

CONSTRUCTION DOCUMENTS AND TECHNICAL SPECIFICATIONS

for

FACADE REHABILITATION at MACARTHUR HOUSES 260 CLINTON STREET, HEMPSTEAD NY

Prepared for:

HEMPSTEAD HOUSING AUTHORITY
260 Clinton St # 100, Hempstead, NY 11550



Prepared by:



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Public Notice - Invitation to Bid

HEMPSTEAD HOUSING AUTHORITY (the “Owner” will accept bids for the Façade Rehabilitation at MacArthur Houses, 260 Clinton Street, Hempstead, NY, as shown on the Drawings and as set forth in the Specifications. Sealed bids will be received and opened at the Administrative Offices of the Village of Hempstead Housing Authority, 260 Clinton Street, (lower level rear) Hempstead, NY 11550, executed and sealed in an envelope marked “**Façade Rehabilitation At MacArthur Houses – Sealed Bid Do Not Open**”, on November 23, 2026 at 11 AM. At this time bids shall be publicly opened and read aloud. This submission shall include three (3) copies with the original. Instruction to Bidders and Proposal Forms are contained in the Bid Book. All bids will be reviewed by the Architect and Owner. The contract will be awarded after the review is completed. A set of Plan and Specifications may be obtained at the following locations: Hempstead Housing Authority, Administrative Office, 260 Clinton Street (lower level rear), Hempstead, NY 11550 (516) 489-8500, LiRo Architects & Planners, 235 East Jericho Turnpike, Mineola, NY 11501 (516) 746-2350, and at <http://www.hempsteadhousing.org/contractingopportunities.html>. A bid bond in the amount of 5% of the base bid will be required to accompany all bids. The Owner reserves the right to reject any or all bids and to waive irregularity in the bids and the bidding.

INSTRUCTIONS TO BIDDERS

1. Bid Form.

In order to be considered, prepare bids as follows:

- a. Submit a Bid Document Original with 3 copies.
- b. Prepare bids on the forms provided, properly signed and with all times filled out. Unauthorized conditions, limitations, or provisions attached to the bid will be cause for rejection of the bid. Bid proposals forms to be filled out by the contractor include:
 - Bid Proposal Form
 - HUD-5369A – Representations, Certification and Other Statements of Bidders Public and Indian Housing Programs
 - HUD-2530- Previous Participation Certification
 - Certificate of Experience
 - Statement of Bidders Qualifications
 - Statement of Compliance to Wage Rates
 - Section 3 Requirements and Certification
 - Non-Collusive Bidding Certification
 - Substitution List
 - Bid Bond
- c. Faxed or emailed bid proposals will not be accepted.
- d. Bids must be received by the Owner no later than the time set forth in the notice. It is the sole responsibility of the bidder to see that his/her bid is received on time.

2. Insurance.

The CONTRACTOR shall obtain and maintain throughout the term of this Agreement, at its own expense: one or more policies for commercial general liability insurance, which policy(ies) shall name Hempstead Housing Authority as an additional insured as follows:

- a. Commercial general liability insurance for bodily injury liability, including death, and property damage liability, incurred in connection with the performance of this Agreement, with minimum limits of \$1,000,000 in respect of claims arising out of personal injury or sickness or death of any one person, \$1,000,000 in respect of claims arising out of personal injury, sickness or death in any one accident or disaster, and \$1,000,000 in respect of claims arising out of property damage in any one accident or disaster.
- b. The CONTRACTOR is also responsible to maintain the statutory limits of Workers Compensation Insurance (for all staff) and to verify that his subcontractors (if any) maintain the statutory limits of Workers Compensation Insurance.
- c. Automobile Liability Insurance in the amount of \$500,000.

3. Construction Time and Liquidated Damages.

This Agreement will include stipulations that:

- a. Work shall be completed **no later than 120 days**.
- b. Liquidated damages shall be assessed in the following manner: \$500.00 per Calendar Day for each calendar day after Completion Time.

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

Office of Public and Indian Housing

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

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 and 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 —Rosemary A. Olsen, Executive Director, Hempstead Housing Authority, 260 Clinton Street, Hempstead, NY 11550.

[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, accept 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;

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

[x] (3) a 20 percent cash escrow;

[x] (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. Copies of the circular may be downloaded on the U.S. Department of Treasury website <http://www.fms.treas.gov/c570/index.html>, or ordered for a minimum fee by contacting the Government Printing Office at (202) 512-2168.

(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) Preferences and opportunities for training and employment (other than core 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.

General Conditions for Construction

U.S. Department of Housing and Urban

Contracts - Public Housing Programs

Development

Office of Public and Indian Housing

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

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.
- (j) "Specifications" means the written description of the technical requirements for construction and includes the criteria and tests for determining whether the requirements are met.
- (l) "Work" means materials, workmanship, and manufacture

- (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. and fabrication of components.

2. Contractor's Responsibility for Work

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- (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.

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

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 receiving such notice.

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

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 "shown" "indicated", "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

required in the planning and production of the work. Such 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

machinery and mechanical and other equipment. 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

Contracting Officer the name of the manufacturer, the model number, and other information concerning the performance, capacity, nature, and rating of the

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- (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

waivers. Before installing the work, the Contractor shall 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.

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.

- (f) New work which connects to existing work 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.

The contractor shall comply with the Clean Air Act, as 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.

18. Clean Air and Water

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- (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.

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

occupied without proper remuneration therefore. If prior possession or use by the PHA delays the progress of 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 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

-
- 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.

- (h) Unless a defect is caused by the negligence of the Contractor or subcontractor or supplier at any tier, the Contractor shall not be liable for the repair of any 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 on this contract within 90 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

basis for determining progress payments. The breakdown shall be approved by the Contracting Officer and must be 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 15 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 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

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.

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 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 nowise 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 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 a 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:

- (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 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

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 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 interruption to the extent that performance would have

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

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 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 \$ 500.00 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 \$1,000,000

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 "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

[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

(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 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.

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

(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 **the Housing and Urban Development Act of 1968.**

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

- (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

be posted at all times by the Contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

- (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,

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 advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to

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.

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.



**Homes and
Community Renewal**

New York State
Homes & Community Renewal
Office of Economic Opportunity & Partnership Development
Web Site: www.nyshcr.org

M/WBE UTILIZATION PLAN
(Instructions on Reverse Side)

☐ Preliminary
☐ Amended

Project or SHARS#:	Contract Amount:		Funding Amount:	
Contractor Name:	Address:	Telephone Number:	Email:	Federal ID:
Developer Name:	Address:	Telephone Number:	Email:	Federal ID:

Name, Address and Federal ID # of Firm	NYS Certified (Check One)		HCR Review	General Description of Work to be Performed	\$ Value of Contract	Anticipated Contract Date	
	MBE	WBE				Start	Completion
Federal ID #	☐	☐					
Federal ID #	☐	☐					
Federal ID #	☐	☐					
Federal ID #	☐	☐					

Pursuant to Executive Law Article 15-A, my firm proposes to use the certified M/WBE firms listed above. _____ Signature of Company Official _____ Title _____ Date	HCR Use Only		
	Proposed Goal Attainment:		
	☐ Accepted	MBE %	WBE % Funding Amount \$
	☐ Accepted as Noted	MBE \$	WBE \$
	☐ Rejected		
	_____ Authorized Signature:		
	_____ Date:		

Instructions for Completing the M/WBE Utilization Plan

This project will not proceed to closing or be awarded until this Utilization Plan has been approved!

The M/WBE Utilization Plan is to be completed by the Contractor and will document the M/WBE to be utilized for each goal achievement. HCR is required by law to request Utilization Plans for all contracts in excess of \$25,000 for labor, services, supplies/equipment and/or material; and expenditures in excess of \$100,000 for construction, demolition, major repairs, renovation, acquisition or improvements to real property.

Project/SHARS #:	Indicate Project/SHARS #.
Contract Amount:	Indicate the amount of this contract.
Funding Amount:	Indicate the amount of funding.
Contractor Federal ID #:	Indicate Federal ID #.
Contractor Name, Address, Telephone Number, Fax Number, Email Address	Provide full name of contractor, office address, city, state and zip code. Indicate Telephone Number, Fax Number, Email address.
Developer Federal ID #:	Indicate Federal ID #.
Developer Name, Address, Telephone Number, Fax Number, Email Address	Provide full name of developer, office address, city, state and zip code. Indicate Telephone Number, Fax Number, Email address.
Name, Address and Federal ID of Firm:	Provide the name, address and Federal ID #.
NYS Certified:	Indicate if firm is MBE or WBE. Only firms certified by NYS will be counted towards M/WBE goals.
HCR Review:	For agency use only.
General Description of work to be preformed:	Provide a brief description of work to be done.
Dollar (\$) value of contract:	Indicate total dollar amount of contract.
Anticipated Contract Date:	Indicate the proposed start and completion dates.
Signature of Company Official:	Signature of official responsible for contract
Title:	Provide title of official responsible for contract
Date:	Provide date the M/WBE Utilization Plan is signed

Introduction to the Prevailing Rate Schedule

Information About Prevailing Rate Schedule

This information is provided to assist you in the interpretation of particular requirements for each classification of worker contained in the attached Schedule of Prevailing Rates.

Classification

It is the duty of the Commissioner of Labor to make the proper classification of workers taking into account whether the work is heavy and highway, building, sewer and water, tunnel work or residential, and to make a determination of wages and supplements to be paid or provided. It is the responsibility of the public work contractor to use the proper rate. If there is a question on the proper classification to be used, please call the district office located nearest the project. District office locations and phone numbers are listed below.

Prevailing Wage Schedules are issued separately for "General Construction Projects" and "Residential Construction Projects" on a county-by-county basis.

General Construction Rates apply to projects such as: Buildings, Heavy & Highway, and Tunnel and Water & Sewer rates.

Residential Construction Rates generally apply to construction, reconstruction, repair, alteration, or demolition of one family, two family, row housing, or rental type units intended for residential use.

Some rates listed in the Residential Construction Rate Schedule have a very limited applicability listed along with the rate. Rates for occupations or locations not shown on the residential schedule must be obtained from the General Construction Rate Schedule. Please contact the local Bureau of Public Work office before using Residential Rate Schedules, to ensure that the project meets the required criteria.

Labor Law requires that contractors obtain a Contractor Registry certificate of registration prior to bidding on or commencing ²

work on a public or private project subject to prevailing wage requirements. Subcontractors also are prohibited from commencing work on covered employment unless they have received a Contractor Registry certificate. Contractors are required to submit their Certificate of Registration with their bid materials. A public database is available online to confirm registration at data.ny.gov to confirm registration validity. For additional information on how to register and the requirements, visit <https://dol.ny.gov/public-work-contractor-and-subcontractor-registry>.

Payrolls and

Payroll

Records

Contractors and subcontractors are required to establish, maintain and preserve accurate payroll records for at least six (6) years.

Electronic Certified Payroll (LL 220-J)

Effective December 31, 2025, all contractors and subcontractors who perform public work, or covered private work subject to the prevailing wage, will be required to submit certified payrolls electronically to the Bureau of Public Work and Prevailing Wage Enforcement. Additional information about the electronic certified payroll submission system will be made available on the Department's website at <https://dol.ny.gov/Electronic-Payroll>

Paid Holidays are days for which an eligible employee receives a regular day's pay, but is not required to perform work. If an employee works on a day listed as a paid holiday, this remuneration is in addition to payment of the required prevailing rate for the work actually performed.

Overtime

At a minimum, all work performed on a public work project in excess of eight hours in any one day or more than five days in any workweek is overtime. The specific overtime requirements for each trade or occupation on a public work project may differ. Specific overtime requirements for each trade or occupation are contained in the prevailing rate schedules.

Overtime holiday pay is the premium pay that is required for work performed on specified

holidays. It is only required where the employee actually performs work on such holidays.

Thea OVER-PIME licable holidays are listed under HOLIDAYS: OVERTIME. The required rate of pay for these covered holidays can be found in the PAY section listings for each classification.

Supplemental Benefits

Particular attention should be given to the supplemental benefit requirements. Although in most cases the payment or provision of supplements is straight time for all hours worked, some classifications require the payment or provision of supplements, or a portion of the supplements, to be paid or provided at a premium rate for premium hours worked. Supplements may also be required to be paid or provided on paid holidays, regardless of whether the day is worked. The Overtime Codes and Notes listed on the particular wage classification will indicate these conditions as required.

Effective Dates

When you review the schedule for a particular occupation, your attention should be directed to the dates above the column of rates. These are the dates for which a given set of rates is effective. The rate listed is valid until the next effective rate change or until the new annual determination which takes effect on July 1 of each year. Please Note: Updates to the Wage Schedule shall be made on a quarterly basis.

All contractors and subcontractors are required to pav the current prevailing rates of wages and supplements. If you have any questions please contact the Bureau of Public Work or visit the 'New York State Department of Labor website (www.labor.ny.gov) for current wage rate Information.

Shift Work

If the timeline of the contract requires shift work be performed to meet deadlines, the BPWE will enforce the shift work rate as the required rate on the project whether or not shift work is specifically addressed in the contract.

Paid Prenatal

Leave

Every employer shall be required to provide to its employees twenty hours of paid prenatal personal leave during any fifty-two week calendar period. Paid prenatal personal leave shall mean leave taken for the health care services received by an employee during their pregnancy or related to such pregnancy, including physical examinations, medical procedures, monitoring and testing, and discussions with a healthcare provider related to the pregnancy. Paid prenatal personal leave may be taken in hourly increments. Benefits for paid prenatal personal leave shall be paid in hourly Installments. Employees shall receive compensation at the employee's regular rate of pay, or the applicable minimum wage established by the labor law, whichever is greater, for the use of Paid Prenatal leave.

Apprentice Training Ratios

The following are the allowable ratios of registered Apprentices to Journey-workers.

For example, the ratio 1:1 , 1 :3 indicates the allowable initial ratio is one Apprentice to one Journeyworker. The Journeyworker must be in place on the project before an Apprentice is allowed. Then three additional Journeyworkers are needed before a second Apprentice is allowed. The last ratio repeats indefinitely. Therefore, three more Journeyworkers must be present before a third Apprentice can be hired, and so on.

Please call Apprentice Training Central Office at (518) 457-6820 if you have any questions.

Title (Trade)	Ratio
Boilermaker (Construction)	1 •1 , 1.4
Boilermaker (Shop)	1 •.1 ,1 .3

Carpenter (Bldg.,H&H, Pile Driver/Dockbuilder)	1•1 , 1.4
Carpenter (Residential)	1.1 1.3
Electrical (Outside) Lineman	1•1 , 1.2
Electrician (Inside)	1.1 , 1.3
Elevator/Escalator Construction & Modernizer	1.1 , 1.2
Glazier	1.1 , 1.3
Insulation & Asbestos Worker	1•1 , 1.3
Iron Worker	1 :1,1.4
Laborer	1 .1 51.3
Mason	1 :1 , 1.4
Millwright	1•1 , 1.4
Op Engineer	1.1 1.5
Painter	1.1 1.3
Plumber & Steamfitter	1.1 1.3
Roofer	1 :1 , 1.2
Sheet Metal Worker	1.1 , 1.3
Sprinkler Fitter	1.1 1.2

If you have any questions concerning the attached schedule or would like additional information, please contact the nearest BUREAU of PUBLIC WORK District Office or write to:

New York State Department of Labor
 Bureau of Public Work
 State Office Campus, Bldg. 12
 Albany, NY 12226

District Office Locations:	Telephone #	FAX #
Bureau of Public Work - Albany	518-457-2744	518-485-0240
Bureau of Public Work - Binghamton	607-721-8005	607-721-8004
Bureau of Public Work - Buffalo	716-847-7159	716-847-7650
Bureau of Public Work - Garden City	516-228-3915	516-794-3518
Bureau of Public Work - Newburgh	845-568-5287	845-568-5332
Bureau of Public Work - New York City	212-932-2419	212-775-3579

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Bureau of Public Work - Patchogue	631-687-4882	631-687-4902
Bureau of Public Work - Rochester	585-258-4505	585-258-4708
Bureau of Public Work Syracuse	315-428-4056	315-428-4671
Bureau of Public Work - Utica	315-793-2314	315-793-2514
Bureau of Public Work - White Plains	914-997-9507	914-997-9523
Bureau of Public Work - Central Office	518-457-5589	518-485-1870

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Prevailing Wage Rates for 07/01/2026 - 06/30/2027

Published by the New York State Department of Labor

Last Published on Aug 01 2026Nassau County**Nassau County General Construction****Asbestos Worker**08/01/2026**JOB DESCRIPTION Asbestos Worker DISTRICT 4 ENTIRE COUNTIES**

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour:

07/01/2026

01/01/2027

Additional

Asbestos Worker \$ 48.50

Removal & Abatement ONLY*

NOTE: * For Mechanical Systems that are NOT to be SCRAPPED.

**

To be allocated at a later date.

SUPPLEMENTAL**BENEFITS per Hour:**

Asbestos Worker \$ 18.02

Removal & Abatement Only

OVERTIME PAY

See (B, B2, *E, J) on OVERTIME PAGE

*Hours worked on Saturdays are paid at time and one half only if forty hours have been worked during the week.

HOLIDAY paid: See 1) on HOLIDAY PAGE Overtime:

See 5, 6, 8, 28) on HOLIDAY PAGE

REGISTERED**APPRENTICES**

Apprentice Removal & Abatement Only:

1000 hour terms at the following percentage of Journeyworker's wages per hour.

1st	2nd	3rd	4th
78%		83%	89%

SUPPLEMENTAL BENEFITS Per Hour:

All Terms: \$ 18.02

4-12a - Removal Only

Boilermaker08/01/2026**JOB DESCRIPTION Boilermaker DISTRICT 4 ENTIRE COUNTIES**

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

WAGES

per Hour:

07/01/2026

01/01/2027

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Boilermaker	\$ 70.38	\$ 71.88
Repairs & Renovations	70.38	71.88
Repairs & Renovation: Includes Repairing, Renovating, and Replacement of parts to an existing unit(s). SUPPLEMENTAL BENEFITS Per Hour:		
Boilermaker	33.5% of	
	Hourly	
Repair & Renovations	Wage Paid	
	+ \$26.85	

NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay.

OVERTIME PAY

See (*B, O, on OVERTIME PAGE

Note:* Includes 9th & 10th hours, double for 11th or more. ** Labor Day ONLY, if worked.

Repairs & Renovation see (B,E,Q) on OT Page

HOLIDAY paid: See 1) on HOLIDAY

PAGE

Overtime: See 5, 6, 11, 12, 15, 25, 26, 29) on HOLIDAY PAGE

REGISTERED APPRENTICES

(1/2) Year Terms at the following percentage of Boilermaker's wage per hour:

1st	2nd	3rd	4th	5th	6th	7th
65%	70%	75%	80%	85%	90%	95%

SUPPLEMENTAL BENEFITS:

33.5% of Hourly Wage Paid Plus Amount Below:

1st	2nd	3rd	4th	5th	6th	7th
\$20.36	\$21.28	\$22.22	\$23.12	\$24.07	\$25.00	\$25.93

NOTE: "Hourly Wage Paid" shall include any and all premium(s)

4-5

Broadband

08/01/2026

JOB DESCRIPTION Broadband**DISTRICT 4****ENTIRE COUNTIES**

Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

PARTIAL COUNTIES

Orange: Entire County except Village of Greenwood Lake, Village of Highland Falls, Town of Tuxedo, and Town of Patterson

WAGES

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NOTE: Applies to all public work and covered private projects, including those receiving ConnectAll funding subject to New York State Labor

Law S224-E, solicited on or after July 1 ,2025. For all other projects solicited prior to July 1 ,2025 please see LINEMAN ELECTRICIAN(I)TELEDATA

Per Hour:	07/01/2026	08/04/2026
Field Tech	\$ 55.59	\$ 57.26
Install/Repair*		

For outside work (excluding installation on building construction/alteration/renovation projects), stopping at first point of attachment (demarcation), installing/maintaining/repairing broadband internet service.

"Broadband", "Broadband Service", or "Broadband Internet" means mass-market retail service by wire or radio that provides the capability to transmit data to and receive data from all or substantially all internet endpoints, including any capabilities that are incidental to and enable the operation of the communications service, but excluding dial-up internet access service.

*NOTE: EXCLUDES work within ten(10) feet of High Voltage (600 Volts and over) transmission lines. Please see LINEMAN rates.

*NOTE: Does not include the operation of equipment. Please see OPERATING ENGINEER rates.

*NOTE: Does not include groundmen/flagger/flagmen. Please see LABORER/LABORER-HEAVY/HIGHWAY rates.

SUPPLEMENTAL

BENEFITS per Hour:

\$ 23.54

OVERTIME PAY

See (B, K, *R) on OVERTIME PAGE

*Two and one half times the hourly rate after the 8th hour

HOLIDAY

Paid: See (5, 6, 7, 11, 12) on
Overtime: HOLIDAY PAGE
See (5, 6, 7, 11, 12) on
HOLIDAY PAGE

4-CWA-Dist1

Carpenter

08/01/2026

JOB DESCRIPTION Carpenter DISTRICT 8 ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

per hour:	07/01/2026
Piledriver	\$ 62.59
	+ 10.16*
Dockbuilder	\$ 62.59
	+ 10.16*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL

BENEFITS per hour:

Journeyworker	\$ 47.48
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OVERTIME PAY

See (B, E2, 0) on OVERTIME PAGE

HOLIDAY paid: See (1) on HOLIDAY PAGE.

Paid: for 1st & 2nd yr.

Apprentices See(5,6,11,

Overtime: See 5.6.11.13.25on HOLIDAY PAGE.

REGISTERED

APPRENTICES Wages per hour (1)year terms:

1st	2nd	3rd	4th
\$ 28.98	\$ 34.58	\$ 42.96	\$ 51.35
+ 5.66*	+ 5.66*	+ 5.66*	+ 5.66*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:

All Terms: \$ 34.03

8-1556 Db

Carpenter

08/01/2026

JOB DESCRIPTION Carpenter DISTRICT 8 ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

Per hour: 07/01/2026

Carpet/Resilient

Floor Coverer \$ 60.05
+ 8.39*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

INCLUDES HANDLING & INSTALLATION OF ARTIFICIAL TURF AND SIMILAR TURF INDOORS/OUTDOORS.

SUPPLEMENTAL**BENEFITS**

Per hour: \$ 42.24

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY paid: See (18, 19) on HOLIDAY PAGE.

Paid for 1st & 2nd yr.

Apprentices See (5,6,11,13,16,18,19,25)

Overtime: See (5,6,11,13,16,18,19,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wage per hour - (1) year terms:

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1st	2nd	3rd	4th
\$ 26.54	\$ 29.60	\$ 34.05	\$ 42.40
+ 2.00*	+ 2.54*	+ 3.00*	+ 3.94*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:

1st	2nd	3rd	4th
\$ 16.91	\$ 18.13	\$ 21.67	\$ 22.98

8-2287

Carpenter08/01/2026

JOB DESCRIPTION Carpenter DISTRICT 8 ENTIRE COUNTIES

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES per Hour:

07/01/2026

Marine Construction:

Marine Diver \$ 77.46
+ 10.16*

Marine Tender \$ 57.00
+ 10.16*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime

SUPPLEMENTAL

BENEFITS per Hour:

Journeyworker \$ 47.48

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY paid: See (18, 19) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 13, 16, 18, 19, 25) on HOLIDAY PAGE

REGISTERED

APPRENTICES Wages per hour:

One (1) year terms.

1st year \$ 28.98
+ 5.66*

2nd year 34.58
+ 5.66*

3rd year 42.96
+ 5.66*

4th year 51.35
+ 5.66*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental
Benefits per Hour:

All terms \$ 34.03

8-1456MC

Carpenter

08/01/2026

~~Last Published on Aug 01 2026~~~~Nassau County~~**JOB DESCRIPTION Carpenter DISTRICT 8 ENTIRE COUNTIES**

Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES per hour:

07/01/2026

Building

Millwright

\$ 62.03

+ 13.12*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL**BENEFITS Per hour:**

Millwright

\$ 46.66

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY paid: See (18,19) on HOLIDAY
PAGE.

Overtime: See 5,6,8,11,13,15,18,19,25on HOLIDAY PAGE.

REGISTERED**APPRENTICES Wages per****hour:**

One (1) year terms:

1 st.	2nd.	3rd.	4th.
\$ 33.04	\$ 38.89	\$ 44.74	\$ 56.44
+ 7.08*	+ 8.25*	+ 9.42*	+ 11.76*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per

hour: One (1) year terms:

1 st.	2nd.	3rd.	4th.
\$ 31.81	\$ 34.34	\$ 37.52	\$ 41.94

8-740.1

Carpenter**08/01/2026**

JOB DESCRIPTION Carpenter DISTRICT 8 ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

per Hour:

07/01/2026

Timberman

\$ 57.59

+ 10.42*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL**BENEFITS Per Hour:**

\$ 46.79

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Overtime: See (5, 6, 11, 13, 25) on HOLIDAY PAGE Paid:

See (1) on HOLIDAY PAGE.

Paid: for 1st & 2nd yr.

Apprentices See(5,6,11,

Overtime: See 5.6.11.13.25on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wages per hour:

One (1) year terms:

1st	2nd	3rd	4th
\$ 26.96	\$ 32.07	\$ 39.72	\$ 47.38
+ 5.71*	+ 5.71*	+ 5.71*	+ 5.71*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:

All terms \$ 33.78

8-1556 Tm

Carpenter

08/01/2026

JOB DESCRIPTION Carpenter DISTRICT 8 ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland, Westchester

PARTIAL COUNTIES

Orange: South of but including the following, Waterloo Mills, Slate Hill, New Hampton, Goshen, Blooming Grove, Mountainville, east to the Hudson River.

Putnam: South of but including the following, Cold Spring, TompkinsCorner, Mahopac, Croton Falls, east to Connecticut border. Suffolk: West of Port Jefferson and Patchogue Road to Route 112 to the Atlantic Ocean.

WAGES

per hour: 07/01/2026 10/18/2026

Core Drilling:

Driller \$ 48.78 Additional
+ 3.85*

Driller Helper \$ 38.15
+ 3.85*

Note: Hazardous Waste Pay Differential:

For Level C, an additional 15% above wage rate per hour

For Level B, an additional 15% above wage rate per hour

For Level A, an additional 15% above wage rate per hour

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Note: Additional \$3.00 per hour to be paid when required to work on water

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL**BENEFITS Per hour:**

Driller and Helper \$ 32.37

OVERTIME PAY

See (B, G, P) on OVERTIME PAGE

HOLIDAYPaid: See 5, 6, 13, 25) on
HOLIDAY PAGEOvertime: See 5, 6, 13, 25) on
HOLIDAY PAGE

8-1536-CoreDriller

Carpenter**08/01/2026****JOB DESCRIPTION Carpenter DISTRICT 8 ENTIRE COUNTIES**

Bronx, Kings, New York, Putnam, Queens, Richmond

PARTIAL COUNTIES

Nassau: The portion of the county that lies west of Seaford Creek and south of the Southern State Parkway.

WAGES

Per hour: 07/01/2026

Show Exhibit \$ 57.75
+ 10.00**

Bldg. Carpenter* \$ 60.05

* Not applicable in Putnam County

**This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL**BENEFITS Per hour**

worked:

Show Exhibit \$ 46.94

Bldg. Carpenter

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY paid: See (1) on HOLIDAY
PAGE

Overtime: See 5.6.11.13.16.25on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wages per hour: Show Exhibit

(1) year terms:

1st.

2nd.

3rd.

4th.

~~Last Published on Aug 31 2026~~~~Nassau County~~

\$ 23.10	\$ 28.88	\$ 37.54	\$
		0*	46.20
			+
			5.00*

*This portion is not subject to overtime premiums

Supplemental benefits per hour:

All terms	\$ 32.50
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Wages per hour: Bldg. Carpenter

(1) year terms:

1st	2nd	3rd	4th
\$ 25.20	\$ 28.20	\$ 32.45	\$
			40.33
+ 2.14*	+ 2.59*	+ 9*	+
			4.09*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:

1st	2nd	3rd	4th
\$ 17.86	\$ 18.91	\$ 22.01	\$ 23.01

8-EXHIB

Carpenter - Building I Heavy&Highway**08/01/2026**

JOB DESCRIPTION Carpenter - Building / Heavy&Highway

DISTRICT 4

ENTIRE COUNTIES

Suffolk

PARTIAL COUNTIES

Nassau: Entire County EXCEPT for the portion of Nassau County that lies both west of Seaford Creek AND south of the Southern State

Parkway.

WAGES

Per Hour:	07/01/2026
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Carpenter (Building)	\$ 55.06
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Carpenter (Heavy & Highway)	\$ 55.06
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SHIFT WORK

ADD 15% to straight time hourly wage for NEW YORK STATE D.O.T. and other GOVERNMENTAL MANDATED Off-Shift Work.

SUPPLEMENTAL**BENEFITS per Hour:**

Journeyworker	\$ 35.43
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OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
 Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

One(l) Year Terms at the following
 Per Hour:

1st	2nd	3rd	4th
\$ 26.98	\$ 31.71	\$ 36.44	\$ 41.16

Supplemental Benefits per Hour:

All Apprentice Terms: \$ 18.88

4-Reg.Council Nass/Suff

Carpenter - Heavy&Highway

08/01/2026

JOB DESCRIPTION Carpenter - Heavy&Highway

DISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

PARTIAL COUNTIES

Nassau: That portion of the county that lies West of Seaford Creek and South of the Southern State Parkway.

WAGES per hour:

07/01/2026

Heavy & Highway

Carpenter \$ 62.59
 + 10.16*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS Per hour worked:

Heavy & Highway Carpenter \$ 47.48

OVERTIME PAY

See (B, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid: e 1) on HOLIDAY PAGE

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Nassau County

Overtime: See 5, 6, 11, 13, 25) on HOLIDAY PAGE

For 1st & 2nd year Apprentices

Paid: See 5.6.11.1

REGISTERED**APPRENTICES Wage per****hour:**

One (1) year terms:

	1st	2nd	3rd	4th
Heavy & Highway	\$ 28.98	\$ 34.58	\$ 42.96	\$
				51.35
	+ 5.66*	+ 5.66*	+ 5.66*	+
				5.66*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental Benefits:

Per Hour:

All terms
\$ 34.03

8-NYC H/H

Electrician

08/01/2026

JOB DESCRIPTION Electrician DISTRICT 4 ENTIRE COUNTIES

Nassau, Suffolk

WAGES

Per Hour: 07/01/2026 04/24/2027

Electrician/Wireman \$ 66.75 \$ 69.25

Inside/Outside

SUPPLEMENTAL**BENEFITS per Hour:**

All Classes: 18% of Straight Time 18% of Straight Time Hourly Wage Paid Hourly Wage

Paid

+ \$ 37.05

+ \$38.38

OVERTIME PAY

See (B, E, E2, Q, *V) on OVERTIME PAGE

OVERTIME Supplemental Benefits Per Hour:

*6% of the 18% of the above supplemental benefit to be calculated at OVERTIME WAGE PAID. The remaining 12% to be calculated at STRAIGHT TIME WAGE PAID.

HOLIDAY paid: See {1) on HOLIDAY

PAGE

Overtime: 3, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED**APPRENTICES**

6 Month Terms at the following Wages:

07/01/2026

04/24/2027

Last Published on Aug 01 2026

Nassau County

1st & 2nd	\$ 26.70	\$ 27.70
3rd & 4th	28.70	29.78
5th & 6th	30.04	31.16
7th	33.38	34.63
8th	36.71	38.09
9th	43.39	45.01
10th	50.06	51.94

Supplemental Benefits Per Hour:

1st	5% + \$ 5.88	5% + \$ 6.08
2nd	10% + 7.26	10% + 7.51
3rd	11% + 8.58	11% + 8.89
4th	12% + 10.04	12% + 10.39
5th	12% + 10.06	12% + 10.43
6th	12% + 10.41	12% + 10.79
7th	15% + 13.07	15% + 13.52
8th	15% + 13.08	15% + 13.48
9th	16% + 20.55	16% + 17.87
10th	16% + 20.62	16% + 21.35

NOTE: Percentages are on "Straight-Time Hourly Wage Paid"

OVERTIME Supplemental Benefits Per Hour:

Term 1:

3% of the above supplemental benefits to be calculated on OVERTIME WAGE PAID. The remaining % of supplemental benefit to be calculated on STRAIGHT-TIME WAGE PAID.

All other terms:

6% of the above supplemental benefits to be calculated on OVERTIME WAGE PAID. The remaining % of supplemental benefit to be calculated on STRAIGHT-TIME WAGE PAID.

4-25

Electrician08/01/2026

JOB DESCRIPTION Electrician DISTRICT 4 ENTIRE COUNTIES

Nassau, Suffolk

WAGES

per Hour: 07/01/2026 08/01/2026 Telephone and
Integrated Tele-Data

System Electrician	\$ 42.93	\$ 44.43
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Last Published on Aug 01 2026

Nassau County

This rate classification applies to ALL Voice, Data & Video work.

Excludes Fire Alarm Systems and Energy Management Systems (HVAC Controls), in those cases the regular Electrician rate applies.

To ensure proper use of this rate please call: Nassau District Office - (516)228-3915 or Suffolk District Office - (631)687-4882

SUPPLEMENTAL**BENEFITS per Hour:**

Tele-Data	18% of Straight Time	18% of Straight Time
Electrician	Hourly Wage + \$ 24.70	Hourly Wage + \$ 25.80

OVERTIME PAY

See (B, E, E2, Q, V) on OVERTIME PAGE

OVERTIME Supplemental Benefits Per Hour:

6% of the 18% of the above supplemental benefit to be calculated at OVERTIME WAGE PAID. The remaining 12% to be calculated at STRAIGHT TIME WAGE PAID.

HOLIDAY

paid: See 1) on HOLIDAY PAGE

Overtime: See 5, 6, 15, 16, 25, 26) on
HOLIDAY PAGE

4-25tela

Electrician

08/01/2026

JOB DESCRIPTION Electrician

DISTRICT 4

ENTIRE COUNTIES

Nassau, Suffolk

WAGES per Hour: 07/01/2026

Electrical Maintenance \$ 51.29

Traffic Signal
Maintenance \$ 52.25**"PLEASE NOTE"**

Applicable to "EXISTING ELECTRICAL SYSTEMS" including, but not limited to TRAFFIC SIGNALS & STREET LIGHTING. Not to be used for extensions or additions to the system.

SUPPLEMENTAL**BENEFITS Per Hour:**

Electrical Maintenance:	14% of STRAIGHT-TIME Hourly wage Paid + \$26.46
Traffic Signal: Maintenance	14% of STRAIGHT-TIME Hourly wage Paid + \$26.65

Last Published on Aug 01 2026

Nassau County

OVERTIME PAY

See (B, E2, K, P, V) on OVERTIME PAGE

OVERTIME Supplemental Benefits Per Hour:

6% of the 14% of the above supplemental benefit to be calculated at OVERTIME WAGE PAID. The remaining 8% to be calculated at STRAIGHT-TIME WAGE PAID.

HOLIDAY

Paid: See 1) on HOLIDAY PAGE
Overtime: See 5, 6, 155 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Term(s) at the following Percentage of Journeyworkers Wage:

1st 6mo	2nd 6mo	2nd Yr	3rd Yr	4th Yr	5th Yr	50%	60%
	70%	90%					

Supplemental Benefits:

1st 6mo	5% + \$5.86
2nd 6mo	10% + \$6.88
2nd year	11% + \$8.49
3rd year	12 % + \$11.07
4th year	13% + \$15.51
5th year	14% + \$19.49

NOTE: Percentages are on "STRAIGHT-TIME HOURLY WAGE PAID"

OVERTIME Supplemental Benefits Per Hour:

Term I.

3% of the above supplemental benefits to be calculated on OVERTIME WAGE PAID. The remaining % of supplemental benefit to be calculated on STRAIGHT-TIME WAGE PAID.

All other terms:

6% of the above supplemental benefits to be calculated on OVERTIME WAGE PAID. The remaining % of supplemental benefit to be calculated on STRAIGHT-TIME WAGE PAID.

4-25m

Last Published on Aug 01 2026

Nassau County

JOB DESCRIPTION Electrician

DISTRICT 4

ENTIRE COUNTIES

Nassau, Suffolk

WAGES

per

Hour:

Electrician

07/01/2026

04/26/2027

Pump & Tank

\$ 50.15

\$ 51.65

SUPPLEMENTAL

BENEFITS Per Hour:

Electrician

18% of Straight Time

18% of Straight Time

Pump & Tank

Hourly Wage

Hourly Wage

+ \$27.24

+ 28.61

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

OVERTIME Supplemental Benefits Per Hour:

6% of the 18% of the above supplemental benefit to be calculated at OVERTIME WAGE PAID. The remaining 12% to be calculated at STRAIGHT-TIME WAGE PAID.

HOLIDAY

Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

4-25 Pump & Tank

Electrician Lineman08/01/2026

JOB DESCRIPTION Electrician Lineman

DISTRICT 4

ENTIRE COUNTIES

Nassau, Queens, Suffolk

WAGES

07/01/2026

Utility Distribution & Transmission Line Construction:
per Hour

Lineman/Splicer

\$ 73.40

Material Man

63.86

Heavy Equip. Operator

58.72

Groundman

44.04

Flagman

33.03

	07/01/2026	05/30/2027
Natural Gasline		
Construction: per Hour		
Journeyworker U.G.Mech	\$ 61.89	\$ 64.37
SUPPLEMENTAL BENEFITS		
	07/01/2026	
Utility Distribution & Transmission Line Construction:		
Per Hour		
Lineman/Splicer	33.25% of Hourly	
Material Man	Wage Paid +	
Heavy Equip. Operator	\$ 16.94	
Groundman		
Flagman		
	07/01/2026	05/30/2027
Natural Gasline Construction:		
per Hour		
Journeyworker U.G.Mech.	30.7% of Hourly	31.3% of Hourly
	Wage Paid +	Wage Paid
		+
	\$ 16.20	\$ 16.35

NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

OVERTIME for Natural Gas Mechanic: (B, G, P)

HOLIDAY

Paid: See 1) on HOLIDAY PAGE

Overtime: See 5, 6, 8, 16, 23, 25, 26) on HOLIDAY PAGE Same as Above for Natural Gas Mechanic.

REGISTERED

APPRENTICES

1000 hour Terms at the following Percentage of Journeyworker's Wage.

(Lineman Only)

1 st	2nd	3rd	4th	5th	6th	7th
	65%	70%	75%		85%	

SUPPLEMENTAL BENEFIT:

07/01/2026

All Terms 32.25% of Hourly
Wage Paid +
\$ 16.94

Electrician Lineman08/01/2026

JOB DESCRIPTION Electrician Lineman

DISTRICT 4

ENTIRE COUNTIES

Nassau, Suffolk

WAGES

Per Hour:

07/01/2026

12/28/2026

Tree Trimmer/Remover and

Line Clearance Specialist

\$ 45.62

\$ 46.99

Groundman*

27.37

29.32

Rates apply to all tree trimming/removal contracts including but not limited to "Electrical Line Clearance"/"Long Island Railroad Right of Ways".

For Building Construction or Road/Highway Construction Contracts, Heavy & Highway Laborer and Operating Engineer classifications Apply.

* NOTE: Utilization of Groundman Classification not to exceed 20% of the company(s) workforce on project. Please contact local district office for clarification.

SUPPLEMENTAL BENEFITS

per Hour:

07/01/2026

12/28/2026

Tree Trimmer,

Line Clearance Specialist,

and Groundman

20% of Hourly Wage

20% of Hourly Wage

+ \$14.42

+ \$ 14.72

OVERTIME PAY

See (B, E, P, S) on OVERTIME PAGE

HOLIDAY

paid:

See 5, 6, 8, 16, 23, 24, 25, 26, 29) on

Overtime:

HOLIDAY PAGE See 5, 6, 8, 16, 23, 24,

25, 26, 29) on HOLIDAY PAGE

4-1049/Tree

Elevator Constructor08/01/2026

JOB DESCRIPTION Elevator Constructor

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

PARTIAL COUNTIES

Rockland: Entire County except for the Township of Stony Point

Westchester: Entire County except for the Townships of Bedford, Lewisboro, Cortland, Mt. Kisco, North

Salem, Pound Ridge, Somers and Yorktown. WAGES per hour:

07/01/2026

03/17/2027

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Nassau County

Elevator Constructor	\$ 86.43	\$ 89.76
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Modernization & Service/Repair	\$ 68.06	\$ 70.72
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SUPPLEMENTAL BENEFITS**Per Hour:**

Elevator Constructor	\$ 48.96	\$ 50.27
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Modernization & Service/Repairs	\$ 47.73	\$ 49.00
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OVERTIME PAY

Constructor See (D, M, T) on OVERTIME PAGE.

Modern/Service See (B, E5, P) on OVERTIME PAGE.

HOLIDAY

paid: See 5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

Overtime: See 5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES**WAGES PER HOUR:****6 MONTH TERMS:**

1st Term*	2nd & 3rd Term*	4th & 5th Term	6th & 7th Term	8th & 9th Term
	50%	55%	65%	75%

* Note: 1st, 2nd, 3rd Terms are based on average of the Constructor, the Modernization and the Service/Repair wage. Terms 4 thru 9 Based on the Journeyworker's wage of classification they are working in.

SUPPLEMENTAL BENEFITS:

	07/01/2026	03/17/2027
Elevator Constructor		
1st Term	\$0.00	\$ 0.00
2nd & 3rd Term	37.66	38.42
4th & 5th Term	38.80	39.62
6th & 7th Term	40.60	41.50
8th & 9th Term	42.39	43.39

Last Published on Aug 01 2026

Nassau County

**Modernization &
Service/Repair**

1st Term	\$0.00	\$ 0.00
2nd & 3rd Term	37.63	38.39
4th & 5th Term	38.37	39.17
6th & 7th Term	40.09	40.98
8th & 9th Term	41.81	42.79

4-1

Glazier

08/01/2026

Last Published on Aug 01 2026

Nassau County

JOB DESCRIPTION Glazier***DISTRICT 8******ENTIRE COUNTIES***

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

WAGES per
hour:

07/01/2026

11/01/2026

Glazier \$ 66.22 \$ 67.20

Scaffolding, 71.22 72.20

including swing
scaffold

*Mechanical Equipment 67.23 68.20

* 32.82 33.47

*Repair & Maintenance

*Mechanical equipment, scissor jacks, man lifts, booms & buckets 30' or more, but not pipe scaffolding.

* *Repair & Maintenance- All repair & maintenance work on a particular building whenever performed, where the total cumulative Repair & Maintenance contract value is under \$202,000.

SUPPLEMENTAL***BENEFITS***

Per hour:

Glazier, Scaffolding \$ 44.81

and Mechanical Equipment

Repair & Maintenance \$ 26.01 \$26.37

OVERTIME PAY

See (B, E, Q, V) on OVERTIME PAGE

For 'Repair & Maintenance' see (B, B2, I, S) on overtime page.

HOLIDAY

Paid: See 5, 6, 16, 25 on HOLIDAY PAGE Overtime:

See 5, 6, 16, 25 on HOLIDAY PAGE

For 'Repair &

Maintenance' Paid:

see(5, 6, 16, 25)

Overtime: see(5, 6, 16, 25)

REGISTERED***APPRENTICES Wage per******hour:***

(1) year terms at the following wage rates:

07/01/2026

11/01/2026

1st term \$ 23.68 \$ 24.06

2nd term 32.23

3rd term 42.89 43.55

4th term 52.47 53.23

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Nassau County

Supplemental Benefits:

(Per hour)

1st term	\$ 20.18	\$ 20.56
2nd term	28.85	29.39
3rd term	34.77	35.45
4th term	38.18	38.95

8-1087 (DC9 NYC)

Insulator - Heat & Frost 08/01/2026

JOB DESCRIPTION Insulator - Heat & Frost

DISTRICT 4

JOB DESCRIPTION

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour:	07/01/2026	06/01/2027
Insulators	\$ 73.26	Additional
Heat & Frost		2.50*

* To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per Hour:

Insulators	\$ 38.51
Heat & Frost	

OVERTIME PAY

See (A, E, *Q, V) on OVERTIME PAGE

* Triple time for Labor Day (If worked)

HOLIDAY paid: See (1) on HOLIDAY

PAGE

Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

*REGISTERED**APPRENTICES*

1 year terms at the following Wages Per Hour:

1st	2nd	3rd	4th
\$ 32.97	\$ 40.29	\$ 47.62	\$
			54.95

Supplemental

Benefits:

1st	2nd	3rd	4th
\$17.33	\$21.18	\$25.03	\$28.88

4-12

Last Published on Aug 01 2026

Nassau County

JOB DESCRIPTION Ironworker DISTRICT 9 ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per Hour:	07/01/2026	01/01/2027 Additional
Stone Derrickmen Rigger	\$ 78.46	\$ 1.84

Stone Handset

Derrickman	\$ 76.51	\$ 1.64
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SUPPLEMENTAL BENEFITS

Per hour:

Stone Derrickmen Rigger	\$ 49.02
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Stone Handset

Derrickman	\$ 48.01
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OVERTIME PAY

See (B, DI, *E, Q, on OVERTIME PAGE

*Time and one-half shall be paid for all work on Saturday up to eight (8) hours and double time shall be paid for all work thereafter. ** Benefits same premium as wages on Holidays only

HOLIDAY paid: See 18) on HOLIDAY PAGE

Overtime: See 5, 6, 8, 25) on HOLIDAY PAGE Work stops at schedule lunch break with full day's pay.

REGISTERED

APPRENTICES Wage per

hour:

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Nassau County

Stone Derrickmen Rigger:

	1st	2nd	3rd	4th
07/01/2026	\$ 38.98	\$ 55.17	\$ 61.37	\$ 67.56

**Supplemental
Benefits: per
hour:**

07/01/2026	\$ 24.77	\$ 37.34	\$ 37.34	\$ 37.34
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Stone Handset:

1/2 year terms at the following hourly wage rate:

	1st	2nd	3rd	4th
07/01/2026	\$ 37.51	\$ 53.51	\$ 59.51	\$ 65.51

Supplemental Benefits:

Per hour:

07/01/2026	\$ 24.75	\$ 36.90	\$ 36.90	\$ 36.90
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9-197D/R

Ironworker

08/01/2026

JOB DESCRIPTION Ironworker DISTRICT 4 ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per Hour:	07/01/2026	01/01/2027
Ornamental	\$ 48.65	Additional \$ 1.05*
Chain Link Fence	48.65	
Guide Rail	48.65	

* To be allocated at a later date.

SUPPLEMENTAL**BENEFITS per hour:**

Journeyworker: \$ 68.84

OVERTIME PAY

See (B, Bl, Q, V) on OVERTIME PAGE

HOLIDAY paid: See 1) on HOLIDAY PAGE

Overtime: See 5, 6, 25) on HOLIDAY PAGE

**REGISTER
ED**

Last Published on Aug 01 2026

Nassau County

APPRENTICES

1 year terms at the following wages per hour:

1st	2nd	3rd	4th
\$ 25.98	\$ 28.45	\$ 30.80	\$ 34.39

Supplemental Benefits per hour:

1st	2nd	3rd	4th
\$ 17.29	\$ 18.29	\$ 19.29	\$ 21.29

4-580-0r

Ironworker08/01/2026

JOB DESCRIPTION Ironworker DISTRICT 4 ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

PER HOUR:

	07/01/2026	01/01/2027
Ironworker:		Additional
Structural, Bridges, Machinery	\$ 59.45	1.38*

* To be allocated at a later date.

SUPPLEMENTAL

BENEFITS Per hour paid:

Journeyman	\$ 95.26
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OVERTIME PAY

See (B, BI, Q, on OVERTIME PAGE

*NOTE: Benefits are calculated for every hour paid.

HOLIDAY

Paid: e 1) on HOLIDAY PAGE

Overtime: See 5, 6, 18, 19) on HOLIDAY PAGE

REGISTERED

APPRENTICES

6 month terms at the following wages per hour:

	1st	2nd	3rd-6th
07/01/2026	\$ 30.87	\$ 31.47	\$ 32.08

Supplemental
Benefits

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Nassau County

\$

PER HOUR PAID: 69.08

4-40/361 -Str

Ironworker

08/01/2026

JOB DESCRIPTION Ironworker DISTRICT 4 ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester
PARTIAL COUNTIES
Rockland: Southern section - south of Convent Road and east of Blue Hills Road.
WAGES per hour: 07/01/2026

Reinforcing &
Metal Lathing: \$ 58.85

SUPPLEMENTAL
BENEFITS Per hour:

Reinforcing &
Metal Lathing \$ 46.42

OVERTIME PAY
See (B, E, Q, on OVERTIME PAGE
Wages Per Hour:
At Time & One Half \$ 87.35
At Double Time 115.85
Supplemental Benefit Premiums for Overtime Hours worked:

At Time & One Half \$ 52.77
At Double Time 59.27

*Only \$24.00 per hour for non worked hours
HOLIDAY paid: See 1) on HOLIDAY
PAGE
Overtime: See 5, 11, 13, 20, 21, 22, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

(1) year terms at the following Wages Per Hour:				
	1st	2nd	3rd	4th
Straight time	\$ 22.55	\$ 25.00	\$ 28.00	\$ 30.00
At Time & One Half	33.05	36.60	41.10	44.10

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Nassau County

At Double Time 46.65 51.80 57.80 61.80

SUPPLEMENTAL BENEFITS Per
Hour:

1st	2nd	3rd	4th
\$ 18.17	\$ 18.22	\$ 17.22	\$ 17.22

4-46Reinf

Laborer - Building08/01/2026

JOB DESCRIPTION Laborer - Building

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens,
Richmond, Suffolk

WAGES

per Hour: 07/01/2026 01/01/2026

Asbestos, Lead and \$ 42.90 Additional \$ 2.66*

Hazardous Material

Abatement Laborer

NOTE: For Asbestos removal from Mechanical Systems that are NOT to be scrapped see ASBESTOS
WORKER Classification For Re-Roofing Asbestos Removal See ROOFER Classification

*To be allocated at a later date

SUPPLEMENTAL

BENEFITS per Hour:

Asbestos, Lead \$ 23.37 and
Hazardous Material Abatement Laborer*OVERTIME PAY*

See (B, B2, I) on OVERTIME

PAGE Wages Per Hour:

Asbestos, Lead \$ 62.90 and
Hazardous Material Abatement Laborer

HOLIDAY paid: See 1) on HOLIDAY PAGE

Overtime: See 5, 6, 8, 28) on HOLIDAY PAGE

REGISTER ED APPRENTI CES

1000 hour terms at the following wages per hour:

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Nassau County

	1st	2nd	3rd	4th
07/01/2026	\$22.86	\$23.91	\$26.98	\$29.14

OVERTIME PAY:

	1st	2nd	3rd	4th
07/01/2026	\$33.26	\$34.83	\$39.44	\$42.68

**SUPPLEMENTAL
BENEFIT per Hour:**

All Terms \$ 16.94

4-NYDC(78)

Laborer Building08/01/2026*JOB DESCRIPTION Laborer- Building**DISTRICT 4*

ENTIRE COUNTIES

Nassau, Suffolk

WAGES

Per Hour: 07/01/2026

\$
Building Laborer 45.35
"Base Wage" 42.55*

*For OVERTIME/PREMIUM CALCULATIONS purposes only.

SUPPLEMENTAL

BENEFITS Per Hour:

Building Laborer \$ 32.36

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

See also (H) for Fire Watch on OVERTIME
PAGE Asbestos Worker See (B, H)

*OVERTIME/PREMIUMS are calculated on Building Laborer "Base Rate" then adding: \$2.80 per hour worked.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25) on HOLIDAY PAGE
Asbestos Worker see (5,6,8 & 28)

REGISTERED APPRENTICES

Regular Hours Work Terms

Term #1	Term #2	Term #3	Term #4
0-1000 Hrs	1001-2000Hrs	2001-3000Hrs	3001-4000Hrs
\$ 19.09	\$ 24.35	\$ 30.03	\$ 35.15
Supplemental Benefits per hour worked:			
Term #1	Term #2	Term #3	Term #4
\$ 25.25	\$ 26.63	\$ 27.06	\$ 27.27

JOB DESCRIPTION Laborer - Heavy&Highway

DISTRICT 4

ENTIRE COUNTIES

Nassau, Suffolk

WAGES

Laborer (Heavy/Highway):

GROUP # 1: Asphalt Rakers, Concrete Curb Formsetters.

GROUP # 2: Asphalt Shovelers, Rollerboy and Tampers.

GROUP # 3: Basic Laborer, Power Tool(Jackhammer), Landscape Construction(Non-Building), Traffic Control Personnel(Flagger)

WAGES PER HOUR:

GROUP # 1	07/01/2026	06/01/2027
Total Wage Paid	\$ 66.13	Additional
"Base Wage"	55.72*	

GROUP # 2	
Total Wage Paid	\$ 64.65
"Base Wage"	54.25*

GROUP # 3	
Total Wage Paid	\$ 60.18
"Base Wage"	49.78*

* For OVERTIME/PREMIUM CALCULATIONS purposes only. ** To be allocated at a later date.

SHIFT WORK

- Additional 30% to "Base Wage" for all hours worked on New York State D.O.T. and/or other Government Mandated Off-Shift Work.

- Hazardous Material Work add an additional 10% of posted base wage

SUPPLEMENTAL**BENEFITS**

Per Hour:

ALL GROUPS \$ 37.87 OVERTIME:

\$ 22.14**

** Only after Forty (40) paid hours in a work week.

OVERTIME PAY

See (B, 82, E2, F) on OVERTIME PAGE

NOTE: Premium/Overtime Pay to be calculated on "Base Wage" ONLY. Then adding the difference between "Total Wage Paid" and "Base Wage"

Example Group #3 \$49.79 X Time and one Half = \$74.69 + \$10.40 = \$85.09

HOLIDAY paid: See {1) on HOLIDAY PAGE

Overtime: on HOLIDAY PAGE

REGISTER ED APPRENTICES

1000 hour(s) Terms at the following Percentage of the Journey Worker "Base Wage".

Term 1	Term 2	Term 3	Term 4
0-1000Hrs.	1001-2000Hrs.	2001-3000Hrs.	3001-4000Hrs.
\$ 29.87	\$ 34.85	\$ 39.82	\$ 44.80

Supplemental Benefits per hour:

All APPRENTICES	\$ 37.87
OVERTIME:	\$ 22.14***

*** Only after Forty (40) paid hours in a work week.

4-1298

Mason - Building

08/01/2026

JOB DESCRIPTION Mason - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Building

07/01/2026

01/01/2027

Wages per hour:

Additional

Mosaic & Terrazzo Mechanic \$ 62.82 \$ 1.06

Mosaic & Terrazzo Finisher 61.22

SUPPLEMENTAL BENEFITS per hour:

Mosaic & Terrazzo Mechanic \$ 31.91*

+ \$11.63

Mosaic & Terrazzo Finisher \$ 31.91*

+ 11.61

*This portion of benefits subject to same premium rate as shown for overtime wages.

OVERTIME PAY

See (A, E, Q) on OVERTIME PAGE

Deduct \$7.00 from hourly wages before calculating overtime.

HOLIDAY paid: See (1) on HOLIDAY

PAGE

Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

Easter Sunday is an observed holiday. Holidays falling on a Saturday will be observed on that Saturday.

Holidays falling on a Sunday will be celebrated on the Monday.

REGISTER ED APPRENTI CES

Wages Per hour:

	1st 1500	2nd 1501- 3000	3rd 3001- 3750	4th 3751- 4500	5th 4501- 5250	6th 5251- 6000
07/01/2026	\$25.90	\$33.30	\$40.85	\$42.00	\$50.56	\$57.05

Supplemental Benefits per hour:

07/01/2026	\$7.26*	\$9.33*	\$15.99*	\$24.31*	\$25.21*	\$28.21* 7	+ 5.23
	+ 6.98	+ 8.14	+ 9.32	+ 10.46			

*This portion of benefits subject to same premium rate as shown for overtime wages.

per hour:	07/01/2026	12/07/2026 Additional	06/07/2027 Additional
Tile Setters	\$ 66.35	\$ 1.28	\$ 1.41

SUPPLEMENTAL BENEFITS

Per Hour:

\$ 30.56*
+8.56

*This portion of benefits subject to same premium rate as shown for overtime wages.

OVERTIME PAY

Last Published on Aug 01 2026

Nassau County

See (B, *E, Q, V) on OVERTIME PAGE

Work beyond 10 hours on Saturday shall be paid at double
the hourly wage rate.

HOLIDAY paid: See {1) on HOLIDAY OLIDAY PAGE
PAGE Overtime: 8, 11, 15, 16, 25) on H

REGISTERED APPRENTICES
Wage per hour:

750 hour terms at the following wage rate:

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
	751-	1501-	2251-	3001-	3751-	4501-	5251-	6001-	6501-
750	1500	2250	3000	3750	4500	5250	6000	6750	7000
07/01/2026									
\$23.09	\$28.32	\$35.65	\$40.86	\$44.67	\$48.38	\$52.23	\$57.45	\$59.83	\$66.35

Supplemental Benefits per hour:

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
07/01/2026									
\$13.05*	\$13.05*	\$16.16*	\$16.16*	\$17.16*	\$18.66*	\$19.66*	\$19.66*	\$19.96*	\$30.56*
+ \$.77	+ \$.82	+ \$.93	+ \$.98	+\$1.45	+\$1.51	+\$1.94	+\$1.99	+\$4.59	+\$8.56

*This portion of benefits subject to same premium rate as shown for overtime
wages.

9-7/3

Mason - Building08/01/2026

JOB DESCRIPTION Mason - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland,
Suffolk, Westchester

WAGES

9-7/52

Mason - Building08/01/2026

JOB DESCRIPTION Mason - Building

DISTRICT 9

~~Last Published on Aug 01 2026~~~~Nassau County~~**ENTIRE COUNTIES**

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per hour:	07/01/2026	01/04/2027
Building-Marble Restoration:		Additional
Marble, Stone &	\$ 48.72	\$ 0.57

Terrazzo Polisher

SUPPLEMENTAL**BENEFITS per Hour:**

Journeyworker

Building-Marble Restoration:

Marble, Stone &

Polisher \$ 32.78

OVERTIME PAY

See (B, *E, Q, V) on OVERTIME PAGE

* On Saturdays, 8th hour and successive hours paid at double hourly rate.

HOLIDAY paid: See 1) on HOLIDAY

PAGE

Overtime: See 5, 6, 8, 11, 15, 25) on HOLIDAY PAGE

REGISTERED**APPRENTICES WAGES**

per hour:

900 hour term at the following wage:

	1st	2nd	3rd	4th
		901-	1801-	2701
900		1800	2700	
07/01/2026	\$ 34.10	\$ 38.97	\$ 43.84	\$ 48.72

Supplemental Benefits Per

Hour:

		\$ 31.78	\$ 32.29	\$ 32.78
07/01/2026	\$ 31.28			

9-7/24-MP

Mason - Building

08101/2026

JOB DESCRIPTION Mason - Building DISTRICT 9 ENTIRE COUNTIES

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

WAGES

Per Hour:

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Nassau County

07/01/2026

01/04/2027

Additional

Marble Cutters

& Setters

\$ 65.61

\$ 0.75

SUPPLEMENTAL

BENEFITS per Hour:

Journeyworker

\$ 41.38

OVERTIME PAY

See (B, E, Q, V) on OVERTIME PAGE

HOLIDAY

Paid: e 1) on HOLIDAY PAGE

Overtime: See 5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

REGISTERED

APPRENTICES Wage Per

Hour:

750 hour terms at the following wage

1st

2nd

3rd

4th

5th

6th

7th

8th

3001-

3751-

4501-

5251-

6001-

6751-

7500+

3000

3750

4500

5250

6000

6750

7500

07/01/2026

\$28.35

\$42.51

\$46.05

\$49.59

\$53.14

\$55.76

\$65.61

\$65.61

Supplemental Benefits per

hour:

1st

2nd

3rd

4th

5th

6th

7th

8th

07/01/2026

\$27.95

\$30.68

\$31.37

\$32.05

\$32.73

\$39.34

\$41.38

\$41.38

9-7/4

Mason - Building

08/01/2026

JOB DESCRIPTION Mason - Building

DISTRICT 9 ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

Per hour:

07/01/2026

12/07/2026

06/07/2027

Additional

Additional

Tile Finisher

\$ 50.93

\$ 1.05*

\$ 1.15*

*To be allocated at a later date.

SUPPLEMENTAL

BENEFITS Per Hour:

\$ 27.16*

+ \$8.37

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Nassau County

* This portion of benefits is subject to same premium rate as shown for overtime wages.

OVERTIME PAY

See (A, *E, Q) on OVERTIME PAGE

*Double time rate after 10 hours on Saturdays

HOLIDAY

paid: e 1) on HOLIDAY PAGE

Overtime: See 5, 6, 11, 15, 16, 25) on
HOLIDAY PAGE

9-7/88-tf

Mason - Building**08/01/2026****JOB DESCRIPTION Mason - Building DISTRICT 9 ENTIRE COUNTIES**

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per hour: 07/01/2026 01/04/2027

Marble, Stone, Additional

Maintenance Finishers: \$ 28.56 \$ 0.41Note 1: An additional \$2.00 per
hour for time spent grinding floor
using "60 grit" and below.Note 2: Flaming equipment
operator shall be paid an
additional \$25.00 per day.**SUPPLEMENTAL****BENEFITS Per Hour:**

Marble, Stone

Maintenance Finishers: \$ 16.54**OVERTIME PAY**

See (B, *E, Q, V) on OVERTIME PAGE

*Double hourly rate after 8 hours on
SaturdayHOLIDAY paid: See (5, 6, 8, 11, 15, 25) on
HOLIDAY PAGE Overtime: See (5, 6, 8, 11, 15, 25) on
HOLIDAY PAGE 1st term apprentice gets paid for all
observed holidays.**REGISTERED****APPRENTICES WAGES**

per hour:

	07/01/2026
0-750	\$
	23.78
751-1500	24.43
1501-2250	25.07
2251-3000	25.70
3001-3750	26.65
3751-4500	27.93

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4501+ 28.56

Supplemental

Benefits: Per hour:

0-750 \$
12.61

751-1500 13.12

1501-2250 13.65

2251-3000 14.18

3001-3750 14.97

3751-4500 16.01

16.54

9-7/24M-MF

Mason - Building I Heavy&Highway08/01/2026

JOB DESCRIPTION Mason - Building / Heavy&Highway

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per hour: 07/01/2026 01/04/2027

Additional

Marble-Finisher \$ 51.04 \$ 0.53

SUPPLEMENTAL BENEFITS Journeyworker:

Per hour

Marble- Finisher \$ 38.46

OVERTIME PAY

See (B, E, Q, V) on OVERTIME PAGE

Work beyond 8 hours on a Saturday shall be paid at double the rate.

HOLIDAY

Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

When an observed holiday falls on a Sunday, it will be observed the next day.

9-7/20-MF

Mason - Building I Heavy&Highway08/01/2026

JOB DESCRIPTION Mason - Building / Heavy&Highway

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2026

Brick/Block Layer \$ 69.84

Base Wage* 58.49

* For Premium/Overtime calculations
purposes only.

Brick/Block Layer	\$ 37.95
-------------------	----------

OVERTIME PAY

See (A, E, E2, Q) on OVERTIME PAGE

* Base rate is utilized for Calculating Overtime Premiums then adding \$ 11.35/hr.

HOLIDAY

Paid: See 1) on HOLIDAY PAGE

Overtime: See 5, 6, 25) on HOLIDAY PAGE

REGISTERED**APPRENTICES**

650 Hr Terms at the following Percentage of Brick/Block Layer "Base Wage" then adding \$ 6.10 per hour:

1st	2nd	3rd	4th	5th	6th
	50%	60%	70%		90%

Supplemental Benefits per
hour:

All Apprentices \$ 26.45

4-1 Brk

Mason - Building I Heavy&Highway

08/01/2026

JOB DESCRIPTION Mason - Building / Heavy&Highway

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2026

Cement Mason \$ 59.87

SUPPLEMENTAL BENEFITS

Per Hour:

Cement Mason \$ 34.81

1.5x OVERTIME \$ 63.30

2X OVERTIME \$ 69.62

OVERTIME PAY

See (81, Q) on OVERTIME PAGE

HOLIDAY paid: e 1) on HOLIDAY PAGE

Overtime: See 5, 6, 8, 11, 13, 25) on HOLIDAY PAGE

REGISTERED
APPRENTI

CES

(1) year terms at the following wage:

1st	2nd	3rd
\$ 23.77	\$ 28.74	\$ 34.27

Supplement Benefits per hour paid:

	1st	2nd	3rd
Straight Time	\$ 14.86	\$ 15.16	\$ 15.27
1.5x OVERTIME	14.89	15.34	15.50
2X OVERTIME	14.91	15.51	15.73

4-780

Mason - Building I Heavy&Highway

08/01/2026

JOB DESCRIPTION Mason - Building /Heavy&DISTRICT 4 ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

per Hour: 07/01/2026

Pointer, Cleaners
& Caulkers \$ 66.84

SUPPLEMENTAL

BENEFITS

Per Hour:

Pointer, Cleaners &
Caulkers \$ 34.25

OVERTIME PAY

See (B, E2, H) on OVERTIME PAGE

HOLIDAY paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 25, 26) on HOLIDAY PAGE

REGISTERED

APPRENTICES

One (1) year terms at the following wage rates per hour.

1st	2nd	3rd	4th
\$ 34.96	\$ 39.69	\$ 46.12	\$ 55.30

Supplemental Benefits per hour paid:

1st	2nd	3rd	4th
\$ 16.70	\$ 20.80	\$ 24.55	\$ 25.55

~~Last Published on Aug 01, 2026~~~~Nassau County~~Mason - Building I Heavy&Highway08/01/2026

JOB DESCRIPTION Mason - Building / Heavy&Highway

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES NOTE: Shall include but not limited to Precast concrete slabs (London Walks) Marble and Granite pavers 2'x 2 or larger. per Hour:

07/01/2026

05/01/2026

Additional

Stone Setter \$ 74.57

Base Wage 58.36*

* For Premium/Overtime calculations purposes only.

** To be allocated at a later date.

SUPPLEMENTAL**BENEFITS**

Per Hour:

Stone Setter \$ 44.75

OVERTIME PAY

See (*C, Q) on OVERTIME PAGE

Base rate is utilized for Calculating Overtime Premiums then adding 16.21/Hr.

* On weekdays the eighth (8th) and ninth (9th) hours are time and one-half and all work thereafter is paid at double the hourly rate.

** On Saturday, the first nine (9) hours are paid at time and one-half and all work thereafter is paid at double the hourly rate.

HOLIDAY

Paid: See *18) on HOLIDAY PAGE

Overtime: See 5, 6, 8, 10) on HOLIDAY PAGE Paid: *

Must work first 1/2 of day.

REGISTERED APPRENTICES

800 Hour terms at the following base wages per hour then adding \$ 7.42/Hr.

1st	2nd	3rd	4th	5th
\$ 29.18	\$ 35.02	\$ 40.85	\$ 46.69	\$ 52.52

Apprentice Supplemental

Benefits:

All Terms: \$ 27.29

4-1 Stn

Operating Engineer - Building08/01/2026

~~LAST PUBLISHED ON AUG 01 2026~~~~Nassau County~~

JOB DESCRIPTION Operating Engineer - Building

DISTRICT 4

ENTIRE COUNTIES

Nassau, Suffolk

WAGES**BUILDING CATEGORIES:****CLASS " AA "CRANES:**

ABI Machine (150,000lbs and over or 149,999lbs and under when driving steel sheet piles), All
Cranes/Cherry-pickers, Derrick, Dragline, Dredge, Tower Crane, Pile Driver, Vertical Drill Rig

CLASS"A":

ABI Machine (149,999 and under used for augering and drilling), Asphalt Spreader, Backhoe Crawler(360
swing), Barrier Machine, CAP (ice machine), CMI or Maxim Spreader, Concrete Pump, Directional Boring,
GradAll, Grader, Hoist (3drum or multi platform), Laser Screed, Loading Machine (Bucket/CAP IOYDS or
more), Milling Machine (Large), Pipeline Welder, Plant Engineer, Power Winch (Stone setting/Structural steel),
Powerhouse, Scoop Carry-All Scraper (in tandem), Side boom Tractor (includes tank work), Track Alignment
Machine, Stone Spreader (Self Propelled), Striping Machine (Long line/Truck mounted), Tree Grapple,
Zamboni.

CLASS"B":

Backhoe (other than 360), Belt Screte, Bulldozer, Boom Truck, Boring Machine/Auger, Conveyor-Multi, Curb
Machine (asphalt or concrete),
Dinky Locomotive, Drill Rig (dowels), Fork Lift, Hoist (2 Drum), Loading Machine & Front End Loader,
Mechanical Compactors (Machine
Drawn), Mulch Machine (Machine Fed), Post Hole/Auger, Power Winch (Other than Class "A"), Asphalt Roller,
Hydraulic Pump with Boring Machine, Scoop, Carryall/Scraper, Skid Loader/Skid Steer/Bobcat, Trenching
Machine, Vermeer Cutter, Work Boat, Inspection/Safety Boat.

CLASS"C":

Concrete Finish/Saw/Spreader, Dirt Roller, Hoist (1 drum, Clam Shell), Interior Hoist, Milling Machine (small),
Oiler Truck Crane (pile work), Power Broom, Vactor Truck, Vac-All.

CLASS"D":

Boiler (thermoplastic), Concrete Breaker, Cnveryor, Curing Machine, Fork Lift or Walk Behind (power
operated), Generator, Hydra Hammer,
Compactors (mechanical or hand operated), Maintenance Engineer (small equipment/well point/welding &
burning), Mechanic (field man),
Micro-Trap with Compressor, Oiler (Truck Crane Boom 100ft or more) Power Winch Truck Mounted (Stone
Setter/Struct. Steel), Pin Puller, Portable Heaters, Power Buggies, Pump (double action diaphragm), Pump (4
inch or over), Pump (hydraulic/submersible) Jet Pump, PulviMixer, Ridge Cutter, Shot Blaster.

CLASS "E":

Batching Plant, Compressor (structural steel/2 or more battery), Generator (small), Grinder, Ground Heater,
Power Grinder, Mixer with Skip,
Mulching Machine (hand fed), Oiler, Pipeline Welder Helper, Power Washer, Pumps (up to 3 inch/single action
1 to 3 inches), Pump (gypsum), Root Cutter, Stump Chipper, Track Tamper, Tractor (caterpillar or wheel),
Trenching Machine (hand), Welding Machine (pile work/structural steel), Deckhand on Work/Inspection/Safety
Boat.

07/01/2026

06/01/2027

Class # AA

\$ 98.97

Additional

3%

per hour to

Cranes:Boom length over 100 feet add \$ 1.00 per hour

Boom length over 150 feet add \$ 1.50 per hour

be
allocated
(All
Classes)

Boom length over 250 feet add \$ 2.50 per hour

Boom length over 350 feet add \$ 3.00 per hour

Class "A" \$ 82.82

Add \$3.50 for Hazardous Waste

Work

Class '1B" \$ 78.72

Add \$2.50 for Hazardous Waste

Work

Class "C" \$ 75.98

Add \$1.50 for Hazardous Waste

Work

Class "D" \$ 58.27

Add \$1.00 for Hazardous Waste

Work

Class "E" \$ 55.88

SUPPLEMENTAL

BENEFITS Per Hour:

All Classes \$ 43.40

Overtime Rate \$ 38.60

OVERTIME PAY

Last Published on Aug 01 2026

Nassau County

See (D, 0) on OVERTIME PAGE

HOLIDAY paid: See (5, 6, 8, 15, 16, 25) on

HOLIDAY PAGE Overtime: See (5, 6, 8, 15, 16, 25) on

HOLIDAY PAGE

REGISTERED**APPRENTICES**

One(l) Year Terms at the following Rate:

1st	2nd	3rd
\$ 30.80	\$ 31.86	\$ 32.92

Supplemental Benefits per hour:

All Apprentices \$
15.64

Overtime Rate \$
5.60

4-138

Operating Engineer - Building I Heavy&Highway08/01/2026

JOB DESCRIPTION Operating Engineer - Building / Heavy&Highway DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour:	07/01/2026	08/01/2026
Well Driller	\$ 44.37	\$ 45.63
Well Driller Assistant	38.44	39.53

Hazardous Waste

Differential Added to

Hourly Wage: \$ 3.00

Level A \$ 2.00

Level B \$ 1.00

Level C

Monitoring Well Work

Add to Hourly Wage: \$ 3.00

Level A

Level B \$ 2.00

SUPPLEMENTAL**BENEFITS per Hour:**

Last Published on

Aug 01 2026

Nassau County

Well Driller 10% of Total Wage at Straight time Wage Rate & Assistant plus \$ 13.50*

*Additional \$ 4.25/Hr. for Premium Time Hours Worked

OVERTIME PAY

See (82, P, S) on OVERTIME PAGE

HOLIDAY paid: See (5, 6, 16, 23 on

HOLIDAY PAGE Overtime: See (5, 6, 16, 23 on

HOLIDAY PAGE

REGISTERED APPRENTICES

Apprentices at 12 Month

Terms

Wages Per Hour:

	1st	2nd	3rd
07/01/2026	\$ 29.40	\$ 30.43	\$ 31.46
08/01/2026	\$ 30.80	\$ 31.86	\$ 32.92

SUPPLEMENTAL

BENEFITS Per Hour:

All Terms 10% of Total Wage at Straight time Wage Rate plus
\$ 13.50*

*Additional \$ 4.25/Hr. for Premium Time Hours Worked

4-138well

Operating Engineer - Heavy&Highway

08/01/2026

JOB DESCRIPTION Operating Engineer - Heavy&Highway

DISTRICT 4

ENTIRE COUNTIES

Nassau, Suffolk

WAGES

Party Chief - One who directs a survey party

Instrument Man - One who runs the instrument and assists

Party Chief Rodman - One who holds the rod and in general,

assists the survey party Categories cover GPS & Under

Ground Surveying

per Hour:

07/01/2026

Heavy Highway/Building

\$

Party Chief

77.06

Instrument Man

56.79

Rodman

47.50

SUPPLEMENTAL

BENEFITS per Hour:

Heavy Highway/Building

\$ 48.10

At Time and One Half

52.45

At Double Time

64.49

OVERTIME PAY

Last Published on

Aug 01 2026

Nassau County

See (B, B2, *E, E5, Q, V) on OVERTIME PAGE

* Double-time paid on the 9th hour on Saturday.

HOLIDAY

Paid: See 5, 6, 10, 11, 15, 16, 26 on HOLIDAY PAGE

Overtime: See 5, 6, 10, 11, 15, 16, 26 on HOLIDAY PAGE

4-15D-N/S co.

Operating Engineer - Heavy&Highway08/01/2026

JOB DESCRIPTION Operating Engineer - Heavy&Highway

DISTRICT 4

ENTIRE COUNTIES

Nassau, Suffolk

WAGES

HEAVY and HIGHWAY CATEGORIES:

CLASS " AA "CRANES:

ABI Machine (150,000lbs and over or 149,999lbs and under when driving steel sheet piles), All Cranes/Cherry pickers, Derrick, Dragline, Dredge, Tower Crane, Pile Driver, Vertical Drill Rig

CLASS"A":

ABI Machine (149,999 and under used for augering and drilling), Asphalt Spreader, Backhoe Crawler(360 swing), Barrier Machine, CAP (ice machine), CMI or Maxim Spreader, Concrete Pump, Directional Boring, GradAll, Grader, Hoist (3drum or multi platform), Laser Screed, Loading Machine (Bucket/CAP IOYDS or more), Milling Machine (Large), Pipeline Welder, Plant Engineer, Power Winch (Stone setting/Structural steel), Powerhouse, Scoop Carry-All Scraper (in tandem), Side boom Tractor (includes tank work), Track Alignment Machine, Stone Spreader (Self Propelled), Striping Machine (Long line/Truck mounted), Tree Grapple, Zamboni.

CLASS"B":

Backhoe (other than 360), Belt Screte, Bulldozer, Boom Truck, Boring Machine/Auger, Conveyor-Multi, Curb Machine (asphalt or concrete), Dinky Locomotive, Drill Rig (dowels), Fork Lift, Hoist (2 Drum), Loading Machine & Front End Loader, Mechanical Compactors (Machine Drawn), Mulch Machine (Machine Fed), Post Hole/Auger, Power Winch (Other than Class "A"), Asphalt Roller, Hydraulic Pump with Boring Machine, Scoop, Carryall/Scraper, Skid Loader/Skid Steer/Bobcat, Trenching Machine, Vermeer Cutter, Work Boat, Inspection/Safety Boat.

CLASS"C":

Concrete Finish/Saw/Spreader, Dirt Roller, Hoist (1 drum, Clam Shell), Interior Hoist, Milling Machine (small), Oiler Truck Crane (pile work), Power Broom, Vactor Truck, Vac-All.

CLASS"D":

Boiler (thermoplastic), Concrete Breaker, Conveyor, Curing Machine, Fork Lift or Walk Behind (power operated), Generator, Hydra Hammer, Compactors (mechanical or hand operated), Maintenance Engineer (small equipment/well point/welding & burning), Mechanic (field man), Micro-Trap with Compressor, Oiler (Truck Crane Boom 100ft or more) Power Winch Truck Mounted (Stone Setter/Struct. Steel), Pin Puller, Portable Heaters, Power Buggies, Pump (double action diaphragm), Pump (4 inch or over), Pump (hydraulic/submersible) Jet Pump, PulviMixer, Ridge Cutter, Shot Blaster.

CLASS"E":

Batching Plant, Compressor (structural steel/2 or more battery), Generator (small), Grinder, Ground Heater,

Last Published on

Aug 01 2026

Nassau County

Power Grinder, Mixer with Skip,
 Mulching Machine (hand fed), Oiler, Pipeline Welder Helper, Power Washer, Pumps (up to 3 inch/single
 action 1 to 3 inches), Pump (gypsum), Root Cutter, Stump Chipper, Track Tamper, Tractor (caterpillar or
 wheel), Trenching Machine (hand), Welding Machine (pile work/structural steel), Deckhand on
 Work/Inspection/Safety Boat.

07/01/2026

06/01/2027

Class "AA"

\$ 98.10

Additional 3%

Cranes: Boom Length over 100 feet add \$ 1.00 per hour

Per hour to

Boom Length over 150 feet add \$ 1.50 per hour

be Allocated

Boom Length over 250 feet add \$ 2.00 per hour

(All Classes)

Boom Length over 350 feet add \$ 3.00 per hour

Class "A" \$ 87.21 Add \$3.50 for

Hazardous Waste Work.

Class "B" \$ 81.69 Add \$2.50 for

Hazardous Waste Work.

Class "C" \$ 78.90 Add \$1.50 for

Hazardous Waste Work

class "D" \$ 60.73 Add \$1.00 for

Hazardous Waste Work

Class "E"

\$ 58.29

SHIFT WORK

ADD 30% to straight time hourly wage for NEW YORK STATE D.O.T. and other GOVERNMENTAL MANDATED off-shift work.

SUPPLEMENTAL**BENEFITS per Hour:**

ALL CLASSES \$
 43.65

\$
 Note: OVERTIME AMOUNT 38.60

OVERTIME PAY

See (D, 0) on OVERTIME PAGE

HOLIDAY paid: See 5, 8, 15, 20, 22, 25, 26) on

HOLIDAY PAGE Overtime: See 5, 8, 15, 20, 22, 25, 26) on

HOLIDAY PAGE

REGISTERED**APPRENTICES Wage per****hour:****REGISTERED APPRENTICES**

One(l) Year Terms at the following Rate:

1st	2nd	3rd
\$ 30.80	\$31.86	\$32.92

SUPPLEMENTAL BENEFITS:

Last Published on

Aug 01 2026

Nassau County

All Apprentices	\$ 15.64	
Overtime Rate	\$ 5.60	
		4-138

Operating Engineer - Marine Dredging

08/01/2026

JOB DESCRIPTION Operating Engineer - Marine Dredging

DISTRICT 4

ENTIRE COUNTIES
Albany, Bronx, Cayuga, Clinton, Columbia, Dutchess, Essex, Franklin, Greene, Jefferson, Kings, Monroe, Nassau, New York, Orange, Oswego, Putnam, Queens, Rensselaer, Richmond, Rockland, St. Lawrence, Suffolk, Ulster, Washington, Wayne, Westchester

WAGES

These wage rates do not apply to Operating Engineers on land-based construction projects. For those projects, refer to the Operating Engineers Heavy/Highway rates. The wage rates listed below apply specifically to all equipment and operators involved in marine dredging work within navigable waters located in the counties listed above.

per Hour: 07/01/2026 10/01/2026

CLASS A1 \$ 48.48 \$ 49.94

Deck Captain, Leverman,

Mechanical Dredge

Operator,

Licensed Tug Operator with

MOTV

CLASS A2 43.20 44.50

Crane Operator (360 swing)

CLASS B To conform to Operating Engineer

Dozer, Front Loader Prevailing Wage in locality where

work Operator (On Land) is being performed

including benefits.

CLASS B1 41.93 43.18

Derrick Operator (180 swing),

Spider/Spill Barge Operator 1/1 1 ,

Fill Placer, Engineer, Chief Mate,

Electrician, Chief Welder, Maintenance Engineer,

Licensed Boat, Crew Boat

Operator

CLASS B2 39.46 40.65

Certified Welder

CLASS C1 38.38 39.53

Drag Barge Operator,

Steward, Mate,

Assistant Fill Placer

CLASS C2 37.15 38.26

Boat Operator

CLASS D 30.86 31.79

Shoreman, Deckhand, Oiler,

Rodman, Scowman, Cook,

Messman, Porter/Janitor

SUPPLEMENTAL

BENEFITS per Hour:

THE FOLLOWING SUPPLEMENTAL BENEFITS APPLY TO ALL CATEGORIES

All Classes: 7% of Hourly Straight 7.5% of Hourly Straight

~~Last Published on Aug 01 2026 Nassau~~

County

time wage + \$12.00.

time wage +
\$12.00.

- Additional \$0.63 per hour for Overtime hours

OVERTIME PAY

See (82, F, R) on OVERTIME PAGE

HOLIDAY

Paid: See 1) on HOLIDAY PAGE

Overtime: See 5, 6, 8, 15, 26) on HOLIDAY PAGE

4-25a-MarDredge

Operating Engineer - Survey Crew - Consulting Engineer08/01/2026

JOB DESCRIPTION Operating Engineer - Survey Crew - Consulting Engineer DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Suffolk, Westchester

PARTIAL COUNTIES

Dutchess: That part in Dutchess County lying South of the North City line of Poughkeepsie.

WAGES

Feasibility and preliminary design surveying, any line and grade surveying for inspection or supervision of construction.

Per hour:

07/01/2026

Survey Classifications

\$

Party Chief

51.16

Instrument Man

42.44

Rodman

36.92

SUPPLEMENTAL**BENEFITS Per Hour:**

All Crew Members: \$ 24.53

OVERTIME PAY

OVERTIME:.... See (B, Q, V) ON OVERTIME PAGE.

*Double-time paid on the 9th hour on Saturday.

HOLIDAY paid: See (5, 6, 7, 11, 16) on

HOLIDAY PAGE Overtime: See (5, 6, 7, 11, 16) on

HOLIDAY PAGE

9-15dconsult

Operating Engineer - Trenchless Pipe Rehab08/01/2026

JOB DESCRIPTION Operating Engineer - Trenchless Pipe

DISTRICT 4

Rehab

ENTIRE COUNTIES

Nassau, Suffolk

WAGES

IMPORTANT NOTE: This Category & Classifications are now located

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County

within Operating Engineers/Heavy Highway & Laborers/ Heavy Highway.

Per Hour:	07/01/2026 (SEE)
Robotic Unit Operator	Operator(class D)
Technician/Boiler, Generator	Operator(class D)
AM Liner/Hydra Seal	Laborer(Grp#3)
Hobas Pipe, Polyethylene Pipe or Pull and Inflate Liner	Laborer(Grp#3)
OVERTIME PAY	
HOLIDAY	

4-138TrchPREh

Painter08/01/2026**JOB DESCRIPTION Painter DISTRICT 8 ENTIRE COUNTIES**

Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Suffolk, Westchester

WAGES

per hour:	07/01/2026	05/01/2027 Additional
Brush	\$ 55.76	\$2.77*
Abatement/Removal of lead based or lead containing paint on materials to be repainted.	55.76	
Spray & Scaffold	\$ 58.76	
Fire Escape	58.76	
Decorator	58.76	
Paperhanger/Wall Coverer	57.27	

*To be allocated at a later date.

SHIFT WORK

Agency/Government mandated off-shift work to be paid at time and one-half the hourly wage.

SUPPLEMENTAL**BENEFITS per hour:**

Paperhanger	\$ 39.86
All others	36.72
Paperhanger Premium	45.26
Premium	41.23**

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County

**Applies only to "All others" category, not paperhanger journeyworker.

OVERTIME PAY

See (A, F, R) on OVERTIME PAGE

HOLIDAY paid: See 1) on HOLIDAY

PAGE

Overtime: See 5, 6, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

One (1) year terms at the following wage rate.

per hour:	07/01/2026
Appr 1st term...	\$ 21.18
Appr 2nd term...	27.40
Appr 3rd term...	33.30
Appr 4th term...	44.67

Supplemental benefits:

per Hour:

Appr 1st term.,.	\$ 18.06
Appr 2nd term...	22.14
Appr 3rd term...	25.59
Appr 4th term...	32.55

8-NYDC9-B/S

Painter08/01/2026

JOB DESCRIPTION Painter

DISTRICT 8

ENTIRE COUNTIES

Putnam, Suffolk, Westchester

PARTIAL COUNTIES

Nassau: All of Nassau except the areas described below: Atlantic Beach, Ceaderhurst, East Rockaway, Gibson, Hewlett, Hewlett Bay, Hewlett Neck, Hewlett Park, Inwood, Lawrence, Lido Beach, Long Beach, parts of Lynbrook, parts of Oceanside, parts of Valley Stream, and Woodmere. Starting on the South side of Sunrise Hwy in Valley Stream running east to Windsor and Rockaway Ave., Rockville Centre is the boundary line up to Lawson Blvd. turn right going west all the above territory. Starting at Union Turnpike and Lakeville Rd. going north to Northern Blvd. the west side of Lakeville road to Northern blvd. At Northern blvd. going east the district north of Northern blvd. to Port Washington Blvd. West of Port Washington blvd-to St.Francis Hospital then north of first traffic light to Port Washington and Sands Point, Manor HAVen, Harbour Acres.

WAGES

Per hour: 07/01/2026 05/01/2027

		Additional
Drywall Taper:	\$ 55.76	\$ 2.77*
Scaffold:	\$ 58.76	

* To be allocated a later date.

SHIFT WORK

Agency/Government mandated off-shift work to be paid at time and one-half hourly wage

SUPPLEMENTAL

BENEFITS Per hour:

Journeyworker \$ 36.72

OVERTIME PAY

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Nassau County

See (A, F, R) on OVERTIME PAGE

HOLIDAY

paid: See (1) on HOLIDAY PAGE Overtime:

See (5, 6, 16, 25) on HOLIDAY PAGE

REGISTERED**APPRENTICES Wages -****Per Hour:**

1500 hour terms at the following wage rate:

1st term \$ 21.18

2nd term 27.40

3rd term 33.30

4th term 44.67

Supplemental Benefits - Per hour:

One year term (1500 hours) at the following dollar amount.

1st year \$ 18.06

2nd year 22.14

3rd year 25.59

4th year 32.55

8-NYDCT9-DWT

Painter

08/01/2026

JOB DESCRIPTION Painter DISTRICT 8 ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

PARTIAL COUNTIESNassau: Atlantic Beach, Ceadershurst, East Rockaway, Hewlett, Hewlett Bay, Hewlett Neck, Hewlett Park,
Inwood, Lawrence, Lido Beach,

15.73 Long Beach, parts of Lynbrook, parts of Oceanside, parts of Valley Stream, and
 2nd term 21.67 Woodmere. Starting on South side of Sunrise Hwy in Valley Stream running
 east to Windsor and Rockaway Ave, Rockville is the boundary line up to
 Lawson Blvd, turning right going west all the above territory. Starting at Union Turnpike & Lakeville Rd going
 north to northern Blvd. the west side of Lakeville Rd to Northern Blvd. At Northern Blvd doing east the district
 north of Northern blvd to Port Washington blvd. West of Port Washington blvd to St. Francis Hospital then
 north of first traffic light to Port Washington & Sands Point, Manor Haven, & Harbour Acres.

WAGES

Per hour:	07/01/2026	01/01/2027
		Additional
Drywall Taper	\$ 60.12	\$0.50*

*To be allocated at a later date.

SHIFT WORK

When directly specified in public agency or authority contract documents for an employer to work an irregular or off-shift, all employees who work any shifts between 3pm-1 1 pm or 1 Ipm-7am will be paid wage rate as followed:

\$ 67.64

SUPPLEMENTAL**BENEFITS Per Hour:**

Journeyworker: \$ 27.61

OVERTIME PAY

See (A, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See {1) on HOLIDAY PAGE

Overtime: 3, 8, 11, 18, 19, 25, 26) on HOLIDAY PAGE

REGISTERED**APPRENTICES Wage per hour:**

1st term \$ 23.83

2nd term 30.50

3rd term 36.42 4th term 48.27

Supplemental Benefits per hour:

3rd term 22.86

4th term 25.23

8-NYC9-1974-DWT

Painter Bridge & Structural Steel

08/01/2026

JOB DESCRIPTION Painter - Bridge & Structural Steel DISTRICT 8 ENTIRE COUNTIES

Albany, Bronx, Clinton, Columbia, Dutchess, Essex, Franklin, Fulton, Greene, Hamilton, Kings, Montgomery, Nassau, New York, Orange, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Suffolk, Sullivan, Ulster, Warren, Washington, Westchester

WAGES

per Hour:

STEEL:

Bridge Painting:	07/01/2026	10/01/2026
	\$ 57.00*	Additional
	+ 12.90**	+ 3.64**

ADDITIONAL \$7.00 per hour for POWER TOOL/SPRAY, whether straight time or overtime.

*NOTE: All premium wages are to be calculated on base rate per hour only.

** For the period of May 1st to November 15th, this amount is payable up to 40 hours. For the period of Nov 16th to April 30th, this amount is payable up to 50 hours. EXCEPTION: First and last week of employment, and for the weeks of Memorial Day, Independence Day and Labor Day, where the amount is paid for the actual number of hours worked (50 hour cap).

*** To be allocated a later date

NOTE: Generally, for Bridge Painting Contracts, ALL WORKERS on and off the bridge (including Flagmen) are to be paid Painter's Rate; the contract must be ONLY for Bridge Painting.

SHIFT WORK

When directly specified in public agency or authority contract documents for an employer to work a second shift and works the second shift with employees other than from the first shift, all employees who work the second shift will be paid 10% of the base wage shift differential in lieu of overtime for the first eight (8) hours worked after which the employees shall be paid at time and one half of the regular wage rate. When a single irregular work shift is mandated in the job specifications or by the contracting agency, wages shall be paid at time and one half for single shifts between the hours of 3pm-11 pm or 11 pm-7am.

SUPPLEMENTAL**BENEFITS per Hour:**

Journeyworker:	\$ 13.49
	+ 31.67*

OVERTIME PAY

See (B, F, R) on OVERTIME PAGE

HOLIDAY paid: See (1) on HOLIDAY PAGE

Overtime: See (4, 6) on HOLIDAY PAGE

REGISTERED**APPRENTICES Wage -****Per hour:**

Apprentices: (1) year terms.

	07/01/2026
1st year	\$ 22.80*
2nd year	\$ 34.20*
3rd year	\$ 45.60*
	+ 10.31 **

*NOTE: All premium wages are to be calculated on base rate per hour only.

** For the period of May 1st to November 15th, this amount is payable up to 40 hours. For the period of Nov

16th to April 30th, this amount is payable up to 50 hours. EXCEPTION: First and last week of employment, and for the weeks of Memorial Day, Independence Day and Labor Day, where the amount is paid for the actual number of hours worked (50 hour cap).

Supplemental Benefits - Per hour:

1st year \$ 13.74

2nd year \$ 8.09*
+ 18.99

3rd year \$ 10.79*
+ 25.34

*Portion not applicable to May 1st to November 15th and Nov 16th to April 30th period mentioned above.

8-DC-9/806/155-BRSS

Painter - Line Striping

08/01/2026

JOB DESCRIPTION Painter- Line Striping DISTRICT 8 ENTIRE COUNTIES

Albany, Clinton, Columbia, Dutchess, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Nassau, Orange, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Suffolk, Sullivan, Ulster, Warren, Washington, Westchester

WAGES Per
hour:

Painter (Striping-Highway):	07/01/2026	04/01/2027
Striping-Machine Operator*	\$ 36.93	\$ 38.45

Linerman Thermoplastic	44.44	46.22
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Note: * Includes but is not limited to: Positioning of cones and directing of traffic using hand held devices. Excludes the Driver/Operator of equipment used in the maintenance and protection of traffic safety.

SHIFT WORK

When directly specified in public agency or authority contract documents there shall be a 30% night shift premium pay differential for all work performed after 9:00pm and before 5:00am.

SUPPLEMENTAL BENEFITS Per
hour paid: Journeyworker:

Striping Machine Operator:	\$ 24.95	\$ 25.60
Linerman Thermoplastic:	24.95	25.60

OVERTIME PAY

See (B, 32, E2, F, S) on OVERTIME PAGE

HOLIDAY

Paid: See 5, 20) on HOLIDAY PAGE

Overtime: See 5, 20) on HOLIDAY PAGE

REGISTERED APPRENTICES

One (1) year terms at the following
wage rates:

	07/01/2026
1 st Term:	\$ 21.18
2nd Term:	27.40

3rd Term:	33.30
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Supplemental Benefits per hour:

	\$ 18.06
1st term:	
2nd term:	22.14
3rd term:	25.59

8-1456-LS

~~Painter - Metal Polisher~~~~08/01/2026~~***JOB DESCRIPTION Painter - Metal Polisher DISTRICT 8 ENTIRE COUNTIES***

Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

07/01/2026

Metal Polisher \$ 41.33 Metal Polisher*
42.43 Metal Polisher**45.33

*Note: Applies on New Construction & complete renovation ** Note: Applies when working on scaffolds over 34 feet.

SUPPLEMENTAL**BENEFITS Per Hour:**

Journeyworker:

All classifications \$ 13.99

OVERTIME PAY

See (B, E, P, T) on OVERTIME PAGE

HOLIDAY

Paid: See 5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE Overtime:
See 5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED**APPRENTICES Wages**

per hour:

One (I) year term at the following wage rates:

07/01/2026

1st year \$ 20.67

2nd year 22.73

3rd year 24.80

1st year* \$ 21.06

2nd year* 23.17

3rd year* 25.34

1st year** \$ 23.17

2nd year** 25.23

3rd year* * 27.30

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*Note: Applies on New Construction & complete renovation ** Note: Applies when working on scaffolds over 34 feet.

Supplemental

benefits: Per hour:

1st year	\$ 9.19
2nd year	9.19
3rd year	9.19

8-8A/28A-MP

Plasterer

08/01/2026

JOB DESCRIPTION Plasterer

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES per hour:

07/01/2026

08/01/2026

Building:

Plasterer/Traditional &	\$ 49.18	\$ 49.88
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Spraying Fireproofing	+ \$6.00*	+ \$6.00*
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*This portion is not subjected to OT premiums.

SUPPLEMENTAL

BENEFITS Per hour:

Journeyworker	\$ 26.73	\$ 27.53
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OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED**APPRENTICES**

Wages: 07/01/2026 (Per hour) 08/01/2026

800 hours term:

		\$ 19.69 +
1st term	\$ 19.50 + 1.00*	1.00*
2nd term	\$ 22.94 + 1.00*	\$ 23.16 +
		1.00*

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3rd term	\$ 26.43 + 1.00*	\$ 26.68 + 1.00*
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*This portion is not subjected to OT premiums.

Supplemental
Benefits: (Per
hour):
(800) hours term:

1 st term	\$ 11.95	\$ 12.15
2nd term	12.44	12.67
3rd term	13.08	13.35

9-262

Plumber08/01/2026

JOB DESCRIPTION Plumber

DISTRICT 4

ENTIRE COUNTIES

Nassau, Suffolk

WAGES per Hour: 07/01/2026 05/01/2027

Plumber:

PUMP & TANK	\$ 48.74	\$ 49.74
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SUPPLEMENTAL

BENEFITS per Hour:

Plumber:

PUMP & TANK	\$ 42.74	\$ 44.24
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OVERTIME PAY

See (B, 82, E2, Q, on OVERTIME PAGE

*For Sundays & Holidays if Worked Only

HOLIDAY

Paid: See 1) on HOLIDAY PAGE

Overtime: See 5, 6, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

One(l) Year Terms at the Following wages :

1st Term	\$ 17.38	\$ 17.68
2nd Term	\$ 21.00	\$ 21.40
3rd Term	\$ 25.63	\$ 26.13
4th Term	\$ 30.24	\$ 30.84
5th Term	\$ 34.87	\$ 35.57

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Supplemental Benefits Per Hour:

1st Term	\$ 29.98	\$ 31.48
2nd Term	\$ 30.72	\$ 32.22
3rd Term	\$ 31.64	\$ 33.14
4th Term	\$ 32.11	\$ 33.61
5th Term	\$ 35.49	\$ 36.99

4-200 Pump & Tank

Plumber08/01/2026

JOB DESCRIPTION Plumber

DISTRICT 4

ENTIRE COUNTIES

Nassau, Suffolk

WAGES

per Hour:

07/01/2026

Plumber

MAINTENANCE ONLY

\$ 37.05

Maintenance: Correction of problem(s) with the existing fixture or group of fixtures, preventive repairs or servicing of said fixtures.

SUPPLEMENTAL

BENEFITS per Hour:

Plumber

MAINTENANCE ONLY

\$ 24.44

OVERTIME PAY

See (B, B2, J) on OVERTIME PAGE

HOLIDAY

paid:

See 1) on HOLIDAY PAGE

Overtime:

See 5, 6, 15, 16) on

HOLIDAY PAGE

4-200 Maintance

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DISTRICT 4

08/01/2026

JOB DESCRIPTION Plumber

ENTIRE COUNTIES

Nassau, Suffolk

WAGES

per

Hour:

07/01/2026

Plumber \$ 63.98

SUPPLEMENTAL BENEFITS

05/01/2027

Per Hour:

\$ 66.48

Plumber \$ 53.70

OVERTIME PAY

See (A, E, Q, on OVERTIME PAGE \$ 54.70

*CODE "V" is only for SUNDAYS and HOLIDAYS THAT
ARE WORKED

HOLIDAY

Paid: See {1) on 3, 15, 16, 25) on HOLIDAY P

HOLIDAY PAGE Overtime:

REGISTERED APPRENTICES

One(l) Year Terms at the following wages per hour:

	1st	2nd	3rd	4th	5th
07/01/2026	\$ 19.21	\$ 25.59	\$ 32.03	\$ 38.39	\$ 44.81
05/01/2027	\$ 19.96	\$ 26.59	\$ 33.28	\$ 39.89	\$ 46.56

Supplemental Benefits per hour:

	1st	2nd	3rd	4th	5th
07/01/2026	\$ 39.02	\$ 41.51	\$ 43.03	\$ 44.68	\$ 46.41
05/01/2027	\$ 40.02	\$ 42.51	\$ 44.03	\$ 45.68	\$ 47.41

4-200

Roofer08/01/2026

JOB DESCRIPTION Roofer

DISTRICT 4

ENTIRE COUNTIES

Nassau, Suffolk

WAGES

Per Hour

07/01/2026

05/01/2027

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Roofer/Waterproofer:	\$ 60.25	Additional
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"Base Wage": \$ 52.25*

* For Premium/Overtime calculations purposes only.

** To be allocated at a later date.

SUPPLEMENTAL
BENEFITS Per Hour:

ROOFER/Waterproofer	\$ 41.36
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OVERTIME PAY

Per Hour:

NEW ROOF SEE (B, E, Q)

RE-ROOF SEE (B, E, E2, Q)

NOTE: Premium/Overtime pay to be calculated on "Base Wage" rate above then adding \$ 8.00 per hour.

HOLIDAY

Paid: See 1) on HOLIDAY PAGE

Overtime: See 5, 6, 13, *16, on HOLIDAY PAGE

* and ** Calculated at Time and one Half the Base Wage + \$ 8.00 per hour if worked.

REGISTER ED APPRENTI CES

(1) Year terms at the following wages below:

	1st	2nd	3rd	4th
07/01/2026	\$ 20.90	\$ 26.13	\$ 36.58	\$ 41.80 + \$ 6.40/Hr.

NOTE ON OVERTIME PAY:

Term 4: Premium/Overtime to be calculated on \$ 41.80 per hour then add \$6.40 per hour.

Supplemental Benefits per hour:

	1st	2nd	3rd	4th
07/01/2026	\$ 11.43	\$ 14.14	\$ 29.23	\$ 33.27

4-154

Sheetmetal Worker

08/01/2026

JOB DESCRIPTION Sheetmetal Worker DISTRICT 4 ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

per Hour:

07/01/2026

08/01/2026

Sign Erector

\$ 62.00

\$ 64.00

NOTE: For Structurally Supported Overhead Highway Signs (See STRUCTURAL IRON WORKER CLASSIFICATION)

*SUPPLEMENTAL**BENEFITS*

Per Hour:

Sign Erector

\$ 59.58

\$ 60.62

OVERTIME PAY

See (B, F, S) on OVERTIME PAGE

HOLIDAY

~~Last Published on Aug 01 2026~~~~Nassau County~~

paid: See (5, 6, 10, 11, 12, 16, 25) on HOLIDAY PAGE Overtime:

See (5, 6, 10, 11, 12, 16, 25) on HOLIDAY PAGE

REGISTERED**APPRENTICES Per Hour:**

6 month Terms at the following percentage of Sign Erectors wage rate:

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
35%		45%	50%	55%	60%	65%	70%	75%	

SUPPLEMENTAL BENEFITS Per**Hour:**

07/01/2026

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ 19.04	\$ 21.62	\$ 24.21	\$ 26.79	\$ 36.17	\$ 39.36	\$ 43.50	\$ 46.77	\$ 50.05	\$ 53.32

08/01/2026

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ 19.45	\$ 22.09	\$ 24.72	\$ 27.36	\$ 36.81	\$ 40.07	\$ 44.29	\$ 47.62	\$ 50.95	\$ 54.29

4-137-SE

Sheetmetal Worker**DISTRICT 4**08/01/2026**JOB DESCRIPTION Sheetmetal Worker****ENTIRE COUNTIES**Bronx, Kings, Nassau, New York, Queens,
Richmond, Suffolk**WAGES**

per Hour:

07/01/2026

11/01/2026

05/01/2027

Sheetmetal Worker

\$ 64.82

Additional
1.50*Additional
1.50*Maintenance of Fans
Temporary Operation

\$ 53.40

*To be allocated at a later
date**SUPPLEMENTAL****BENEFITS per Hour:**

\$ 55.52

All Classifications:

\$ 81.58

At time and one Half:

\$ 107.64

At Double Time:

OVERTIME PAYSee (B, *E, E2, Q) on OVERTIME
PAGE* Double the hourly rate on Saturday after 10
HoursMaintenance of Fans
Temporary Operation: B,E, & Q

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HOLIDAY paid: See (1) on HOLIDAY

PAGE

Overtime: See (5, 6, 11, 15, 16, 25, 26, 29) on HOLIDAY PAGE

REGISTERED

APPRENTICES Six(6)

Month Terms As

Follows: Wages per

hour:

1st & 2nd Term	3rd & 4th Term	5th & 6th Term	7th & 8th Term	9th Term
\$ 22.57	\$ 29.07	\$ 35.57	\$ 45.37	\$ 51.83

Supplemental Benefits Per Hour:

1st & 2nd Term	3rd & 4th Term	5th & 6th Term	7th & 8th Term	9th Term
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Straight Time:

\$ 20.47	\$ 27.77	\$ 32.83	\$ 43.37	\$ 45.44
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At time and one Half:

\$ 30.06	\$ 40.82	\$ 48.25	\$ 59.33	\$ 66.77
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At Double Time:

\$ 39.64	\$ 53.86	\$ 63.66	\$ 78.28	\$ 88.10
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4-28

Steamfitter08101/2026

JOB DESCRIPTION Steamfitter

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens,
Richmond, Suffolk

WAGES

Per Hour:

07/01/2026	01/01/2027
	Additional 1.00*

AC Service/Heat Service
& Refrigeration Technician

\$ 48.35

- Includes the installation, service, maintenance, repair and replacement, of refrigeration, air cooling and heating, air conditioning, Oil Burner and Stoker.

- Air Cooling / Heating Equipment installation is not to exceed fifteen (15) tons, or equal to 6,000 CFM or 180,000 BTU combined on any one project.

- Refrigeration Equipment installation is not to exceed five (5) Horsepower combined on any one project.

*To be allocated at a later date.

SUPPLEMENTAL

BENEFITS Per Hour

Worked:

AC Service/Heat Service	\$
	21.40
& Refrigeration Technician	+
	3.06*

- Portion of benefit not applicable to overtime hours and paid holidays.

OVERTIME PAY

See (B, E, *K) on OVERTIME

PAGE * See Holidays

HOLIDAY paid: See 5, 6, 11, 15, 25, 26 on HOLIDAY PAGE

Overtime: See 5, 6, 11, 15, 25, 26 on HOLIDAY PAGE

Note:

- Additional 15% premium on STRAIGHT-TIME wages if worked (11, 15, 25, 26)

- Time and one half of the hourly rate if worked (5, 6)

REGISTERED APPRENTICES

1 year terms at the following wages per hour:

1st	2nd	3rd	4th
\$23.39	\$28.25	\$32.91	\$39.75

Supplemental Benefits for hours worked:

1st	2nd	3rd	4th
\$12.84	\$14.50	\$16.22	\$18.52
+ 3.06*	+ 3.06*	+ 3.06*	+ 3.06*

* Portion of benefit not applicable to overtime hours and paid holidays.

4-638B-StmFtrRef

Steamfitter

08/01/2026

JOB DESCRIPTION Steamfitter DISTRICT 4 ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

per Hour:

	07/01/2026	10/01/2026
Sprinkler/Steam	\$ 70.36	Additional \$ 1.50*
AC & Heat Fitter		

Last Published on Aug 01 2026

Nassau County

Temporary \$ 53.49
Heat & AC
Fitter

* To be allocated at a later date.

SHIFT WORK

Add 15% to Hourly Wage and Hourly Supplemental Benefit for "Contracting Agency" Mandated Off Shift Work.

SUPPLEMENTAL**BENEFITS per Hour:**

Sprinkler/Steam \$
Fitter 56.49

Temporary \$
Heat & A 46.14

C

Fitter

OVERTIME PAY

The posted hourly PREMIUM TIME rates are applicable as follows:

- After 7 hours worked per day for Sprinkler/Steamfitter AC & Heat Fitter
- After 8 hours worked per day for Temporary Heat/AC Fitter - Hours worked on Saturdays, Sundays and Holidays

Per Hour:

PREMIUM TIME Wages:

Sprinkler/Steam \$ 140.66
Temp Heat/AC \$ 106.92

PREMIUM TIME Supplemental Benefits per hour:

Sprinkler/Steam \$ 112.14
Temp Heat/AC \$ 91.44

HOLIDAY

Paid: See 1) on HOLIDAY PAGE

Overtime: See 5, 6, 11, 15, 16, 25) on
HOLIDAY PAGE**REGISTERED****APPRENTICES**

1 year terms at the following wages Per hour:

	1st	2nd	3rd	4th	5th
07/01/2026	\$ 28.18	\$ 35.21	\$ 42.24	\$ 49.27	\$ 56.30

PREMIUM TIME Wages per hour:

	1st	2nd	3rd	4th	5th
07/01/2026	\$ 56.30	\$ 70.36	\$ 84.42	\$ 98.48	\$ 112.54

Supplemental Benefits per hour:

	1st	2nd	3rd	4th	5th
07/01/2026	\$ 23.10	\$ 28.67	\$ 34.23	\$ 39.80	\$ 45.36

PREMIUM TIME Supplemental Benefits

per hour:

	1st	2nd	3rd	4th	5th
07/01/2026	\$ 45.36	\$ 56.50	\$ 67.62	\$ 78.76	\$ 89.88

4-638A-StmSpFtr

Teamster - Asphalt Delivery

08/01/2026

JOB DESCRIPTION Teamster - Asphalt Delivery

DISTRICT 4

ENTIRE COUNTIES

Nassau, Suffolk

WAGES

per Hour:

07/01/2026

Truck Driver

Heavy Construction \$ 46.65

Asphalt Delivery

Heavy Construction Work:

Shall include the supply of Asphalt for construction, improvement and modification of all or any part of Streets, Highways, Bridges, Tunnels, Railroads, Canals, Dams, Airports, Schools, Power Generation Plants, where distance between project and asphalt plant is not more than 50 miles.

Truck Driver

Light Construction \$ 47.08 Asphalt
Delivery

Light Construction Work:

Shall include the supply of Asphalt for construction of Single & Multi Family Homes, Town Houses, Apartment Buildings, including Driveways, Streets and Curbs within those projects. Parking Lots, Office Buildings, where distance between project and asphalt plant is not more than 50 miles.

SHIFT WORK

PREMIUM PAY of 25% on straight time hours for New York State D.O.T. and or other GOVERNMENTAL MANDATED off shift work.

SUPPLEMENTAL

BENEFITS per Hour:

Truck Driver

Heavy Construction \$
Asphalt Delivery 57.70

Truck Driver

Light \$
Construction 13.57

Asphalt Delivery

OVERTIME PAY

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Nassau County

Heavy Construction Driver see (B, E, P, T, U) on
OVERTIME PAGE Light Construction Driver see (B2, I,
T, U) on OVERTIME PAGE Note: (U) Only applies
after 8 hours worked on holiday.

HOLIDAY paid: See (5, 6, 16, 25) on
HOLIDAY PAGE Overtime: See (5, 6, 16, 25) on
HOLIDAY PAGE

(5, 6) Paid at 4X the hourly Straight-Time Rate if worked
(16,25) Paid at 2x the hourly Straight-Time rate if worked.

4-282 NSAD

Teamster - Building

08/01/2026

JOB DESCRIPTION Teamster- Building DISTRICT 4 ENTIRE COUNTIES

Nassau, Suffolk

WAGES

per Hour:

Truck Driver (Building Demolition & Debris, Asbestos Removal & Toxic Waste)

07/01/2026

Straight Jobs \$ 41.04

Trailers

SHIFT WORK

PREMIUM PAY of 17.3% on straight time hours for GOVERNMENTAL MANDATED off shift work.

***SUPPLEMENTAL
BENEFITS***

Per Hour:

All Classes: \$ 45.88

OVERTIME PAY

See (B, E, SI) on OVERTIME PAGE

HOLIDAY

paid: See (5, 6, 8, 11, 15, 16, 25, 26) on

Overtime: HOLIDAY PAGE

See (5, 6, 8, 11, 15, 16, 25, 26) on
HOLIDAY PAGE

4-282 BNS

Teamster - Delivery of Concrete**DISTRICT 4**08/01/2026**JOB DESCRIPTION Teamster - Delivery of Concrete
ENTIRE COUNTIES**

Nassau, Suffolk

WAGES

Per Hour:

07/01/2026

Heavy Construction

Truck Driver \$ 45.00

Concrete Delivery

Heavy Construction Work:

Shall Include the supply of Ready-Mix Concrete for construction, improvement and modification of all or any part of Streets, Highways, Bridges, Tunnels, Railroads, Canals, Dams, Airports, Schools & Power Generation Plants, where distance between project and concrete plant is not more than 50 miles.

Light Construction

Truck Driver \$ 41.01

Concrete Delivery

Light Construction Work:

Shall include the supply of Ready-Mix Concrete for construction of Single & Multi Family Homes, Town Houses, Apartment Buildings, including Driveways, Streets and Curbs within those projects. Parking Lots and Office Buildings, where distance between project and concrete plant is not more than 50 miles.

SUPPLEMENTAL**BENEFITS per Hour:**

Truck Driver

Heavy Construction Work

Concrete Delivery \$ 53.77

Truck Driver

Light Construction Work

Concrete Delivery \$ 21.34

OVERTIME PAY

Heavy Construction See (B, E, P, R, U) on OVERTIME PAGE

Light Construction: See (82, I, R, U) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 16, 25) on HOLIDAY PAGE Overtime:

See (5, 6, 16, 25) on HOLIDAY PAGE

(5, 6) Paid at 4X the hourly Straight-Time Rate if worked

(16,25) Paid at 2x the hourly Straight-Time rate if worked.

4-282nscd

Teamster Heavy&Highway

08/01/2026

JOB DESCRIPTION Teamster - Heavy&Highway

DISTRICT 4

ENTIRE COUNTIES

Nassau, Suffolk

WAGES

Per Hour:

07/01/2026

Heavy Construction

Site Excavating

\$

(Chauffeurs)

46.65

Heavy Construction Work:

Shall include the construction, improvement or modification of all or any part of Streets, Highways, Bridges, Tunnels, Railroads, Canals, Dams, Airports, Schools, Power Generation Plants.

Light Construction

Site Excavating

\$ 47.08

(Chauffeurs)

Light Construction Work:

Shall include the construction, improvement and modification of Single & Multi Family Homes, Town Houses, Apartment Buildings, including Driveways, Streets and Curbs within those projects. Parking Lots and Office Buildings.

SHIFT WORK

PREMIUM PAY of 25% on straight time hours for NEW YORK STATE D.O.T. and or other GOVERNMENTAL MANDATED off shift work. SUPPLEMENTAL BENEFITS Per Hour:

Heavy Construction Work

Chauffeurs

\$ 57.70

Light Construction Work

Chauffeurs

\$ 13.57

OVERTIME PAY

Heavy Construction See (B, E, P, R, U) on OVERTIME PAGE

Light Construction: See (82, I, R, U) on OVERTIME PAGE

HOLIDAY paid: See 5, 6, 16, 25) on HOLIDAY

PAGE Overtime: See 5, 6, 16, 25) on HOLIDAY

PAGE

(5, 6) Paid at 4X the hourly Straight time Rate if worked

(16,25) Paid at 2X the hourly Straight time Rate if worked.

Welder08/01/2026***JOB DESCRIPTION Welder DISTRICT 1 ENTIRE COUNTIES***

Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

Per hour

07/01/2026

Welder: To be paid the same rate of the mechanic performing the work.*

*EXCEPTION: If a specific welder certification is required, then the 'Certified Welder' rate in that trade tag will be paid.

OVERTIME PAY HOLIDAY

1 -As Per Trade

***Nassau County
Residential***Carpenter - Residential08/01/2026**JOB DESCRIPTION Carpenter - Residential****DISTRICT 4*****ENTIRE COUNTIES***

Nassau, Suffolk

WAGES per Hour:

07/01/2026 Carpenter

(Residential) \$ 35.12

**

*NOTE: Construction, Re-Construction, Alterations and Repairs of all residential units on housing, whether singular or multiple, condominiums, townhouses and walk-up garden apartments not to exceed four (4) stories (four stories shall be above ground level and shall not include the buildings basement nor unfinished attic space). Receiving, fastening and putting in place all modular units when used for construction of the above referenced units, regardless of from what material they are made of, such as wood, masonry, metal or plastic. Hi-Rise apartments, Motels, Nursing Homes and other Institutional type living facilities are not covered under Residential Construction.

SUPPLEMENTAL**BENEFITS per Hour:**

Carpenter

(Residential) \$ 23.63

OVERTIME PAY

See (82, J) on OVERTIME PAGE

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Nassau County

HOLIDAY paid: See 8) on HOLIDAY PAGE Overtime:

5, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

One(l) Year Terms at the Following:

1st	2nd	3rd	4th
\$ 19.41	\$ 20.41	\$ 21.41	\$ 22.41

Supplemental Benefits per hour:

Apprentice(s) \$ 15.05

4-Reg Council Nass/Suff-r

Electrician - Residential

08/01/2026

JOB DESCRIPTION Electrician - Residential

DISTRICT 4

ENTIRE COUNTIES

Nassau, Suffolk

WAGES

per Hour:	07/01/2026	04/24/2027
Electrician:		
Residential Wireman	\$ 39.55	\$ 41.05

NOTE: Shall apply to wiring of all Single or Multiple Family Dwellings and Apartment Buildings up to (3) stories.

SUPPLEMENTAL

BENEFITS

Per Hour:

Electrician	15% of Straight Time	15% of Straight Time
	Hourly Wage Paid	Hourly Wage Paid
	+ \$ 19.61	+ \$ 20.41

6% of the 15% of the above supplemental benefit to be calculated at OVERTIME WAGE PAID. The remaining 9% to be calculated at STRAIGHT-TIME WAGE PAID.

OVERTIME PAY

See (B, E, E2, Q, V) on OVERTIME PAGE

HOLIDAY

paid: See 1) on HOLIDAY PAGE

Overtime: See 5, 6, 15, 16, 25) on
HOLIDAY PAGE

4-25resd

Iron Worker - Residential**08/01/2026****JOB DESCRIPTION Iron Worker- Residential DISTRICT 4 ENTIRE COUNTIES**

Kings, Nassau, Queens, Suffolk

WAGES

Per Hour

***IMPORTANT NOTE: These rates are limited to Residential Construction, Affordable Housing Projects, Residential Modular Erection and Pre-Fabricated Engineered Buildings.

07/01/2026

Iron Worker \$ 48.00

Iron Worker Tender 28.00

SUPPLEMENTAL***BENEFITS***

Per Hour

\$ 16.63

OVERTIME PAY

See (B, 81, Q) on OVERTIME PAGE

HOLIDAY paid: See (5, 6, 18, 20) on

HOLIDAY PAGE

4-361 Resd

Plumber - Residential**08/01/2026****JOB DESCRIPTION Plumber - Residential****DISTRICT 4****ENTIRE COUNTIES**

Nassau, Suffolk

WAGES

PER HOUR:

07/01/2026

Plumber

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Residential* \$ 37.05

*Note: Only to be used for One, Two or Multiple Family Dwellings Two Floors or less.

No Communal Kitchens or Medical

Facilities. SUPPLEMENTAL

BENEFITS PER HOUR:

Plumber

Residential \$ 24.44

OVERTIME PAY

See (B, B2, J) on OVERTIME PAGE

HOLIDAY

paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 15, 16) on HOLIDAY PAGE

4-PLUM200RT

Overtime Codes

Following is an explanation of the code(s) listed in the OVERTIME section of each classification contained in the attached schedule. Additional requirements may also be listed in the HOLIDAY section.

NOTE: Supplemental Benefits are 'Per hour worked' (for each hour worked) unless otherwise noted
)Time and one half of the hourly rate after 7 and one half hours per day

(A) Time and one half of the hourly rate after 7 hours per day

(B) Time and one half of the hourly rate after 8 hours per day

(BI) Time and one half of the hourly rate for the 9th & 10th hours week days and the 1st 8 hours on Saturday.

Double the hourly rate for all additional hours

Time and one half of the hourly rate after 40 hours per week

(83) Time and one half of the hourly rate after 40 straight hours per week

(C) Double the hourly rate after 7 hours per day

Double the hourly rate after 7 and one half hours per day

(D) Double the hourly rate after 8 hours per day

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- (DI) Double the hourly rate after 9 hours per day
- (E) Time and one half of the hourly rate on Saturday
- (EI) Time and one half 1st 4 hours on Saturday; Double the hourly rate all additional Saturday hours
Saturday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather
- (E3) Between November 1st and March 3rd Saturday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather, provided a given employee has worked between 16 and 32 hours that week

Sunday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather

Double time after 8 hours on Saturdays
- (F) Time and one half of the hourly rate on Saturday and Sunday
- (G) Time and one half of the hourly rate on Saturday and Holidays
Time and one half of the hourly rate on Saturday, Sunday, and Holidays
- (I) Time and one half of the hourly rate on Sunday
- (J) Time and one half of the hourly rate on Sunday and Holidays
- (K) Time and one half of the hourly rate on Holidays
- (L) Double the hourly rate on Saturday
- (M) Double the hourly rate on Saturday and Sunday
- (N) Double the hourly rate on Saturday and Holidays
- (O) Double the hourly rate on Saturday, Sunday, and Holidays
- (P) Double the hourly rate on Sunday
- (Q) Double the hourly rate on Sunday and Holidays
- (R) Double the hourly rate on Holidays
- (S) Two and one half times the hourly rate for Holidays
Two and one half times the hourly rate the first 8 hours on Sunday or Holidays One and one half times the hourly rate all additional hours.
- (T) Triple the hourly rate for Holidays
- (U) Four times the hourly rate for Holidays
- (V) Including benefits at SAME PREMIUM as shown for overtime
- (W) Time and one half for benefits on all overtime hours.
- (X) Benefits payable on Paid Holiday at straight time. If worked, additional benefit amount will be required for worked hours. (Refer to other codes listed.)

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Holiday Codes

PAID Holidays:

Paid Holidays are days for which an eligible employee receives a regular day's pay, but is not required to perform work. If an employee works on a day listed as a paid holiday, this remuneration is in addition to payment of the required prevailing rate for the work actually performed.

OVERTIME Holiday Pay:

Overtime holiday pay is the premium pay that is required for work performed on specified HOLIDAYS: holidays & OVERTIME. It is only required where the employee actually performs work on such holidays. The applicable overtime holidays are listed under The required rate of pay for these covered holidays can be found in PAY section listings for each classification.

Following is an explanation of the code(s) listed in the HOLIDAY section of each classification contained in the attached schedule. The Holidays as listed below are to be paid at the wage rates at which the employee is normally classified.

SUMMARY OF LUMP SUM BID PROPOSAL
HEMPSTEAD HOUSING AUTHORITY
FACADE REHABILITATION AT THE MACARTHUR HOUSES
260 Clinton St, Hempstead, New York

To: 260 Clinton St # 100, Hempstead, NY 11550

The Undersigned declares that he has carefully examined the attached Contract Documents and Addenda and Addenda Nos. _____ (if any) thereto issued prior to the date of opening

(Insert "None" or Addenda Nos.)

bids, as prepared by LiRo Engineers, Inc. and that he has visited the site and examined all conditions affecting the proposed work, and he will execute the Contract and perform all of its terms, covenants and conditions to furnish all labor and materials, implements and incidentals called for by said documents in the scheduled time for the following total bid price shown below.

Total of Bid Items from Page BP-1a:

_____ DOLLARS \$	_____
Amount in Words	Amount in Numbers

THE CONTRACT WILL BE AWARDED ON THE TOTAL OF THE LUMP SUM BID

Bidder's Name

LUMP SUM PROPOSAL

ITEM	DESCRIPTION	BID PRICE WRITTEN IN WORDS	<u>BID PRICE IN FIGURES</u> DOLLARS CENTS
A	For providing all labor material and equipment necessary to complete all work as shown on the contract drawings and in accordance with the specifications for the Facade Rehabilitation at The MacArthur Houses, 260 Clinton St, Hempstead New York for the Hempstead Housing Authority.	For the lump sum of Dollars And Cents.	

COMPLETE THIS FORM USING BLACK INK ONLY

Proposal

BP-1a

**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

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, 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.

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

OMB Approval No. 2502-0118

(Exp. 02/29/2016)

US Department of Housing and Urban Development

Office of Housing/Federal Housing Commissioner

US Department of Agriculture

Farmers Home Administration

Part I to be completed by Principals of Multifamily Projects <i>(See instructions)</i>		For HUD HQ/FmHA use only	
Reason for submission:			
1. Agency name and City where the application is filed		2. Project Name, Project Number, City and Zip Code	
3. Loan or Contract amount \$	4. Number of Units or Beds	5. Section of Act	6. Type of Project (check one) ☐ Existing ☐ Rehabilitation ☐ Proposed (New)

7. List all proposed Principals and attach organization chart for all organizations

Name and address of Principals and Affiliates (Name: Last, First, Middle Initial) proposing to participate	8 Role of Each Principal in Project	9. Expected % Ownership in Project	10. SSN or IRS Employer Number

Certifications: The principal(s) listed above hereby apply to HUD or USDA FmHA, as the case maybe, for approval to participate as principal(s) in the role(s) and project listed above. The principal(s) each certify that all the statements made on this form are true, complete and correct to the best of their knowledge and belief and are made in good faith, including any Exhibits attached to this form. **Warning:** HUD will prosecute false claims and statements. Conviction may result in criminal and/or civil penalties. The principal(s) further certify that to the best of their knowledge and belief:

- Schedule A contains a listing, for the last ten years, of every project assisted or insured by HUD, USDA FmHA and/or State and local government housing finance agencies in which the principal(s) have participated or are now participating.
- For the period beginning 10 years prior to the date of this certification, and except as shown on the certification:
 - No mortgage on a project listed has ever been in default, assigned to the Government or foreclosed, nor has it received mortgage relief from the mortgagee;
 - The principals have no defaults or noncompliance under any Conventional Contract or Turnkey Contract of Sale in connection with a public housing project;
 - There are no known unresolved findings as a result of HUD audits, management reviews or other Governmental investigations concerning the principals or their projects;
 - There has not been a suspension or termination of payments under any HUD assistance contract due to the principal's fault or negligence;
 - The principals have not been convicted of a felony and are not presently 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);
 - The principals 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;
 - The principals 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;
- All the names of the principals who propose to participate in this project are listed above.
- None of the principals is 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.
- None of the principals is a participant in an assisted or insured project as of this date on which construction has stopped for a period in excess of 20 days or which has been substantially completed for more than 90 days and documents for closing, including final cost certification, have not been filed with HUD or FmHA.
- None of the principals have been found by HUD or FmHA to be in noncompliance with any applicable fair housing and civil rights requirements in 24 CFR 5.105(a). (If any principals or affiliates have been found to be in noncompliance with any requirements, attach a signed statement explaining the relevant facts, circumstances, and resolution, if any).
- None of the principals is 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.
- Statements above (if any) to which the principal(s) cannot certify have been deleted by striking through the words with a pen, and the relevant principal(s) have initialed each deletion (if any) and have attached a true and accurate signed statement (if applicable) to explain the facts and circumstances.

Name of Principal	Signature of Principal	Certification Date(mm/dd/yyyy)	Area Code and Tel. No.
This form prepared by (print name)		Area Code and Tel. No.	

Previous Participation Certification

OMB Approval No. 2502-0118

(Exp. 02/29/2016)

Schedule A: List of Previous Projects and Section 8 Contracts. Below is a complete list of the principals' previous participation projects and participation history in multifamily Housing programs of HUD/FmHA, State and local Housing Finance Agencies. **Note:** Read and follow the instruction sheet carefully. Make full disclosure. Add extra sheets if you need more space. Double check for accuracy. If no previous projects, write by your name, **"No previous participation, First Experience"**.

1. Principals Name (Last, First)	2. List of previous projects (Project name, project ID and, Govt. agency involved)	3. List Principals' Role(s) (indicate dates participated, and if fee or identity of interest participant)	4. Status of loan (current, defaulted, assigned, foreclosed)	5. Was the Project ever in default during your participation Yes No If yes, explain		6. Last MOR rating and Physical Insp. Score and date

Part II- For HUD Internal Processing Only

Received and checked by me for accuracy and completeness; recommend approval or refer to Headquarters after checking appropriate box.

Date (mm/dd/yyyy)	Tel No. and area code	☐ A. No adverse information; form HUD-2530 approval recommended. ☐ B. Name match in system ☐ C. Disclosure or Certification problem ☐ D. Other (attach memorandum)
Staff	Processing and Control	
Supervisor	Director of Housing/Director, Multifamily Division	Approved ☐ Yes ☐ No
		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.

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 principals applying to participate 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 arm's 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., refinance, change in ownership, change in management agent, 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.

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 appropriate role. The following are examples of possible roles that the principals may assume: Owner/Mortgagor, Managing Agent, Sponsor, Developer, General Con-tractor, Packager, Consultant, Nursing Home Administrator etc.

Block 9: Fill in the percentage of ownership in the proposed project that each principal is expected to have.

Block 10: Fill in the Social Security Number or IRS employer number of every principal 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.

Column 2. All previous projects must be listed or your certification cannot be processed. Include the name of all projects, project number, city where it is located and the governmental agency (HUD, USDA-FmHA or state or local housing finance agency) that was involved.

Column 3. List the role(s) as a principal, dates participated and if fee or identity of interest (IOI) with owners.

Column 4. Indicate the current status of the loan. Except for current loan, the date associated with the status is required. Loans under a workout arrangement are considered assigned. For all noncurrent loans, an explanation of the status is required. Column 5. Explain any project defaults during your participation. Column 6. Provide the latest Management Review (MOR) rating and Physical Inspection score. 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 the certification, fill in the names of all principals and affiliates as listed in block 7. Each principal should sign the certification 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). Principal who is signing on behalf of the entity should attach signature authority document. Each principal who signs the form	should fill in the date of the signature and a telephone number. By providing a telephone number, HUD can reach you in the event of 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 to strike through those parts that differ with your record, and then sign and certify. Attach a signed statement of explanation of the items you have struck out on the certification. Item 2c. relates to felony convictions within the past 10 years. If you are convicted of a felony within the past 10 years, strike out 2c. and attach statement of 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 stand point of an insurer, lender or governmental agency.
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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 that 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 of participation in this HUD program.

CERTIFICATE OF EXPERIENCE

Date: _____

_____ hereby certifies that the following work has been performed by our firm within the last five (5) years:

Project	Year	Contract Amount	Municipality or other Owner	Owner Contact Information

Please provide three (3) business references:

Municipality or other Owner	Owner Contact Information	Comments

Name of Prime Contractor /Bidder (print)

Signature of Prime Contractor/Bidder Representative

Name and Title of Bidder Representative (print)

HEMPSTEAD HOUSING AUTHORITY STATEMENT OF BIDDERS QUALIFICATIONS

Questions shall be answered and the date given shall be clear and comprehensive. The statement shall be signed and notarized. Attach additional pages as needed.

1. Name of Bidder (legal business entity name): _____

2. Identify Officials and Principal Owners. For each person, include name, title and percentage of ownership. Attach additional pages if necessary. If applicable, reference to relevant SEC filing(s) containing the required information is optional.

Name	Title	Percentage Ownership (Enter 0% if not applicable)

3. Names/Titles of Authorized Agents:_____

4. Principal Place of Business (street, city, state, zip):_____

5. EIN:_____

6. Contact information

Telephone Number and extension: _____

Fax Number:_____

Cellular: _____

Email:_____

Website: _____

HEMPSTEAD HOUSING AUTHORITY STATEMENT OF BIDDERS QUALIFICATIONS

7. Legal Business Entity Type – check appropriate box and provide additional information.

☐ Corporation (including PC)	Date of Incorporation:
☐ Limited Liability Company (LLC or PLLC)	Date of Organization:
☐ Partnership (including LLP, LP or General)	Date of Registration or Establishment:
☐ Sole Proprietorship	How many years in business?
☐ Other	Date Established:
If Other, explain:	

8. City, State and County where company was established:_____

9. How many years have you been engaged in the contracting business under your present name?

10. Please list any “doing business as” names?

11. Previous companies in which principals have engaged in the contracting business:_____

12. List present contracts by name and gross amount of contract (add attachments if necessary):_____

HEMPSTEAD HOUSING AUTHORITY STATEMENT OF BIDDERS QUALIFICATIONS

13. Names, background, number of years of experience, and current workload of the principal members of your staff, including Officers:

Name	Background	Year Experience	Current Workload

14. Within the past five (5) years, has any current or former entity official or any individual currently or formerly having the authority to sign, execute or approve bids, proposals, contracts or supporting documentation on behave of the Business Entity been:

Sanctioned relative to any business or professional permit or license?	☐ Yes ☐ No ☐ Other
Suspended, debarred, or disqualified from any government contracting process?	☐ Yes ☐ No ☐ Other
The subject of an investigation, whether opened or closed, by any government entity for a civil or criminal violation for any business-related conduct?	☐ Yes ☐ No ☐ Other
Charged with a misdemeanor or felony, indicted, granted immunity, convicted of a crime or subject to a judgment for: - Any business related activity, or - Any crime, whether or not business-related, the underlying conduct of which was related to truthfulness?	☐ Yes ☐ No ☐ Other
For each "Yes" or "Other" explain:	

HEMPSTEAD HOUSING AUTHORITY STATEMENT OF BIDDERS QUALIFICATIONS

15. Within the past five (5) years, has the Business Entity:

Been suspended or debarred from any government contracting process or been disqualified on any government procurement, permit, license, concession, franchise or lease, including but not limited to a debarment for the violation of New York State Worker's Compensation or federal or state prevailing wage laws?	☐ Yes ☐ No
Been subject to a denial or revocation of government prequalification?	☐ Yes ☐ No
Been denied a contract award or had a bid rejected based upon a non-responsibility finding by a government entity?	☐ Yes ☐ No
Had a low bid rejected on a government contract for failure to make good faith efforts on any Minority-Owned Business Enterprise, Women-Owned Enterprise or Disadvantaged Business Enterprise goal or statutory affirmative action requirements on a previously held contract?	☐ Yes ☐ No
Agreed to a voluntary exclusion from bidding/contracting with a government entity?	☐ Yes ☐ No
Initiated a request to withdraw a bid submitted to a government entity in lieu of responding to an information request or subsequent to a formal request to appear before the government entity?	☐ Yes ☐ No
For each "Yes" explain:	

16. Within the past five (5) years, had the Business Entity?:

Been suspended, cancelled or terminated for cause on any government contract including, but not limited to a non-responsibility finding?	☐ Yes ☐ No
Been subject to an administrative proceeding or civil action seeking specific performance or restitution in connection with any government contract?	☐ Yes ☐ No
Entered into a formal monitoring agreement as a condition of a contract award from a government entity?	☐ Yes ☐ No
For each "Yes" explain:	

HEMPSTEAD HOUSING AUTHORITY STATEMENT OF BIDDERS QUALIFICATIONS

17. Within the past five (5) years, had the Business Entity?:

Had a revocation, suspension or disbarment of any business or professional permit and/or license?	☐ Yes ☐ No
Had a denial, decertification, revocation or forfeiture of New York State certification of Minority-Owned Business Enterprise, Women-Owned Business Enterprise or federal certification of Disadvantaged Business Enterprise status for other than a change of ownership?	☐ Yes ☐ No
For each "Yes" explain:	

18. Within the past five (5) years, has the Business Entity received any unsatisfactory performance assessment(s) from any government entity on any contract?

☐ Yes ☐ No If yes, please explain_____

19. Within the past five (5) years, has the Business Entity had any liquidated damages assessed over \$25,000?

☐ Yes ☐ No If yes, please explain_____

20. Within the past five (5) years, have any liens or judgments (not including UCC filings) over \$25,000 been filed against the Business Entity, which remain undischarged?

☐ Yes ☐ No If yes, please explain_____

HEMPSTEAD HOUSING AUTHORITY STATEMENT OF BIDDERS QUALIFICATIONS

21. Within the past seven (7) years, has the Business Entity initiated or been the subject of any bankruptcy proceedings, whether or not closed, or is any bankruptcy proceeding pending?

☐ Yes ☐ No If yes, please explain_____

22. During the past three (3) years, has the Business Entity failed to file or pay any tax returns required by federal, state or local tax laws?

☐ Yes ☐ No If yes, please explain_____

23. During the past three (3) years, has the Business Entity failed to file or pay any New York State unemployment insurance returns?

☐ Yes ☐ No If yes, please explain_____

24. During the past three (3) years, has the Business Entity had any government audits completed?

☐ Yes ☐ No

If yes, did any audit of the Business Entity identify any reported significant deficiencies in internal control, fraud, illegal acts, significant violations of provisions of the contract or grant agreements, significant abuse or any material disallowance?

If yes, please explain_____

25. Have you ever refused to sign a contract at your original bid?

☐ Yes ☐ No If yes, please explain_____

HEMPSTEAD HOUSING AUTHORITY STATEMENT OF BIDDERS QUALIFICATIONS

IMPORTANT:

Please be sure to include the following:

- Financial Statement no more than twelve (12) months old
- Evidence of type and amount of company credit available

Will you, upon request, fill out a detailed Financial Statement and furnish any other information that may be required by the Owner?

☐ Yes ☐ No

HEMPSTEAD HOUSING AUTHORITY STATEMENT OF BIDDERS QUALIFICATIONS CERTIFICATION

The undersigned: (1) recognizes that this questionnaire is submitted for the express purpose of assisting the Hempstead Housing Authority (HHA) in making responsibility determinations regarding award or approval of a contract or subcontract and that the HHA will rely on information disclosed in the questionnaire in making responsibility determinations; (2) acknowledges that HHA, in its discretion, by means which it may choose, verify the truth and accuracy of all statements made herein; and (3) acknowledges that intentional submission of false or misleading information may result in criminal penalties under State and/or Federal Law, as well as a finding of non-responsibility, contract suspension or contract termination.

The undersigned certifies that he/she:

- Is knowledgeable about the submitting Business Entity's business and operations;
- Has read and understands all of the questions contained in the questionnaire;
- Has not altered the content of the questionnaire in any manner;
- Has reviewed and/or supplied full and complete responses to each question;
- To the best of his/her knowledge, information and belief, confirms that the Business Entity's responses are true, accurate and complete, including all attachments, if applicable;
- Understands that the HHA will rely on the information disclosed in the questionnaire when entering into a contract with the Business Entity; and
- Is under an obligation to update the information provided herein to include any material changes to the Business Entity's responses at the time of bid/proposal submission through the contract award notification, and may be required to update the information at the request of HHA prior to the award and/or approval of a contract, or during the term of the contract.

Dated this _____ day of _____. 2016

Name of Bidder (print)

Signature of Bidder Representative

Name and Title of Bidder Representative (print)

Notary Signature

THIS FORM SHALL BE COMPLETED BY BIDDER AND SUBMITTED WITH THE BID PROPOSAL

STATEMENT OF COMPLIANCE WITH WAGE RATES

This is to certify that all persons employed by the undersigned will be paid full weekly wages earned, less permissible deductions for income taxes, social security, etc. and that no rebates have been or will be made either directly or indirectly to the undersigned from the full weekly wages earned by any person in his employ, and further that all employees will be paid as defined in Regulations, Part 3 (29 CFR Part3) issued by the Secretary of Labor under the Copeland Act, as amended (43 Stat. 948, 63 Stat. 108, 72 Stat. 967; 40 U.S.C. 276c), and described on said payroll; that said payroll is correct and complete; that the wage rates contained in said payroll for laborers and mechanics pursuant to the Contract under which such work was performed; and that the classification set forth for each laborer or mechanic conforms with the work he performed.

Dated this _____ day of _____. 2016

Name of Bidder (print)

Signature of Bidder Representative

Name and Title of Bidder Representative (print)

**THIS STATEMENT SHALL BE COMPLETED BY BIDDER AND SUBMITTED WITH
THE BID PROPOSAL**

SECTION 3 REQUIREMENTS

It is the policy of Hempstead Housing Authority to provide economic opportunities to residents of Hempstead Housing Authority and to residents of the Nassau County who meet the following low income criteria:

HUD Low Income Limits Fiscal Year 2026	
Persons in Family	Annual Income
1	\$89,700
2	\$102,500
3	\$115,300
4	\$128,100
5	\$138,350

The contractor agrees to use their best effort to carry out the policy through the employment of Section 3 residents and the award of contracts to subcontractors who are Section 3 concerns. Attached is a Section 3 Concern Worksheet

Signed

Dated

**WORKSHEET FOR CONTRACTS / SUBCONTRACTORS
WHO ARE SECTION 3 CONCERNS**

Contract/Project Name: _____

Contractor/Developers Name: _____

HUD mandates that Hempstead Housing Authority provide economic opportunities to residents of Hempstead Housing Authority and residents of the Nassau-Suffolk Metropolitan Area who meet the following low or very low income criteria. A Section 3 Resident is someone who has an annual income that does not exceed:

HUD Low Income Limits Fiscal Year 2026	
Persons in Family	Annual Income
1	\$89,700
2	\$102,500
3	\$115,300
4	\$128,100
5	\$138,500

I certify that the firm of _____ (company's name) is a bona fide Section 3 company, and that it meets the following definition of a Section 3 business (check one):

- ☐ 51 percent or more of the ownership of this company is owned by Section 3 residents.
- ☐ Currently, at least 30 percent of the employees of the company are Section 3 residents.
- ☐ At least 30 percent of the employees of the company were Section 3 residents, within 3 years of the date of first employment with this company.
- ☐ I commit to subcontract at least 25 percent of the total value of this contract to Section 3 subcontractors, as these companies are defined above, and to provide the necessary evidence to substantiate this.

Signature of Chief Executive Officer

Date

Non-Collusive Bidding Certification

By submission of this bid, each Bidder and each person signing on behalf of any Bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization under penalty of perjury, that to the best of his/her knowledge and belief:

1. The prices of this bid have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor;
2. Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the Bidder and will not knowingly be disclosed by the Bidder prior to opening, directly or indirectly, to any other Bidder or to any competitor; and
3. No attempt has been made or will be made by the Bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.

Bidder's Name

By: _____
Signature Date

Print:
Name: _____

Title: _____

SUBSTITUTION LISTING

TO: VILLAGE OF HEMPSTEAD HOUSING AUTHORITY hereinafter called "Owner".

1. Pursuant to bidding requirements for the Work titled:

FACADE REHABILITATION at the MACARTHUR HOUSES

The Contract Sum proposed by the undersigned on the Bid Form is for the Work Shown on the Drawings described in the Specifications, and otherwise defined in the Contract Documents. However the undersigned proposes the following substitutions for the Owner's consideration. Should the Owner accept any or all of the proposed substitutions, the bidder's proposed Contract Sum will be reduced by the amount shown.

2.

Specified Product or Material:	Drawing Number or Spec. Section:	Proposed Substitution:	Proposed Reduction in Contract Sum:

Dated this _____ day of _____, 2016

Name of Bidder (print)

Signature of Bidder Representative

Name and Title of Bidder Representative (print)

THIS FORM SHALL BE COMPLETED BY THE BIDDER AND SUBMITTED WITH THE BID PROPOSAL.

AIA® Document A310"-2010

Bid Bond

CONTRACTOR:
(Name, legal status and address)

SURETY:
(Name, legal status and principal place of business)

OWNER:
(Name, address and address)

BOND MONET: 5

PROFESSIONAL:
(Name, location or address, zip, project number, if any)
Blank.

ADDITIONS AND DELETIONS:

This is a form of the AIA document. It has been modified to meet the needs of the user. The user may also have made changes to 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. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

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

Any singular reference to Contractor, **Surety**, Owner or other party shall be understood to include all parties where applicable.

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 Contractor agrees that it has accepted 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 Contractor and Contractor, and the Contractor enters into a contract with the owner in accordance with the terms of such bid, and gives such bond as may be specified in the bidding a **Contract Document**, its terms, and the surety admitted in the jurisdiction of the Project but otherwise acceptable to the Owner, for the full 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 of the bid and the amount of the Contract. If the Contractor is 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 mixed to comply with a statutory or other legal requirement in the local law 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.

	(Cotttractoras Principal)	Tal)
	(Surety)	t?ienl)
(Witness)	lTitle)	

AIA® Document A101™ -2007

Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum

AGREEMENT made as of the _____ day of _____
in the year _____
(Min words, indicate date month and year.)

BETWEEN the Owner:
(Name, legal status, address and other information)

and the Contractor:
(Name, legal status, address and other information)

for the following Project:
(Name, location and detailed description)

The Architect:
(Name, legal status, address and other information)

The Owner and Contractor agree as follows,

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

AIA Document A201™—2007, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

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TABLE OF ARTICLES

1	THE CONTRACT DOCUMENTS
2	THE WORK OF THIS CONTRACT
3	DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION
4	CONTRACT SUM
5	PAYMENTS
6	DISPUTE RESOLUTION
7	TERMINATION OR SUSPENSION
8	MISCELLANEOUS PROVISIONS
9	ENUMERATION OF CONTRACT DOCUMENTS
10	INSURANCE AND BONDS

ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. An enumeration of the Contract Documents, other than a Modification, appears in Article 9.

ARTICLE 2 THE WORK OF THIS CONTRACT

The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be the date of this Agreement unless a different date is stated below or provision is made for the date to be fixed in a notice to proceed issued by the Owner.

(Insert the date of commencement if it differs from the date of this Agreement or, if applicable, state that the date will be fixed in a notice to proceed.)

If, prior to the commencement of the Work, the Owner requires time to file mortgages and other security interests, the Owner's time requirement shall be as follows:

§ 3.2 The Contract Time shall be measured from the date of substantial completion.

§ 3.3 The Contractor shall achieve Substantial Completion of the entire Work not later than () days from the date of commencement, or as follows:
(Insert in number of calendar days. Alternatively, a calendar date may be inserted when coordinated with the date of completion of the entire Work.)
(If appropriate, insert requirement for earlier Substantial Completion of certain portions of the Work.)

Portion of the Work

Substantial Completion Date

, subject to adjustments of this Contract Time as provided in the Contract Documents.
(Insert provisions, if any, for liquidated damages or incentive for early completion of the Work.)

ARTICLE 4 CONTRACT SUM

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be

Dollars

(\$), subject to additions and deductions as provided in the Contract Documents.

§ 4.2 The Contract Sum is based upon the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner:

(State the numbers or other identification of accepted alternates. If the bidding or proposal documents permit the Owner to accept other alternates subsequent to the execution of this Agreement, attach a schedule of such other alternates showing the amount for each and the date when that amount expires.)

§ 4.3 Unit prices, if any:

(Identify and state the unit prices, state (quantity limitations, if any, to which the unit price will be applicable.)

Item

Units and Limitations

Price per Unit (\$0.00)

§ 4.4 Allou'ances included in the Contract Sum, if any:
(Identify all allowances and state exclusions, if any, from the allowance price.)

Item

Price (\$0.00)

ARTICLE 5 PAYMENTS

§ 5.1 PROGRESS PAYMENTS

§ 6.1.4 Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

§ 5.1.3 Provided that an Application for Payment is received by the Architect not later than the _____ day of a month, the Owner shall make payment of the certified amount to the Contractor not later than the _____ day of the (same) (folio month). If an Application for Payment is received by the Architect after the application date fixed above, payment shall be made by the Owner not later than (_____) days after the Architect receives the Application for Payment.
(Federal, state or local laws may require payment within a certain period of time.)

§ 5.1.4 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form and supported by such data to substantiate its accuracy as the Architect may require. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 5.1.5 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

§ 5.4.6 Subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

1. Take that portion of the Contract Sum properly allocable to completed Work as determined by multiplying the percentage completion of each portion of the Work by the share of the Contract Sum allocated to that portion of the Work in the schedule of values, less retainage of _____ percent (_____%). Pending final determination of cost to the Owner of changes in the Work, amounts not in dispute shall be included as provided in Section 7.3.9 of AIA Document A201[®] 2007, General Conditions of the Contract for Construction;
2. Add that portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing), less retainage of _____ percent (_____%);
3. Subtract the aggregate of previous payments made by the Owner; and
4. Subtract amounts, if any, for which the Architect has withheld or nullified a Certificate for Payment as provided in Section 9.5 of AIA Document A201—2007.

§ 5.1.7 The progress payment amount determined in accordance with Section 5.1.6 shall be further modified under the following circumstances:

- .1 Add, upon Substantial Completion of the Work, a sum sufficient to increase the total payments to the full amount of the Contract Sum, less such amounts as the Architect shall determine for incomplete Work, retainage applicable to such work and unsettled claims; and
(Section 9.8.5 of AIA Document A201-2007 requires release of all retainage upon Substantial Completion of Work with consent of surety, if any.)
- .2 Add, if final completion of the Work is thereafter materially delayed through no fault of the Contractor, any additional amounts payable in accordance with Section 9.10.3 of AIA Document A201—2007.

§ 5.1.8 Reduction or limitation of retainage, if any, shall be as follows:

(If it is intended, prior to Substantial Completion of the entire Work, to reduce or limit the retainage percentages inserted in Sections 7.6.7 and 5.1.6.2 above, and this is not explained elsewhere in the Contract Documents, insert the provision for such reduction or limitation.)

§ 5.1.9 Except with the Owner's prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

§ 5.2 FINAL PAYMENT

§ 5.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

- .1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Section 1.2.2.2 of AIA Document A201—2007, and to satisfy other requirements, if any, which extend beyond final payment; and
- .2 a final Certificate for Payment has been issued by the Architect.

§ 5.2.2 The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the Architect's final Certificate for Payment, or as follows:

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 INITIAL DECISION MAKER

The Architect will serve as Initial Decision Maker pursuant to Section 1.5.2 of AIA Document A201—2007, unless the parties appoint below another individual, not a party to this Agreement, to serve as Initial Decision Maker.

(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)

§ 6.2 BINDING DISPUTE RESOLUTION

For any Claim subject to, but not resolved by, mediation pursuant to Section 15.3 of AIA Document A201-2007, the method of binding dispute resolution shall be as follows:

Check the appropriate box. If the Owner and Contractor do not select a method of binding dispute resolution below, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, Claims will be resolved by litigation in a court of competent jurisdiction.

Arbitration pursuant to Section 15.4 of AIA Document A201—2007

☒ Litigation in a court of competent jurisdiction

☐ Other: *(Specify)*

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201—2007.

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201—2007.

ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201—2007 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 Payments due and unpaid under the Contract shall bear interest *from* the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located. *(Insert rate of interest agreed upon, if any.)*

§ 8.3 The Owner's representative:
(Name, address and other information)

§ 8.4 The Contractor's representative:
(Name, address and other information)

§ 8.5 Neither the Owner's nor the Contractor's representative shall be changed without ten days written notice to the other party.

§8.6 Modifications:

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 The Contract Documents, except for Modifications issued after execution of this Agreement, are enumerated in the sections below.

§ 9.1.4 The Agreement is this executed AIA Document A101—2007, Standard Form of Agreement Between Owner and Contractor.

§ 9.1.2 The General Conditions are AIA Document A201—2007, General Conditions of the Contract for Construction.

§ 9.1.3 The Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
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§ 9.1.4 The Specifications:

(Either list the Specifications here or refer to an exhibit attached to this Agreement.)

Section	Title	Date	Pages
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§ 9.1.5 The Drawings:

(Either list the Drawings here or refer to an exhibit attached to this Agreement.)

Number	Title	Date
--------	-------	------

§ 9.1.6 The Addenda, if any:

Number	Date	Pages
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Portions of Addenda relating to bidding requirements are not part of the Contract Documents unless the bidding requirements are also enumerated in this Article 9.

§ 9.1.7 Additional documents, if any, forming part of the Contract Documents:

1. AIA Document E201™—2007, Digital Data Protocol Exhibit, if completed by the parties, or the following:

2. Other documents, if any, listed below:

(List here any additional documents that are intended to form part of the Contract Documents. AIA document A201-2007™ provides that bidding requirements such as advertisement or invitation to bid, instructions to bidders, sample forms and the Contractor's bid are not part of the Contract Documents unless enumerated in this Agreement. They should be listed here only if intended to be part of the Contract Documents.)

ARTICLE 10 INSURANCE AND BONDS

The Contractor shall purchase and maintain insurance and provide bonds as set forth in Article 11 of AIA Document A201—2007.

Notwithstanding to whom the bonds are issued, the Contractor shall comply with the requirements of Article 11 of AIA Document A201—2007.

Type of Insurance or Bond

Limit of Liability or Bond Amount (\$0.00)

This Agreement entered into as of the day and year first written above.

OWNER (Signature)

CONTRACTOR (Signature)

(Printed name and title)

(Printed name and title)

AIA® Document A312" – 2010

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)

Uninterruptible Power Supply (UPS)

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 of this Performance Bond.)

(FOR INFORMATION ONLY— Name, address and telephone)

AGENT or BROKER:

OWNER'S REPRESENTATIVE:

(Architect, Engineer or other party.)

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* page that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

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.

Init.

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§ 1 The Contractor and 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 when applicable to participate in a conference as provided in Section 3.

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

1. the Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Section 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. 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.
2. the Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
3. the Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

§ 4 Failure on the part of the Owner to comply with the notice requirement in Section 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

§ 5 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:

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

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

§ 5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract arranged for a contract to be prepared for execution by the Owner and a 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 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

§ 5.4 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, make payment to the Owner, or
2. Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

§ 6 If the Surety does not proceed as provided in Section 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven 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 5.4, and the Owner refuses the payment 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.

§ 7 If the Surety elects to act under Section 5.1, 5.2 or 5.3, 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. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication, for

- .1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
- .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 5; and
- .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.

§ 8 If the Surety elects to act under Section 5.1, 5.3 or 5.4, the Surety's liability is limited to the amount of this Bond.

§ 9 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, successors and assigns.

§ 40 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 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 a declaration of 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.

§ 12 Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.

§ 43 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. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

§ 14 Definitions

§ 14.1 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.

§ 44.2 Construction Contract. The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

§ 14.3 Contractor Default. Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

§ 14.4 Owner Default. Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

§ 14.5 Contract Documents. All the documents that comprise the agreement between the Owner and Contractor.

§ 15 If this Bond is issued for an agreement between a Contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the Owner shall be deemed to be Contractor.

§ 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:

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PAGE 1

Uninterruptible Power Supply (UPS)

Certification of Document's Authenticity
AIA® Document D401™ — 2003

I, _____, hereby certify, to the best of my knowledge, information and belief, that I created the attached final document simultaneously with its associated Additions and Deletions Report and this certification at 15:25:48 on 01/10/2013 under Order No. 6871475021-1 from AIA Contract Documents software and that in preparing the attached final document I made no changes to the original text of AIA Document A312™ — 2010, Performance Bond, as published by the AIA in its software, other than those additions and deletions shown in the associated Additions and Deletions Report.

(Title)

(Dated)

REQUEST FOR ACCEPTANCE OF SUBCONTRACTOR

	Date:
To:	Project No:
	Project Name:
	Project Location:

In accordance with our prime contract for _____ of this project we request acceptance of the following proposed subcontractor to perform work or to supply material as indicated below:

1. Name of Subcontractor (legal business entity name): _____

2. Identify Officials and Principal Owners. For each person, include name, title and percentage of ownership. Attach additional pages if necessary. If applicable, reference to relevant SEC filing(s) containing the required information is optional.

Name	Title	Percentage Ownership <i>(Enter 0% if not applicable)</i>

3. Names/Titles of Authorized Agents:_____

4. Principal Place of Business (street, city, state, zip): _____

5. EIN: _____

6. Contact information

Telephone Number and extension: _____

Fax Number: _____

Cellular: _____

Email: _____

Website: _____

7. Scope of work (state kind of work, if for labor, or material, or both, and give specification reference):

8. The Subcontractor's non-collusive affidavit in the form required by our contract is furnished herewith (original only attached to the original request)

9. We warrant that the provisions required by our contract to be inserted in each subcontract will be inserted in this contract.

10. We certify that this proposed subcontractor is not ineligible to receive awards of contracts from the United States as evidenced by the list or lists of such contractors maintained by HUD.

11. There will be no assignment of interest in this subcontract except as follows (if none, so state):

12. Term of Payment Price \$_____

13. Remarks: _____

Name of Prime Contractor /Bidder (print)

Signature of Prime Contractor/Bidder Representative

Name and Title of Bidder Representative (print)

If sales agent, identify the manufacturer under "Remarks". If a subcontractor, identify principal subcontractor under "Remarks."

APPROVAL OR REJECTION

The proposed subcontractor named above is_____

If accepted, the contracting party giving such acceptance assures no responsibility in connection with the forms or terms of the subcontractor nor the performance of the subcontractor, and this form will not be returned.

If rejected, the reason(s) will be briefly stated herein, and this form will be returned within 10 days after receipt. ·

(Date)

HHA Contracting Officer

CONTRACTOR'S REQUEST FOR PAYMENT

The Contractor shall submit a request for payment for each payment on **HUD Form 51001 - Periodic Estimate for Partial Payment**. The request shall be accompanied by the Contractor's written designation of a certifying officer. In addition, the appropriate forms, if applicable with each Periodic Estimate for Partial Payment: **HUD Form 51002 - Schedule of Change Orders, HUD Form 51003 - Schedule of Material Stored, and HUD Form 51004 - Summary of Material Stored**.

Approval of payment shall only be approved if the following conditions have been met:

1. The Contractor's request is consistent with the P.H.A. 's approved Schedule of Amounts for Contract Payment (HUD Form 51000).
2. The amount does not include the amount to be retained by the PHA under the contract.
3. The work covered by the payment has been performed in accordance with the Construction Documents.
4. The Periodic Estimate for Partial Payment has been properly executed and all applicable supporting documentation submitted.
5. The General Contractor has submitted all required Certified Payroll Records. Include all Sub- contractors performing work during payment period.
6. The General Contractor shall furnish five (5) copies as directed of the Completed Payment Request.
7. The General Contractor shall be responsible to verify that all documents are in order before submitting. Incomplete documents will be returned.

**ENGINEER/ARCHITECT/CONTRACTOR CHECKLIST FOR PROCESSING
PERIODIC PAYMENT REQUISITION**

The checklist provided is to be used as a standard form for preparing Periodic Payment Requisitions which are to be submitted with all payment requisitions. The Contractor shall be responsible for verification that all required information has been provided. The Contractor shall submit five (5) copies of all payment requisition documents.

Failure to do so will only result in a delay of processing payment requisitions.

CHECKLIST FOR PERIODIC PAYMENT REQUISITION	
ITEM	DESCRIPTION
☐	Submit five (5) copies of all material listed below signed, dated and in order for the following: (All five copies are to be individually packaged in complete groups.)
☐	Schedule of Amounts for Contract Payment (HUD Form #51000)
☐	Periodic Estimate for Partial Payment (HUD Form #51001)
☐	Schedule of Change Orders (HUD Form #51002) [when applicable]
☐	Schedule of Material Stored (HUD Form #51003) [when applicable] (including bills of lading, shipping receipts, etc.)
☐	Summary of Material Stored -HUD Form #51004 [when applicable]
☐	Certified Payroll Records for current pay period (i.e. GC employees, and all subcontractors).

NOTICE TO THE CONTRACTOR

The Contractor shall submit this checklist with all Periodic Payment Requests, signed and dated.

Signature

Date

Company

Job number

Housing Authority/Project Name

The Engineer/ Architect reserves the right to reject any and all material submitted which does not conform to the aforementioned checklist.

ENGINEER/CONTRACTOR CHECKLIST FOR CONTRACT CLOSE-OUT

The checklist provided is to be used as a standard form for preparing final close-out documents which are to be submitted with the final payment requisition. The Contractor shall be responsible for verification that all required information has been provided. The Contractor shall submit three (3) copies of all close-out documents.

Failure to do so will only result in a delay of processing payment requisitions.

CHECKLIST FOR FINAL CLOSE-OUT DOCUMENTS		
ITEM	DESCRIPTION	REMARKS
☐	Certificate of Completion	
☐	Release of Liens	For Subcontractors and/or Suppliers
☐	Affidavit of Final Payment	For Subcontractors and/or Suppliers
☐	Warranties and Guarantees	Manufacturer's and/or Subcontractor's
☐	Operation and Maintenance Manuals	
☐	Letter of Certification (Re: Punch List Completion)	
☐	Letter of GC Guarantee	
	List of Receipt for Extra Stock Material	
	As-Built Drawings	
	Final Payment Requisition	

The Contractor shall submit this checklist with final close-out documents, signed and dated.

Signature

Date

Company

Job number

Housing Authority/Project Name

The Engineer reserves the right to reject any and all material submitted which does not conform to the aforementioned checklist.

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

Total Amount of Contract or Carried Forward	\$
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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)
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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.," "yd.," "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		Site Improvements
231	General Conditions \1	21	Metal Bucks	44	Retaining Walls
	Demolition & Clearing	22	Caulking	45	Storm Sewers
	Structures	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	Finish 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
2301	Spandrel Waterproofing	32	Floors	55	(Other)
	Structural Steel	33	Painting & Decorating	56	(Other)
	Masonry	34	Screens		Equipment
	Stonework	35	Plumbing	57	Shades & Drapery Rods
	Miscellaneous & Ornamental Metal	36	Heating	58	Ranges
■	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		Punch List \2
		42	(Other)	63	Lawns & Planting
		43	(Other)	64	

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.

Periodic Estimate for Partial Payment

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

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

Submit original and one copy to the Public Housing Agency.
Complete instructions are on the back of this form.

Public reporting burden for this collection of information is estimated to average 3.5 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. 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.

This information is collected under the authority of Section 6(c) of the U.S Housing Act of 1937 and HUD regulations. HAs are responsible for contract administration to ensure that the work for project development is done in accordance with State laws and HUD requirements. The contractor/subcontractor reports provide details and summaries on payments, change orders, and schedule of materials stored for the project. The information will be used to ensure that the total development costs, identified in the ACC, are kept as low as possible and consistent with HUD construction requirements. Responses to the collection are necessary to obtain a benefit. The information requested does not lend itself to confidentiality.

Name of Public Housing Agency		Periodic Estimate Number	Period From (mm/dd/yyyy) To (mm/dd/yyyy)
Location of Project			Project Number
Name of Contractor			Contract Number
Item Number (1)	Description of Item (2)	Completed to Date (3)	
		\$	

Value of Contract Work Completed to Date (Transfer this total to line 5 on back of this sheet)	\$
--	----

Instructions

Headings. Enter all identifying data required. Periodic estimates must be numbered in sequence beginning with the number 1.

Columns 1 and 2. The "Item Number" and "Description of Item" must correspond to the number and descriptive title assigned to each principal division of work in the "Schedule of Amounts for Contract Payments", form

HUD-51000.

Column 3. Enter the accumulated value of each principal division of work completed as of the closing date of the periodic estimate. Enter the total in the space provided.

Certifications. The certification of the contractor includes the analysis of amounts used to determine the net balance due. In the first paragraph, enter the name of the Public Housing Agency, the contractor, and the date of the contract. Enter the calculations used in arriving at the "Balance Due This Payment" on lines 1 through 16.

Enter the contractor's name and signature in the certification following line 16.

The latter portion of this certification relating to payment of legal rates of wages, is required by the contract before any payment may be made. However, if the contractor does not choose to certify on behalf of his/her subcontractors to wage payments made by them, he/she may modify the language to cover only himself /herself and attach a list of all subcontractors who employed labor on the site during the period covered by the Periodic Estimate, together with the individual certifications of each.

Certification of the Contractor or Duly Authorized Representative

According to the best of my knowledge and belief, I certify that all items and amounts shown on the other side of this form are correct; that all work has been performed and material supplied in full accordance with the items and conditions of the contract between the (name of owner) _____ and (contractor) _____ dated (mm/dd/yyyy) _____, and duly authorized deviations, substitutions, alterations, and additions; that the following is a true and correct statement of the Contract Account up to and including the last day of the period covered by this estimate, and that no part of the "Balance Due This Payment" has been received.

1. Original Contract Amount \$ _____

Approved Change Orders:

2. Additions (Total from Col. 3, form HUD-51002) \$ _____

3. Deductions (Total from Col. 5, form HUD-51002) \$ _____ (net) \$ _____

4. Current Adjusted Contract Amount (line 1 plus or minus net) \$ _____

Computation of Balance Due this Payment

5. Value of Original Contract work completed to date (from other side of this form) \$ _____

Completed Under Approved Change Orders

6. Additions (from Col. 4, form HUD-51002) \$ _____

7. Deductions (from Col. 5, form HUD-51002) \$ _____ (net) \$ _____

8. Total Value of Work in Place (line 5 plus or minus net line 7) \$ _____

9. **Less:** Retainage, _____ % \$ _____

10. Net amount earned to date (line 8 less line 9) \$ _____

11. **Less:** Previously earned (line 10, last Periodic Estimate) \$ _____

12. Net amount due, work in place (line 10 less line 11) \$ _____

Value of Materials Properly Stored

13. At close of this period (from form HUD-51004) \$ _____

14. **Less:** Allowed last period \$ _____

15. Increase (decrease) from amount allowed last period \$ _____

16. **Balance Due This Payment** \$ _____

I further certify that all just and lawful bills against the undersigned and his/her subcontractors for labor, material, and equipment employed in the performance of this contract have been paid in full in accordance with the terms and conditions of this contract, and that the undersigned and his/her subcontractors have complied with, or that there is an honest dispute with respect to, the labor provisions of this contract.

Name of Contractor	Signature of Authorized Representative	Title	Date (mm/dd/yyyy)
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Certificate of Authorized Project Representative and of Contracting Officer

Each of us certifies that he/she has checked and verified this Periodic Estimate No. _____; that to the best of his/her knowledge and belief it is a true statement of the value of work performed and material supplied by the contractor; that all work and material included in this estimate has been inspected by him/her or by his/her authorized assistants; and that such work has been performed or supplied in full accordance with the drawings and specifications, the terms and conditions of the contract, and duly authorized deviations, substitutions, alterations, and additions, all of which have been duly approved.

We, therefore, approve as the "Balance Due this Payment" the amount of \$ _____

Authorized Project Representative	Date (mm/dd/yyyy)	Contracting Officer	Date (mm/dd/yyyy)
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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)

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)

form **HUD-51002** (1/2014)

form HUD-51003 (1/2014)

Summary of Materials Stored

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

OMB Approval No. 2577-0157
(exp. 01/31/2017)

Public reporting burden for this collection of information is estimated to average 2.5 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. 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.

This information is collected under the authority of Section 6(c) of the U.S Housing Act of 1937 and HUD regulations. HAs are responsible for contract administration to ensure that the work for project development is done in accordance with State laws and HUD requirements. The contractor/subcontractor reports provide details and summaries on payments, change orders, and schedule of materials stored for the project. The information will be used to ensure that the total development costs, identified in the ACC, are kept as low as possible and consistent with HUD construction requirements. Responses to the collection are necessary to obtain a benefit. The information requested does not lend itself to confidentiality.

Instructions: This form is for the Contractor to summarize the value of materials stored at the site (as shown on the schedule, form HUD-51003). Use a separate line for the contractor and each of his/her subcontractors. Prepare an original and one copy, attach form HUD-51003, and send to the Public Housing Agency with the Periodic Estimate for Partial Payment, form HUD-51001. **Payment Value.** No more than 90 percent of the estimated value of the stored materials will be allowed, and only the net amount will be carried to line 13 on the back of the Periodic Estimate for Partial Payment, form HUD-51001. **Signatures.** This form must be signed by those employees of the contractor and of the Public Housing Agency who prepare and check the Schedule of Materials Stored, form HUD-51003.

Name of Public Housing Agency	Supporting Periodic Estimate for Partial Payment Number	Period From (mm/dd/yyyy)	To (mm/dd/yyyy)	
Location of Project			Project Number	
Name of General Contractor			Contract Number	
Name of General Contractor or Subcontractor			Amounts	
General Contractor			\$	
Subcontractors			\$	
			Total	\$
			Less 10%	\$
			Net	\$

Prepared by	Date (mm/dd/yyyy)	Checked by	Date (mm/dd/yyyy)
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I certify that I or my authorized representatives have examined and checked in detail the invoices representing the cost of materials set forth in appended "Schedule of Materials Stored", form HUD-51003, dated (mm/dd/yyyy) _____ submitted by _____ consisting of _____ sheets with an indicated cost of \$ _____, and find that the net unit prices set forth in the schedule are the same or less than the invoices examined, and that such materials were suitably stored at the site of the development as of (date)(mm/dd/yyyy) _____.

Name of Owner	By (Authorized Representative)	Title	Date (mm/dd/yyyy)
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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)

PAYROLL
(For Contractor's Optional Use; See Instructions at www.dol.gov/whd/forms/wh347instr.htm)
Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number.



NAME OF CONTRACTOR ☐ OR SUBCONTRACTOR ☐										ADDRESS										OMB No.: 1235-0006 Expires: 02/28/2018		
PAYROLL NO.			FOR WEEK ENDING							PROJECT AND LOCATION						PROJECT OR CONTRACT NO.						
(1) NAME AND INDIVIDUAL IDENTIFYING NUMBER (e.g., LAST FOUR DIGITS OF SOCIAL SECURITY NUMBER) OF WORKER			(2) NO. OF WITHHOLDING EXEMPTIONS	(3) WORK CLASSIFICATION		OT OR ST.	(4) DAY AND DATE HOURS WORKED EACH DAY							(5) TOTAL HOURS	(6) RATE OF PAY	(7) GROSS AMOUNT EARNED	(8) DEDUCTIONS FICA WITH- HOLDING TAX OTHER TOTAL DEDUCTIONS					(9) NET WAGES PAID FOR WEEK
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While completion of Form WH-347 is optional, it is mandatory for covered contractors and subcontractors performing work on Federally financed or assisted construction contracts to respond to the information collection contained in 29 C.F.R. §§ 3.3, 5.5(a). The Copeland Act (40 U.S.C. § 3145) contractors and subcontractors performing work on Federally financed or assisted construction contracts to "furnish weekly a statement with respect to the wages paid each employee during the preceding week." U.S. Department of Labor (DOL) regulations at 29 C.F.R. § 5.5(a)(3)(ii) require contractors to submit weekly a copy of all payrolls to the Federal agency contracting for or financing the construction project, accompanied by a signed "Statement of Compliance" indicating that the payrolls are correct and complete and that each laborer or mechanic has been paid not less than the proper Davis-Bacon prevailing wage rate for the work performed. DOL and federal contracting agencies receiving this information review the information to determine that employees have received legally required wages and fringe benefits.

Public Burden Statement

We estimate that it will take an average of 55 minutes to complete this collection, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. If you have any comments regarding these estimates or any other aspect of this collection, including suggestions for reducing this burden, send them to the Administrator, Wage and Hour Division, U.S. Department of Labor, Room S3502, 200 Constitution Avenue, N.W. Washington, D.C. 20210

(over)

Date _____

I, _____
(Name of Signatory Party) (Title)

do hereby state:

(1) That I pay or supervise the payment of the persons employed by

_____ on the
(Contractor or Subcontractor)

_____ ; that during the payroll period commencing on the
(Building or Work)

_____ day of _____, _____, and ending the _____ day of _____, _____,
all persons employed on said project have been paid the full weekly wages earned, that no rebates have
been or will be made either directly or indirectly to or on behalf of said

_____ from the full
(Contractor or Subcontractor)

weekly wages earned by any person and that no deductions have been made either directly or indirectly
from the full wages earned by any person, other than permissible deductions as defined in Regulations, Part
3 (29 C.F.R. Subtitle A), issued by the Secretary of Labor under the Copeland Act, as amended (48 Stat. 948,
63 Stat. 108, 72 Stat. 967; 76 Stat. 357; 40 U.S.C. § 3145), and described below:

(2) That any payrolls otherwise under this contract required to be submitted for the above period are
correct and complete; that the wage rates for laborers or mechanics contained therein are not less than the
applicable wage rates contained in any wage determination incorporated into the contract; that the classifications
set forth therein for each laborer or mechanic conform with the work he performed.

(3) That any apprentices employed in the above period are duly registered in a bona fide apprenticeship
program registered with a State apprenticeship agency recognized by the Bureau of Apprenticeship and
Training, United States Department of Labor, or if no such recognized agency exists in a State, are registered
with the Bureau of Apprenticeship and Training, United States Department of Labor.

(4) That:

(a) WHERE FRINGE BENEFITS ARE PAID TO APPROVED PLANS, FUNDS, OR PROGRAMS

☐ — in addition to the basic hourly wage rates paid to each laborer or mechanic listed in
the above referenced payroll, payments of fringe benefits as listed in the contract
have been or will be made to appropriate programs for the benefit of such employees,
except as noted in section 4(c) below

(b) WHERE FRINGE BENEFITS ARE PAID IN CASH

☐ — Each laborer or mechanic listed in the above referenced payroll has been paid,
as indicated on the payroll, an amount not less than the sum of the applicable
basic hourly wage rate plus the amount of the required fringe benefits as listed
in the contract, except as noted in section 4(c) below.

(c) EXCEPTIONS

EXCEPTION (CRAFT)	EXPLANATION

REMARKS:

NAME AND TITLE	SIGNATURE
----------------	-----------

THE WILLFUL FALSIFICATION OF ANY OF THE ABOVE STATEMENTS MAY SUBJECT THE CONTRACTOR OR
SUBCONTRACTOR TO CIVIL OR CRIMINAL PROSECUTION. SEE SECTION 1001 OF TITLE 18 AND SECTION 231 OF TITLE
31 OF THE UNITED STATES CODE.

VHHA MACARTHUR HOUSES
FAÇADE REHABILITATION

22-032 1180.08

FAÇADE REHABILITATION

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14 AUGUST 2026

BID SUBMISSION
14 AUGUST 2026

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- 01 11 00 Safety
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22-032 1180.08

SECTION 011000 - SUMMARY OF WORK

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Work covered by the Contract Documents.
 2. Type of the Contract.
 3. Work sequencing.
 4. Use of premises.
 6. Owner's occupancy requirements.
 7. Work restrictions.
 8. Special Conditions.
- B. Related Sections:
1. Division 1 Section "Temporary Construction Facilities" for limitations and procedures governing temporary use of Owner's facilities.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. Project Identification: MacArthur Houses, Village of Hempstead Housing Authority.

1. Project Location: 260 Clinton Street, Hempstead, NY 11550
- B. Owner: Village of Hempstead Housing Authority, 260 Clinton Street, Hempstead, NY 11550.
- C. Owner's Representative: Village of Hempstead Housing Authority, 260 Clinton Street, Hempstead, NY 11550.
- D. Architect: LiRo Architects + Planners, P.C., 235 E Jericho Turnpike, Mineola, NY 11501.
- E. Structural Engineers: LiRo Engineers, 235 E Jericho Turnpike, Mineola, NY 11501.

1.3 TYPE OF CONTRACT

- A. Project will be constructed under a single prime contract.

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1.4 WORK SEQUENCING

- A. The project will be sequenced in the order of priority and to limit construction access over the roofs.
Sequence to be determined

1.5 USE OF PREMISES

- A. General: General Contractor shall have limited use of premises for construction operations as necessary to complete the work.

- B. Use of Site: Limit use of premises to work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.

1. Owner Occupancy: Allow for Owner occupancy in areas immediately adjacent to the work area, and for access to the existing facility.
2. Driveways and Entrances: Keep indicated driveways, loading areas, and entrances serving existing facility clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 - a. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

1.6 OWNER'S OCCUPANCY REQUIREMENTS

- A. Owner Occupancy: Owner will occupy the existing facility during the construction of the entire project. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage of the existing building. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits.

1. Maintain access to existing walkways and other adjacent occupied or used facilities. Do not close or obstruct walkways or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
2. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's ongoing operations.

1.7 SPECIAL CONDITIONS

- A. Refer to Supplemental Conditions for work hour restrictions.

- B. Resident operations cannot be disturbed or impeded. Coordinate with owner.
- C. Rigging procedures of equipment and construction materials shall be submitted prior to commencement of work for architect and owner approval.

D. General Contractor to consider access limitations, no payment for delays caused by security concerns/limitations shall be considered.

E. Existing Utility Interruptions: No interruption of utilities serving facilities occupied by Owner at any time will be permitted. Any utility interruptions must be performed only after coordination with the County.

1. Notify VHHA/owner not less than two days in advance of proposed utility interruptions.

2. Do not proceed with utility interruptions without VHHA/owner's written permission.

F. Some parts of the roof exhibit ponding and poor drainage. General Contractor shall be aware of the condition and implement necessary protective measures.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

SAFETY
SECTION 01 11 00

PART 1 GENERAL

1.01 SUMMARY

- A. This section describes the requirements for safe and healthful working conditions as an integral part of the project construction.

1.02 DEFINITION

- A. Safety staff shall mean the safety professional and his/her safety representative(s) or the safety person.

1.03 GENERAL REQUIREMENTS

- A. In prosecuting the work of this Contract, the General Contractor shall provide working conditions on each operation that shall be as safe and healthful as the nature of that operation permits. The various operations connected with the work shall be so conducted that they will not be unsafe or injurious to health; and the General Contractor shall comply with all regulations and published recommendations of the New York State Department of Labor and all provisions, regulations and recommendations issued pursuant to the Federal Occupational Safety and Health Act of 1970 and the Construction Safety Act of 1969, as amended, and with laws, rules, and regulations of other authorities having jurisdiction, with regard to all matters relating to safe and healthful working conditions.

1. Compliance with governmental requirements is mandated by law and considered only a minimum level of safety performance.

2. All work shall also be performed in accordance with safe work practice, and General Contractor's Health and Safety Plan, as approved by the Construction Manager in writing.

B. The General Contractor shall be responsible for the safety of the General Contractor's employees, the public, and all other persons at or about the site of the work. The General Contractor shall be solely responsible for the adequacy and safety of all construction methods, materials, equipment, and the safe prosecution of the work.

C. The General Contractor shall employ a properly qualified safety professional familiar with all work under this contract whose duties shall be to initiate, review, and cause implementation of measures for the protection of health and prevention of accidents.

D. The safety staff shall be provided with an appropriate office on the job site to maintain and keep available safety records, up-to-date copies of all pertinent safety rules, regulations and governing legislation, material safety data sheets, and the site safety plan including information concerning foreseeable emergency conditions, location of emergency and telephone contacts for supportive actions.

E. The General Contractor shall stop work whenever a work procedure or a condition at a work site is deemed unsafe by the safety staff.

1.04 SUBMITTALS

A. The General Contractor shall submit a Health and Safety Plan (HASP), prepared prior to the start of any construction for acceptance by the CM, in writing.

1. The HASP shall be available to workers on site and be submitted to the Engineer and Owner at least two (2) weeks before the beginning of any field work.

2. Copies of the plan shall be provided to the General Contractors' insurers and their risk managers, if any, by the General Contractor.

B. Within thirty (30) days of receiving a "Notice to Proceed", the General Contractor shall submit the name of a safety professional, employed by the General Contractor, responsible for project safety management, and of the safety representative(s) who will work under his/her direction.

C. Documentation and/or personal references confirming the qualifications may also be required.

1. The persons proposed as a safety person, safety professional, or safety representative(s), may be rejected by the Engineer for failure to have adequate qualifications or other cause.

D. In addition, the General Contractor shall submit the names, addresses, and telephone numbers of three (3) supervisory personnel who may be contacted in the event of an emergency occurring during non-working hours.

1.05 QUALIFICATIONS

A. Safety Professional:

1. Certification by the Board of Certified Safety Professional as a Certified Safety Professional.

2. Minimum of five (5) years of professional safety management experience in the types of construction and conditions expected to be encountered on the site.

B. Safety Person:

1. Qualifications of the safety person must include a minimum of five (5) years of relevant construction experience, two (2) years of which are related to safety management.

- C. The Safety staff shall be completely experienced with OSHA requirements and knowledgeable of all applicable health and safety requirements of all governing laws, rules and regulations as well as of good safety practice. The safety staff shall not include the project manager, engineer, or superintendent, or anyone else working on the project. The safety staff shall have no other duties except those directly related to safety.

PART 2 PRODUCTS

2.01 HEALTH AND SAFETY PLAN

- A. The General Contractor shall commit to writing a specific site Health and Safety Plan before the start of any construction for acceptance by the Construction Manager.

2.02 ACCIDENT REPORTS

- A. The General Contractor shall promptly (within the hour of the incident) report to the Construction Manager all accidents involving injury to personnel or damage to equipment and structures, investigate these accidents and prepare a preliminary report and submit within twenty-four (24) hours of the accident. The General Contractor must submit a final accident report to the Construction Manager as follows:

1. The summary report, due by the tenth (10th) day of the incident, shall include descriptions of corrective actions to reduce the probability of similar accidents.
2. In addition, the General Contractor shall furnish to the Engineer, a copy of all accident and health or safety hazard reports received from OSHA or any other government agency, within one (1) day of receipt, and attach the final plan.

- B. In addition to the reports which the General Contractor is required to file under the provisions of the Workman's Compensation Law, he/she shall submit to the Engineer on or before the tenth (10th) day of each month, a report giving the total force employed on his/her Contract in man-days during the previous calendar month, the number and character of all accidents resulting in loss of time or considered reportable by OSHA, and any other information on classification of employees, injuries received on the work, and disabilities arising therefrom, that may be required by the Engineer.

1. The submittal shall also contain an audit report for the prior month, including the safety training conducted, the above equipment logs, records of the condition of the work areas, safety and health records, OSHA and ANSI Z16.1 incidence rates for frequency and severity of recordable accidents, and an evaluation of the effectiveness of the HASP with any changes necessary.
2. The safety professional or safety person and the General Contractor shall sign this audit report. The Engineer will review these reports for General Contractor's compliance with the safety provisions of the Contract.

2.03 SAFETY AND RESCUE EQUIPMENT

- A. The General Contractor shall have proper safety and rescue equipment, adequately maintained and readily available, for any foreseeable contingency. This equipment shall include such applicable items as: proper fire extinguishers, first aid supplies, safety ropes and harness, stretchers, water safety devices, oxygen breathing apparatus, resuscitators, gas detectors, oxygen deficiency indicators, combustible gas detectors, etc.

B. This equipment shall be kept in a protected area and checked at scheduled intervals. A log shall be maintained indicating who checked the equipment, when it was checked, and that it was acceptable. This equipment log shall be updated monthly and be submitted with the monthly report. Equipment that requires calibration shall have copies of dated calibration certificates on site.

C. Substitute safety and rescue equipment must be provided while primary equipment is being serviced or calibrated.

2.04 PROTECTIVE EQUIPMENT

A. All personnel employed by the General Contractor or his subcontractors or any visitors whenever entering the job site shall be required to wear appropriate personal protection equipment required for that area. The General Contractor shall provide all necessary personal protective equipment as requested by the Engineer for his/her designated representatives.

PART 3 EXECUTION

3.01 SAFETY STAFF DUTIES

A. The safety professional shall visit and audit all work areas as frequently as necessary (a minimum of once a week) and shall be available for consultation whenever necessary. The safety staff shall have full authority to implement and enforce the Health and Safety Plan to take immediate action to correct unsafe, hazardous, or unhealthful conditions.

B. A member of the safety staff must be at the job site full time (a minimum of eight (8) hours per working day) whenever work is in progress. When multiple shift work is in progress, more than one (1) safety representative may be required. The safety staff shall as a minimum:

1. Schedule safety training programs as required by law, the safety plan, and good safety practice. An outline of materials to be covered shall be provided with the safety plan. All employees shall be instructed on the recognition of hazards, observance of precautions, of the contents of the safety plan and the use of protective and emergency equipment.
2. Determine that operators of specific equipment are qualified by training and/or experience before they are allowed to operate such equipment.
3. Develop and implement emergency response procedures. Post the name, address, and hours of the nearest medical doctor; name and address of nearby clinics and hospitals, and the telephone numbers of the appropriate ambulance service, fire, and the police department.
4. Post all appropriate notices regarding safety and health regulations at locations which afford maximum exposure to all personnel at the job site.
5. Post appropriate instructions and warning signs in regard to all hazardous areas or conditions which cannot be eliminated. Identification of these areas shall be based on

experience, on site surveillance, and severity of hazard. Such signs shall not be used in place of appropriate workplace controls. In order to alert the workers “Safety First” signs should be posted, as ordered by the Engineer at no extra cost.

6. Ascertain by personal inspection that all safety rules and regulations are enforced. Make inspections at least once a shift to ensure that all machines, tools, and equipment are in a safe operating condition, and that all work areas are free of hazards. Take necessary and timely corrective actions to eliminate all unsafe acts and/or conditions, and submit to the Engineer each day, a copy of his/her findings on the inspection check list report forms established in the safety plan.

7. Submit to the Engineer, copies of all safety inspection reports and citations from regulating agencies and insurance companies within one (1) workday of receipt of such reports.

8. Provide safety training and orientation to authorized visitors to ensure their safety while occupying the job site.

9. Perform all related tasks necessary to achieve the highest degree of safety that the nature of the work permits.

3.02 MEASUREMENT OF PAYMENT

- A. No separate payment for the article “Safe and Healthful Working Conditions” will be made. The costs of same will be included in the Lump Sum Bid.

END OF SECTION 01 11 00

SECTION 012200 - UNIT PRICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for unit prices.

1.3 DEFINITIONS

- A. Unit price is a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

1.4 PROCEDURES

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.
- B. Measurement and Payment: See individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.
- C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.
- D. List of Unit Prices: A schedule of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

UNIT PRICES
22-032 1180.08
VHHA MACARTHUR HOUSES
FAÇADE REHABILITATION

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PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF UNIT PRICES

A. Unit Price No. Patch and repair of existing CMU walls to remain. Including all materials and labor necessary to complete the work not already included in Item 1: Base Bid.

B. Unit Price No. 2: Remove and replace existing CMU walls in addition to those indicated in the contract documents. Including all materials and labor necessary to complete the work not already included in Item 1: Base Bid.

C. Unit Price No. 3: Patch and repair existing concrete floor. Include all materials and labor necessary to complete the work not already included in Item 1: Base Bid.

D. Unit Price No. 4: Abatement of other non-identified hazardous materials concealed prior to the start of the work not already included in Item 1: Base Bid.

END OF SECTION 012200

SECTION 012513 - PRODUCT SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Work specified in this section is applicable to the General Contractor and its Subcontractors as described herein.

B. Section Includes:

1. General product requirements, including:

- a. Product options.
- b. Procedures for substitution requests.

C. Related Sections:

1. Submittal transmission, handling, and action procedures: Elsewhere in Division 1.

1.2 DESCRIPTION OF REQUIREMENTS

A. Definitions: Definitions used herein are not intended to negate the meaning of other terms used in the contract documents, including such terms as "specialties", "systems", "structure", "finishes", "accessories", "furnishings", "special construction", and similar terms. Such terms are self-explanatory and have recognized meanings in the construction industry.

1. "Products" are items purchased for incorporation in the Work, regardless of whether they were specifically purchased for the project or taken from the General Contractor's previously purchased stock. The term "product" as used herein includes the terms "material", "equipment", "system", and other terms of similar intent.

a. "Named Products" are products identified by use of the manufacturer's name for a product, including such items as a make or model designation, as recorded in published product literature, of the latest issue as of the date of the contract documents.

2. "Materials" are products that must be substantially cut, shaped, worked, mixed, finished, refined, or otherwise fabricated, processed, or installed to form units of work.

3. "Equipment" is defined as a product with operational parts, regardless of whether motorized or manually operated, and in particular, a product that requires service connections such as wiring or piping.

B. Inclusion of Non-Specified Products Prior to Bid Date: For inclusion of products other than those specified, bidders shall submit a request in writing at least 15 days prior to bid date. Requests received after this time will not be reviewed or considered regardless of cause. Requests shall clearly define and describe the product and all implications to the Contract work, including design, for which inclusion is requested. Inclusion, if accepted by the Architect/Engineer, will be in the form of an addendum to the contract documents issued to all bidders on record.

C. Substitutions After Award of Contract: The General Contractor's requests for changes in the products, materials, equipment, and methods of construction required by the contract documents are considered requests for "substitutions", and are subject to the requirements specified herein. The following are not considered as substitutions:

1. Revisions to the contract documents, where requested by the Owner or Architect/Engineer are considered as "changes", not substitutions.
2. Substitutions requested during the bidding period, which have been accepted prior to the bid date, are included in the contract documents and are not subject to the requirements for substitutions as herein specified.
3. Specified General Contractor options on products and construction methods in the contract documents are choices available to the General Contractor and are not subject to the requirements for substitutions as herein specified.
4. Except as otherwise provided in the contract documents, the General Contractor's determination of and compliance with governing regulations and orders as issued by governing authorities do not constitute "substitutions" and do not constitute a basis for change orders.

1.3 QUALITY ASSURANCE

- A. Source Limitations: To the fullest extent possible, provide products of the same generic kind, from a single source, for each unit of work.
1. When it is discovered that specified products are available only from sources that do not or cannot produce an adequate quantity to complete project requirements in a timely manner, consult with the Architect for a determination of what product qualities are most important before proceeding. The Architect/Engineer will designate those qualities, such as visual, structural, durability, or compatibility, that are most important. When the Architect's/Engineer's determination has been made, select products from those sources that produce products that possess the most important qualities, to the fullest extent possible.

- B. Compatibility of Options: Compatibility of products is a basic requirement of product selection. When the General Contractor is given the option of selecting between two or more products for use on the project, the product selected must be compatible with other products previously selected, even if the products previously selected were also General Contractor options. The complete compatibility between the various choices available to the General Contractor is not assured by the various requirements of the contract documents, but must be provided by the General Contractor.

1.4 SUBMITTALS

- A. Requests for Substitutions after Award of Contract: Submit one original and three copies of each request for substitution. For each request for substitution, identify the product or fabrication or installation method to be replaced by the substitution; include related specification section and drawing numbers, and complete documentation showing compliance with the requirements for substitutions. Include the following information, as appropriate, with each request:
1. Provide complete product data, drawings and description of products, and fabrication and installation procedures.
 2. Provide samples where applicable or requested.
 3. Provide a detailed comparison of the significant qualities of the proposed substitution with those of the work originally specified. Significant qualities include elements such as size, weight, durability, performance, and visual effect where applicable.
 4. Provide complete coordination information. Include all changes required in other elements of the work to accommodate the substitution, including work performed by the Owner and General Contractor.
 5. Provide a statement indicating the effect the substitution will have on the work schedule in comparison to the schedule without approval of the proposed substitution. Include information regarding the effect of the proposed substitution on the Contract Time.
 6. Provide complete cost information, including a proposal of the net change, if any, in the Contract Sum.
 7. Provide certification by the General Contractor to the effect that, in the General Contractor's opinion, after thorough evaluation, the proposed substitution will result in work that in every significant respect is equal to or better than the work required by the contract documents, and that it will perform adequately in the application indicated.
 - a. Include in this certification, the General Contractor's waiver of rights to additional payment or time, which may subsequently be necessary because of the failure of the substitution to perform adequately, and the General Contractor's obligation to assume responsibility for any additional cost: to the Owner by reason of additional services of

the Architect/Engineer; to subcontractors which may arise by virtue of the request for substitution.

b. Provide a Producer's Statement of Applicability.

B. Action by the Architect/Engineer: Within two weeks of receipt of the General Contractor's request for substitution, the Architect/Engineer will request additional information or documentation as may be needed for evaluation of the request. Within two weeks of receipt of the request, or within one week of receipt of the requested additional information or documentation, whichever is later, the Architect/Engineer will make a recommendation to the Owner of either the acceptance or rejection of the proposed substitution.

1. Acceptance will be in the form of a change order.
2. Rejection will include a statement giving reasons for the rejection.

1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle product in accordance with manufacturer's recommendations, using means and methods that will prevent damage, deterioration and loss, including theft. Control delivery schedules to minimize long-term storage at the site and to prevent overcrowding of construction spaces. In particular, coordinate delivery and installation to ensure minimum holding or storage of items known or recognized to be flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other sources of loss.

B. Deliver products to the site in manufacturer's sealed containers or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.

C. Store products at the site in a manner that will facilitate inspection and measurement of quantity or counting of units.

D. Store heavy materials away from the project structure in a manner that will not endanger the supporting construction.

PART 2 - PRODUCTS

2.1 GENERAL PRODUCT COMPLIANCE

A. General: Requirements for individual products are indicated in the contract documents; compliance with these requirements is in itself a contract requirement. These requirements may be specified in any one of several different specifying methods, or in any combination of these methods. These methods include the following:

1. Proprietary.

2. Descriptive.
 3. Performance.
 4. Compliance with Reference Standards.
 5. Compliance with codes, compliance with graphic details, allowances, and similar provisions of the contract documents also having a bearing on the selection process.
- B. Procedures for Selecting Products: The General Contractor's options in selecting products are limited by requirements of the contract documents and governing regulations. They are not controlled by industry traditions or procedures experienced by the General Contractor on previous construction projects. Required procedures include, but are not limited to, the following for the various indicated methods of specifying:
1. Proprietary and semi-proprietary specification requirements:
 - a. Single product name: Where only a single product or manufacturer is named, provide the product indicated, unless the specification indicates possible consideration of other products. Advise the Architect/Engineer before proceeding, when it is discovered that the named product is not a reasonable or feasible solution.
 - b. Two or more product names: Where two or more products or manufacturers are named, provide one of the products named, at the General Contractor's option. Exclude products that do not comply with specification requirements. Do not provide or offer to provide an unnamed product, unless the specification indicates possible consideration of other products. Advise the Architect/Engineer before proceeding where none of the named products comply with specification requirements, or are feasible for use.
 - c. Where products or manufacturers are specified by name, accompanied by the term "or equal" or similar language, comply with contract document provisions concerning "substitutions" to obtain approval for the use of an unnamed product.
 2. Non-proprietary specification requirements: Where the specifications name products or manufacturers that are available and may be incorporated in the Work, but do not restrict the General Contractor to the use of these products only, the General Contractor may, at his option, use any available product that complies with contract requirements.
 3. Descriptive specification requirements: Where the specifications describe a product or assembly generically, in detail, listing the exact characteristics required, but without use of a brand or trade name, provide products or assemblies that provide the characteristics indicated and otherwise comply with contract requirements.
 4. Performance specification requirements: Where the specifications require compliance with indicated performance requirements, provide products that comply with

the specific performance requirements indicated, and that are recommended by the manufacturer for the application indicated. The manufacturer's recommendations may be contained in published product literature, or by the manufacturer's individual certification of performance. General overall performance of a product is implied where the product is specified for specific performance.

5. Compliance with standards, codes, and regulations: Where the specifications require only compliance with an imposed standard, code or regulation, the General Contractor has the option of selecting a product that complies with specification requirements, including

6. Visual matching: Where matching an established sample is required, the final judgment of whether a product proposed by the General Contractor matches the sample satisfactorily will be determined by the Architect. Where there is no product available within the specified product category that matches the sample satisfactorily and also complies with other specified requirements, comply with provisions of the contract documents concerning "substitutions" and "change orders" for the selection of a matching product category, or for non-compliance with specified requirements.

7. Visual selection: Except as otherwise indicated, where specified product requirements include the phrase "...as selected from manufacturer's standard colors, patterns, textures..." or similar phrases, the General Contractor has the option of selecting the product and manufacturer, provided the selection complies with other specified requirements. The Architect is subsequently responsible for selecting the color, pattern and texture from the product line selected by the General Contractor.

8. Producer's statement of applicability: Where the individual specification sections indicate products that require a "Statement of Applicability" from the manufacturer or other producer, submit a written certified statement from the producer stating that the producer has reviewed the proposed application of the product on the project. This statement shall state that the producer agrees with or does not object to the Architect's/Engineer's specification and the General Contractor's selection of the product for use in the Work. The statement shall also state that the proposed application of the product on the project is suitable and proper.

2.2 SUBSTITUTIONS

- A. Conditions: The General Contractor's request for a substitution will be received and considered when extensive revisions to the contract documents are not required, when the proposed changes are in keeping with the general intent of the contract documents, when the requests are timely, fully documented and properly submitted, and when one or more of the following conditions is satisfied; otherwise, the requests will be returned without action except to record noncompliance with these requirements.

1. The Architect/Engineer will consider a request for substitution where the request is directly related to an "or equal" clause or similar language in the contract documents.

2. The Architect/Engineer will consider a request for substitution where the specified product or method cannot be provided within the Contract Time. However, the request will not be considered if the product or method cannot be provided as a result of the General Contractor's failure to pursue the work promptly or to coordinate the various activities properly.

3. The Architect/Engineer will consider a request for substitution where the specified product or method cannot receive necessary approval by a governing authority, and the requested substitution can be approved.

4. The Architect/Engineer will consider a request for substitution where a substantial advantage is offered the Owner, in terms of cost, time, energy conservation, or other considerations of merit, after deducting offsetting responsibilities the Owner may be required to bear. These additional responsibilities may include such considerations as additional compensation to the Architect/Engineer for redesign and evaluation services, the increased cost of other work by the Owner or the General Contractor, and similar considerations.

a. Where such advantage to the Owner is offered, the General Contractor shall provide a statement as to the amount of cost, time or other consideration.

b. The Architect/Engineer will consider a request for substitution when the specified product or method cannot be provided in a manner which is compatible with other materials in the work, and where the General Contractor certifies that the proposed substitution will overcome the incompatibility.

c. The Architect/Engineer will consider a request for substitution when the specified product or method cannot be properly coordinated with other materials in the work, and where the General Contractor certifies that the proposed substitution can be properly coordinated.

d. The Architect/Engineer will consider a request for substitution when the specified product or method cannot receive a warranty as required by the contract documents and where the General Contractor certifies that the proposed substitution will receive the required warranty.

B. Work-Related Submittals: The General Contractor's submittal, and the Architect's/Engineer's review, of shop drawings, product data or samples which relate to work not complying with requirements of the contract documents, does not constitute an acceptance or valid request for a substitution, nor approval thereof.

2.3 GENERAL PRODUCT REQUIREMENTS

A. General: Provide products that comply with the requirements of the contract documents and that are undamaged and, unless otherwise indicated, unused at time of installation. Provide products that are complete with all accessories, trim, finish, safety guards, and other devices and details

needed for a complete installation and for the intended use and effect.

1. Standard products: Where they are available, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 2. Continued availability: Where, because of the nature of its application, the Owner is likely to need replacement parts or additional amounts of a product at a later date, either for maintenance and repair or replacement, provide standard, domestically produced products for which the manufacturer has published assurances that the product and its parts are likely to be available to the Owner at a later date.
- B. Equipment Nameplates: Provide a permanent nameplate on each item of service-connected or power-operated equipment. Locate nameplate on an easily accessible surface which is inconspicuous in occupied spaces. Nameplate shall contain the following information and other essential operating data:
1. Name of manufacturer.
 2. Name of product.
 3. Model number.
 4. Serial number.
 5. Capacity.
 6. Speed.
 7. Ratings.
- C. Identifying Markings: Nameplates and other identifying markings shall not be affixed on exposed surfaces or manufactured items installed in finished spaces.

PART 3 - EXECUTION

3.1 INSTALLATION OF PRODUCTS

- A. Except as otherwise indicated in individual specification sections, comply with manufacturer's instructions and recommendations for installation of the products and the applications indicated. Anchor each product securely in place, accurately located and aligned with other work. Clean exposed surfaces and protect surfaces as necessary to ensure freedom from damage and deterioration at time of acceptance.

END OF SECTION 012513

22-032 1180.08
VHHA MACARTHUR HOUSES
FAÇADE REHABILITATION

BID SUBMISSION
14 AUGUST 2026

SECTION 013113 - PROJECT PLANNING AND SCHEDULING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes conferences required after the Notice to Proceed but prior to commencement of construction activities, and describes the requirements for Project Progress Meetings during the execution of the Work.

1. General Contractor shall coordinate all elements of the work and coordinate the work with existing facilities/conditions, and with work of other affected trades, and the Construction Manager.

2. The requirements included herein shall constitute the minimum coordination and supervision necessary for coordination of work on the project to be fulfilled by the General Contractor.

- B. Related Sections:

1. Submittals: Elsewhere in Division 1.

1.2 DESCRIPTION OF WORK

A. Meetings: The Construction Manager will call as many meetings with the General Contractor as are necessary to resolve any conflicts that become apparent. Meetings and conferences shall take place at the project site or some other location satisfactory to both the Construction Manager and the General Contractor. Meetings will include but are not limited to the following.

B. Attendance: All meetings called by the Construction Manager shall be attended by the following personnel:

1. The Construction Manager.
2. General Contractor's superintendent.
3. General Contractor's quality control supervisor, as appropriate to the agenda.
4. General Contractor's site safety and health officer as appropriate to the agenda.
5. Subcontractors as appropriate to the agenda.
6. Suppliers as appropriate to the agenda.

7. Architect/consultants and others as appropriate or as requested by the Construction Manager.

C. Report of the Meeting: The Construction Manager shall be responsible for recording the report of all meetings and shall include all significant proceedings and decisions. The Construction Manager will reproduce and issue report of the meetings to each participant and to interested parties.

D. Preconstruction Conference: Within 5 working days of issuance of the Notice to Proceed, the General Contractor shall meet with the Construction Manager for a preconstruction conference. The purpose of this conference is to review submittal procedures, safety, payment procedures and labor relations, environmental protection, progress schedules, and procurement of materials. The principal features of work shall also be reviewed and any questions regarding the Contract and work site shall be addressed. Attendance by the General Contractor's quality control personnel, safety personnel, and any key subcontractors' superintendent will be required.

1. At least 5 working days prior to this meeting, General Contractor shall submit 5 copies of the following:

- a. General Contractor Quality Control Plan (CQCP).
- b. Site Safety and Accident Prevention Plan.
- c. Site Security Plan.
- d. Materials Handling Plan.
- e. Construction Phasing and Site Logistics Plan.

2. The purpose of this conference is to further define the Quality Control Plan, to thoroughly review the CQCP, and to develop a mutual understanding of the specific requirements established by the Contract. The specifics of the General Contractor's other submittals shall also be discussed so that the emergency procedures and health and safety requirements are understood by all those performing work at the site.

3. The above-listed items will be briefly reviewed to provide the Construction Manager with a general understanding of the Quality Control Plan. The General Contractor's schedule, particularly for the initial start-up period, shall be discussed. Questions concerning the administrative requirements outlined during the preconstruction conference or any other aspect of the project may also be addressed.

E. Progress Meetings: The Construction Manager shall schedule and administer progress meetings at a minimum of once every two weeks and additionally, as requested by the Construction Manager, the Architect, or the General Contractor, to address issues or matters of particular interest or concern related to the project.

1. Meeting requirements: The Construction Manager shall:

- a. Prepare agenda for meetings.
- b. Make physical arrangements for meeting.
- c. Preside at meetings.
- d. Record the report of meetings; include significant proceedings and decisions.
- e. Distribute previous meeting reports.

2. Suggested agenda: The following is a suggested agenda for progress meetings:

- a. Review and approval of report of previous meeting.
- b. Review of work progress since previous meeting.
- c. Field observations, problems, conflicts.
- d. Problems which impede the schedule, and proposed corrective actions.
- e. Review of delivery schedules.
- f. Corrective measures and procedures to regain projected schedule.
- g. Revisions to project schedule.
- h. Projected progress during succeeding work period.
- i. Coordination of schedules.
- j. Review of submittal schedules.
- k. Maintenance of quality and safety standards.
- l. Pending of changes and substitutions.
- m. Review of proposed changes for effect on construction schedule and on completion date.
- n. Other business as appropriate.

F. Preinstallation Conference: Prior to starting installation of each major work component, a preinstallation conference will be held, attended by the General Contractor's superintendent, the General Contractor's Quality Control Supervisor and each entity involved or affected by the planned installation, and technical representatives of product manufacturers and others recognized as expert or otherwise capable of influencing success of the installation.

G. Coordination/Foremen Meetings: Once construction commences, a Foremen's Meeting will be called every Monday to coordinate work between the trades. Foremen for all the trades will be required to attend.

H. Pre-Construction Meeting for Facility Coordination: A meeting with the facility must be held prior to the start of work to coordinate the General Contractor's proposed work plan, schedules, phasing, site logistics, safety, and other concerns. A meeting with the Construction Manager will

be held prior to the meeting with the facility to prepare for the meeting with the facility.

I. Pre-scheduling Meeting: Within five calendar days of issuance of the Notice to Proceed, the General Contractor shall meet with the Construction Manager for a pre-scheduling conference. The purpose of this conference is to review the specified project scheduling requirements.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013113

SECTION 01 32 00 CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 -GENERAL

1.01 DESCRIPTION

- A. The work shall consist of preparing, submitting, and maintaining a computerized CPM (Critical Path Method) progress schedule using Primavera P6 software.
- B. The purpose of the computerized CPM progress schedule is to ensure timely completion of the contract and to establish a standard methodology for time adjustment analysis based on the principles of the Critical Path Method of Scheduling.
- C. For this specification, "Engineer" means County authorized Construction Manager.
- D. The Contractor shall ensure that any and all computer files submitted to the Engineer are in a format that can be imported directly using Primavera software, version P6 (or as approved by the Engineer).

1.02 DETAILS

- A. PRE-CONSTRUCTION SCHEDULE MEETING
 - 1. The Engineer will schedule and conduct a Pre-construction Scheduling Meeting with the Contractor within ten (10) working days after the contract has been awarded. The requirements of this specification will be reviewed at this meeting. Additionally, the following topics will be discussed:
 - a. Specifics of any contract Time-Related Clauses.
 - b. The representation in the schedule of the Time Related work.
 - c. The calendar, activity coding, and resource definition requirements unique to and consistent with the contract.
 - d. The Contractor's schedule methodology employed, proposed work sequence and any proposed deviations of sequences from the contract plans.
 - e. The factors that the Contractor determines to control the completion of the project and any milestone completions contained therein.
 - f. Narrative content for Initial Baseline and Monthly Updates.
 - g. Schedule submission protocol for Initial Baseline and Monthly Updates.
 - h. The Contractors attendance at the Pre-construction Scheduling Meeting is mandatory. No fieldwork will be allowed, with the exception of set up of the field office, until this meeting is held.
- B. INITIAL BASELINE CPM CONSTRUCTION SCHEDULE
 - 1. Within fifteen (15) workdays following the Notice to Proceed, the Contractor shall prepare and submit to the Engineer the Initial Baseline CPM Construction Schedule for the entire

project. This submission shall include the electronic Schedule file and paper reports as required and approved by the Engineer.

2. The Initial Baseline Schedule must be cost and resource loaded and shall represent the Contractor's plan to construct the project. This schedule shall include all work and activities necessary to complete the project including but not limited to activities for the preparation, submittal, review, approval, fabrication, and delivery of all shop drawing and procurement related items. The Initial Baseline CPM Construction Schedule must be set up to conform to the staging/phasing and other requirements defined in the contract.

3. The Initial Baseline Schedule shall meet all interim milestone dates and shall not extend beyond the contract completion date.

C. SCHEDULE REQUIREMENTS

1. The Contractors Initial Baseline CPM Construction Schedule shall meet the following requirements:

2. CPM ACTIVITY NETWORK FORMAT - The schedule network shall use the Precedence Diagramming Method. (If the contractor desires to employ an alternative method prior approval by the Engineer is required and no changes to the initial submission date will be permitted.)

3. PROJECT DEFINITIONS - The following project specific properties within the schedule shall be defined:

a. CALENDAR - All calendars created shall encompass and account for the total duration of the contract time period. The standard calendar shall be 8-hour days, five days per week and shall account for holidays and non-working days. Additional calendars shall be created and included as required for:

- 1) Work week (5 or 6 day). (When or if the contractor elects to utilize a 6 day work week he shall be responsible for the county's overtime costs as applicable by the contract requirements).
- 2) Seasonal restrictions (asphalt, landscape, etc.).
- 3) Concrete curing/calendar days.
- 4) Shop drawing review.
- 5) Any project specifics as required by the Engineer.
- 6) Expected and contemplated weather conditions shall be accounted for in the calendars.

b. ACTIVITY CODE - As a minimum, the following activity codes shall be established:

- 1) Responsibility -The party responsible for each activity. Only one party can be responsible for an activity. Include Values for "Nassau County Department of Public Works (NC)", "Prime Contractor" and third parties to the contract as appropriate (utilities, etc.).
- 2) Phase - Phasing consistent with Contract plans where each activity is performed; Include Values for "None", and "Project Wide".
- 3) Location - Location of activity work by Stationing; Include Value for "None", and "Project Wide"
- 4) Type - The type of work for each activity; Include a Value for Administrative."
- 5) Added Work - Work added to the Contract and incorporated into the schedule with the Engineers Approval.

- 6) As Required by Project - Any coding unique to or as required by the Engineer to facilitate the use and analysis of the Schedule. This coding shall be established in consultation with the Engineer at the Pre-construction Scheduling Meeting.
4. RESOURCES - The Resource Dictionary shall be established as required by the Engineer. The Resource Dictionary shall be limited to Labor and Equipment. Labor may be represented by work crews. The composition of each crew must be detailed and included as an appendix to the Narrative Report. Sub-Contractors shall be represented as a labor crew(s).
5. COST LOADING – Basis of cost loading will be the **approved** bid breakdown.
6. ACTIVITY DATA
 - a. ACTIVITY IDENTIFICATION - Each activity shall have a unique identifier. The identifier may be alpha-numeric, but at a minimum must be a unique number.
 - b. ACTIVITY DESCRIPTION - Each activity shall be unambiguously described. Descriptions such as "construct 30% of Y" are unacceptable. Activities shall be discrete to the extent necessary to accurately schedule the work.
 - c. ACTIVITY DURATION - Durations of individual work activities shall not exceed fifteen working days. The minimum activity duration increment is one full day. Durations of individual shop drawing review activities may exceed fifteen working days and shall be consistent with Contract Requirements. Exceptions to this will be reviewed by the Engineer on an activity-by-activity basis. If requested by the Engineer, production rates or other supporting information shall be supplied justifying the reasonableness of any given activity time duration. A Method Statement including the labor, equipment, production rates and any additional information, required to achieve a given activity shall be supplied within 5 working days when requested by the Engineer.
 - d. ACTIVITY RELATIONSHIPS - Activity relationships shall be finish-to-start with no lags unless directed otherwise by the Engineer. Contractor requests for exemptions will be made on a case by case basis. Each activity with the exception of the required "Project Award" and "Completion" activities shall have a predecessor and a successor activity relationship.
 - e. ACTIVITY START and FINISH DATES - The earliest start date, earliest finish date, latest start date, and latest finish date shall be calculated for each activity.
 - f. ACTIVITY TOTAL FLOAT - The total float shall be calculated for each activity. Total float is the full amount of time by which the start on an activity may be delayed without causing the project to last longer.
 - g. ACTIVITY CALENDARS - The appropriate calendar assignment shall be made to each activity
 - h. ACTIVITY CODES - Coding shall be assigned to each activity from the defined activity dictionary. Each code shall have a value assigned in a given activity.
 - i. ACTIVITY CONSTRAINTS - The start or completion of any activity shall not be constrained. Exceptions to this must receive prior approval in writing by the Engineer. A "Must-Finish-By" Date for the overall project is a constraint and must be pre-approved by the Engineer.
 - j. ACTIVITY RESOURCE(S) - The schedule shall be "Resource" loaded as required by the Engineer. The resources required to accomplish each activity shall be assigned to that activity from the "Resource Dictionary"
7. REQUIRED ACTIVITIES -The following activities shall be incorporated into the Schedule:

<u>Activity</u>			
<u>Activity ID</u>	<u>Description</u>	<u>Activity Type</u>	<u>Logic Relationship</u>
000010	Contract "Notice to Proceed"	Start Milestone	No Predecessors to this First Schedule Activity
999999	Completion	Finish Milestone	No Successors to this Last Schedule Activity

8. DATA DATE - The Data Date and Project Start Date in the Initial Baseline Schedule shall be the NOTICE TO PROCEED DATE. The Data Date for each Monthly Update shall be the last workday of the month.

D. REVIEW AND ACCEPTANCE OF THE INITIAL BASELINE CPM CONSTRUCTION SCHEDULE

1. The Contractor shall submit to the Engineer the following items to facilitate review of the Initial Baseline CPM Construction Schedule:
 - a. Narrative -A statement explaining the general sequence of work in the Contractor's schedule, a detailed definition of the work on the Critical Path, a statement regarding the meeting of any Time Restrictive Clause dates, and the explanation of any other ambiguities in the schedule.
2. The following Activity Sorts generated from the software shall be provided or as required and approved by the Engineer:
 - a. Critical Path Activity Sort -The activities that comprise the projects Critical Path. The list shall start with the first activity in the path and then ascend by Early Start date to the final activity in the path.
 - b. Time Related Activity Sort -For the activities necessary to complete the work within each specific Time Frame provision in the contract, shall be listed. The list shall start with the first milestone activity and then ascend by Early Start date to the final milestone activity in the network comprising each Time Frame period. Include a Critical Path activity sort for each specific Time Frame in the contract.
 - c. Constraint Activity Sort -Listing of Constrained Activities and type of constraint.
 - d. Listing of Calendars and Activity Coding incorporated in the Schedule
3. Electronic copies of the Initial CPM Construction Schedule shall be provided in format approved by the Engineer.
4. The Engineer will review the Initial Baseline CPM Construction Schedule and forward any comments, revisions, or requests to the Contractor. Within ten (10) workdays of the Engineer's reply, the Contractor shall make adjustment to the Initial Baseline CPM Construction Schedule in accordance with the Engineer's comments and resubmit copies for review consistent with the above directives.
5. Upon final revisions, the Contractor shall submit electronic file copies of the Initial Baseline CPM Construction Schedule to the Engineer. The sort of activities scheduled to start (ES) & finish (EF) in the next update period shall be included. The Logic Diagram shall be submitted as directed by the Engineer. The final submission shall be submitted for approval within five (5) workdays of the Contractor's receipt of the final comments by the Engineer.
6. Approval of the Initial Baseline CPM Construction Schedule by the Engineer shall not be construed to imply approval of any particular method or sequence of construction or to relieve

the Contractor of providing sufficient materials, equipment, and labor to guarantee completion of the project in accordance with the contract proposal, plans, and specifications. Approval shall not be construed to modify or amend the completion date. Completion dates can only be modified or amended by standard contractual means.

7. Failure to include in the Initial Baseline CPM Construction Schedule any element of work required for the performance of the contract shall not excuse the Contractor from completing all work required within the completion date(s) specified in the contract.

E. SCHEDULE UPDATES

1. MONTHLY PROGRESS UPDATES The Contractor shall update the schedule monthly. The schedule shall be updated to include all work and progress up to and including the last working day of the month. This will establish the "Data Date". The Monthly update shall detail progress based on actual dates of activities started and completed, the percent of work completed to date on each activity started but not yet completed and the status of procurement of critical materials. The updated schedule data shall be submitted in an electronic file format acceptable to the Engineer.

2. A Narrative Report is required for each update and shall provide the following information:

- Contractors transmittal letter to the Engineer stating the update period and schedule "Data Date".
- Work started, completed and ongoing during the update period by activity with "Actual Dates".
- Description of current Critical Path and any change from previous Critical Path.
- Any activities added or deleted and any proposed changes in Activity Logic (Engineer's approval in writing is required).
- Current Delays or Advancements
 - Delayed or Advanced Activities.
 - Proposed corrective action and schedule adjustments to address the Delay.
 - Impact of Delay or Advancement on other activities (duration, ES, EF, LS, LF), milestone and completion dates.
 - Impact of Delay or Advancement on the Critical Path.
- Outstanding Items that effect the schedule and status thereof (including but not limited to):
 - Permits.
 - Shop Drawings.
 - Change Orders.
 - Reviews of submittals.
 - Approvals.
 - Fabrication and Delivery.
- Scheduled Completion Date Status
 - Contract Completion.
 - Interim Time Frame if any.

3. The following Activity Sorts generated from the Software shall be provided:

- Current Critical Path Activity Sort
- Near Critical Activities Sort
- Sort of Activities scheduled to start (ES) & finish (EF) in the next Monthly update period.
- Any other "sort" as directed by the Engineer and/or as discussed in the pre-construction scheduling meeting.

4. The Monthly Progress Updates shall be submitted to the Engineer within five (5) workdays of the "Data Date". The Engineer shall prepare a written response within five (5) workdays of receipt of the Monthly Update approving, approving with comments, or returning for resubmission within five (5) workdays. **If the Contractor fails to comply with the Monthly Progress Update submission requirements the Commissioner reserves the right to withhold any or all contract payments.**

F. TOTAL FLOAT OWNERSHIP Total Float belongs to the contract and shall not be considered as available for the exclusive use or benefit of either the County or the Contractor. Total Float is the number of days an activity may be delayed without extending the completion of either the project or an interim milestone. Float is available on a first-come, first-served basis to all identified "Responsible" parties in the schedule.

G. FLOAT MANIPULATION NOT PERMITTED The Schedule shall not sequester float through such strategies as calendar manipulation, resource/labor manipulation or the extension of activity durations to fill up available float time. The Initial Baseline CPM Construction Schedule shall not attribute negative float to any activity.

H. CHANGES TO THE SCHEDULE The Initial Baseline CPM Construction Schedule shall accurately reflect the manner in which the Contractor intends to proceed with the project. Changes to the schedule (the addition or deletion of activities, logic changes, and duration changes) shall be submitted in writing to the Engineer for approval and inclusion in the next Monthly Progress Update. The process of comparing the Schedule Update to Baseline shall be followed throughout the contract. Revision to any contract milestones, or contractually mandated schedule provisions will not be permitted without written authorization from the Engineer.

I. CRITICAL ACTIVITIES AND BASIS FOR TIME ADJUSTMENTS The measure for Time

Adjustments in the schedule shall be based on the criticality, and responsibility of the delay or advancement. Criticality is defined as the presence of the delayed or advanced activity on the projects Critical Path. The Critical Path is defined to be the longest continuous chain of activities through the schedule network that establishes the minimum overall duration in the absence of constraints in the program software. Time adjustment does not mean an extension of time for this contract.

J. CHANGES TO THE CONTRACT In the event a notice of a change to the contract is received the Contractor shall notify the Engineer in writing within 10 (ten) calendar days of the effect of such change to the schedule. Change to the contract includes, but is not limited to, extra work, change orders, work suspensions, changed condition, Value Engineering Change Proposal, etc. The effect of the change to the contract on the projects Critical Path shall be stated. Any proposed revisions to the Schedule to incorporate the change to the contract shall be stated. No changes shall be made to the Schedule without prior written approval of the Engineer. The approved changes shall be incorporated in the next Monthly Progress Update.

1.03 TIME IMPACT ANALYSIS

A. This analysis will be performed by the Engineer (CM's scheduler) based on schedule updates as accepted in monthly schedule meetings.

B. Events, actions, and progress that cause delays or gains to the Project Schedule will be analyzed solely by the "Contemporaneous Period Analysis" method. The Contemporaneous Period Analysis evaluates delays or gains in the period in which it occurred. The analysis period for the purpose of this Specification shall be the period covered in each Monthly update to the schedule.

- C. Impact of delay will be evaluated at the completion of the project. However, an interim extension of time for payment purposes only may be granted by the Commissioner at his or her sole discretion at the end of contractual completion date.

1.04 RECOVERY SCHEDULES

A. General Provisions for Recovery Schedules

1. When updated Progress Schedule indicates and the Engineer determines that the ability to comply with the Contract Times falls behind schedule due to delay attributed to the CONTRACTORS, General Contractor shall prepare and submit a Progress Schedule demonstrating responsible Contractor's plan to accelerate related work to achieve compliance with the Contract Times ("recovery schedule") for Engineer's acceptance.
2. When recovery schedule will affect another prime Contractor on the Project, input on proposed recovery schedule action from the responsible prime Contractors must be provided within 10 workdays of such determination by the Engineer. Incorporate requirements of other prime Contractors into the recovery schedule to the extent applicable.
3. Submit recovery schedule within 10 workdays after submittal of updated Progress Schedule where need for recovery schedule is indicated or include in next update as directed by the Engineer.

B. Implementation of Recovery Schedule

1. At no additional cost to OWNER, do one or more of the following: furnish additional labor, provide additional construction equipment, provide suitable materials, employ additional work shifts, expedite procurement of materials and equipment to be incorporated into the Work, and other measures necessary to complete the Work within the Contract Times.
2. Item 1 above is also applicable when prime Contractor is required to accelerate their Work to recover lost time.
3. Upon acceptance of recovery schedule by Engineer, incorporate recovery schedule into the next Progress Schedule update.

C. Lack of Action

1. Prime Contractor's refusal, failure, or neglect to take appropriate recovery action, or General Contractor's refusal to submit a recovery schedule and take appropriate recovery action, shall constitute reasonable evidence that CONTRACTOR is not prosecuting the Work or separable part thereof with the diligence that will ensure completion within the Contract Times. Such lack of action shall constitute sufficient basis for OWNER to exercise remedies available to OWNER under the Contract Documents.

1.05 METHOD OF MEASUREMENT

- A. The CPM (Critical Path Method) Progress Schedule will be measured for payment on a Lump Sum Basis.

1.06 BASIS OF PAYMENT

- A. The lump sum price bid for the Critical Path Method Scheduling system shall include the cost of preparation and submission of the Initial Baseline Schedule and the preparation and submission of the monthly updates.
- B. Payment will be made as follows:

1. Upon submission of the Initial Baseline CPM Construction Schedule 20%
2. Upon acceptance of the Baseline CPM Construction Schedule 20%
3. The balance will be paid in equal monthly payments distributed over 60%
4. the contract. These payments will be contingent on the submission of
5. acceptable monthly updates,
6. No additional payment over and above the lump sum price bid will be made for addition or deletion of work, delays, or any other reason whatsoever.

PART 2 -PRODUCTS (NOT USED)

PART 3 -EXECUTION (NOT USED)

END OF SECTION 01 32 00

SECTION 013300 - SUBMITTALS

PART 1 - GENERAL

1.1 SUMMARY

- A. Work specified in this section is applicable to the General Contractor and its Subcontractors as described herein.
- B. Section Includes:
 - 1. Preparing and processing of submittals for review and action.
 - 2. Preparing and processing of informational submittals.
- C. Submit the following for the Architect's/Engineer's review and action:
 - 1. Shop drawings.
 - 2. Product data.
 - 3. Samples.
 - 4. Material Safety Data Sheets (MSDS).
- D. Submit the following as informational submittals:
 - 1. Certificates.
 - 2. Coordination drawings.
 - 3. Reports.
 - 4. Qualification statements for manufacturers/installers.
 - 5. Progress photographs.
- E. Specific submittals are described in individual sections.

1. Provide other information required by Divisions 210 and 220 for fire and plumbing suppression work, respectively.
 2. Provide other information required by Division 230 for mechanical work.
 3. Provide other information required by Division 260 for electrical work.
- F. Do not commence work which requires review of any submittals until receipt of returned submittals with an acceptable action.
- G. Do not allow submittals without an acceptable action marking to be used for the project.
- H. Transmit all submittals to the Architect/Engineer, with copy to the Construction Manager.
- I. Related Sections: The following are specified elsewhere in Division 1:
1. Quality control submittals, including inspection reports and test reports.
 2. Shop drawings regarding penetrations through walls, partitions and floors; including cutting and patching requirements. Refer to Section 01045.

1.2 DEFINITIONS

- A. Shop Drawings: See General and Supplemental Conditions.
1. Shop drawings also include:
- a. Product data specifically prepared for this project.
 - b. Shop or plant inspection and test reports, when made on specific materials, products, or systems to be used in the work.
- B. Product Data: See General and Supplemental Conditions.
1. Product data submittals also include:
- a. Performance curves, when issued by the manufacturer for all products of that type.
 - b. Selection data showing standard colors.
 - c. Wiring diagrams, when standard for all products of that type.

- C. Samples: See General and Supplemental Conditions.
- D. Informational Submittals: Submittals identified in the contract documents as to be submitted for information only.
- E. Material Safety Data Sheets (MSDS): Submit for all materials unless otherwise indicated.

1.3 FORM OF SUBMITTALS

A. Shop Drawings and Product Data: Submit PDF's in electronic forms via upload to the Architect's project management software. Provide three (3) full size paper copies of all Approved shop drawings for the Owner's records. B. Samples: 4 sets of each; one set will be returned.

1. Size of samples: 12 inches long for linear products, and 12 inches by 12 inches for sheet/panel products.

- C. Progress Photographs: 8 by 10-inch glossy color prints with muslin backing and mounting edge. Furnish three (3) prints of twelve (12) locations each plus a compact disc of electronic files (JPEG) of individual views, assembled in separate (3) binders with clear view description of each photo with dates, location and times on a monthly basis.
- D. Material Safety Data Sheets (MSDS): Manufacturer's standard sheets, but not less than 11 inches by 7-1/2 inches; 4 copies required for each product plus an electronic PDF copy.
- E. Maintenance Instructions: Submit 4 paper copies in 3-ring binders plus a compact disc in PDF format for each product/system.
- H. If additional sets are needed by other entities involved in work represented by the samples, submit with original submittal.
- I. Copies in excess of the number requested will not be returned.
- J. Provide additional copies for project record documents.

1.4 COORDINATION OF SUBMITTALS

- A. Coordinate submittals and activities that must be performed in sequence, so that the Architect has enough information to properly review the submittals.
- B. Coordinate submittals of different types for the same product or system so that the Architect has enough information to properly review each submittal.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 TIMING OF SUBMITTALS

A. Deliver each submittal requiring approval in time to allow for adequate review and processing time, including resubmittals if necessary; failure of the General Contractor in this respect will not be considered as grounds for an extension of the contract time.

B. Deliver each informational submittal prior to start of the work involved, unless the submittal is of a type which cannot be prepared until after completion of the work; submit promptly.

3.2 SUBMITTAL PROCEDURES - GENERAL

A. Notify the Architect/Engineer, in writing and at time of submittal, of all points upon which the submittal does not conform to the requirements of the contract documents, if any.

B. Preparation of Submittals:

1. Label each copy of each submittal, with the following information:

- a. Project name.
- b. Date of submittal.
- c. Respective General Contractor's name and address.
- d. Architect's name and address.
- e. Construction Manager's name and address.
- f. Subcontractor's name and address.
- g. Supplier's name and address.
- h. Manufacturer's name.
- i. Specification section where the submittal is specified.
- j. Numbers of applicable drawings and details.

- k. Other necessary identifying information.
- 2. Pack submittals suitably for shipment.
- 3. Submittals to receive Architect's/Engineer's action marking: Provide blank space on the label or on the submittal itself for action marking; minimum 4 inches wide by 5 inches high.
- C. Transmittal of Submittals:
 - 1. Submittals will be accepted from the General Contractor only. Submittals received from other entities will be returned without review or action.
 - 2. Submittals received without a transmittal form will be returned without review or action.
 - a. Project name.
 - b. Submittal date.
 - c. Transmittal number.
 - d. Specification section number.
 - e. To:
 - f. From:
 - g. General Contractor's name.
 - h. Subcontractor's and supplier's names.
 - i. Manufacturer's name.
 - j. Submittal type (shop drawing, product data, sample, informational submittal).
 - k. Description of submittal.
 - l. Records of distribution.
 - m. Action marking.
 - n. Comments.
 - 3. Fill out a separate transmittal form for each submittal; also include the following:

- a. Other relevant information.
- b. Requests for additional information.

3.3 SHOP DRAWINGS

A. Content: Include the following information:

1. Dimensions, at accurate scale.
2. All field measurements that have been taken, at accurate scale.
3. Names of specific products and materials used.
4. Details, identified by contract document sheet and detail numbers.
5. Show compliance with the specific standards referenced.
6. Coordination requirements; show relationship to adjacent or critical work.

B. Preparation:

1. Reproductions of contract documents are not acceptable as shop drawings.
2. Identify as indicated for all submittals.
3. Space for Architect's/Engineer's action marking shall be adjacent to the title block.

3.4 PRODUCT DATA

A. When product data submittals are prepared specifically for this project (in the absence of standard printed information) submit such information as shop drawings and not as product data submittals.

B. Content:

1. Submit manufacturer's standard printed data sheets.
2. Identify the particular product being submitted; submit only pertinent pages.
3. Show compliance with properties specified.
4. Show compliance with the specific standards referenced.
5. Identify dimensions which have been verified by field measurement.

6. Show special coordination requirements for the product.

3.5 SAMPLES

A. Samples:

1. Where unavoidable variations must be expected, submit "range" samples, minimum of 4 units, and describe or identify variations among units of each set.

2. Where selection is required, provide full set of all options.

B. Preparation:

1. Attach a description to each sample.

2. Attach name of manufacturer or source to each sample.

3. Where compliance with specified properties is required, attach documentation showing compliance.

4. Where there are limitations in availability, delivery, or other similar characteristics, attach description of such limitations.

5. Where samples are specified to be returned for installation in the work, indicate such requirement on transmittal form.

C. Keep final sample set(s) at the project site, available for use during progress of the work.

3.6 PROGRESS PHOTOGRAPHS

A. Have progress photographs taken by a professional photographer.

B. Refer to General Conditions for quantity of photographs.

C. Consult Construction Manager/Architect regarding proposed locations for taking photographs.

3.7 REVIEW OF SUBMITTALS

A. Submittals for approval will be reviewed, marked with appropriate action, and returned.

B. Informational submittals: Submittals will be reviewed.

1. "X" action: No action taken.

2. "Not Approved" action: Revise the submittal or prepare a new submittal complying with the comments made.

3.8 RETURN, RESUBMITTAL, AND DISTRIBUTION

- A. Electronic submittals will be returned to the General Contractor via the Architect's project management software.
- B. Samples will be returned to the General Contractor by mail.
- C. Perform resubmittals in the same manner as original submittals; indicate all changes other than those requested by the Architect/Engineer.
- D. Distribution:
 1. Distribute returned submittals to all subcontractors and suppliers involved in work covered by the submittal.
 2. Make extra copies for operation and maintenance data submittals, as required.

END OF SECTION 013300

SECTION 013543 – ENVIRONMENTAL PROCEDURES

PART 1 - GENERAL

1.01 SCOPE OF WORK:

This section covers the General Contractor's responsibilities with respect for spill prevention and control.

1.02 APPLICABLE REFERENCES:

The publications listed below form a part of this Specification to the extent referenced. The publications are referred to by basic designation only and shall be the latest published versions.

A. United States Environmental Protection Agency (USEPA):

EPA/625/6-B5/006, Remedial Action at Waste Disposal sites

B. Code of Federal Regulations (CFR):

40 CFR Part 300, National Oil and Hazardous Substances Pollution Contingency Plan 40 CFR, Protection of Environment

C. American Society for Testing and Materials (ASTM):

ASTM E119, Fire Resistance Directory

1.03 SUBMITTALS:

A Spill Prevention and Control Plan shall be provided to the Construction Manager, upon request, in accordance with Section 01300: SUBMITTALS

1.04 GENERAL REQUIREMENTS:

1.04.1 The General Contractor shall prepare and implement a Spill Prevention and Control Plan and maintain appropriate containment and/or diversionary structure, materials and equipment to prevent and control the maximum spillage of any specific item within the Scope of Work. All materials and equipment used in connection with this project shall be included. The plan shall include inspection and test procedure performed to ensure compliance.

1.04.2 Laws and Regulations: The General Contractor shall not pollute any area with any manmade or natural harmful materials. It is the sole responsibility of the General Contractor to investigate and comply with all applicable federal, State, County, and municipal laws and regulations concerning the Spill Prevention and Control Plan.

1.04.3 A Project Telephone Directory shall be incorporated into the plan.

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1.04.4 Written Discussions: In addition to the minimal prevention standards listed, the Plan shall include a complete discussion of conformance with the following applicable guidelines, other effective spill prevention and containment procedures, or if more stringent, with the State rules, regulations and guidelines.

- A. Facility drainage
- B. Bulk storage

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- C. Facility transfer operations, pumping, and conveying materials
- D. Truck loading/unloading rack

1.04.5 Design and Specifications: The General Contractor shall provide a Spill Prevention and Control Plan with the following designs and specifications:

- A. Appropriate containment and/or diversionary structures or equipment to prevent discharge of materials to the environment
- B. Dikes sufficiently impervious to contain spill materials
- C. Curbing
- D. Culverts, gutters, or other drainage systems
- E. Weirs, booms, or other barriers
- F. Sorbent materials
- G. Curbing drip pans
- H. Sumps and collection systems

1.04.6 Inspections and Records: Inspections required by this Scope of Work shall be in accordance with written procedures developed for the facility by the General Contractor. These written procedures and a record of the inspections, signed by the appropriate supervisor or inspector, shall be part of the Spill Control and Prevention Plan, and shall be maintained during the project and submitted to the Construction Manager for final closeout.

1.04.7 Facility Lighting: Facility lighting shall be commensurate with the type and location of the facility. Consideration shall be given to: 1) Discovery of spills occurring during hours of darkness, both by operating personnel, if present, and by non-operating personnel such as security personnel, the general public, local police, etc.; and 2) prevention of spills occurring through acts of vandalism.

PART 2 - PRODUCTS

(Not Used)

PART 3 - EXECUTION

ENVIRONMENTAL PROCEDURES

3.01 GENERAL:

A. If materials are released, the General Contractor shall provide a written description of the event, corrective action taken, and plans for preventing a recurrence, as well as a written commitment of manpower, equipment, and materials required to expedite control and removal of any harmful quantity of materials released.

B. The General Contractor shall notify the NYSDEC within two hours of the release or spill. The General Contractor shall notify the DEC hotline at 1-800-457-7362.

3.02 TRAINING:

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A. Personnel Training and Spill Prevention Procedures: The General Contractor shall be responsible for properly instructing his personnel regarding applicable pollution control laws, rules, and regulations; and in the operation and maintenance of equipment to prevent the discharge of materials.

B. Briefings: The General Contractor shall schedule and conduct Spill Prevention Briefings for its operating personnel at intervals frequent enough to assure adequate understanding of the Spill Prevention and Control Plan for this project. Such briefings shall highlight and describe known spill events or failures, malfunctioning components, and recently developed precautionary measures.

C. Evacuation Routes: Evacuation Routes shall be marked on the project site.

3.03 TESTING

Facility communication or alarm systems and spill control equipment must be tested and maintained by the General Contractor as necessary to ensure proper operation in time of emergency.

END OF SECTION 013543

SECTION 014339 - MOCK-UPS

PART 1 GENERAL

1.1 GENERAL REQUIREMENTS

- A. Work of this Section, as shown or specified, shall be in accordance with the requirements of the Contract Documents.

1.2 SUMMARY

- A. General: The requirements of this Section are of a procedural and administrative nature relative to products, materials, equipment, substitutions, and options as described herein and in other sections of the specifications.
- B. Mock-Up Assemblies: Models built accurately using full scale materials for the purpose of study, testing, display, material and methods approval and final approval.
 - 1. Provide submittals and all labor, materials, equipment and services required for the approval of samples, Mock-Up Construction and removal of Work at the end of the project and after final approval, at no additional cost to the Architect or Owner.
- C. Product List Schedule: A list of each product required and coordinated with the General Contractor's Construction Schedule and the Schedule of Submittals.

1.3 DEFINITIONS

- A. General: Definitions in this paragraph are not intended to negate the meaning of other terms used in the Contract Documents, including "specialties," "systems," "structure," "finishes," "accessories," "furnishings," "special construction," and similar terms. Such terms are self-explanatory and have recognized meanings in the construction industry.
- B. Products: "Products" includes purchased items for incorporation into the project, whether purchased for the project or taken from previously purchased stock. The term "product" includes "material," "equipment," "system," and terms of similar intent.
 - 1. "Named" products are those items identified by manufacturer's name, and product name, including make or model designation in the manufacturer's product literature, that is current as of the date of the Contract Documents.
- C. Materials: Items which must be substantially cut, shaped, worked, mixed, finished, refined, or otherwise fabricated, processed, installed, or applied to form a part of the work.
- D. Equipment: Products with operational parts, regardless of whether motorized or manually operated, and particularly including products with service connections such as wiring, piping, etc.

E. Materials mock-ups (M) are intended for review of materials, components and to set standards of workmanship for all portions of assemblies demonstrated. Approval is required prior to release for purchase of materials and/or fabrication, as may be applicable. Mock-ups may or may not be incorporated into the work, as applicable.

F. Installation mock-ups (I) are intended for review and to set standards of workmanship for all portions of assemblies demonstrated. Installation mock-ups are provided "in place" and may be incorporated into the work with the approval of the architect(s). G. Samples (S) are large-size samples, to be reviewed on site.

1.4 MOCK-UP CONSTRUCTION

A. Schedule: A time schedule for the construction of all mock-up assemblies shall be prepared by the General Contractor and submitted to the Architect for review, prior to the start of construction. Incorporate Mock-Up Schedule into Construction and Submittal Schedules.

B. Shop Drawings: Prepare and submit shop drawings of each mock-up assembly for review by the Architect. Shop drawings shall indicate all details, dimensions, connections, tolerances, and the relationship of the various parts to each other and to adjoining work.

C. Samples and Product Data: Prior to delivery of materials for mock-up assemblies, submit product data and samples of all materials proposed for use in the construction of the mock-ups for review by the Architect. Samples shall illustrate all characteristics such as scale, color and texture of finishes, sizes, shapes, and physical properties of the materials to be used in the Work.

D. Construction: Refer to drawing for mock-up materials, size, and location of mock-up; mock-up numbers coincide with numbers on drawings. All slabs, footings, supporting walls, frames, etc. required for mock-up construction shall be provided by the General Contractor.

E. Sequence of Inspection

1. The Architect shall be notified by the General Contractor at the start of building all the mockup assemblies and shall be sent progress reports to allow the Architect to schedule inspections.
2. Visual examination of all mock-up assemblies will be made by the Architect, Owner, and other interested parties during construction.
3. Mock-ups shall be scheduled well in advance of actual construction of the specified area to allow adjustments in material use, material selections and construction techniques.
4. Should any mock-up assembly fail to receive the approval of the Architect, it shall be taken down or dismantled and rebuilt to the extent necessary or until the Architect's approval has been obtained; at no cost to the Architect or Owner.
5. The rebuilding and completion of any mock-up assembly as necessary to obtain acceptance shall be so timed by the General Contractor as to avoid delay in the construction schedule of the project.

6. Obtain the Architect's acceptance of each finished mock-up before commencing the final corresponding work for the project.
7. Coordinate the product list schedule with the General Contractor's Construction Schedule and the Schedule of Submittals, and the time schedule for construction of mock-ups.
8. Approved interior mock-ups shall be incorporated into the permanent construction.

F. Approvals Required: Before ordering the job requirements of any materials for construction of work of sections or of assemblies requiring mock-ups, the General Contractor is advised that he shall obtain approvals of the following:

1. Material(s).
2. Mock-up.
3. Shop Drawings.
4. Method of Installation, including quality standards that pertain.

1.5 DELIVERY, STORAGE, AND HANDLING

A. General: Deliver, handle and store products in accordance with manufacturer's recommendations and by methods and means which will prevent damage, deterioration, and loss including theft.

1. Control delivery schedules to minimize long-term storage of products at site and overcrowding of construction spaces. Provide delivery/installation coordination to ensure minimum holding or storage times for products recognized to be flammable, hazardous, easily damaged, or sensitive to deterioration, theft and other causes of loss.
2. Deliver products, materials, and equipment to the site in the manufacturer's original sealed containers or other packaging systems; complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
3. Inspect products, materials, and equipment upon delivery to ensure compliance with the Contract Documents, and to ensure that products are undamaged and properly protected.
4. Store products, materials, and equipment in a manner that will facilitate inspection and measurement of quantity or counting of units.
5. Store products, materials, and equipment in a manner to avoid significant or permanent deflection, cracking, or failure of the structure and its finishes.
6. Store products, materials, and equipment subject to damage above ground, under cover in stain-proof and weatherproof enclosures; with ventilation adequate to prevent condensation. Protect against splashing.

B. Particular attention shall be paid to the storage of materials that will be exposed to view when construction is completed. The Architect retains the right to reject and require replacement of any product, material and equipment that has, in his judgment, been visually or physically marred during delivery, storage and handling. All removal and replacement costs direct and indirect, including costs caused by the delay in making such correction, shall be the responsibility of the General Contractor.

PART 2 PRODUCTS

2.1 MOCK-UPS

A. Materials and finishes shall comply with the requirements specified in the various sections of the specifications and shall match previously submitted and approved samples.

B. Mock-ups shall incorporate all related construction materials and finishes having a visual effect upon the completed work.

PART 3 EXECUTION

3.1 MOCK-UP ASSEMBLIES

A. General: Mock-up assemblies shall be constructed in accordance with details indicated in the Contract Documents and the following:

1. Site exterior wall mock-up, partial installation to remain when reviewed and approved, as marked up in the Building Elevations.

B. All mock-ups shall be removed and disposed of at the completion of the project. Mockups shall be located in the building so that they can stay erected during the entire construction phase and serve as the quality control sample which all work shall be measured against.

C. Product List Schedule: The General Contractor shall prepare a schedule showing products specified in a tabular form acceptable to the Architect. Include generic names of products required. Include the manufacturer's name and proprietary product names for each item listed.

1. Coordinate the product list schedule with the General Contractor's Construction Schedule and the Schedule of Submittals, and the time schedule for construction of mock-ups.
2. Within 30 days after date of commencement of the Work, submit 4 copies of an Initial Product List Schedule. Provide a written explanation for omissions of data and for known variations from Contract requirements.
3. The Architect will respond with a list of unacceptable product selections and/or requesting more information on certain product selections. Failure of the Architect to list a product unacceptable or not request more information will not constitute a waiver of the

requirement to submit a Substitution Request Submittal or waiver of the requirement that products comply with the Contract Documents.

3.2 INSTALLATION OF PRODUCTS

A. Field Measurement: Before ordering any materials or doing any work, the General Contractor shall verify all measurements at the project site and shall be responsible for their correctness. Responsibility for dimensions of materials or assemblies shall rest with the General Contractor, who shall be responsible to correct to the Architect's approval, or replace, any misfitting elements. No extra charge will be allowed for differences between actual dimensions and measurements indicated on the drawings.

B. Manufacturer's Instructions and Recommendations: Unless more stringent requirements are indicated or specified in individual sections of these specifications, comply with the manufacturer's instructions and recommendations for installation of the products in the applications indicated. Anchor each product securely in place, accurately located and aligned with other work. Clean exposed surfaces and protect surfaces as necessary to ensure freedom from damage and deterioration at time of substantial completion of the Project.

3.3 REPAIR AND PROTECTION

A. General: Upon completion of inspection, testing, sample-taking and similar services, repair damaged construction and restore substrates and finishes to eliminate deficiencies, including deficiencies in visual qualities of exposed finishes. Comply with Contract Document requirements for "Cutting and Patching."

B. Protection

1. Protect construction exposed by or for inspection and testing service activities and protect repaired construction.
2. Repair and protection is the General Contractor's responsibility, regardless of the assignment of responsibility for inspection, testing or similar services.

END OF SECTION 01 43 39

SECTION 015000 - TEMPORARY CONSTRUCTION FACILITIES

PART 1 - GENERAL

1.1 SUMMARY

- A. Work specified in this section is applicable to the General Contractor and to its subcontractors as described herein.
- B. Section includes requirements for temporary facilities and services, including utilities, construction and support facilities, security and protection.
- C. The General Contractor shall provide and pay all costs for the following, as specified in this section:
 - 1. Coordination of location of temporary construction facilities provided by other Contractors.
 - 2. Field office for Architect's, Owner's and Construction manager's use.
 - 3. Drinking water facilities.
 - 4. Fire protection facilities, other than piped utilities.
 - 5. Ice and snow removal.
 - 6. Temporary scaffolding, for construction access into all elevated work areas under construction, from the exterior, for use by the General Contractor.
 - 7. Janitorial services and general maintenance of all constructed facilities used by the Contractors during the course of the project.
 - 8. Other employee protection facilities required by law.
 - 9. Temporary toilet/sanitary facilities sufficient for the General Contractor and subcontractors; including regular cleaning.
 - 10. Project identification sign.

11. All temporary site fencing, barricades, warning signs and lights as required for facility security.
12. Telephone service, including coin-operated telephones for the use of all trade; locate where directed by the Construction Manager.
13. Temporary enclosures for general building heating and for protection from weather.
14. Temporary stairs.
15. Site cleanup and waste disposal services of all construction debris for all Contractors.
 - a. Each Subcontractor is responsible to dispose of their construction debris into designated dumpsters provided by the General Contractor. The General Contractor will be responsible to dispose of all generated debris to an approved offsite landfill, and ensure dumpsters are continuously available to receive contractor's construction debris. Comply with requirements of Section 01506, Construction Waste Management.
16. Coordination of all construction staging areas at all construction work locations and the coordination of all temporary construction facilities, provided by other Contractors, within all staging areas.
17. Temporary Enclosures for Heating: When general building heating is required for construction operations before completion of building enclosure, provide temporary construction to close openings in building enclosure.
18. Temporary Enclosures for Weather Resistance: When building enclosure is not yet complete but interior construction may be damaged by weather, provide temporary enclosures adequate to keep out weather.
19. Temporary Piping System
 - a. Make all arrangements with the proper jurisdictional authorities for connection to its water main. Pay all related costs for the installation therefor.
 - b. Furnish and install a complete piping system for the use of temporary water, including

a check valve backflow prevention system and a 2 inch valve connection in the temporary water system for each Prime Contractor. Each Contractor shall provide its own hoses, valves and containers as required to service its own work force.

- c. Provide temporary water services at all Work and Phase locations where construction is occurring whether the occurring construction is scheduled or not.
- d. Protect the temporary water piping system from freezing by heat-tracing aboveground piping and installing buried pipes at a minimum depth of 4 feet. The system shall be extended and relocated as necessary to meet construction procedures and temporary water requirements.
- e. Remove all temporary lines when no longer required.

20. Temporary heating at all Work and Phase locations where construction is occurring whether the occurring construction is scheduled or not.

- a. Use of the existing and/or permanent utilities (i.e., water, gas, electricity, etc.) will be permitted subject to the review and approval of the Architect. The absence or unavailability of any or all of the existing or permanent utilities will not relieve the General Contractor from full compliance with the requirements of this section.
- b. Provide heating adequate to maintain a minimum of 65 degrees F, ambient temperature.
- c. Provide heating after the installation of temporary enclosure or as directed by the Construction Manager.

21. Temporary lighting at all Work, Phase and Staging locations where construction is occurring whether the occurring construction is scheduled or not.

- a. Use of the existing and/or permanent electrical system will be permitted subject to the review and approval of the Construction Manager. The absence or unavailability of any or all of the existing or permanent electrical system will not relieve the General Contractor from full compliance with the requirements of this section.

- b. Provide lighting at the Work and Phase locations adequate to maintain a minimum lighting level of 40fc.
- c. Provide lighting at the Staging locations adequate to maintain a minimum lighting level of 10 fc.

22. Temporary power at all Work, Phase and Staging locations where construction is occurring whether the occurring construction is scheduled or not.

a. Use of the existing and/or permanent electrical system will be permitted subject to the review and approval of the Construction Manager. The absence or unavailability of any or all of the existing or permanent electrical system will not relieve the General Contractor from full compliance with the requirements of this section.

b. Provide temporary power at all locations adequate to perform the Work.

c. Minimum temporary power at all locations shall be 200A, 120/208, 3 Phase, 4 Wire.

3. All temporary service conduit and feeders shall be buried, conform to the local utility company's requirements as to materials and workmanship, and be of sufficient capacity to supply all temporary light and power required for the project.

D. The General Contractor shall provide and pay all costs for all other facilities and services required to accomplish the work.

1.2 DEFINITIONS

A. Temporary Facilities: Construction, fixtures, fittings, and other built items required to accomplish the work but which are not incorporated into the finished work.

B. Temporary Utilities: A type of temporary facility; primary sources of electric power, water, steam supply, natural gas supply, etc., obtained from public utilities, other main distribution systems, or temporary sources constructed for the project, but not including the fixtures and equipment served.

C. Temporary Services: Activities required during construction which do not directly accomplish the work.

D. Construction Equipment: A type of temporary facility, consisting of fixed equipment used to accomplish the work, determined by the method the Contractor chooses to accomplish the work.

1.3 SUBMITTALS

- A. Temporary Utilities: Submit reports of inspections, tests, and approvals for the installation and use of construction facilities, which are made or given by public authorities.
- B. Permits: Submit copies of permits required by public authorities.

1.4 QUALITY ASSURANCE

- A. Regulations: Comply with industry standards and applicable laws and regulations of authorities having jurisdiction.
- B. Standards: Comply with NFPA Code 241, "Building Construction and Demolition Operations",
ANSI-A10 Series standards for "Safety Requirements for Construction and Demolition", and
NECA Electrical Design Library "Temporary Electrical Facilities".
 - 1. Refer to "Guidelines for Bid Conditions for Temporary Job Utilities and Services", prepared jointly by AGC and ASC, for industry recommendations.
 - 2. Electrical service: Comply with LIPA, NEMA, NECA and UL standards and regulations for temporary electric service. Install service in compliance with National Electric Code (NFPA 70).
- C. Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certificates and permits.

1.5 PROJECT CONDITIONS

- A. Obtain easements where required.
- B. Coordinate scheduling of the implementation and termination of temporary facilities and services with all other Contractors affected and with all agencies having jurisdiction.
- C. Use of permanent facilities prior to substantial completion is subject to the Construction Manager's approval and conditions.
 - 1. Each permanent facility used for construction purposes shall be operated, maintained, and protected during such use by the original installer.

2. Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Take necessary fire prevention measures. Do not overload facilities or permit them to interfere with progress of the Work. Do not allow hazardous or unsanitary conditions or public nuisances to develop or persist on the site.
3. Specified warranties shall not be reduced or voided by temporary use.

1.6 SEQUENCING AND SCHEDULING

- A. Maintain required facilities until not needed or until shortly before substantial completion; remove facilities before substantial completion.
 1. Exception: Where use of permanent facilities is allowed.
- B. Change over to use of permanent facilities, when applicable, as soon as possible, except when use of permanent facilities is not allowed.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Provide materials which are both suitable for the use and durable enough to withstand the use and abuse to be expected.
 1. Trailers and containers utilized by the Contractors must be free of graffiti. Each Contractor shall be responsible to maintain its trailers and keep the containers free of graffiti at all times.
 2. All trailers, containers, work boxes, large machinery, and equipment must be provided with legible signage identifying the respective Contractor's name.
 3. Containers only will be permitted in the approved project staging and work areas. Contractors' office trailers will not be permitted either in the construction site, the adjacent streets, or in staging and work areas. Contractors' office trailers may be allowed at off-site locations designated by the Owner.
- B. Tarpaulins: Waterproof and fire-retardant (UL Class A).

C. Temporary Heating Units: UL labeled for the fuel used; do not use gasoline-burning or open burning.

1. Use equipment that is known to be safe and that will not damage work in progress.

D. Water Hoses: Provide at every work area 3/4 inch heavy-duty abrasion-resistant flexible rubber hoses 100 feet long, with pressure rating greater than the maximum pressure of the water distribution system; provide adjustable shut-off nozzles at hose discharge.

E. Electrical Outlets: Provide properly configured NEMA polarized outlets to prevent insertion of 110-120 volt plugs into higher voltage outlets. Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button and pilot light, for connection of power tools and equipment.

F. Electrical Power Cords: Provide grounded extension cords; use "hard-service" cords where exposed to abrasion or traffic. Provide waterproof connectors to connect separate lengths of electric cords, if single lengths will not reach areas where construction activities are in progress.

G. Lamps and Light Fixtures: Provide general service incandescent lamps of wattage required for adequate illumination. Provide guard cages or tempered glass enclosures, where exposed to breakage. Provide exterior fixtures where exposed to moisture.

H. Temporary Offices: Provide prefabricated or mobile units or similar job-built construction with lockable entrances, operable windows and serviceable finishes. Provide heating and air-conditioning units on foundations adequate for normal loading.

I. Temporary Toilet Units: Provide self-contained single-occupant toilet units of the chemical, aerated recirculation, or combustion type, properly vented and fully enclosed with a fiberglass reinforced polyester shell or similar non-absorbent material.

J. First Aid Supplies: Comply with governing regulations.

K. Fire Extinguishers: Provide hand-carried, portable, UL-rated, Class "A" fire extinguishers for temporary offices and similar spaces. In other locations provide hand-carried, portable, UL-rated, Class "ABC" dry chemical extinguishers, or a combination of extinguishers of NFPA recommended classes for the exposures.

1. Comply with NFPA 10 and 241 for classification, extinguishing agent and size required by location of fire exposure.

2.2 TEMPORARY UTILITIES

A. Temporary Water Service:

1. Provide water adequate for demand of construction operations.
2. Provide piped water service:
 - a. Do not use permanent piping system to distribute non-potable water.
 - b. Connect to existing water main.
 - c. Connect to temporary plumbing fixtures.
 - d. Provide shut-off valve.
 - e. Disinfect temporary piping before use.
 - f. Provide minimum 5 gpm at all work locations.
 - g. Take precautions to prevent damage due to leaks and spills inside building.
3. Each Contractor shall provide and pay all costs for other water required for his operations.

B. Temporary Sanitary Sewer: Connect fixed temporary plumbing fixtures to sewer main.

C. Temporary Power:

1. Provide electricity adequate for demand of construction operations.
2. Electrical service:
 - a. Provide distribution equipment, feeders, and branch circuit panelboards to serve temporary lighting, temporary convenience receptacles, and other temporary facilities specified.
 - b. Temporary convenience receptacles: NEMA WD 6, Type 5-20R; locate within 25 feet of each point requiring power; use 20-ampere branch circuits.
3. The General Contractor is not responsible to provide and pay all costs for other power (for equipment 1/4 HP and above) and all utilities required for his operations.

2.3 PROTECTIVE FACILITIES

A. Temporary Fire Protection: Until fire protection needs are supplied by permanent facilities, install and maintain temporary fire protection facilities of the types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 10 "Standard for Portable Fire Extinguishers", and NFPA 241 "Standard for Safeguarding Construction, Alterations and Demolition Operations".

1. Locate fire extinguishers where convenient and effective for their intended purpose, but not less than one extinguisher on each floor at or near each usable stairwell.
2. The General Contractor shall store combustible materials in containers in fire-safe locations.
3. The General Contractor shall maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire protection facilities, stairways and other access routes for fighting fires. Prohibit smoking in hazardous fire exposure areas.
4. The General Contractor shall provide supervision of its welding operations, combustion type temporary heating units, and similar sources of fire ignition.

B. Site Fence: Install 8 feet high, chain link fence to prevent easy access to site by people and animals.

1. Enclose entire site.
2. Provide gates as required for access.
3. Do not remove until other security facilities, either temporary or permanent, are in place and in operation.

C. Barricades, Warning Signs and Lights: Comply with standards and code requirements for erection of structurally adequate barricades. Paint with appropriate colors, graphics and warning signs to inform personnel and the public of the hazard being protected against. Where appropriate and needed, provide lighting, including flashing red and amber lights.

D. Environmental Protection: Provide protection, operate temporary facilities and conduct construction in ways and by methods that comply with environmental regulations and minimize the possibility that air, waterways and subsoil might be contaminated or polluted, or that other undesirable effects might result. Avoid use of tools and equipment which produce harmful noise.

1. From commencement to completion of the Work, keep all parts of the site and the project free from accumulation of water; supply, maintain, and operate all necessary pumping and bailing equipment.
2. Remove snow and ice as necessary for the protection and prosecution of the Work, and protect the Work against weather damage.

2.4 ADMINISTRATIVE FACILITIES

A. Telephone Service: Provide the following telephone service for use of the General Contractor.

1. The General Contractor shall provide at least one telephone on the site or at a location approved by the Construction Manager.
2. Other telephone service is the responsibility of individual Subcontractors.
3. The General Contractor shall display construction-related phone numbers at each pay phone.
 - a. Fire emergency number.
 - b. Rescue emergency number.
 - c. Physician.
 - d. General Contractors' home offices.
 - e. Construction Manager.
 - f. Architect.

2.5 TEMPORARY CONSTRUCTION AND SUPPORT FACILITIES

A. Locate storage sheds, sanitary facilities and other temporary construction and support facilities for easy access.

1. Maintain temporary construction and support facilities until near Substantial Completion. Remove prior to Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to the Owner.

B. Provide non-combustible construction for offices, shops and sheds located within the construction area, or within 30 feet of building lines. Comply with requirements of NFPA 241.

C. Field Offices: Each Prime Contractor shall provide insulated, weathertight temporary offices for its own use, of sufficient size to accommodate required office personnel assigned to the project. Locate field offices at an off-site location to be determined by the Owner. Keep offices clean and orderly.

1. In addition to temporary offices required for its own work, the General Contractor shall provide a temporary office for the Owner and the Construction Manager. This office shall contain minimum 400 square feet of space, and shall be provided with the following:

- a. Heating and insulation sufficient to maintain minimum of 70 degrees F interior temperature in winter.
- b. Air conditioning sufficient to maintain maximum of 75 degrees F interior temperature in summer.
- c. Private toilet facilities with water closet, lavatory, and mirror-medicine cabinet unit.
- d. Drinking water facilities.
- e. Telephone service; one telephone for each desk.

f. The following furnishings:

- 1. 2 desks and desk chairs.
- 2. 2 drawing tables.
- 3. 2 plan racks.
- 4. 4 filing drawers.
- 5. 20 linear feet of bookshelving.
- 6. One desktop copier.
- 7. One facsimile (FAX) machine.

8. Conference table and chairs to accommodate 12 people.

D. Storage and Fabrication Sheds: Provide storage and fabrication sheds sized, furnished and equipped to accommodate materials and equipment involved, including temporary utility service.

E. Sanitary Facilities: Provide temporary toilets, wash facilities and drinking fountains. Comply with Board of Health, State and Local regulations and health codes for the type, number, location, operation and maintenance of fixtures and facilities. Install where facilities will best serve the project's needs. Provide toilet tissue, paper towels, paper cups and similar disposable materials for each facility, including covered waste containers for used materials. At completion of the Work, clean all facilities and remove from the site.

1. Toilets: Install self-contained toilet units. Shield toilets to ensure privacy. Use of pit-type privies will not be permitted.
2. Wash facilities: Install wash facilities supplied with potable water at convenient locations for personnel involved in handling materials that require wash-up for a healthy and sanitary condition. Dispose of drainage properly. Supply cleaning compounds appropriate for each condition.
3. Drinking water facilities: Provide drinking fountains or containerized (bottled-water) type units for convenience for construction personnel, including paper cup supply.

F. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations and similar activities.

1. Where heat is needed and the permanent building enclosure is not complete, provide temporary enclosures where there is no other provision for containment of heat. Coordinate enclosure with ventilating and material drying or curing requirements to avoid dangerous conditions and effects.
2. All temporary wood or plywood enclosures shall be UL-labeled fire-retardant treated material for framing and main sheathing.

G. Temporary Paving and Walkways: Construct and maintain temporary roads, paving and walkways to adequately support indicated loading and to withstand exposure to traffic during the construction period. Keep temporary access clean and provide dust control measures.

1. Extend temporary paving in and around the construction area as necessary to accommodate delivery and storage of materials, equipment usage, administration, and supervision.

2. Note: This temporary paving is a construction road for construction vehicles, and is separate and apart from permanently paved areas.

H. Collection and Disposal of Waste: Collect waste from construction areas and elsewhere on a

daily basis. Comply with NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly. Do not hold materials more than 7 days during normal weather or 3 days when the temperature is expected to rise above 80 degrees F. Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material in a lawful manner.

I. Stairs: Until permanent stairs are available, provide temporary stairs where ladders are not adequate. Cover finished permanent stairs with a protective covering of plywood or similar material so that finishes will be undamaged at time of acceptance.

PART 3 - EXECUTION

3.1 GENERAL

- A. Locate temporary construction and facilities as directed by the Construction Manager.
- B. Cooperate with other Contractors in location of temporary facilities.

3.2 TEMPORARY SERVICES

- A. Waste Disposal Service: Provide contracted removal service at regular intervals.
 - 1. Remove waste at least once a week.
 - 2. When temperature exceeds or is expected to exceed 80 degrees F, remove at least twice a week.
 - 3. Provide waste collection containers for use of the General Contractor.
- B. Janitorial Services: Clean toilet facilities at least once a week.
- C. Extermination Service: Provide periodic extermination and pest control services.

1. Exterminate at least once before excavation work is complete.
 2. Obtain and follow recommendations of experienced pest control company as to procedures required to minimize pests and their residue at completion of project.
- D. Ice and Snow Removal: Remove ice and snow regularly.
- 3.3 OPERATION, TERMINATION AND REMOVAL
- A. Supervision: Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended use to minimize waste and abuse.
- B. Maintenance: Maintain facilities in good operating condition until removal. Protect from damage by freezing temperatures and similar elements.
1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation and similar facilities on a 24-hour day basis where required to achieve indicated results and to avoid possibility of damage.
 2. Protection: Prevent water filled piping from freezing. Maintain markers for underground lines. Protect from damage during excavation operations.
- C. Termination and Removal: Unless the Construction Manager directs that it be maintained longer, remove each temporary facility when the need has ended, or when replaced by authorized use of permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with a temporary facility. Repair damaged work, clean exposed surfaces and replace construction that cannot be satisfactorily repaired.
1. Materials and facilities that constitute temporary facilities are the property of the Contractor. The Owner reserves the right to take possession of the project identification sign.
 2. Remove temporary paving and walkways that are not intended for integration into permanent paving. Repair or replace paving, curbs and sidewalks as required by governing authorities.
 3. At Substantial Completion, clean and renovate permanent facilities that have been used during the construction period, including but not limited to:
 - a. Replace air filters and clean inside of ductwork and housings. Comply with requirements of Section 01511, Construction IAQ Management.

- b. Replace significantly worn parts and parts that have been subjected to unusual operating conditions.
- c. Replace lamps that are burned out or noticeably dimmed by substantial hours of use.

END OF SECTION 015000

SECTION 016500 - MATERIALS AND EQUIPMENT

PART 1 - GENERAL

1.1 SUMMARY

- A. Work specified in this section is applicable to the General Contractor and its Subcontractors as described herein.
- B. Unless otherwise specifically indicated in the contract documents, reference to equipment, material, article, or patented process, by trade name, model or catalog number, shall be regarded as establishing a standard of quality and shall not be construed as limiting competition. General Contractor may submit other equipment, material, article, or process for approval, provided all requirements of the contract documents are met, and equality is proven (in the sole judgement of the Architect) by the General Contractor.
- C. Definitions:
1. "Products" is defined to include purchased items for incorporation into the work, regardless of whether specifically purchased for the project or taken from the General Contractor's stock of previously purchased products.
 2. "Materials" is defined as products which must be substantially cut, shaped, worked, mixed, finished, refined or otherwise fabricated, processed, installed or applied to form units of work.
 3. "Equipment" is defined as products with operational parts, regardless of whether motorized or manually operated, and particularly including products with service connections (wiring, piping, etc.).
 4. Definitions in this paragraph are not intended to negate the meaning of other terms used in contract documents, including "specialties", "systems", "structure", "finishes", "accessories", "furnishings", "special construction", and recognized meanings in the construction industry.

1.2 QUALITY ASSURANCE

- A. Source Limitation: To the greatest extent possible for each unit of work, and subject to the restrictions of the Buy America Act, provide products, materials and equipment of a single generic kind from a single source.

B. Compatibility of Options: Where more than one choice is available as options for General Contractor's selection of a product or material, select an option which is compatible with other products and materials already selected (which may have been from among options for those other products and materials). Total compatibility among options is not assured by limitations with contract documents, but must be provided by the General Contractor. Compatibility is a basic general requirement of product/material selections.

C. Labels and Listings: Where equipment or materials are specified to conform to requirements of standards of organizations such as American Society of Mechanical Engineers (ASME), Underwriters Laboratories (UL), American Gas Association (AGA), American Refrigeration

Institute (ARI), Air Diffusion Council (ADC), Sheet Metal and Air-Conditioning General Contractors National Association, Inc. (SMACNA), and Air Moving and Conditioning Association (AMCA), that use a label or listing as a method of indicating compliance, proof of such conformance shall be submitted to the Architect. The label or listing of the specified organization will be acceptable evidence. In lieu of a label or listing, the General Contractor may submit a notarized certificate from a nationally recognized testing organization, adequately equipped and competent to perform such services and approved by the Architect, stating that the item has been tested in accordance with the specified organization's test methods and that the item conforms to the specified organization's standard or code. For materials whose compliance with organizational standards or specifications is not regulated by an organization using its own listing or label as proof of compliance, a notarized certificate from the manufacturer shall be furnished to the Architect stating that the material complies with the applicable referenced standard or specification.

1.3 TRANSPORTATION AND HANDLING

A. Materials, products, and equipment shall be properly containerized, packaged, boxed, and protected to prevent damage during transportation and handling.

B. More detailed requirements for transportation and handling are specified under the technical Sections.

1.4 STORAGE AND PROTECTION

A. Provide suitable temporary weathertight storage facilities as may be required for materials that will be damaged by storage in the open.

B. Available storage space at the job site is limited to the area permitted by the Owner/CONSTRUCTION MANAGER. Allocate such space for storage purposes. Any additional off-site space required is the responsibility of the General Contractor.

C. Allocate the available storage areas and coordinate their use by the trades on the job. Maintain a current layout of all storage facilities.

D. Store and protect materials delivered at the site from damage. Do not use damaged material on the work.

E. In the event that it is necessary for the General Contractor to store any materials offsite, General Contractor shall first obtain the approval of the Owner/CONSTRUCTION MANAGER in advance. The General Contractor shall be responsible for insurance and warehousing charges of any materials stored offsite. The General Contractor shall also be responsible for the cost of delivery to the job site of any materials that have been stored offsite.

1.5 PRODUCT APPROVAL STANDARDS

A. Where the words "or approved equal" or other synonymous terms are used, it is expressly understood that they shall mean that the approval of any such submission is vested in the Architect/Engineer, whose decision shall be final and binding upon all concerned. All submissions are subject to such approval and shall conform to the requirements of Section 01300.

1.6 TEMPORARY USE OF EQUIPMENT

A. No equipment intended for permanent installation shall be operated for temporary purposes without the written permission of the Owner/Architect/Engineer/Construction Manager.

B. The temporary or trial usage by the Owner of any mechanical device, machinery, apparatus, equipment or any work or materials supplied under this Contract before final completion and written acceptance by the Architect, shall not be construed as evidence of the acceptance of same by the Owner. The Owner shall have the privilege of such temporary and trial usage, for such reasonable length of time as and when the Architect/Engineer shall deem to be proper for making a complete and thorough test of same and no claim for damage shall be made by the General Contractor for the injury to or breaking of parts of such work which may be caused by weakness or inaccuracy of structural parts or by defective material or workmanship. If the General Contractor so elects, he may at his own expense, place a competent person or persons to make such trial usage; such trial usage shall be under the supervision of the General Contractor.

PART 2 - PRODUCTS

2.1 GENERAL PRODUCT COMPLIANCES

A. General: The compliance requirements, for individual products as indicated in the contract documents, are multiple in nature and may include generic, descriptive, performance, prescriptive, compliance with standards, conformance with graphic details, and other similar forms and methods of indicating requirements, all of which must be complied with.

B. Procedures for Selecting Products: General Contractor's options for selecting products are limited by contract document requirements and governing regulations, and are not controlled by industry traditions or procedures experienced by General Contractor on previous construction projects. Required procedures include, but are not necessarily limited to, the following for various indicated methods of specifying:

1. Standards, Codes and Regulations: Where only compliance with an imposed standard, code or regulation is required, selection from among products which comply with requirements, including those standards, codes and regulations, is General Contractor's option.
2. Performance Requirements: Provide products which comply with specific performances indicated, and which are recommended by manufacturer (in published product literature or by individual certification) for application indicated. Overall performance of a product is specified with only certain specific performance requirements.
3. Prescriptive Requirements: Provide products which have been produced in accordance with prescriptive requirements, using specified ingredients and components, and complying with specified requirements for mixing, fabricating, curing, finishing, testing, and similar operations in manufacturing process.
4. Visual Matching: When matching to an existing product/surface or to an established sample is required, final judgment of whether a product proposed by General Contractor matches sample satisfactorily rests with the Architect.
5. Visual Selection: Except as otherwise indicated, where specified product requirements include "...as selected from manufacturer's standard colors, patterns, textures..." or words of similar effect, the selection of manufacturer and basic product (complying with requirements) is General Contractor's option, and subsequent selection of color, pattern and texture rests with the Architect.

C. General Requirements for Electrical Work: The following applies to electrical work, unless otherwise specified:

1. Comply with NEC.
2. Arrange conduits, wiring and equipment generally as indicated. Any change resulting in a savings in labor or materials shall be made only in accordance with a Change Order. Deviations shall be made only where necessary to avoid interferences and only after drawings showing the proposed deviations have been submitted and approved by the Architect.

2.2 GENERAL PRODUCT REQUIREMENTS

- A. General: Provide products which comply with the clause "MATERIALS AND WORKMANSHIP" of the General Conditions, and which are undamaged and unused at time of installation, and which are complete with accessories, trim, finish, safety guards and other devices and details needed for complete installation and for intended use and effect.

1. Standard Products: Products shall be essentially the standard catalogued products of manufacturers regularly engaged in production of such products and shall be the manufacturer's latest standard design that complies with the specification requirements. Equipment shall essentially duplicate items that have been in satisfactory commercial and industrial use at least two years, or more if otherwise specified, prior to bid opening; or in lieu thereof, shall have been used and operated in a test installation which, in the opinion of the Architect, duplicate its field performance for the same period of time. The Architect reserves the right to require the General Contractor to submit evidence to this effect for his approval. When two units of the same class of equipment are required, these units shall be the product of a single manufacturer; however, the component parts of the system need not be the products of the same manufacturer.

- B. Continued Availability: Products which, by nature of their application, are likely to be needed at a later date for maintenance and repair or replacement work, shall be current models for which replacement parts are available.

2.3 LABELS AND NAMEPLATES

- A. General: To the extent feasible and consistent with the following requirements pertaining to the appearance of the finished construction, wherever a product is required to comply with a specified standard, grade, class or type, a permanent label to this effect shall be applied to the product. Where this is not feasible because of the nature of the product, the label shall be on or inside of each container.

- B. Nameplates: Except as otherwise indicated for required approval labels and operating data, do not permanently attach or imprint manufacturer's or producer's nameplates or trademarks on exposed surfaces of products which will be exposed to view either in occupied spaces or on exterior of the work.

- C. Labels: Locate required labels and stamps on a concealed surface or, where required for observation after installation, on an accessible surface which, in occupied spaces, is not conspicuous.

- D. Equipment Nameplates: Provide permanent nameplate on each item of service-connected or power operated equipment. Indicate manufacturer, product name, model number, serial number, capacity, speed, ratings, and similar essential operating data. Locate nameplates on an easily accessed surface which, in occupied spaces, is not conspicuous.

PART 3 - EXECUTION (Not Applicable)

22-032 1180.08
VHHA MACARTHUR HOUSES
FAÇADE REHABILITATION

BID SUBMISSION
14 AUGUST 2026

END OF SECTION 016500

22-032 1180.08

SECTION 017329.01 – REMOVALS CUTTING AND PATCHING

PART 1 - GENERAL

1.1 SUMMARY

A. The General Contractor shall do all cutting and fitting in connection with his work that may be required to make its several parts come together properly and fit to receive or be received by work of subcontractors as shown upon or reasonably implied by the Drawings and Specifications for the completed structure.

B. Notwithstanding the above, the following conditions shall prevail:

1. Perimeter Precast Concrete, Precast Concrete Interior Walls, Precast Concrete Girders and Beams, Precast Concrete Plank:

- a. The General Contractor shall identify and coordinate all penetrations and embedments in the concrete required for his work and the work of all trades and subcontractors (Mechanical, Electrical, and Plumbing), prior to fabrication of precast components. Penetrations shall be performed by the precast manufacturer whenever appropriate.
- b. The General Contractor shall prepare coordinated shop drawings including sizes and locations, etc. indicating all penetrations and embedments.
- c. The General Contractor shall provide all sleeves required for utility penetrations and conduit and back-box embedments required for wall-mounted lighting and security fixtures so that these are factory-installed into the precast wall panels by the precast manufacturer. Field installation not permitted.
- d. The General Contractor is responsible to fireproof and waterproof the sleeve once utilities are installed.
- e. All penetrations performed as field conditions following precast fabrication shall be documented in shop drawings and approved by the precast manufacturer prior to execution, in order to safeguard against the cutting of essential rebar and prestressed strand. All field penetrations will be performed by the General Contractor.

C. General Contractor shall not do any cutting or drilling that will impair the strength of the construction and shall report to the Construction Manager of any cutting that they consider too extensive or that might impair the strength of the construction. No structural members, such as precast concrete walls, precast concrete planks, joists, beams or columns supporting the work shall be cut or drilled without the approval of the precast concrete manufacturer.

D. All required cutting, patching and restoring shall be neatly done by mechanics skilled in their trades and to the satisfaction of the Construction Manager. All cutting of holes through cast-in-place concrete for pipes or conduit shall be core drilled and shall be large enough only to accept the Contractor's work and readily patched.

E. The General Contractor shall be responsible for the patching of openings cut in walls, floors, ceilings, foundations, etc., so as to close around his work in a neat and workmanlike manner. Finish patching shall exactly match the adjoining surfaces such that there is a smooth, uniform, flush and continuous surface free of visual joints, ridges and gaps. Patching shall be performed by the original installer of the work being patched, and at no expense to the Owner.

F. Patched areas requiring painting shall match existing adjacent painted surfaces as closely as practical using the same type of paint. Painting of patched surfaces shall be performed by the original painting subcontractor.

G. The General Contractor shall be responsible for and shall pay for the removal and reinstallation of ceilings and/or light fixtures as necessary to complete the work. Damaged parts shall be replaced with new to match in-place work.

H. The General Contractor shall leave all the work of his Contract whole, complete and perfect at the final completion of the building with no additional charge to the Owner.

1.2 SUBMITTALS

A. For field cutting and patching, submit shop drawings describing procedures. Include the following information:

1. Extent: Describe cutting and patching, show how they will be performed, and indicate why they cannot be avoided.

2. Changes to installed construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building's appearance and other significant visual elements.

3. Products: List products to be used and firms or entities that will perform the Work.

4. Dates: Indicate when cutting and patching will be performed.

5. Architect's approval: Obtain approval of cutting and patching proposal before cutting and patching. Approval does not waive right to later require removal and replacement of unsatisfactory work.

1.3 QUALITY ASSURANCE

A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.

B. Operational Elements: Do not cut and patch the following operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.

1. Primary operational systems and equipment.
2. Air and smoke barriers.
3. Fire protection systems.
4. Control systems.
5. Communications systems.
6. Conveying systems.
7. Electrical wiring systems.

C. Miscellaneous Elements: Do not cut and patch the following elements or related components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.

1. Water, moisture, or vapor barriers.
2. Membranes and flashings.
3. Exterior wall construction.
4. Equipment supports.
5. Piping, ductwork, vessels, and equipment.

6. Noise- and vibration-control elements and systems.

D. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

1. Retain original installer or fabricator to cut and patch exposed work listed below. If it is impossible to engage original Installer or fabricator, engage another recognized, experienced, and specialized firm which is approved by the Architect/Construction Manager.

- a. Concrete finishes.
- b. Masonry.
- c. Preformed metal panels.
- d. Roofing.
- e. Firestopping.
- f. Window systems.
- g. HVAC enclosures, cabinets, or covers.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: Comply with requirements specified in other Sections of these Specifications.

B. Materials: Use materials identical to existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.

1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of existing materials.

PART 3 - EXECUTION

3.1 EXAMINATION

REMOVALS CUTTING AND PATCHING

A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.

1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.

2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Temporary Support: Provide temporary support of work to be cut.

B. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of project that might be exposed during cutting and patching operations.

C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

3.3 PERFORMANCE

A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.

1. Cut existing construction to provide for installation of other components or performance of other construction and subsequently patch as required to restore surfaces to their original condition.

B. Cutting: Cut existing construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. Review proposed procedures with original Installer; comply with original Installer's written recommendations.

1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.

2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.

3. Concrete and masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.

4. Excavating and backfilling: Comply with requirements in applicable Division 2 Sections where required by cutting and patching operations.

5. Mechanical and electrical services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.

6. Proceed with patching after construction operations requiring cutting are complete.

C. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections of these Specifications.

1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.

2. Exposed finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing; all as approved by the Architect/Construction Manager.

3. Floors and walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove existing floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.

a. Where patching occurs in a painted surface, apply primer and intermediate paint coats over the patch and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.

4. Ceilings: Patch, repair, or rehang existing ceilings as necessary to provide an even-plane surface of uniform appearance.

5. Exterior building enclosure: Patch components in a manner that restores enclosure to a weathertight condition.

END OF SECTION 017329.01

SECTION 017419.01 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for the following:

1. Salvaging nonhazardous demolition and construction waste.
2. Recycling nonhazardous demolition and construction waste.
3. Disposing of nonhazardous demolition and construction waste.

- B. Related Requirements:

1. Section 024116 "Structure Demolition" for disposal of waste resulting from the demolition and removal of buildings, below grade construction and new site utilities.

1.3 DEFINITIONS

- A. Construction Waste: Building, structure, and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.

- B. Demolition Waste: Building, structure, and site improvement materials resulting from demolition operations.

- C. Disposal: Removal of demolition or construction waste and subsequent salvage, sale, recycling, or deposit in landfill, incinerator acceptable to authorities having jurisdiction, or designated spoil areas on Owner's property.

- D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.

- E. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.

F. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

1.4 MATERIALS OWNERSHIP

A. Unless otherwise indicated, demolition and construction waste becomes property of General Contractor.

B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.

1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

1.5 ACTION SUBMITTALS

A. Waste Management Plan: Submit plan within 14 days of date established for the Notice of Award.

1.6 INFORMATIONAL SUBMITTALS

A. Waste Reduction Progress Reports: Concurrent with each Application for Payment, submit report. Use Form CWM-7 for construction waste and Form CWM-8 for demolition waste. Include the following information:

1. Material category.
2. Generation point of waste.
3. Total quantity of waste in tons.
4. Quantity of waste salvaged, both estimated and actual in tons.
5. Quantity of waste recycled, both estimated and actual in tons.
6. Total quantity of waste recovered (salvaged plus recycled) in tons.
7. Total quantity of waste recovered (salvaged plus recycled) as a percentage of total waste.

B. Waste Reduction Calculations: Before request for Substantial Completion, submit calculated end-of-Project rates for salvage, recycling, and disposal as a percentage of total waste generated by the Work.

C. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt.

D. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.

E. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

F. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

G. Qualification Data: For waste management coordinator and refrigerant recovery technician.

H. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant was recovered.

I. Refrigerant Recovery: Comply with requirements in Section 024116 "Structure Demolition" for refrigerant recovery submittals.

1.7 QUALITY ASSURANCE

A. Waste Management Coordinator Qualifications: Experienced firm, or individual employed and assigned by General Contractor, with a record of successful waste management coordination of projects with similar requirements. Superintendent may not serve as Waste Management Coordinator.

B. Refrigerant Recovery Technician Qualifications: Universal certified by EPA-approved certification program.

C. Refrigerant Recovery Technician Qualifications: Comply with requirements in Section 024116 "Structure Demolition."

D. Regulatory Requirements: Comply with transportation and disposal regulations of authorities having jurisdiction.

E. Waste Management Conference(s): Conduct conference(s) at Project site to comply with requirements of the County. Review methods and procedures related to waste management including, but not limited to, the following:

1. Review and discuss waste management plan including responsibilities of General Contractor and waste management coordinator.
2. Review requirements for documenting quantities of each type of waste and its disposition.
3. Review and finalize procedures for materials separation and verify availability of containers and bins needed to avoid delays.
4. Review procedures for periodic waste collection and transportation to recycling and disposal facilities.
5. Review waste management requirements for each trade.

1.8 WASTE MANAGEMENT PLAN

A. General: Develop a waste management plan according to requirements in this Section. Plan shall consist of waste identification, waste reduction work plan, and cost/revenue analysis. Indicate quantities by weight or volume, but use same units of measure throughout waste management plan.

B. Waste Identification: Indicate anticipated types and quantities of demolition, site-clearing, and construction waste generated by the Work. Use Form CWM-1 for construction waste and Form CWM-2 for demolition waste. Include estimated quantities and assumptions for estimates.

C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Use Form CWM-3 for construction waste and Form CWM-4 for demolition waste. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.

1. Salvaged Materials for Reuse: For materials that will be salvaged and reused in this Project, describe methods for preparing salvaged materials before incorporation into the Work in compliance with Section 024116 "Structure Demolition."
2. Salvaged Materials for Sale: For materials that will be sold to individuals and organizations, include list of their names, addresses, and telephone numbers.
3. Salvaged Materials for Donation: For materials that will be donated to individuals and organizations, include list of their names, addresses, and telephone numbers.
4. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.
5. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
6. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location where materials separation will be performed.

D. Cost/Revenue Analysis: Indicate total cost of waste disposal as if there were no waste management plan and net additional cost or net savings resulting from implementing waste management plan. Use Form CWM-1 for construction waste and Form CWM-2 for demolition waste. Include the following:

1. Total quantity of waste.
2. Estimated cost of disposal (cost per unit). Include transportation and tipping fees and cost of collection containers and handling for each type of waste.
3. Total cost of disposal (with no waste management).
4. Revenue from salvaged materials.
5. Revenue from recycled materials.
6. Savings in transportation and tipping fees by donating materials.
7. Savings in transportation and tipping fees that are avoided.
8. Handling and transportation costs. Include cost of collection containers for each type of waste.
9. Net additional cost or net savings from waste management plan.

PART 2 - PRODUCTS

2.1 RECYCLING RECEIVERS AND PROCESSORS

- A. Subject to compliance with requirements. Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.

2.2 PERFORMANCE REQUIREMENTS

- A. General: Achieve end-of-Project rates for salvage/recycling of 75 percent by weight of total nonhazardous solid waste generated by the Work. Practice efficient waste management in the use of materials in the course of the Work. Use all reasonable means to divert construction and demolition waste from landfills and incinerators. Facilitate recycling and salvage of materials including the following:

1. Demolition Waste:

- a. Asphalt paving.
- b. Concrete.
- c. Concrete reinforcing steel.
- d. Brick.
- e. Concrete masonry units.
- f. Wood studs.
- g. Wood joists.
- h. Plywood and oriented strand board.
- i. Wood paneling.
- j. Wood trim.
- k. Structural and miscellaneous steel.
- l. Rough hardware.
- m. Roofing.
- n. Insulation.
- o. Doors and frames.
- p. Door hardware.
- q. Windows.
- r. Glazing.
- s. Metal studs.
- t. Gypsum board.
- u. Acoustical tile and panels.
- v. Carpet.
- w. Carpet pad.
- x. Demountable partitions.
- y. Equipment.
- z. Cabinets. aa. Plumbing fixtures. bb. Piping. cc. Supports and hangers. dd. Valves. ee. Sprinklers. ff. Mechanical equipment. gg. Refrigerants. hh. Electrical conduit. ii. Copper wiring. jj. Lighting fixtures. kk. Lamps.
- ll. Ballasts.
- mm. Electrical devices.

- nn. Switchgear and panelboards.
- oo. Transformers.
- pp. <Insert materials required>.

2. Construction Waste:

- a. Masonry and CMU.
- b. Lumber.
- c. Wood sheet materials.
- d. Wood trim.
- e. Metals.
- f. Roofing.
- g. Insulation.
- h. Carpet and pad.
- i. Gypsum board.
- j. Piping.
- k. Electrical conduit.
- l. Packaging: Regardless of salvage/recycle goal indicated in "General" Paragraph above, salvage or recycle 100 percent of the following uncontaminated packaging materials:
 - m. Paper.
 - 1) Cardboard.
 - 2) Boxes.
 - 3) Plastic sheet and film.
 - 4) Polystyrene packaging.
 - 5) Wood crates.
 - 6) Wood pallets.
 - 7) Plastic pails.

- n. Construction Office Waste: Regardless of salvage/recycle goal indicated in "General" Paragraph above, salvage or recycle 100 percent of the following construction office waste materials:

- 1) Paper.
- 2) Aluminum cans.
- 3) Glass containers.

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

A. General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.

- 1. Comply with operation, termination, and removal requirements in Section 015000

"Temporary Facilities and Controls."

B. Waste Management Coordinator: Engage a waste management coordinator to be responsible for implementing, monitoring, and reporting status of waste management work plan. Coordinator shall be present at Project site full time for duration of Project.

C. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work.

1. Distribute waste management plan to the Construction Manager, Resident Engineer, and other concerned project stakeholders within three days of submittal return.
2. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.

D. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged and recycled.
2. Comply with Section 015000 "Temporary Facilities and Controls" for controlling dust and dirt, environmental protection, and noise control.

E. Waste Management in Historic Zones or Areas: Transportation equipment and other materials shall be of sizes that clear surfaces within historic spaces, areas, rooms, and openings, by 12 inches or more.

3.2 SALVAGING DEMOLITION WASTE

A. Comply with requirements in Section 024116 "Structure Demolition for salvaging demolition waste.

B. Salvaged Items for Reuse in the Work: Salvage items for reuse and handle as follows:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers with label indicating elements, date of removal, quantity, and location where removed.
3. Store items in a secure area until installation.
4. Protect items from damage during transport and storage.
5. Install salvaged items to comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make items functional for use indicated.

C. Salvaged Items for Sale and Donation: Not permitted on Project site.

D. Salvaged Items for Owner's Use: Salvage items for Owner's use and handle as follows:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers with label indicating elements, date of removal, quantity, and location where removed.
3. Store items in a secure area until delivery to Owner.
4. Transport items to Owner's storage area off-site.
5. Protect items from damage during transport and storage.

E. Doors and Hardware: Brace open end of door frames. Except for removing door closers, leave door hardware attached to doors.

F. Equipment: Drain tanks, piping, and fixtures. Seal openings with caps or plugs. Protect equipment from exposure to weather.

G. Plumbing Fixtures: Separate by type and size.

H. Lighting Fixtures: Separate lamps by type and protect from breakage.

I. Electrical Devices: Separate switches, receptacles, switchgear, transformers, meters, panelboards, circuit breakers, and other devices by type.

3.3 RECYCLING DEMOLITION AND CONSTRUCTION WASTE, GENERAL

A. General: Recycle paper and beverage containers used by on-site workers.

B. Recycling Incentives: Revenues, savings, rebates, tax credits, and other incentives received for recycling waste materials shall accrue to General Contractor.

C. Preparation of Waste: Prepare and maintain recyclable waste materials according to recycling or reuse facility requirements. Maintain materials free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to the recycling process.

D. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical according to approved construction waste management plan.

1. Provide appropriately marked containers or bins for controlling recyclable waste until removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.

- a. Inspect containers and bins for contamination and remove contaminated materials if found.
2. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
3. Stockpile materials away from construction area. Do not store within drip line of remaining trees.

4. Store components off the ground and protect from the weather.
5. Remove recyclable waste from Owner's property and transport to recycling receiver or processor as often as required to prevent overfilling bins.

3.4 RECYCLING DEMOLITION WASTE

- A. Asphalt Paving: Grind asphalt to maximum 4-inch size.
 1. Crush asphaltic concrete paving and screen to comply with requirements in Section 312000 "Earth Moving" for use as general fill.
- B. Asphalt Paving: Break up and transport paving to asphalt-recycling facility.
- C. Concrete: Remove reinforcement and other metals from concrete and sort with other metals.
 1. Pulverize concrete to maximum 1-1/2-inch size.
 2. Crush concrete and screen to comply with requirements in Section 312000 "Earth Moving" for use as satisfactory soil for fill or subbase.
- D. Masonry: Remove metal reinforcement, anchors, and ties from masonry and sort with other metals.
 1. Pulverize masonry to maximum 1-1/2-inch size.
 - a. Crush masonry and screen to comply with requirements in Section 312000 "Earth Moving" for use as general fill.
 - b. Crush masonry and screen to comply with requirements in Section 329300 "Plants" for use as mineral mulch.
 2. Clean and stack undamaged, whole masonry units on wood pallets.
- E. Wood Materials: Sort and stack members according to size, type, and length. Separate lumber, engineered wood products, panel products, and treated wood materials.
- F. Metals: Separate metals by type.
 1. Structural Steel: Stack members according to size, type of member, and length.
 2. Remove and dispose of bolts, nuts, washers, and other rough hardware.
- G. Asphalt Shingle Roofing: Separate organic and glass-fiber asphalt shingles and felts. Remove and dispose of nails, staples, and accessories.
- H. Gypsum Board: Stack large clean pieces on wood pallets or in container and store in a dry location. Remove edge trim and sort with other metals. Remove and dispose of fasteners.
- I. Acoustical Ceiling Panels and Tile: Stack large clean pieces on wood pallets and store in a dry location.

J. Metal Suspension System: Separate metal members, including trim and other metals from acoustical panels and tile, and sort with other metals.

K. Carpet and Pad: Roll large pieces tightly after removing debris, trash, adhesive, and tack strips.

1. Store clean, dry carpet and pad in a closed container or trailer provided by carpet reclamation agency or carpet recycler.

L. Carpet Tile: Remove debris, trash, and adhesive.

1. Stack tile on pallet and store clean, dry carpet in a closed container or trailer provided by carpet reclamation agency or carpet recycler.

M. Piping: Reduce piping to straight lengths and store by material and size. Separate supports, hangers, valves, sprinklers, and other components by material and size.

N. Conduit: Reduce conduit to straight lengths and store by material and size.

O. Lamps: Separate lamps by type and store according to requirements in 40 CFR 273.

3.5 RECYCLING CONSTRUCTION WASTE

A. Packaging:

1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
2. Polystyrene Packaging: Separate and bag materials.
3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.

B. Wood Materials:

1. Clean Cut-Offs of Lumber: Grind or chip into small pieces.
2. Clean Sawdust: Bag sawdust that does not contain painted or treated wood.
 - a. Comply with requirements in Section 329300 "Plants" for use of clean sawdust as organic mulch.

C. Gypsum Board: Stack large clean pieces on wood pallets or in container and store in a dry location.

1. Clean Gypsum Board: Grind scraps of clean gypsum board using small mobile chipper or hammer mill. Screen out paper after grinding.

- a. Comply with requirements in Section 329300 "Plants" for use of clean ground gypsum board as inorganic soil amendment.

D. Paint: Seal containers and store by type.

3.6 DISPOSAL OF WASTE

A. General: Except for items or materials to be salvaged or recycled, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.

- 1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
- 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. General: Except for items or materials to be salvaged or recycled, remove waste materials and legally dispose of at designated spoil areas on Owner's property.

C. Burning: Do not burn waste materials.

D. Burning: Burning of waste materials is permitted only at designated areas on Owner's property, provided required permits are obtained. Provide full-time monitoring for burning materials until fires are extinguished.

3.7 ATTACHMENTS

- A. Form CWM-1 for construction waste identification.
- B. Form CWM-2 for demolition waste identification.
- C. Form CWM-3 for construction waste reduction work plan.
- D. Form CWM-4 for demolition waste reduction work plan.
- E. Form CWM-5 for cost/revenue analysis of construction waste reduction work plan.
- F. Form CWM-6 for cost/revenue analysis of demolition waste reduction work plan.
- G. Form CWM-7 for construction waste reduction progress report.
- H. Form CWM-8 for demolition waste reduction progress report.

END OF SECTION 017419

SECTION 017716 - PROJECT CLOSEOUT

PART 1 - GENERAL

1.1 SUMMARY

- A. Work specified in this section is applicable to the General Contractor and its Subcontractors as described herein.
- B. Section includes administrative and procedural requirements for project closeout, including but not limited to:
 - 1. Inspection procedures.
 - 2. Project record document submittal.
 - 3. Operating and maintenance manual submittal.
 - 4. Submittal of warranties.
 - 5. Final cleaning.
- C. Definition: Closeout is hereby defined to include general requirements near the end of Contract Time, in preparation for final acceptance, final payment, normal termination of the Contract, occupancy, and similar actions evidencing completion of the Work.
 - 1. Specific requirements for individual units of work are specified in Sections of Divisions 2 through 28.
 - 2. Time of closeout is directly related to Substantial Completion and, therefore, may be either a single time period for the entire Work or a series of time periods for individual parts of the Work which have been noted as substantially complete at different dates. That time variation (if any) shall be applicable to other provisions of this section.

1.2 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for certification of Substantial Completion, complete the following. List the exceptions in the request.
 - 1. In the Application for Payment that coincides with, or first follows, the date Substantial Completion is claimed, show 100 percent completion for the portion of the Work claimed as

substantially complete. Include supporting documentation for completion as indicated in these contract documents and a statement showing an accounting of changes to the Contract Sum.

- a. If 100 percent completion cannot be shown, include a list of incomplete items, the value of incomplete construction, and reasons the Work is not complete.
2. Submit specific warranties, workmanship bonds (if any), maintenance agreements, final certifications, and similar documents.
3. Obtain and submit releases enabling the Owner unrestricted use of the Work and access to services and utilities; include occupancy permits, operating certificates, and similar releases.
4. Deliver tools, spare parts, extra stock, and similar items.
5. Complete start-up testing of systems, and instruction of Owner's operating and maintenance personnel. Discontinue or change over and remove temporary facilities from the site, along with construction tools, mock-ups, and similar elements.

B. Inspection Procedures: On receipt of a request for inspection, the Architect/Engineer will either proceed with inspection or the General Contractor of unfilled requirements. The Architect/Engineer will prepare the Certificate of Substantial Completion following inspection, or advise each Prime Contractor of construction that must be completed or corrected before the certificate will be issued.

1. The Architect/Engineer will repeat inspection when requested and assured the Work has been substantially completed.
2. Results of the completed inspection will form the basis of requirements for final acceptance.

1.3 FINAL ACCEPTANCE

A. Preliminary Procedures: Before requesting final inspection for certification of final acceptance and final payment, complete the following. List the exceptions in the request.

1. Submit the final payment request with releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.
2. Submit an updated final statement, accounting for final additional changes to the Contract Sum.

3. Submit a certified copy of the Architect's/Engineer's final inspection list of items to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance, and the list has been endorsed and dated by the Architect.
4. Submit consent of surety to final payment.
5. Submit evidence of final, continuing insurance coverage complying with insurance requirements.

B. Reinspection Procedure: The Architect/Engineer will reinspect the Work upon receipt of notice that the Work, including inspection list items from earlier inspections, has been completed, except items whose completion has been delayed because of circumstances acceptable to the Architect.

1. Upon completion of reinspection, the Architect/Engineer will prepare a certificate of final acceptance, or advise each Prime Contractor of Work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.
2. If necessary, reinspection will be repeated.

1.4 RECORD DOCUMENT SUBMITTALS

A. General: Do not use record documents for construction purposes; protect from deterioration and loss in a secure, fire-resistive location; provide access to record documents for the Architect's reference during normal working hours.

B. Record Drawings: Architect will provide each Prime Contractor with CADD files of the Contract Drawings. Each Prime Contractor shall update the CADD files to "As-Built" conditions and provide two (2) sets of prints for review by the Architect. Architect will return one (1) set of prints to the Contractor. Upon approval by the Architect, Contractor shall provide one set of mylars and an electronic file of the "As-Built" drawings to the Owner and Construction Manager.

C. Record Specifications: Maintain one complete copy of the Project Manual, including addenda, and one copy of other written construction documents such as Change Orders and modifications issued in printed form during construction. Mark these documents to show substantial variations in actual Work performed in comparison with the text of the specifications and modifications. Give particular attention to substitutions, selection of options and similar information on elements that are concealed or cannot otherwise be readily discerned later by direct observation. Note related record drawing information and product data.

1. Upon completion of the Work, submit record specifications to the Architect and Construction Manager for the Owner's records.

D. Record Product Data, Certifications, and Laboratory Test Reports: Maintain one copy of each product data submittal, product certification, and laboratory test report. Mark these documents to show significant variations in actual Work performed in comparison with

information submitted. Include variations in products delivered to the site, and from the manufacturer's installation instructions and recommendations. Give particular attention to concealed products and portions of the Work which cannot otherwise be readily discerned later by direct observation. Note related Change Orders and mark-up of record drawings and specifications.

1. Upon completion of mark-up, submit complete set of record product data, certifications, and laboratory test reports to the Architect and Construction Manager for the Owner's records.

E. Survey of Outside Utility Lines: Upon completion of the Work, submit an acceptable and accurately dimensioned survey showing location and elevation of all utility lines (water, gas, electric, sewer, etc.), including valves, connections and changes in direction, as installed under the Contract, within the project lines and outside the building walls. Points where utility lines emerge from the building shall be located from building corners. Points where utility lines leave the property shall be located from lot monuments.

1. Draw to scale with waterproof ink or tracing cloth, or on a reproducible film which is equivalent to waterproof ink or tracing cloth, as approved by the Architect.
2. Submit survey of utility lines to the Architect for the Owner's and Construction Manager's records.

F. Record Sample Submittals: Immediately prior to the date or dates of Substantial Completion, the General Contractor will meet at the site with the Architect, Construction Manager and the Owner's personnel to determine which of the submitted Samples that have been maintained during progress of the Work are to be transmitted to the Owner for record purposes. Comply with delivery to the Owner's Sample storage area.

G. Miscellaneous Record Submittals: Refer to other Specification Sections for requirements of miscellaneous record-keeping and submittals in connection with actual performance of the Work. Immediately prior to the date or dates of Substantial Completion, complete miscellaneous records and place in good order, properly identified and bound or filed, ready for continued use and reference. Submit to the Architect for the Owner's and Construction Manager's records.

H. Maintenance Manuals: Organize operating and maintenance data into suitable sets of manageable size. Bind properly indexed data in individual heavy-duty 2-inch, 3-ring vinyl-covered binders, with pocket folders for folded sheet information. Mark appropriate identification on front and spine of each binder. Include the following types of information:

1. Emergency instructions.
2. Spare parts list.
3. Copies of warranties.

4. Wiring diagrams.
5. Recommended "turn around" cycles.
6. Inspection procedures.
7. Shop drawings and product data.
8. Fixture lamping schedule.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 CLOSEOUT PROCEDURES

A. Operating and Maintenance Instructions: Arrange for each installer of equipment that requires regular maintenance to meet with the Owner's personnel to provide instruction in proper operation and maintenance. If installers are not experienced in procedures, provide instruction by manufacturer's representatives. Include a detailed revue of the following items:

1. Maintenance manuals.
2. Record documents.
3. Spare parts and materials.
4. Tools.
5. Lubricants.
6. Fuels.
7. Identification systems.
8. Control sequences.
9. Hazards.
10. Cleaning.
11. Warranties and bonds.

12. Maintenance agreements and similar continuing commitments.

B. As part of instruction for operating equipment, demonstrate the following procedures:

1. Start-up.
2. Shutdown.
3. Emergency operations.
4. Noise and vibration adjustments.
5. Safety procedures.
6. Economy and efficiency adjustments.
7. Effective energy utilization.

3.2 FINAL CLEANING

A. General: General cleaning during construction is required by the General Conditions and included in Section "Temporary Facilities and Services".

B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturer's instructions where applicable.

1. Complete the following cleaning operations before requesting inspection for Certificate of Substantial Completion.
 - a. Remove labels that are not permanent labels.
 - b. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compound and other substances that are noticeable vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials.
 - c. Clean exposed exterior and interior hard-surfaced finishes to a dust-free condition, free of stains, films and similar foreign substances. Restore reflective surfaces to their original reflective condition.
 - d. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication and other substances. Clean plumbing fixtures to a sanitary condition. Clean light fixtures and lamps.
 - e. Clean the site, including landscape development areas, of rubbish, litter and other foreign substances. Sweep paved areas broom clean; remove stains, spills and other

foreign deposits. Rake grounds that are neither paved or planted, to a smooth, even-textured surface.

C. Compliance: Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful or dangerous materials into drainage systems. Remove waste materials from the site and dispose of in a lawful manner.

1. Where extra materials of value remaining after completion of associated Work have become the Owner's property, arrange for disposition of these materials as directed.

END OF SECTION 017716

SECTION 018120 - VOLATILE ORGANIC COMPOUND (VOC) LIMITS FOR ADHESIVES,
SEALANTS, AND ARCHITECTURAL COATINGS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes requirements for reduced-emission, reduced-toxicity construction adhesives, sealant and architectural coatings.
- B. Material Safety Data Sheets (MSDS) required and readily available on site.
- C. RELATED SECTIONS:
 - 1. All sections in the Specifications with interior adhesive or sealant applications.
 - 2. Painting: Division 9.

1.2 REFERENCE STANDARDS / QUALITY ASSURANCE

- A. Adhesives (VOC Content): South Coast Air Quality Management District Rule #1168 - "Adhesive and Sealant Applications", amended 1/7/05: South Coast Air Quality Management District (SCAQMD), State of California, www.aqmd.gov.
- B. Sealants: (VOC Content): Regulation 8 (Organic Compounds), Rule 51 (Adhesive and Sealant Products), amended 5/2/01: Bay Area Air Quality Management District (BAAQMD), State of California, www.baaqmd.gov.
- C. Paints: (VOC Content and Prohibited Compounds): "Green Seal Standard for Architectural Coating" (GS-11), plus "Green Seal Standard for Anti-Corrosive Paints" (GC-03).
- D. Anticorrosive Paints: "Green Seal Standard for Anti-Corrosive Paints" (GC-03), Second Edition, 1/7/07.

1.3 DELIVERY AND STORAGE

- A. To the extent feasible, do not store adhesives, sealants, paints, and other Architectural coatings with materials that have a high capacity to adsorb VOC emissions (i.e., materials which are woven, fibrous or porous in nature, such as acoustical ceilings, textiles, etc.). Do not store adhesives, sealants, paints, and other Architectural coatings in occupied spaces.

PART 2 - PRODUCTS

2.1 MATERIALS

A. VOC Content of Adhesives:

1. The volatile organic compound (VOC) content of adhesives shall not exceed the limits defined in Rule #1168, "Adhesive and Sealant Applications" of the South Coast Air Quality Management District (SCAQMD), of the State of California. The VOC limits defined by SCAQMD (based on 1/7/05 amendments) are as follows. All VOC limits are defined in grams per liter, less water and less exempt compounds (determined by U. S. EPA Reference Test Method 24). Unless otherwise specified below, the VOC content of all adhesives, adhesive bonding primers, or adhesive primers shall not be in excess of 250 grams per liter.
2. Architectural Applications:
 - a. Wood flooring adhesive: 100.
 - b. Subfloor adhesive: 50.
 - c. Ceramic tile adhesive: 65.
 - d. Drywall and panel adhesive: 50.
 - e. Cove base adhesive: 50.
 - f. Multipurpose construction adhesive: 70.
 - g. Structural glazing adhesives: 100.
3. Specialty Applications:
 - a. PVC welding: 510.
 - b. CPVC welding: 490.
 - c. ABS welding: 400.
 - d. Plastic cement welding: 250.
 - e. Adhesive primer for plastic: 550.
 - f. Contact adhesive: 80.
 - g. Special purpose contact adhesive: 250.

- h. Structural wood member adhesive: 140.
- i. Sheet applied rubber lining operations: 850.
- j. Adhesive Primer for Traffic Marking Tape: 150.

4. Substrate specific applications:

- a. Metal to metal: 30.
- b. Plastic foams: 50.
- c. Porous material (except wood): 50.
- d. Wood: 30.
- e. Fiberglass: 80.

5. If an adhesive is used to bond dissimilar substrates together, the adhesive with the highest VOC content shall be allowed.

B. VOC Content of Sealants and Sealant Primers:

1. The volatile organic compound (VOC) content of sealants and sealant primers shall not exceed the limits defined in Rule #1168, "Adhesive and Sealant Applications" of the South Coast Air Quality Management District (SCAQMD), of the State of California. The VOC limits defined by SCAQMD (based on 1/7/05 amendments) are as follows. All VOC limits are defined in grams per liter, less water and less exempt compounds (determined by U. S. EPA Reference Test Method 24).

2. Sealants:

- a. Architectural: 250.
- b. Non-membrane Roof: 300.
- c. Roadway: 250.
- d. Other: 420.

3. Sealant Primers:

- a. Architectural Non-Porous: 250.
- b. Architectural Porous: 775.

c. Other: 750.

C. VOC Content of Aerosol Adhesives:

1. The volatile organic compound (VOC) content of aerosol adhesives shall not exceed the limits defined in “Green Seal Standard for Commercial Adhesives” (GS-36), 10/19/00. All VOC limits are defined in grams per liter, less water and less exempt compounds (determined by U. S. EPA Reference Test Method 24).

2. Aerosol Adhesives:

a. General Purpose Mist Spray - 65% VOCs by weight.

b. General Purpose Web Spray - 55% VOCs by weight.

c. Special Purpose Aerosol Adhesives, all types - 70% VOCs by weight. D. VOC

Content of Paints:

1. The Volatile Organic Compound (VOC) content of paints shall not exceed the limits defined in the “Green Seal Standard for Architectural Coating” (GS-11) as of 5/20/93. The VOC limits are as follows. All VOC limits are defined in grams per liter, less water.

2. Paint:

a. Non-flat interior coatings: 150.

b. Flat interior coatings: 50.

E. VOC Content of Anti-Corrosive Paints:

1. The Volatile Organic Compound (VOC) content of paints shall not exceed the limits defined in the “Green Seal Standard for Anti-Corrosive Paints” (GC-03), Second Edition, 1/7/07. All VOC limits are defined in grams per liter, less water.

2. Anti-Corrosive Paints: 250.

F. VOC Content of Clear Wood Finishes, Floor Coatings, Stains, Sealers, Shellacs:

1. The Volatile Organic Compound (VOC) content of paints shall not exceed the limits defined in the South Coast Air Quality Management District Rule #1113, “Architectural Coatings,” 1/1/04.

2. Clear Wood Finishes:

- a. Varnish: 350.
- b. Lacquer: 550.
- 3. Floor Coatings: 100.
- 4. Sealers:
 - a. Waterproofing Sealers: 250.
 - b. Sanding Sealers: 275.
 - c. Other Sealers: 200.
 - d. Stains: 250.
- G. Prohibited Compounds in Paints:
 - 1. Paints shall comply with the prohibited compound requirements of the “Green Seal Standard for Architectural Coating” (GS-11), Green Seal, Washington D.C.
 - 2. Prohibited compounds, as defined in the green seal standard, shall include:
 - a. Halomethanes: methylene chloride.
 - b. Chlorinated ethanes: 1,1,1 trichloroethane.
 - c. Aromatic solvents: benzene, toluene (methylbenzene), Ethylbenzene.
 - d. Chlorinated ethylenes: vinyl chloride.
 - e. Polynuclear aromatics: naphthalene.
 - f. Chlorobenzenes: 1,2 dichlorobenzene.
 - g. Phthalate esters: di (2-ethylhexyl) phthalate, Butyl Benzyl Phthalate, di-n-butyl phthalate, di-n-octyl phthalate, diethyl phthalate, dimethyl phthalate.
 - h. Miscellaneous semi-volatile organics: isophorone.
 - i. Metals and their compounds: antimony, cadmium, hexavalent chromium, lead, mercury.
 - j. Preservatives (antifouling agents): formaldehyde.
 - k. Ketones: methyl ethyl ketone, methyl isobutyl ketone.

1. Miscellaneous volatile organics: acrolein, acrylonitrile.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Coordinate installation of all adhesives, sealants, paints, and coatings with the ventilation and sequencing criteria defined in Specification section 01511 Construction IAQ Management.
- B. When installed over concrete slabs, verify compatibility of adhesives with curing compounds, leveling agents, or sealing agents used for slab preparation.

END OF SECTION 018120

SECTION 02 0110 - PROTECTION OF EXISTING CONDITIONS

PART 1 GENERAL

1.01 SUMMARY

- A. Work of this section, as shown or specified, shall provide Protection of existing conditions in accordance with the requirements of the Contract Documents. The General Contractor must accept the site as-is and shall be deemed to have inspected the site and reviewed all Contract Documents prior to submitting a bid.

1.02 WORK INCLUDED

- A. Overall work under this Contract shall include all labor, materials, equipment, supervision, coordination efforts, and all other associated or related items specified herein that are necessary and are required to complete the Work. Work elements shall include:
 - 1. Protection of existing conditions during construction operations.
 - 2. Repair of any damage during construction operations.

1.03 PROJECT CONDITIONS

- A. Structures to be demolished will be discontinued in use and vacated prior to start of work.
- B. Nassau Community College (NCC assumes no responsibility for condition of structures to be demolished.
- C. Conditions existing at the time of inspection for bidding purposes will be protected by NCC as reasonably practical.
- D. Unless otherwise indicated in Contract Documents or specified by the NCC, items of salvageable value to General Contractor shall be removed from site and structures. Storage or sale of removed items on site will not be permitted and shall not interfere with other work specified.
- E. Explosives shall not be brought to site or used without written consent of NCC. Such written consent will not relieve General Contractor of total responsibility for injury to persons or for damage to property due to blasting operations. Performance of required blasting shall comply with governing regulations.

1.04 GENERAL CONTRACTOR RESPONSIBILITIES

- A. General coordination with other trades, NCC, etc.

PROTECTION OF EXISTING CONDITIONS

B. During construction, General Contractor is responsible for protecting existing conditions that are to remain as necessary.

1.05 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle materials as recommended by the manufacturer to protect from damage.

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1.06 PERMITS AND APPROVALS

- A. General Contractor shall prepare and obtain all required permits prior to construction unless otherwise directed by NCC. Copies of all permits shall be supplied to the NCDPW prior to the commencement of work authorized by the permit.

1.07 PROJECT RECORD DOCUMENTS

A. Upon completion of the work of this and related sections, the General Contractor shall provide the NCC with an as-built survey, tied into established project benchmarks. The survey shall be provided in digital (AutoCAD DWG) and paper formats, and shall be signed and sealed by a New York State Licensed Professional Land Surveyor. This survey may be combined with other as-built survey requirements of site-work items, with the approval of the NCC. Marked-up design plans are not acceptable for the requirements of this section. All survey elevations shall be in North American Vertical Datum (NAVD88).

B. The General Contractor shall accurately record any structures which exist on site and are not shown on the contract documents.

C. A pre-construction and post-construction survey of the conditions within the project limits to remain during construction shall be performed by the General Contractor and provide to the NCC.

1.08 RELATED SECTIONS AND DOCUMENTS

- A. Project Specifications:
1. Section 021000 – Protection of Existing Utilities
 2. Section 310000 – Earthwork
 3. Section 312500 – Erosion and Sedimentation Controls
- B. The following documents apply to all required work for the Project: (1) the Contract Drawings, (2) the Specifications, (3) the General Conditions, (4) the Addendum and (5) the Contract.

1.09 REFERENCE STANDARDS

- A. Unless more restrictive criteria or differing requirements are explicitly stated in the Specifications, or mandated by governing codes or regulations, the recommendations, suggestions, and requirements described in the referenced standards shall be deemed mandatory and applicable to the Work.

PART 2 EXECUTION

2.01 GENERAL DEMOLITION REQUIREMENTS

A. Demolish site improvements designated to be removed as shown on the contract drawings and specifications. Site improvements shall include but not be limited to structures, retaining walls, foundations, pavements, curbs and gutters, drainage structures, utilities, signage, landscaping, etc.

B. Locate demolition equipment and remove materials to prevent excessive loading to supporting walls, floors, or framing.

2.02 FILLING VOIDS

A. Completely fill below grade areas and voids resulting from demolition or removal of structures, underground fuel storage tanks, septic tanks, wells, cisterns, etc., using general fill materials as defined in Section 310000.

B. Areas to be filled shall be free of standing water, frost, frozen or unsuitable material, trash, and debris prior to fill placement.

C. Grade surface per the contract documents and to provide flow of surface drainage after fill placement and compaction.

2.03 DISPOSAL OF DEMOLISHED MATERIALS

A. Remove debris, rubbish, and other materials resulting from demolition operations from site. Leave areas of work in clean condition.

B. No burning of any material, debris, or trash on-site or off-site will be allowed except when allowed by appropriate governing authority and NCC. If allowed as stated above, burning shall be performed in a manner prescribed by governing authority. Attend burning materials until fires have burned out and have been completely extinguished.

C. Transport materials removed from demolished structures with appropriate vehicles and dispose off-site to areas that are approved for disposal by governing authorities and NCC.

2.04 PROTECTION

A. The General Contractor shall become acquainted with the existence and location of all surface and subsurface structures within the project area. General Contractor shall not damage any of those that are to remain and shall leave them accessible.

B. Monuments, bench marks and other reference features on streets bounding this project, shall be protected. Should these be disturbed in any manner, the General Contractor shall have them replaced at own expense.

C. Flag, barricade or suitably protect existing conditions during construction operations and equipment movement.

D. Provide any other safety measures and follow any additional procedures requested by the NCC.

2.05 DAMAGE

A. Any damage to existing conditions by the General Contractor or his subcontractors shall be immediately repaired with the least impact to the operational standards. If the repairs are not immediately addressed by the General Contractor, the Commissioner will contract for the repair at the General Contractor's expense.

B. Post construction condition surveys shall be conducted by the General Contractor. Any damage to the site shall be repaired to the condition identified in the preconstruction survey. The NCC shall determine the acceptability of any repairs.

END OF SECTION 020110

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FAÇADE REHABILITATION

BID SUBMISSION
14 AUGUST 2026

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14 AUGUST 2026

SECTION 021000 - PROTECTION OF EXISTING UTILITIES

PART 1 GENERAL

1.01 SUMMARY

- A. Work of this section, as shown or specified, shall provide protection of existing utilities in accordance with the requirements of the Contract Documents. The General Contractor must accept the site as-is and shall be deemed to have inspected the site and reviewed all Contract Documents prior to submitting a bid.

1.02 WORK INCLUDED

- A. Overall work under this Contract shall include all labor, materials, equipment, supervision, coordination efforts, and all other associated or related items specified herein that are necessary and are required to complete the Work. Work elements shall include:
 - 1. Identification and field mark-out of all on-site utility lines within the project limits to remain in operation and/or be relocated during construction.
 - 2. Protection and support of utilities during construction operations.
 - 3. Repair of any damage during construction operations.

1.03 GENERAL CONTRACTOR RESPONSIBILITIES

- A. General coordination with other trades, NCC, etc.
- B. Notify affected utility companies and Owner before starting work and comply with their requirements.
- C. General Contractor is responsible for protecting existing utilities during construction as necessary.

1.04 PERMITS AND APPROVALS

- A. General Contractor shall prepare and obtain all required permits prior to construction unless otherwise directed by NCC. Copies of all permits shall be supplied to the NCC prior to the commencement of work authorized by the permit.
- B. Connections with existing utilities shall be performed in accordance with the requirements of the Owner or Agency of the utility. The General Contractor shall be required to comply with all such requirements, including securing all permits, and payment of all permit and/or connection fees.

1.05 PROJECT RECORD DOCUMENTS

A. Upon completion of the work of this and related sections, the General Contractor shall provide the NCC with an as-built survey of all new water, sewer, electric, telecommunication, and gas service lines. The data shall include invert elevations at the property line and at connection point to existing utility infrastructure, tied into established project benchmarks. The survey shall be provided in digital (AutoCAD DWG) and paper formats, and shall be signed and sealed by a New York State Licensed Professional Land Surveyor. This survey may be combined with other as-built survey requirements of site-work items, with the approval of NCC. Marked-up design plans are not acceptable for the requirements of this section. All survey elevations shall be in North American Vertical Datum (NAVD88).

B. The General Contractor shall accurately record any structures which exist on site and are not shown on the contract documents.

C. A pre-construction and post-construction survey of the condition of all utilities within the project limits to remain during construction shall be performed by the General Contractor.

D. The General Contractor shall provide a survey of the actual locations of capped utilities and subsurface obstructions that will remain after demolition. Submit record as part of closeout submittals.

1.06 RELATED SECTIONS AND DOCUMENTS

A. Project Specifications:

1. Section 020110 – Protection of Existing Conditions
2. Section 310000 – Earthwork
3. Section 312500 – Erosion and Sedimentation Controls
4. Section 330000 – Other Utilities
5. Section 331000 – Water Utilities
6. Section 333000 – Sanitary and Storm Sewerage Utilities

B. The following documents apply to all required work for the Project: (1) the Contract Drawings, (2) the Specifications, (3) the General Conditions, (4) the Addendum and (5) the Contract.

C. Project Documents: (not used)

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 IDENTIFICATION

A. Existing Utilities: Locate existing underground utilities in and beyond the areas of work. If utilities are indicated to remain in place, provide adequate means of support and protection during the work. In the event of identifying and unforeseen conflict/condition, notify the Owner immediately.

FAÇADE REHABILITATION

B. Should uncharted, or incorrectly charted, piping or other utilities be encountered during excavation, consult utility owner immediately for directions. Cooperate with Owner and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of utility owner.

C. Do not interrupt existing utilities serving facilities occupied by Owner or others, during occupied hours, except when permitted in writing by the Owner and Construction Manager and then only after acceptable temporary utility services have been provided.

3.02 PROTECTION

A. Prior to commencement of any work, consult the records for existing utilities, and note all conditions and limitations, which might affect the work.

B. The General Contractor shall become acquainted with the existence and location of all surface and subsurface structures and utilities within the project area. General Contractor shall not damage any of those that are to remain and shall leave them accessible.

C. The work shall be executed so that no damage or injury will occur to existing public and adjoining or adjacent structures, streets, paving, sewers, gas, water, electric or any other pipes. Should any damage or injury caused by the General Contractor, or anyone in the General Contractor's employ, or by the work under this Contract occur, the General Contractor shall, at his own expense, make good such damage and assume all responsibility for such injury.

D. The above shall also include the protection of all existing utilities (including, but not limited to sewers, water lines, gas lines, electrical lines and telecommunication lines) to remain in use within and adjacent to the area affected by the work of the project.

E. Monuments, bench marks and other reference features on streets bounding this project, shall be protected. Should these be disturbed in any manner, the General Contractor shall have them replaced at their own expense.

F. Flag, barricade or suitably protect existing utilities during construction operations and equipment movement.

G. At a minimum, General Contractor shall provide timber mats at locations where equipment will cross existing utilities. Provide any other safety measures and follow any additional procedures requested by the NCC and the utility owner.

3.03 DAMAGE

A. Any damage to existing utilities by the General Contractor or his subcontractors shall be immediately repaired with the least impact to the utility service and to the operational standards. If the repairs are not immediately addressed by the General Contractor, the utility owner and/or the NCC will contract for the repair at the General Contractor's expense.

B. Post construction condition surveys shall be conducted by the General Contractor. Any damage to the utilities shall be repaired to the condition identified in the preconstruction survey. The NCC and/or utility owner shall determine the acceptability of any repairs.

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SECTION 024119 - SELECTIVE DEMOLITION

PART 1 GENERAL

1.1 GENERAL REQUIREMENTS

- A. Work of this Section, as shown or specified, shall be in accordance with the requirements of the Contract Documents.

1.2 SECTION INCLUDES

- A. The Work of this Section includes all labor, materials, equipment and services necessary to complete the selective demolition work as shown on the drawings and/or specified herein, including but not limited to the following:
1. Alterations, selective demolition and removals as noted on drawings and as required to accommodate new construction.
 2. Removal of debris.
 3. Protection of existing building and spaces to remain and shoring of the structure as required for structural integrity and personal safety.
 4. Alterations, selective demolition and removals of building exterior where noted.
 5. Patching and refinishing of existing surfaces damaged as a result of this work.
 6. Protection.

1.3 QUALITY ASSURANCE

- A. The General Contractor shall comply with the requirements of all applicable Federal, State and local safety and health regulations regarding the demolition of structures including ANSI/NFPD 241-Building Construction and Demolition Operations.
- B. The General Contractor shall be responsible for any damage to any adjacent structures or buildings to remain.
- C. Qualifications: Qualifications of General Contractor for work of this Section shall not be less than ten (10) years of field experience in work of this nature.
- D. Professional Engineering: The General Contractor shall retain the services of a Professional Engineer licensed in the State of New York, who shall design and supervise installation of all underpinning and shoring.

1.4 RELATED SECTIONS

- A. Alteration and removal requirements for mechanical and electrical work - Mechanical and
SELECTIVE DEMOLITION

Electrical Sections.

1.5 SUBMITTALS

A. Schedule of Demolition Operations: Submit demolition procedures and operational sequence for Architect's review prior to start of work. Submit a written request to Architect well in advance of executing any cutting or alteration which affects:

1. The work of tying in or connecting to operational systems of the building, including electrical, mechanical and security systems.
2. The work of the Owner or General Contractor.
3. The structural value or integrity of any element of the project or of adjacent structures.
4. The integrity or effectiveness of weather-exposed and moisture-resistant elements or systems.
5. The efficiency, operational life, maintenance, or safety of operational elements or systems.

B. Notice of Differing Conditions: Submit a written notification if, during the work of demolition and cutting, conditions are discovered which significantly vary from those shown on the drawings. Do not commence work until approval of Architect. C. Shop Drawings: Submit the following prior to starting work:

1. Submit for Architect's information shop drawings indicating location and typical construction details of temporary dustproof and weatherproof partitions.
2. Submit drawings of temporary structural shoring, bracing, framing or support, for the information of the Architect. Such drawings will be reviewed by the Structural Engineer for the effects of such temporary members on the structural elements to remain. These drawings shall include the reason for such temporary members, the location, the direction and magnitude of design reaction forces on existing structure, and details showing how these reaction forces will be applied to the existing structure.
 - a. Shop drawings shall be submitted with the seal of the Professional Engineer engaged by General Contractor; Professional Engineer must be licensed in the State of New York.
 - b. The Architect will receive acknowledgment for concepts shown. Such acknowledgments shall be of the concept only and not of actual capacities or structural design and shall not in any way diminish or limit the General Contractor's responsibility for the quality and performance of the work and for protecting existing structures and facilities.

1.6 SPECIAL PRECAUTION

A. Hazardous materials may be encountered during demolition operations including asbestos; comply with applicable regulations, laws, and ordinances concerning removal, handling, and protection against exposure or environmental pollution.

1.7 JOB CONDITIONS

A. Condition of Structure

1. The General Contractor for the work of this Section shall be held to have visited the site, examined the premises, determined for himself the existing conditions, character of equipment and facilities needed for the performance of the work, and all matters which may in any way affect the work before submitting a bid.

a. Information regarding existing construction or conditions is based on available record drawings which may or may not truly reflect existing conditions. Such information is included on the assumption that it may be of interest to the General Contractor, but the Architect, Owner and their consultants do not assume responsibility for its accuracy or completeness.

b. Notify the Architect if, during the course of demolition, conditions are discovered which significantly vary from those shown on the drawings. Do not proceed until authorized by Architect.

2. The General Contractor shall accept the condition of the site and structures as found. The Architect and Owner assume no responsibility for condition of site or structures nor the continuation of the condition existing at time of bidding or thereafter.

B. Areas of building to be demolished or altered will be vacated and discontinued in use prior to the start of the work.

1. Surrounding areas of the building shall remain operational by the Owner.

C. Partial Removal

1. Items of savable value to the General Contractor may be removed from the structure as the work progresses. Salvaged items must be transported from the site as they are removed.

2. Storage or sale of removed items on the site will not be permitted. D.

Explosives: The use of explosives will not be permitted.

E. Traffic

1. Conduct demolition operations and the removal of debris to ensure minimum interference with roads, streets, walks and other adjacent occupied or used facilities.

2. Do not close or obstruct streets, walks or other occupied or used facilities without permission from authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.

F. Utilities

1. Maintain any existing utilities required to remain; keep in service and protect against damage during demolition operations.

2. Do not interrupt existing 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 the governing authorities.

3. Disconnect and seal any abandoned utilities before starting demolition operations. Coordinate all work with local utility companies having jurisdiction.

1.8 SCHEDULING

A. Before commencing any alteration or demolition work, submit for review by the Architect, and approval of the Owner, a schedule showing the commencement, the order, and the completion dates for the various parts of this work.

B. Before starting any work relating to existing utilities (electrical, sewer, water, heat, gas, fire lines, etc.) that will temporarily discontinue or disrupt service to the structures to remain, notify the Architect and the Owner 7 days in advance and obtain the Owner's approval in writing before proceeding with this phase of the work.

PART 2 PRODUCTS

Refer to Part 3 - Execution, for Product Requirements

PART 3 EXECUTION

3.1 PROTECTION

A. Take full precautions to protect workmen, passersby or any other persons from falling debris and other hazards of demolition operations.

B. Execute demolition work to insure protection of existing portions of building to remain against damages which might occur from falling debris or other cause. Do not interfere with use of adjacent occupied buildings and areas. Maintain free, safe passage to and from occupied adjacent buildings.

C. Materials Placement: Do not load structure with weight that will endanger, overload or cause excessive deflection of the existing structure, or that will damage finished surfaces adjacent to and/or supported by the existing structure, except portions being removed.

D. Construction Operations: Do not employ any construction operation, equipment or vehicles that will endanger, overload or cause excessive deflection of the existing structure, or that will damage finished surfaces adjacent to and/or supported by the existing structure, except portions being removed.

E. Take precautions to guard against movement, settlement, damage, or collapse of any part of building, sidewalks, adjacent property or street passages; be liable for any such movement, settlement or collapse. If such damage does accidentally occur, General Contractor shall repair promptly at no cost to Owner.

F. Provide the necessary safeguards to prevent accidents, to avoid all necessary hazards and protect the public, the work and property at all times, including Saturdays, Sundays, and holidays.

G. Be responsible for any and all damages which may arise or occur to any party whatsoever by reason of the neglect in providing proper lights, guards, barriers, or any other safeguards to prevent damage to property, life and limb.

H. Make such explorations and probes as are necessary to ascertain any required protective measures before proceeding with demolition and removal. Give particular attention to shoring and bracing requirements so as to prevent any damage to existing construction.

1. Provide interior and exterior shoring, bracing, or support to prevent movement or settlement or collapse of structures to be demolished and adjacent facilities to remain. The General Contractor's Professional Engineer shall advise on bracing, shoring, underpinning, or other structural requirements. The General Contractor shall bear all responsibility for prevention of movement or other structural fault.

2. The General Contractor shall restore, by repair or otherwise, the portions of structure or their contents altered by the General Contractor in furtherance of his underpinning and support operations. Restoration shall be completed to the conditions which existed prior to the start of the work. Any damage caused by inadequate support shall also be restored by the General Contractor at no cost to the Owner.

I. Provide, erect and maintain catch platforms, lights, barriers, weather protection, warning signs, and other items as required for proper protection of the workmen engaged in demolition and alteration operations, occupants of the building, public and adjacent property. Any damage caused by the General Contractor's operations shall be promptly repaired by the General Contractor at no cost to the Owner.

J. Provide and maintain temporary protection of the existing structure designated to remain where demolition, removal, and new work are being done, connections made, materials handled, or equipment moved.

K. Take necessary precautions to prevent dust and dirt from rising. Protect unaltered portions of the existing building affected by the operations under this Section by dustproof partitions and other adequate means.

L. Provide adequate fire protection in accordance with local Fire Department requirements.

M. Be responsible for any damage to the existing structure or contents by reason of the insufficiency of protection provided.

N. Promptly repair damages caused to adjacent facilities by demolition operations at no cost to the Owner.

O. Provide and maintain weather protection at exterior openings so as to fully protect the interior premises against damage from the elements until such openings are closed by new construction.

3.2 INSPECTION

A. Verify that areas of demolition work are protected and temporary dustproof partitions have been installed.

B. Verify that construction to be removed is not load bearing or has been properly braced, framed or supported.

C. Inspect existing conditions of the project, including elements subject to damage or to movement during demolition and cutting.

D. After uncovering work, inspect the conditions affecting the installation or performance of the work.

1. Report differing or questionable conditions to the Architect in writing; do not proceed with the work until the Architect has provided further instructions.

3.3 PREPARATION

A. Provide adequate temporary support as necessary to assure the structural value or integrity of the affected portion of the work

B. Provide devices and methods to protect other portions of the project from damage.

C. Pollution Controls

1. Use water sprinkling, temporary enclosures, and other suitable methods to limit the amount of dust and dirt rising and scattering in the air to the lowest practical level. Comply with governing regulations pertaining to environmental protection.

a. Do not use water when it may create hazardous or objectionable conditions such as ice, flooding, and pollution.

2. Clean adjacent structures and improvements of dust, dirt and debris caused by demolition operations. Return adjacent areas to condition existing prior to the start of the work.

3. Provide drainage for temporary water use.

3.4 DEMOLITION AND CUTTING

A. Selectively demolish existing construction in conformance with the drawings and these specifications.

1. Execute cutting and demolition by methods which will prevent damage to other work and will provide proper surface to receive installation of work by others and patching of finish surfaces.

2. Do all cutting or removal so as to leave neat, true, plumb and square edges, at edges to remain. Use carborundum or diamond saw equipment for cutting masonry, concrete and stone work, where edges or surfaces are to remain.
3. Do not cut or remove construction which might weaken or impair the structural integrity or strength of the structural framing or support systems which are to remain.
4. Demolish and remove materials as shown on the drawings without damage to the remaining parts of the structure or mechanical/electrical/utility systems.
5. Remove materials so as to not impose excessive loads in supporting walls, floors or framing and so as not to damage remaining undemolished portions of the structure.
6. Where portions of structures are to be removed, remaining portions shall be protected from damage and prepared to fit new construction. Damage to portions of structures to remain shall be repaired.
7. Reinforcing steel in existing structures shall be left in place, cleaned and aligned to provide tie with new work.
8. Existing waterproofing systems and flashings shall be carefully exposed and protected to maintain workable conditions of fitting new work with existing construction.
9. Proceed with demolition in a systematic manner.
10. Demolish concrete and masonry in small sections.
11. Remove structural framing members and lower to ground by means of hoists, derricks, or other suitable methods.

B. Shoring

1. Design, provide, erect and maintain necessary temporary shoring, bracing, framing, or support where load bearing structural or supporting members are removed or weakened by cuts or openings or are subject to damage from demolition operations, and otherwise as required for safety or to protect finish surfaces from damage.
2. Construction and adequacy of the shoring shall be the entire responsibility of the General Contractor. Any damage caused by the inadequacy of the shoring or other support shall be the responsibility of the General Contractor to remedy at no additional expense to the Owner.
3. Shoring and bracing shall remain until new structural framing and/or supports are installed. Coordinate operations fully with other trades.
4. Be ready at any time to promptly provide, add to, or strengthen temporary shoring, bracing, or support for existing work, in case existing construction begins to show signs of structural stress.

3.5 WORKMANSHIP STANDARDS FOR ALTERATION AND REMOVAL WORK

- A. Cut, remove, alter, temporarily remove and replace, or relocate existing work as required for performance of the work. Perform such work required with due care, including shoring and bracing.
- B. Coordinate patching involving the various trades whether or not specifically mentioned in the respective specification Sections.
- C. Materials or items demolished and not designated to become the property of the Owner or to be reinstalled shall become the property of the General Contractor and shall be removed from the Owner's property.
- D. Execute the work in a careful and orderly manner, with the least possible disturbance to the public and to the occupants of the adjacent buildings.
- E. In general, demolish masonry in small sections. Where necessary to prevent collapse of any construction, install temporary shores, struts, or bracing.
- F. Where existing equipment and/or fixtures are indicated to be reused, repair such equipment and/or fixtures and refinish to put in perfect working order. Refinish as directed.
- G. Cut out embedded anchorage and attachment items as required to properly provide for patching and repair of the respective finishes.
- H. Confine cutting of existing roof areas designated to remain to the limits required for the proper installation of the new work. Cut and fold back existing roofing. Cut and remove insulation and related items. Provide temporary weathertight protection as required until new roofing and flashings are installed. Consult the Owner to ascertain if existing guarantee bonds are in force and execute the work so as not to invalidate such bonds.
- I. Where utilities are removed, relocated or abandoned, cap, valve, plug, or by-pass to make complete and working installation.
- J. Restore existing pipe and duct coverings damaged by work under this Contract to original undamaged condition.
- K. Immediately restore to service and repair any damage caused by General Contractor's workmen to existing pipe and conduits, wires, cables, etc., of utility services or of fire protection systems and communications systems which are not scheduled for discontinuance or abandonment.
- L. Upon completion of contract, deliver work complete. Damage that may be caused by General Contractor or General Contractor's workmen to existing structures designated to remain, grounds, and utilities shall be repaired by General Contractor and left in as good condition as existed prior to damaging.
- M. Restore finish work of floors, walls, and ceilings remaining in place but damaged or defaced because of demolition or alteration work to condition equal that which existed at beginning of work under this Contract.

N. Where alteration or removals expose damaged or unfinished surfaces or materials, refinish such surfaces or materials, or remove them and provide new or salvaged materials to make continuous surfaces uniform.

O. Perform new work and restore and refinish existing work in conformance with applicable requirements of the specifications, except as follows:

1. Materials for use in repair of existing surfaces, but not otherwise specified, shall conform to the highest standards of the trade involved, and be in accordance with approved industry standards, and shall be as required to match existing surfaces.

2. Workmanship for repair of existing materials shall, unless otherwise specified, be equal to similar workmanship existing in or adjacent to the space where the work is being done.

3. Installation of salvaged items where no similar items exist shall be done in accordance with the highest standards of the trade involved and in accordance with approved shop drawings.

P. Materials or items designated to become the property of the Owner shall be as shown on the drawings. Remove such items with care and store them in a location at the site to be designated by the Owner.

Q. Materials or items designated to be reinstalled shall be as shown on the drawings. Remove such items with care under the supervision of the trade responsible for reinstallation; protect and store until required. Replace materials or items damaged in their removal with similar new material.

R. The existing building shall not be used as a workshop. Furnishings or equipment in any room shall not be used as work benches. Should any damage occur during the progress of the work to any furniture, fixtures, equipment, or appurtenances therein, such damage shall be repaired, replaced or made good by the General Contractor without extra cost to the Owner.

S. Finish new and adjacent existing surfaces as specified for new work. Clean existing surfaces of dirt, grease and loose paint before refinishing.

3.6 DISPOSAL OF DEMOLISHED MATERIALS

A. General

1. Remove from the site debris, rubbish and other materials resulting from work of this Section.

2. Burning of removed materials from demolished structures will not be permitted on the site.

B. Removal: Transport materials removed from demolished structures and legally dispose of off site. Pay any and all fees associated with disposal work. Leave the site in an orderly condition to the approval of the Architect.

C. Facility maintenance and renovation policy requirement

1. Intent: to reduce the environmental harms associated with the material purchased, installed, and disposed of during maintenance and renovation of buildings. Establishment: have in place a facility maintenance and renovation policy that includes guidelines for renovation and maintenance activities, using leed rating system strategies, to be implemented at the discretion of the building owners, operators, or tenants. Renovation activities include building improvement and tenant fit-outs. Maintenance activities include general repair and replacement.

2. Renovation waste: the policy should describe the procedure for creating an individual plan for each renovation project. Each renovation project shall establish waste diversion goals, target five materials for diversion, approximate the volume of waste anticipated, and identify waste diversions strategies to be used.

3.7 CLEANING UP

- A. Remove debris as the work progresses. Maintain existing premises in a neat and clean condition.

END OF SECTION 024119

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ASBESTOS REMOVAL

PART 1 GENERAL

1.01 SCOPE OF WORK

A. This asbestos abatement Project will consist of the removal and disposal of asbestos containing materials as indicated in the table below.

Work Area	Location	Description of Asbestos Material	Approximate Quantity Of ACM	ICR 56 Procedure
1	Building Façade, Roof Parapet Wall	Concealed Waterproofing/Vapor Barrier	5000.0 SF	56-11.6
Total:			5000.0 SF	

B. The work shall include but not be limited to the abatement work tabulated in the H-100 series drawings.

C. The Contractor shall be aware of all conditions of the Project and is responsible for verifying quantities and locations of all Work to be performed. Failure to do so shall not relieve the Contractor of its obligation to furnish all labor and materials necessary to perform the Work.

D. All Work shall be performed in strict accordance with the Project Documents and all governing codes, rules, and regulations. Where conflicts occur between the Project Documents and applicable codes, rules, and regulations, the more stringent shall apply.

E. Working hours shall be as required and approved by the Owner. Asbestos abatement activities including, but not limited to, work area preparation, gross removal activities, cleaning activities, waste removal, etc. may need to be performed during ‘off-hours’ (including nights and weekends). In addition, multiple mobilizations may be required to perform the work identified in this project. The Contractor shall coordinate and schedule all Work with the facility and Owner’s representative.

1.02 SPECIAL JOB CONDITIONS

A. Any special job conditions, including variances obtained by the Owner, are described below.

1. All work shall be performed in strict accordance with the project documents and NYS ICR 56 abatement procedures, where conflicts occurs between the project documents and applicable codes, rules and regulations, the most stringent shall apply.
2. The Abatement Contractor shall confirm the location and quantity of all asbestos removal and, prior to the start of any abatement activities, notify the owner / owner's representative of any inconsistencies with the bid documents, as well as any site conditions that were not captured by the bid documents that will impact the execution of the work.
3. All work must be coordinated with the owner / owner's representative facility representatives prior to scheduling and mobilization of manpower and resources to the project site.
4. The contractor shall coordinate locations of decontamination units, egress routes, and waste container with the owner's representative (s). In case locations that are more appropriate for the decontamination unit are determined at any time during the abatement, they may be relocated.
5. Waste generated by this abatement work shall be stored securely using a closed waste container.
6. The contractor shall define, as part of their project specific work plan, the location of accessible temporary power and water supply in coordination with the owner's representative. Abatement Contractor may be responsible for supplying 55-gallon drums for water supply and generators for electric supply.
7. There shall be no hard / physical obstructions to egress doors during ACM removal (example: no stored equipment, no physical barrier, etc.) Regulated / restricted work areas shall be established on by barrier tape, polyethylene sheeting, and signage that includes building plans depicting nearest alternate exit.
8. Plasticizing of egress doorways will require the Abatement Contractor to coordinate work times, dates, and locations with the facility. The facility will be required to place markings / signage at affected egress doors from the interior with clear and distinct direction to the next nearest available egress pathway. Any gatherings / occupants that can be moved to unaffected locations within the building must be moved to accommodate the work as it is performed.
9. All materials shall be removed completely down to the substrate, to a surface that is free and clear of all residues and made suitable for replacement materials. Abatement Contractor shall leave clean demarcations at the borders of removals to facilitate replacement materials.
10. Any Assumed ACM may be tested during construction by the owner's environmental consultant to assess its true asbestos content, if any.

11. Locations of ACM are shown diagrammatically and the Abatement Contractor is responsible for coordinating with other trades for the exact and complete locations of ACM to be abated prior to the performance of abatement activities.
12. The Abatement Contractor shall coordinate with the general contractor to ensure the building envelope remains watertight throughout abatement activities.
13. The Abatement Contractor shall establish fall protection for all roof level work areas as needed per OSHA requirements.
14. The General Contractor shall supply any and all scaffolding for the work area(s) under this contract. Scaffolding structure and maintenance shall be in strict accordance with local, state, and federal safety requirements.
15. Remote personal / waste decontamination units shall be located as close to the active work area as possible.

1.03 PERMITS AND COMPLIANCE

- A. The Contractor shall assume full responsibility and liability for compliance with all applicable Federal, State, and local laws, rules, and regulations pertaining to Work practices, protection of Workers, authorized visitors to the site, persons, and property adjacent to the Work.
- B. Perform asbestos related Work in accordance with New York State Industrial Code Rule 56 (herein referred to as Code Rule 56), 40 CFR 61, and 29 CFR 1926. Where more stringent requirements are specified, adhere to the more stringent requirements.
- C. The Contractor must maintain current licenses, permits and certifications pursuant to New York State Department of Labor and Department of Environmental Conservation for all Work related to this Project, including the removal, handling, transport, and disposal of asbestos containing materials.
- D. The Contractor must have and submit proof upon request that any persons employed by the Contractor to engage in or supervise Work on any asbestos Project have a valid NYS asbestos handling certificate pursuant to Code Rule 56.
- E. The Contractor shall be responsible for obtaining all Variances as may be required for the Project or as requested by the Owner. Approval of the Owner is required prior to submission of a Variance application to any regulatory agency. Failure to obtain Owner approval may result in Owner not permitting variance to be used on the project.
- F. The Contractor shall be responsible for compliance with The New York State Uniform Fire Prevention and Building Code, or its successor during all Work at the site.

G. Failure to adhere to the Project Documents shall constitute a breach of the Contract and the Owner shall have the right to and may terminate the Contract provided, however, the failure of the Owner to so terminate shall not relieve the Contractor from future compliance.

1.04 SUBMITTALS

A. Pre-Work Submittals: Within 7 days prior to the pre-construction conference, the Contractor shall submit 3 copies of the documents listed below for review and approval prior to the commencement of asbestos abatement activities:

1. Contractor license issued by New York State Department of Labor.
2. A list of Projects performed within the past two (2) years including the dollar value of all Projects. Provide Project references to include Owner, consultant, and air monitoring firm's name, contact persons, address, and phone number.
3. Progress Schedule:
 - a. Show the complete sequence of abatement activities and the sequencing of Work within each building or building section.
 - b. Show the dates for the beginning and completion of each major element of Work including substantial completion dates for each Work Area, building, or phase.
4. Project Notifications: As required by Federal and State regulatory agencies together with proof of transmittal (i.e. certified mail return receipt).
5. Building Occupant Notification: As required by regulatory agencies.
6. Abatement Work Plan: Provide plans that clearly indicate the following:
 - a. All Work Areas/containments numbered sequentially.
 - b. Locations and types of all decontamination enclosures.
 - c. Entrances and exits to the Work Areas/containments. Type of abatement activity/technique for each Work Area/containment.
 - e. Number and location of negative air units and exhaust. Also provide calculations for determining number of negative air pressure units.
 - f. Location of water and electrical connections to building services.
 - g. Waste transport routes through the building to the waste storage container.
7. Disposal Site/Landfill Permit from applicable regulatory agency.
8. NYS Department of Environmental Conservation Waste Transporter Permit.

B. On-Site Submittals: Refer to Part 3.01.C & D for all submittals, documentation, and postings required to be maintained on-site during abatement activities.

C. Project Close-out Submittals: Within 30 days of the completion of each abatement phase, the Contractor shall submit one copy of the documents listed below to the environmental consultant for review and approval prior to Contractor's final payment. Once the close-out submittal is approved, the Contractor shall provide three sets of the approved close-out documents (double-sided and bound) to.

1. All waste disposal manifests and disposal logs (Original waste manifests shall be sent to.

2. OSHA compliance air monitoring records conducted during the Work.
3. Daily progress log, including the entry/exit log.
4. Disposal Site/Landfill Permit from applicable regulatory agency.
5. Project notifications, amended notifications, Variances.

1.05 PRE-CONSTRUCTION CONFERENCE

A. Prior to start of preparatory Work under this Contract, the Contractor shall attend a preconstruction conference attended by Owner, Facility Personnel, and Environmental Consultant.

B. Agenda for this conference shall include but not necessarily be limited to:

1. Contractor's scope of Work, Work plan, and schedule to include number of workers and shifts.
2. Contractor's safety and health precautions including protective clothing and equipment and decontamination procedures.
3. Environmental Consultant's duties, functions, and authority.
4. Contractor's Work procedures including:
 - a. Methods of job site preparation and removal methods.
 - b. Respiratory protection.
 - c. Disposal procedures.
 - d. Cleanup procedures.
 - e. Fire exits and emergency procedures.
5. Contractor's required pre-work and on-site submittals, documentation, and postings.
6. Contractor's plan for twenty-four (24) hour Project security both for prevention of theft and for barring entry of unauthorized personnel into Work Areas.
7. Temporary utilities.
8. Handling of furniture and other moveable objects.
9. Storage of removed asbestos containing materials.
10. Waste disposal requirements and procedures, including use of the Owner supplied waste manifest.

C. In conjunction with the conference the Contractor shall accompany the Owner and Environmental Consultant on a pre-construction walk-through documenting existing condition of finishes and furnishings, reviewing overall Work plan, location of fire exits, fire protection equipment, water supply and temporary electric tie-in.

1.06 APPLICABLE STANDARDS AND REGULATIONS

A. The Contractor shall comply with the following codes and standards, except where more stringent requirements are shown or specified:

B. Federal Regulations:

1. 29 CFR 1910.1001, "Asbestos" (OSHA)
2. 29 CFR 1910.1200, "Hazard Communication" (OSHA)
3. 29 CFR 1910.134, "Respiratory Protection" (OSHA)
4. 29 CFR 1910.145, "Specification for Accident Prevention Signs and Tags" (OSHA)
5. 29 CFR 1926, "Construction Industry" (OSHA)
6. 29 CFR 1926.1101, "Asbestos, Tremolite, Anthophyllite, and Actinolite" (OSHA)
7. 29 CFR 1926.500 "Guardrails, Handrails and Covers" (OSHA)
8. 40 CFR 61, Subpart A, "General Provisions" (EPA)
9. 40 CFR 61, Subpart M, "National Emission Standard for Asbestos" (EPA)
10. 49 CFR 171-172, Transportation Standards (DOT)

C. New York State Regulations:

1. 12 NYCRR, Part 56, "Asbestos", Industrial Code Rule 56 (DOL)
2. 6 NYCRR, Parts 360, 364, Disposal and Transportation (DEC)
3. 10 NYCRR, Part 73, "Asbestos Safety Program Requirements" (DOH)
4. "New York State Uniform Fire Prevention and Building Code"

D. Standards and Guidance Documents:

1. American National Standard Institute (ANSI) Z88.2-80, Practices for Respiratory Protection
2. ANSI Z9.2-79, Fundamentals Governing the Design and Operation of Local Exhaust Systems
3. EPA 560/585-024, Guidance for Controlling Asbestos Containing Materials in Buildings (Purple Book)
4. EPA 530-SW-85-007, Asbestos Waste Management Guidance
5. ASTM Standard E1368 "Standard Practice for Visual Inspection of Asbestos Abatement Projects"

1.07 NOTICES

A. The Contractor shall provide notification of intent to commence asbestos abatement activities as indicated below.

1. At least ten (10) Working days prior to beginning abatement activities, send written notification to:

U.S. Environmental Protection Agency
National Emissions Standards for Hazardous Air Pollutants (NESHAPS) Coordinator
26 Federal Plaza
New York, NY 10007

2. At least ten (10) days prior to beginning abatement activities send written notification

to:

New York State Department of Labor
Division of Safety and Health, Asbestos Control Program.
State Office Campus
Building 12 - Room 161B
Albany, NY 12240

B. The Contractor is required to send notifications to regulatory agencies via electronic, mail, or package delivery service that will provide proof of delivery and receipt.

C. The Contractor shall be responsible for maintaining current project filings with regulatory agencies for the duration of the project.

D. The Contractor shall post and/or provide Building Occupant Notification at least 10 days prior to beginning abatement activities as required by Code Rule 56.

1.08 PROJECT MONITORING AND AIR SAMPLING

A. The Owner shall engage the services of an Environmental Consultant (the Consultant) who shall serve as the Owner's Representative in regard to the performance of the asbestos abatement Project and provide direction as required throughout the entire abatement Project period. The consultant and all subconsultants shall not have any contractual relationship with the Contractor for the duration of the asbestos project.

B. The Contractor is required to ensure cooperation of its personnel with the Consultant for the air sampling and Project monitoring functions described in this section. The Contractor shall comply with all direction given by the Consultant during the course of the Project.

C. The Consultant shall provide the following administrative services:

1. Review and approve or disapprove all submittals, shop drawings, schedules, and samples.
2. Assure that all notifications to governmental agencies by the Contractor are submitted in a timely manner and are correct in content.

D. The Consultant shall staff the Project with a trained and certified person(s) to act on the Owner's behalf at the job site. This individual shall be designated as the Abatement Project Monitor (APM).

1. The APM shall be on-site at all times the Contractor is on-site. The Contractor shall not be permitted to conduct any Work unless the APM is on-site (except for inspection of barriers and negative air system during non-working days).
2. The APM shall have the authority to direct the actions of the Contractor verbally and in writing to ensure compliance with the Project documents and all regulations. The APM shall have the authority to Stop Work when gross Work practice

deficiencies or unsafe practices are observed, or when ambient fiber concentrations outside the removal area exceed .01 f/cc or background level.

- a. Such Stop Work order shall be effective immediately and remain in effect until corrective measures have been taken and the situation has been corrected.
 - b. Standby time and air sample collection and analysis required to resolve the situation shall be at the Contractor's expense.
3. The APM shall provide the following services:
 - a. Inspection of the Contractor's Work, practices, and procedures, including temporary protection requirements, for compliance with all regulations and Project specifications.
 - b. Provide abatement Project air sampling as required by applicable regulations (NYS, AHERA) and the Owner. Sampling will include, but not be limited to background, work area preparation, asbestos handling, final cleaning, and clearance air sampling.
 - c. Verify daily that all Workers used in the performance of the Project are certified by the appropriate regulatory agency.
 - d. Monitor the progress of the Contractor's Work, and report any deviations from the schedule to the Owner.
 - e. Monitor, verify, and document all waste load-out operations including placement of generator and location labels on each waste container, as required by federal regulations.
 - f. Verify that the Contractor is performing personal air monitoring daily, and that results are being returned and posted at the site as required.
 - g. The APM shall maintain a log on site that documents all project related and Consultant and Contractor actions, activities, and occurrences.
 - h. Verify landfill to be used for waste disposal with waste transporter(driver) and Contractor prior to waste trailer/dumpster leaving site. Confirm the waste transporter firm and landfill are listed on the regulatory notifications for the project and the waste transport vehicle license number is listed on the current NYS DEC Waste Transporter permit.
4. The following minimum inspections shall be conducted by the APM, accompanied by the Contractor's supervisor. Additional inspections shall be conducted as required by Project conditions and/or the Owner's direction. Progression from one phase of Work to the next by the Contractor is only permitted with the written approval of the APM.
 - a. Pre-Construction Inspection: The purpose of this inspection is to verify the existing conditions of the Work Areas and to document these conditions.
 - b. Pre-Commencement Inspection: The purpose of this inspection is to verify the integrity of each containment system prior to disturbance of any asbestos containing material. This inspection shall take place only after the Work Area is fully prepped for removal.
 - c. Work Inspections: The purpose of this inspection is to monitor the Work practices and procedures employed on the Project and to monitor the continued integrity of the containment system. Inspections within the removal areas shall be conducted by the APM during all preparation, removal, and cleaning

- activities at least twice every Work shift. Additional inspections shall be conducted as warranted.
- d. Pre-Encapsulation Inspection: The purpose of this inspection is to ensure the complete removal of Asbestos Containing Material (ACM), from all surfaces in the Work Area prior to encapsulation.
 - e. Visual Clearance Inspection: The purpose of this inspection is to verify that: all materials in the scope of work have been properly removed; no visible asbestos debris/residue remains; no pools of liquid or condensation remains; and all required cleanings are complete. This inspection shall be conducted before final air clearance testing.
 - f. Post-Clearance Inspection: The purpose of this inspection is to ensure the complete removal of ACM, including debris, from the Work Area after satisfactory final clearance sampling and removal of all isolation and critical barriers and equipment from the Work Area.
 - g. Punch List Inspection: The purpose of this inspection is to verify the Contractor's certification that all Work has been completed as contracted and the existing condition of the area prior to its release to the Owner.
- E. The Consultant shall provide abatement Project air sampling and analysis as required by applicable regulations (New York State and/or AHERA). Sampling will include but is not limited to, background, work area preparation, asbestos handling, and final cleaning and clearance air sampling.
- 1. Unless otherwise required by applicable regulations, the Consultant shall have samples analyzed by Phase Contrast Microscopy (PCM). Results shall be available within 24 hours of completion of sampling.
 - 2. Samples shall be collected as required by applicable regulations (New York State and/or AHERA) and these specifications. If Transmission Electron Microscopy (TEM) clearance air sampling is utilized by the owner, the clearance criteria and sampling protocols must be in compliance with AHERA. If PCM air sample analysis results exceed the satisfactory clearance criteria, then TEM analysis of the entire set of clearance air samples may be used, provided that a standard NIOSH/ELAP accepted laboratory analysis method is utilized that shall report each air sample result in fibers per cubic centimeter.
 - 3. If the air sampling during any phase of the abatement project reveals airborne fiber levels at or above .01 fibers/cc or the established background level, whichever is greater, outside the regulated Work Area, Work shall stop immediately and corrective measures required by Code Rule 56 shall be initiated. Notify all employers and occupants in adjacent areas. The Contractor shall bear the burden of any and all costs incurred by this delay.
 - 4. The Environmental Consultant shall submit copies of all elevated air sampling results collected during abatement and all final air clearance results to the Commissioner of Labor, as required by regulation.

1.09 CONTRACTOR AIR SAMPLING

A. In addition to the requirements of OSHA 1926.1101, the Contractor shall be required to perform personal air monitoring every Work shift in each Work Area during which abatement activities occur in order to determine that appropriate respiratory protection is being worn and utilized.

B. The Contractor shall conduct air sampling that is representative of both the 8-hour time weighted average and 30-minute short-term exposures to indicate compliance with the permissible exposure and excursion limits.

C. The Contractor's laboratory analysis of air samples shall be conducted by an NYS DOH ELAP approved laboratory. The consultant shall not collect or analyze the Contractor's air samples.

D. Results of personnel air sample analyses shall be available, verbally, within twenty-four (24) hours of sampling and shall be posted upon receipt. Written laboratory reports shall be delivered and posted at the Work site within five (5) days. Failure to comply with these requirements may result in all work being stopped until compliance is achieved.

1.10 PROJECT SUPERVISOR

A. The Contractor shall designate a full-time Project Supervisor who shall meet the following qualifications:

1. The Project Supervisor shall hold New York State certification as an Asbestos Supervisor.
2. The Project Supervisor shall meet the requirements of a "Competent Person" as defined by OSHA 1926.1101 and shall have a minimum of one year experience as a supervisor.
3. The Project Supervisor must be able to speak, read, and write English fluently, as well as communicate in the primary language of the Workers.

B. If the Project Supervisor is not on-site at any time whatsoever, all Work shall be stopped. The Project Supervisor shall remain on-site until the Project is complete. The Contractor may not remove the Project Supervisor from the Project without the written consent of the Owner and the Environmental Consultant; however the Project Supervisor shall be removed from the Project if so requested by the Owner.

C. The Project Supervisor shall maintain the bound Daily Project Log and the entry/exit logs as required by New York State Department of Labor and section 2.03 of the specifications and the Waste Disposal Log (Appendix B) required by section 4.03 of the specifications.

D. The Project Supervisor shall be responsible for the performance of the Work and shall represent the Contractor in all respects at the Project site. The Supervisor shall be the primary point of contact for the Asbestos Project Monitor.

1.11 MEDICAL REQUIREMENTS

- A. Before exposure to airborne asbestos fibers, provide Workers with a comprehensive medical examination as required by 29 CFR 1910.1001, and 29 CFR 1926.1101.
 - 1. This examination is not required if adequate records show the employee has been examined as required by 29 CFR 1910.1001, and 29 CFR 1926.1101 within the past year.
 - 2. The same medical examination shall be given on an annual basis to employees engaged in an occupation involving potential disturbance of asbestos fibers.

1.12 TRAINING

- A. As required by applicable regulations, prior to assignment to asbestos Work instruct each employee with regard to the hazards of asbestos, safety and health precautions, and the use and requirements of protective clothing and equipment.
- B. Establish a respirator program as required by ANSI Z88.2 and 29 CFR 1910.134, and 29 CFR 1926.1101. Provide respirator training and fit testing.

1.13 RESPIRATORY PROTECTION

- A. Select respirators from those approved by the National Institute for Occupational Safety and Health (NIOSH).
- B. Respirators shall be individually fit-tested to personnel under the direction of an Industrial Hygienist on a yearly basis. Fit-tested respirators shall be permanently marked to identify the individual fitted, and use shall be limited to that individual.
- C. Where fiber levels permit, and in compliance with regulatory requirements, Powered Air Purifying Respirators (PAPR) are the minimum allowable respiratory protection permitted to be utilized during gross removal operations of OSHA Class I or OSHA Class II friable ACM.
- D. No respirators shall be issued to personnel without such personnel participating in a respirator training program.
- E. High Efficiency Particulate Air (HEPA) respirator filters shall be approved by NIOSH and shall conform to the OSHA requirements in 29 CFR 1910.134 and 29 CFR 1926.1101.
- F. A storage area for respirators shall be provided by the Contractor in the clean room side of the personnel decontamination enclosure where they will be kept in a clean environment.
- G. The Contractor shall provide and make available a sufficient quantity of respirator filters so that filter changes can be made as necessary during the work day.

H. Filters used with negative pressure air purifying respirators shall not be used any longer than one eight (8) hour work day. Any loose respirator filters found within the regulated area, must be disposed of as asbestos waste.

I. Any authorized visitor, Worker, or supervisor found in the Work Area not wearing the required respiratory protection shall be removed from the Project site and not be permitted to return.

J. The Contractor shall have at least two (2) Powered Air Purifying Respirators stored on site designated for authorized visitors use. Appropriate respirator filters for authorized visitors shall be made available by the Contractor.

1.14 DELIVERY AND STORAGE

A. Deliver all materials to the job site in original packages with containers bearing manufacturer's name and label.

B. Store all materials at the job site in a suitable and designated area.

1. Store materials subject to deterioration or damage away from wet or damp surfaces and under cover.
2. Protect materials from unintended contamination and theft.
3. Storage areas shall be kept clean and organized.

C. Remove damaged or deteriorated materials from the job site. Materials contaminated with asbestos shall be disposed of as asbestos debris as herein specified. This includes unused Contractor supplies located in the regulated work area.

1.15 TEMPORARY UTILITIES

A. Shut down and lock out all electrical power to the asbestos Work Areas, including lighting circuits. Any electrical power passing through the Work Areas that can't be shut down due to health and safety reasons, shall be protected as per the requirements of Industrial Code Rule 56.

B. Provide temporary 120-240 volt, single phase, three wire, 100 amp electric service with Ground Fault Circuit Interrupters (GFCI) for all electric requirements within the asbestos Work Area.

1. Where available, obtain from Owner's existing system. Otherwise provide power from other sources (i.e. generator).
2. Provide temporary wiring and "weatherproof" receptacles in sufficient quantity and location to serve all HEPA equipment and tools.
3. Provide wiring and receptacles as required by the Environmental Consultant for project monitoring and air sampling equipment (pumps, fans, leaf blowers, etc.).
4. All power to the Work Area shall be brought in from outside the area through GFCI's at the source.

C. Provide temporary lighting with "weatherproof" fixtures for all Work Areas including decontamination chambers.

1. The entire Work Area shall be kept illuminated at all times.
2. Provide lighting as required by the Environmental Consultant for the purposes of performing required inspections.

D. All temporary devices and wiring used in the Work Area shall be capable of decontamination procedures including HEPA vacuuming and wet-wiping.

E. Utilize domestic water service, if available, from Owner's existing system. Provide hot water heaters with sufficient capacity to meet Project demands.

PART 2 PRODUCTS

2.01 PROTECTIVE CLOTHING

A. Provide personnel utilized during the Project with disposable protective whole body clothing, head coverings, gloves and foot coverings. Provide disposable plastic or rubber gloves to protect hands. Cloth gloves may be worn inside the plastic or rubber for comfort, but shall not be used alone. Make sleeves secure at the wrists and make foot coverings secure at the ankles by the use of tape, or provide disposable coverings with elastic wrists or tops.

B. Provide sufficient quantities of protective clothing to assure a minimum of four (4) complete disposable outfits per day for each individual performing abatement Work.

C. Eye protection and hard hats shall be provided and made available for all personnel entering any Work Area.

D. Authorized visitors shall be provided with suitable protective clothing, headgear, eye protection, and footwear whenever they enter the Work Area.

2.02 SIGNS AND LABELS

A. Provide warning signs and barrier tapes at all approaches to asbestos Work Areas. Locate signs at such distance that personnel may read the sign and take the necessary protective steps required before entering the area.

1. Provide danger signs in vertical format conforming to 29 CFR 1926.1101, minimum 20" x 14" displaying the following legend.

DANGER
ASBESTOS CANCER AND LUNG DISEASE
HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE CLOTHING
ARE REQUIRED IN THIS AREA

2. Provide 3" wide yellow barrier tape printed with black lettered, "DANGER ASBESTOS REMOVAL". Locate barrier tape across all corridors, entrances and access routes to asbestos Work Area. Install tape 3' to 4' AFF.

B. Provide asbestos danger labels affixed to all asbestos materials, scrap, waste, debris and other products contaminated with asbestos.

1. Provide asbestos danger labels of sufficient size to be clearly legible, displaying the following legend:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

2. Provide the following asbestos labels, of sufficient size to be clearly legible, for display on waste containers (bags or drums) which will be used to transport asbestos contaminated material in accordance with United States Department of Transportation 49 CFR Parts 171 and 172: (Note: Include "RQ" for friable asbestos waste only.)

RQ, NA2212, (WASTE) ASBESTOS, 9, PGIII

3. Generator identification information shall be affixed to each waste container or any packaging used to containerize asbestos waste indicating the following printed in indelible ink:

Generator Name
Facility Name
Facility Address
Date

2.03 DAILY PROJECT LOG & WORK AREA ENTRY/EXIT LOG

A. Provide a bound Daily Project Log. The log shall contain on title page the Project name; name, address and phone number of Owner; name, address and phone number of Environmental Consultant; name, address and phone number of Abatement Contractor; emergency numbers including, but not limited to local Fire/Rescue department and all other New York State Department of Labor requirements.

B. All entries into the log shall be made in non-washable, permanent ink and such pen shall be strung to or otherwise attached to the log to prevent removal from the log-in area. Under no circumstances shall pencil entries be permitted.

C. All persons entering and exiting the Work Area shall sign the entry/exit log and include name, certification number, and time.

D. The Project Supervisor shall document all Work performed daily and note all inspections required by Code Rule 56, i.e. testing and inspection of barriers and enclosures.

2.04 SCAFFOLDING AND LADDERS

A. Provide all scaffolding and/or staging as necessary to accomplish the Work of this Contract. Scaffolding may be of suspension type or standing type such as metal tube and coupler, tubular welded frame, pole or outrigger type or cantilever type. The type, erection and use of all scaffolding and ladders shall comply with all applicable OSHA construction industry standards.

B. Provide scaffolding and ladders as required by the Environmental Consultant for the purposes of performing required inspections.

2.05 SURFACTANT (AMENDED WATER)

- A. Wet all asbestos-containing materials prior to removal with surfactant mixed and applied in accordance with manufacturer's printed instructions.

2.06 ENCAPSULANT

A. Encapsulant shall be tinted or pigmented so that application when dry is readily discernible.

B. The encapsulant solvent or vehicle shall not contain a volatile hydrocarbon.

2.07 WASTE DISPOSAL BAGS, DRUMS, AND CONTAINERS

A. Provide 6 mil polyethylene disposal bags printed with asbestos caution labels. Bags shall also be imprinted with U.S. Department of Transportation required markings.

B. Provide 30 or 55 gallon capacity fiber, plastic, or metal drums capable of being sealed air and water tight if asbestos waste has the potential to damage or puncture disposal bags. Affix asbestos caution labels on lids and at one-third points around drum circumference to assure ready identification.

C. Containers and bags must be labeled accordance with 40 CFR Part 61 NESHAPS and Code Rule 56. When the bags/containers are moved to the holding area, lockable trailer, or lockable hardtop dumpster from the waste decontamination system washroom, each bag/container must also be appropriately labeled with the date moved in waterproof markings.

D. Labeled ACM waste containers or bags shall not be used for non-ACM waste or trash. Any material placed in labeled containers or bags, whether turned inside out or not shall be handled and disposed of as ACM waste.

2.08 HEPA VACUUM EQUIPMENT

- A. All vacuuming performed under this contract shall be performed with High Efficiency Particulate Air (HEPA) filter equipped industrial vacuums conforming to ANSI Z9.2.

B. 2.09 POWER TOOLS

- A. Any power tools used to drill, cut into, or otherwise disturb asbestos material shall be manufacturer equipped with HEPA filtered local exhaust ventilation.

2.10 FIRE RETARDANT PLASTIC SHEETING

A. All polyethylene (plastic) sheeting used on the Project (including but not limited to sheeting used for critical and isolation barriers, fixed objects, walls, floors, ceilings, waste container) shall be at least 6 mil fire retardant sheeting.

B. Decontamination enclosure systems shall utilize at least 6 mil opaque fire retardant plastic sheeting. At least 2 layers of 6 mil reinforced fire retardant plastic sheeting shall be used for the flooring.

PART 3 EXECUTION

3.01 GENERAL REQUIREMENTS

A. Should visible emissions or water leaks be observed outside the Work Area, immediately stop Work and institute emergency procedures per Code Rule 56. Should there be elevated fiber levels outside the Work Area, immediately stop Work, institute emergency procedures per Code Rule 56, and notify all employers and occupants in adjacent areas. All costs incurred in decontaminating such non-Work Areas and the contents thereof shall be borne by the Contractor, at no additional cost to the Owner.

B. Valid NYS DOL Asbestos Handler certification cards shall be on site prior to admittance of any Contractor's employees to the asbestos Work Area.

C. The following submittals, documentation, and postings shall be maintained on-site by the Contractor during abatement activities at a location approved by the Abatement Project Monitor:

1. Valid Contractor handling license issued by New York State Department of Labor.
2. NYS DOL Asbestos Handler certification cards for each person employed in the removal, handling, or disturbance of asbestos.
3. Daily OSHA personal air monitoring results.

4. NYS Department of Health ELAP certification for the laboratory that will be analyzing the OSHA personnel air samples.
5. NYS Department of Environmental Conservation Waste Transporter Permit.
6. Project documents (specifications and drawings.)
7. Notifications, Variances, Approved Work Plan. Ensure that the most up-to-date notifications and Variances are on-site.
8. Applicable regulations.
9. Material Safety Data Sheets of supplies/chemicals used on the Project.
10. Disposal Site/Landfill Permit from applicable regulatory agency.
11. List of emergency telephone numbers.
12. Magnahelic manometer semi-annual calibration certification.
13. Waste Disposal Log.
14. Daily Project Log.
15. Entry/Exit Logs.

D. The following documentation shall be maintained on-site by the Abatement Project Monitor during abatement activities:

1. Valid Contractor handling license issued by New York State Department of Labor.
2. Air Sample Log.
3. Air sample results.
4. Project Monitor Daily Log 5. Asbestos Survey Report.
6. A copy of ASTM Standard E1368 “Standard Practice for Visual Inspection of Asbestos Abatement Projects.”
7. Calibration chart for rotometer(s) used on-site.

E. The Work Area must be vacated by building occupants prior to decontamination enclosure construction and Work Area preparation.

F. All demolition necessary to access asbestos containing materials for removal must be conducted within negative pressure enclosures by licensed asbestos handlers. Demolition debris may be disposed of as construction and demolition debris provided the Abatement Project Monitor determines that it is not contaminated with asbestos and there has been no disturbance of ACM within the enclosure. If the demolition debris is determined to be contaminated or ACM has been disturbed, it must be disposed of as asbestos waste.

3.02 PERSONNEL DECONTAMINATION ENCLOSURE

A. Provide personnel decontamination enclosure contiguous to the Work Area or as per Variance. The decontamination enclosure shall be attached to the Work Area and not located within it unless isolation barriers are installed. If the decontamination chamber is accessible to the public it shall be fully framed, sheathed, and lockable to prevent unauthorized entry.

B. Access to the Work Area will be from the clean room through an air-lock to the shower and through an air lock to the equipment room. Each airlock shall be a minimum of three feet from door to door. Additional air locks shall be provided as required by Code Rule 56 for remote decontamination enclosures.

C. The decontamination enclosure ceiling and walls shall be covered with one layer of opaque 6 mil fire retardant plastic sheeting. Two layers of reinforced fire retardant plastic sheeting shall be used to cover the floor.

D. The entrance to the clean room shall have a lockable door with adequate small openings for Work Area make-up air. Provide suitable lockers for storage of Worker's street clothes. Storage for respirators along with replacement filters and disposable towels shall also be provided.

E. Provide a temporary shower with individual hot and cold water supplies and faucets. Provide a sufficient supply of soap and shampoo. There shall be one shower for every six Workers. The shower room shall be constructed in such a way so that travel through the shower chamber shall be through the shower. The shower shall not be able to be bypassed.

F. Shower water shall be drained, collected and filtered through a system with at least a 5.0 micron particle size collection capability containing a series of several filters with progressively smaller pore sizes to avoid rapid clogging of the system. The filtered waste water shall then be discharged in accordance with applicable codes and the contaminated filters disposed of as asbestos waste.

G. The equipment room shall be used for the storage of tools and equipment. A walk-off pan filled with water shall be located in the Work Area outside the equipment room for Workers to clean foot coverings when leaving the Work Area. A labeled 6 mil plastic ACM waste bag for collection of contaminated clothing shall be located in this room.

H. The personal decontamination enclosure shall be cleaned and disinfected minimally at the end of each Work shift and as otherwise directed by the Asbestos Project Monitor.

3.03 WASTE DECONTAMINATION ENCLOSURE

A. Provide a waste decontamination enclosure contiguous to the Work area. The decontamination enclosure shall be attached to the Work Area and not located within it unless isolation barriers are installed. If the decontamination chamber is accessible to the public it shall be fully framed, sheathed, and lockable to prevent unauthorized entry.

B. The waste decontamination enclosure system shall consist of a holding area, air lock and washroom. The airlock shall be a minimum of three feet from door to door. The entrance to the holding area shall have a lockable door.

C. The decontamination enclosure ceiling and walls shall be covered with one layer of opaque 6 mil fire retardant plastic sheeting on walls and ceiling. Two layers of reinforced fire retardant plastic sheeting shall be used to cover the floor.

D. Where there is only one egress from the Work Area, the holding area of the waste decontamination enclosure system may branch off from the personnel decontamination enclosure equipment room, which then serves as the waste wash room.

E. The waste wash room water shall be drained, collected, and filtered through a system with at least a 5.0 micron particle size collection capability containing a series of several filters with progressively smaller pore sizes to avoid rapid clogging of the system. The filtered waste water shall then be discharged in accordance with applicable codes and the contaminated filters disposed of as asbestos waste.

F. In small asbestos Projects where only one egress from the Work Area exists, the shower room may be used as a waste washroom. In this instance, the clean room shall not be used for waste storage, but shall be used for waste transfer to carts, which shall immediately be removed from this enclosure.

3.04 WORK AREA ENTRY AND EXIT PROCEDURES

A. Access to and from the asbestos Work Area is permitted only through the personnel decontamination enclosure unless otherwise stipulated in a Site Specific Variance.

B. Workers shall sign the entry/exit log upon every entry and exit.

C. The following procedures shall be followed when entering the Work Area:

1. Before entering the Work Area, Workers shall proceed to the clean room, remove all street clothes, and don protective clothing, equipment, and respirators.
2. Workers shall proceed from the clean room through the shower room and the equipment room and into the Work Area.

D. The following procedures shall be followed when exiting the Work Area:

1. Before leaving the Work Area, gross asbestos contamination will be removed by brushing, wet cleaning and/or HEPA vacuuming, followed by use of the walk-off pan.
2. In the equipment room, Workers shall remove disposable clothing, but not respirators, and shall place clothing in plastic disposal bags for disposal as contaminated debris prior to entering the shower room. Reusable equipment shall be removed and stored in the equipment room (e.g, work boots).
3. Workers shall shower thoroughly while wearing respirators, then wash respirator with soap and water prior to removal.
4. Upon exiting the shower, Workers shall enter the clean room and don new disposable clothing if the Work shift is to continue or street clothes to exit area.

Under no circumstances shall Workers enter public non-Work Areas in disposable protective clothing.

E. If remote decontamination enclosures are permitted by Code Rule 56 or a Site Specific Variance, workers shall wear two disposable suits for all phases of Work. Workers exiting the work area shall HEPA vacuum the outer suit, enter the airlock, remove the outer suit and then place it back into the Work Area. A clean second suit shall be donned before exiting the airlock and proceeding to the decontamination enclosure or another work area via the designated pathway required by Code Rule 56.

3.05 WORK AREA PREPARATION

A. Asbestos danger signs shall be posted at all approaches to the asbestos Work Area. Post all emergency exits as emergency exits only on the Work Area side, post with asbestos caution signs on the non-Work Area side. Provide all non-Work Area stairs and corridors accessible to the asbestos Work Area with warning tapes at the base of stairs and beginning of corridors. Warning tapes shall be in addition to caution signs.

B. Shut down and lock out the building heating, ventilating, and air conditioning systems. Electrical systems and circuits shall also be shut down unless permitted to remain active per Code Rule 56 and appropriately protected and labeled. Existing lighting sources shall not be utilized. Provide temporary electric power and lighting as specified herein.

C. All non-ACM surfaces and objects within the Work Area shall be pre-cleaned using HEPA vacuuming and/or wet-wiping methods. Dry sweeping and any other methods that raise dust shall be prohibited. ACM shall not be disturbed during pre-cleaning.

D. Movable objects within the Work Area shall be HEPA vacuumed and/or wet-wiped and removed from the Work Area.

E. All non-movable equipment in the Work Area shall be completely covered with 2 layers of fire retardant plastic sheeting, at least 6 mil in thickness, and secured in place with duct tape and/or spray adhesive. Active Fire Protection System components in the Work Area shall not be covered with fire retardant plastic sheeting or any other obstruction.

F. Provide enclosure of the asbestos Work Area necessary to isolate it from unsealed areas of the building in accordance with the approved asbestos Work plan and as specified herein.

G. Provide critical barriers by sealing off all openings including but not limited to operable windows and skylights, doorways, diffusers, grills, electrical outlets and boxes, doors, floor drains, and any other penetrations to surfaces in the Work Area enclosure, using 2 layers of at least 6 mil fire retardant plastic sheeting.

H. Provide isolation barriers by installing temporary framing and sheathing at openings larger than 32 square feet forming the limits of the asbestos Work Area. Sheathing thickness must be a minimum of 3/8 inch and all sheathing shall be caulked and the Work Area side sealed with two layers of 6 mil fire retardant plastic sheeting. Isolation barriers in stairwells

and at work area egress locations shall not be covered with sheathing, only two layers of 6 mil fire retardant plastic sheeting.

I. Isolation barriers shall be installed at all elevator openings in the Work Area. Elevators running through the regulated abatement work area shall be shut down or isolated as per Code Rule 56. Elevator controls shall be modified so that elevators bypass the Work Area

J. Provide two independent layers of 6 mil fire retardant plastic sheeting over all floor, wall, and ceiling surfaces. Isolation barriers shall also be covered with two independent layers (for a total of four layers). Sheeting shall be secured with duct tape. All joints in fire retardant plastic sheeting shall overlap 12" minimum. Carpeting left in place shall be covered with 3/8 inch plywood sheathing prior to plasticizing.

K. Unless otherwise specified for removal, the Contractor shall either protect all fiberglass insulation on piping, ductwork, tanks, etc. in the Work Area using two layers of six mil fire retardant plastic sheeting or remove the insulation as asbestos containing waste. If the Contractor elects to remove the fiberglass insulation as asbestos-contaminated, he/she shall be responsible for reinsulation if reinsulation of removed insulations is part of the Contract or Project.

L. Frame out emergency exits from Work Area. Provide double layer 6 mil fire retardant plastic sheeting and tape seal opening. Post as emergency exits only and tape utility knife to the Work Area side of each exit. Within the Work Area, mark the locations and directions of emergency exits throughout the Work Area using exit signs and/or duct tape.

M. Remove all items attached to or in contact with ACM only after the Work Area enclosure is in place. HEPA vacuum and wet wipe with amended water all items prior to their removal from the Work Area and before the start of asbestos removal operations.

N. Suspended ceiling tiles shall only be removed after Work Area preparation is complete. If possible, non-contaminated ceiling tiles shall be HEPA vacuumed and removed from the Work Area before asbestos removals begin. Contaminated ceiling tiles shall be disposed of as asbestos waste.

3.06 NEGATIVE AIR PRESSURE FILTRATION SYSTEM (NOT APPLICABLE)

A. Provide a portable asbestos filtration system that develops a minimum pressure differential of negative 0.02 in. of water column within all full enclosure areas relative to adjacent unsealed areas and that provides a minimum of 4 air changes per hour in the Work Area during abatement and 6 air changes for non-friable flooring and/or mastic removal.

B. Such filtration systems must be made operational after critical and isolation barriers are installed but before wall, floor, and ceilings are plasticized and shall be operated 24 hours per

day during the entire Project until the final cleanup is completed and satisfactory results of the final air samples are received from the laboratory.

C. The system shall include a series of pre-filters and filters to provide High Efficiency Particulate Air (HEPA) filtration of particles down to 0.3 microns at 100% efficiency and below 0.3 microns at 99.9% efficiency. Provide sufficient replacement filters to replace pre-filters every 2 hours, secondary pre-filters every 24 hours, and primary HEPA filters every 600 hours (25 continuous days) of operation. HEPA filter sides shall be marked with installation date during all new HEPA filter installations on project.

D. A minimum of one additional filtration unit of at least the same capacity as the primary unit(s) shall be installed and fully functional to be used during primary unit (s) filter changing and in case of primary failure.

E. At no time will the unit exhaust indoors, within 15 feet of a receptor, including but not limited to windows and doors, or adversely affect the air intake of the building. Exhaust ducting shall not exceed 25' in length, except as allowed by Industrial Code Rule 56. Provide construction fencing at ground level exhaust termination locations per Code Rule 56.

F. Upon electric power failure or shut-down of any filtration unit, all abatement activities shall stop immediately and only resume after power is restored and all filtration units are fully operating. For shut-downs longer than one hour, all openings into the Work Area, including the decontamination enclosures, shall be sealed.

G. For all OSHA Class I removal Work Areas, the Contractor shall provide a manometer to verify negative air pressure. Manometers shall be read twice daily and recorded within the Daily Project Log.

H. There shall be at least a 4 hour settling period after the Work Area is fully prepared and the negative filtration units have been started to ensure integrity of the barriers.

I. Once installed and operational, the Contractor's Supervisor shall conduct daily inspections of the Work Area to insure the airtight integrity of the enclosure and operation of the negative air system. Findings shall be recorded within the Daily Project Log. Inspections shall also be conducted on days when no abatement activities are in progress per Code Rule 56 (i.e. weekends).

3.07 REMOVAL OF ASBESTOS CONTAINING MATERIALS

A. Asbestos-containing materials shall be removed in accordance with the Contract Documents and the approved Asbestos Work Plan. Only one type of ACM shall be abated at a time within a Work Area. Where there are multiple types of ACM requiring abatement, Code Rule 56 procedures for sequential abatement shall be followed.

- B. Sufficiently wet asbestos materials with a low pressure, airless fine spray of surfactant to ensure full penetration prior to material removal. Re-wet material that does not display evidence of saturation.
- C. One Worker shall continuously apply amended water while ACM is being removed.
- D. Perform cutting, drilling, abrading, or any penetration or disturbance of asbestos containing material in a manner to minimize the dispersal of asbestos fibers into the air. Use equipment and methods specifically designed to limit generation of airborne asbestos particles. All power operated tools used shall be provided with manufacturer HEPA equipped filtered local exhaust ventilation, as required by regulation.
- E. Upon removal of ACM from the substrate, the newly exposed surfaces shall be HEPA vacuumed and/or wet cleaned. Surfaces must be thoroughly cleaned using necessary methods and any required solvents to completely remove any adhesive, mastic, etc.
- F. All removed material shall be placed into 6 mil plastic disposal bags or other suitable container upon detachment from the substrate. Cleanup of accumulations of loose debris or waste shall be performed whenever there is enough accumulation to fill a single bag or container and minimally at the end of each work shift.
- G. Large components shall be wrapped in two layers of 6 mil fire retardant plastic sheeting. Sharp components likely to tear disposal bags shall be placed in fiber drums or boxes and then wrapped with sheeting.
- H. Power or pressure washers are not permitted for asbestos removal or clean-up procedures unless approved in a Site Specific Variance and allowed by owner.
- I. All open ends of pipe and duct insulation not scheduled for removal shall be encapsulated using lag cloth.
- J. All construction and demolition debris determined by the Environmental Consultant to be contaminated with asbestos shall be handled and disposed of as asbestos waste.
- K. The use of metal shovels, metal dust pans, etc. are not permitted inside the work area.

3.08 EQUIPMENT AND WASTE CONTAINER DECONTAMINATION AND REMOVAL PROCEDURES

- A. External surfaces of contaminated containers and equipment shall be cleaned by wet cleaning and/or HEPA vacuuming in the Work Area before moving such items into the waste decontamination enclosure system airlock by persons assigned to this duty. The persons in

the Work Area shall not enter the airlock. No gross removal operations are permitted when waste transfer is in progress.

B. The containers and equipment shall be removed from the airlock by persons stationed in the washroom during waste removal operations. The external surfaces of containers and equipment shall be cleaned a second time by wet cleaning.

C. The cleaned containers of asbestos material and equipment are to be dried of any excessive pooled or beaded liquid, placed in uncontaminated 6 mil plastic bags or sheeting, as the item's physical characteristics demand, and sealed airtight.

D. The clean recontainerized items shall be moved into the airlock that leads to the holding area. Workers in the washroom shall not enter this airlock.

E. Containers and equipment shall be moved from the airlock and into the holding area by persons dressed in clean personal protective equipment, who have entered from the holding area.

F. The cleaned containers of asbestos material and equipment shall be placed in water tight carts with doors or tops that shall be closed and secured. These carts shall be held in the holding until transfer to the waste container. The carts shall be wet cleaned and/or HEPA vacuumed at least once each day.

G. The exit from the decontamination enclosure system shall be secured to prevent unauthorized entry.

H. Where the waste removal enclosure is part of the personnel decontamination enclosure, waste removal shall not occur during shift changes or when otherwise occupied. Precautions shall be taken to prevent short circuiting and cycling of air outward through the shower and clean room.

3.09 WORK AREA DECONTAMINATION, CLEANING, AND CLEARANCE PROCEDURES

A. Following completion of gross abatement and after all accumulations of asbestos waste materials have been containerized, the following decontamination procedures shall be followed unless modified by a Site Specific Variance.

B. First Cleaning:

1. All bagged asbestos waste and unnecessary equipment shall be decontaminated and removed from the Work Area.
2. All surfaces in the Work Area shall be wet cleaned, except active fire protection system components that may be damaged by water. A wet-purpose shop vacuum may

be used to pick up excess liquid, and may either be decontaminated prior to removal from the Work Area or disposed of as asbestos waste.

3. The Abatement Project Monitor (APM) shall conduct a visual inspection of the Work Area for cleanliness and completion of abatement.

4. The Contractor shall then apply a thin coat of encapsulant to all surfaces in the Work Area that were not the subject of removal. In no event shall encapsulant be applied to any surface that was the subject of removal prior to obtaining satisfactory air monitoring results. Encapsulants shall be pigmented or tinted to provide an indication for completeness of coverage. The APM shall determine adequacy of coverage.

5. After the encapsulant has been applied and the required waiting/settling / drying time has elapsed, the first layer of fire retardant plastic sheeting shall then be removed and bagged as asbestos waste.

C. Second Cleaning

1. All surfaces in the Work Area shall be HEPA vacuumed and then wet cleaned. Wet cleaning of active fire protection system components is not necessary if damage may occur.

2. The APM shall conduct a second visual inspection of the Work Area for cleanliness.

3. After the required waiting/settling/drying time has elapsed, the second layer of fire retardant plastic sheeting shall be removed and bagged as asbestos waste.

D. Third Cleaning

1. All surfaces in the Work Area shall be HEPA vacuumed and then wet cleaned. Wet cleaning of active fire protection system components is not necessary if damage may occur.

2. After the required waiting/settling/drying time has elapsed, the APM shall conduct a third visual inspection of the Work Area for completeness of abatement and cleanliness. The APM shall document the results of the visual inspection in the Project Monitor Log and Contractor's Daily Project Log.

3. After satisfactory APM visual inspection, aggressive final clearance air sampling shall then be conducted by the Environmental Consultant provided no visible asbestos debris/residue; pools of liquid, or condensation remains. NOTE: TEM samples should be used vs. PCM if demolition or other dust-generating evolutions are taking place in adjacent areas, as evident from excessive loading.

4. Upon receipt of satisfactory final clearance air sampling results, the negative air pressure equipment can then be shut down, and the isolation and critical barriers removed and bagged as asbestos waste. Following this and satisfactory inspections by the project supervisor and the APM for cleanliness, the decontamination enclosures shall be removed.

E. As a result of any visual inspection by the APM or should air sampling results indicate high fiber levels, the Contractor will re-clean the affected areas at no additional expense to the Owner.

3.10 TENT ENCLOSURES

A. Tent enclosures may only be used where specifically permitted by Code Rule 56 or a Site Specific Variance issued by the NYS Department of Labor.

B. The Contractor shall restrict access to the immediate area where tent removal procedures are taking place using barrier tape and/or construction barriers. Caution signs shall be posted.

C. Remote personnel decontamination enclosures shall be constructed. Configuration shall be as required by Project size and a washroom with attached airlock shall be constructed contiguous to the tent enclosure for small and large size tent enclosure work areas. For tent enclosures with gross abatement of friable materials, a contiguous decontamination system shall be constructed, maintained and utilized, except for minor size tent enclosure work areas where an adjacent decontamination room or area is permitted by Code Rule 56.

D. The Work Area shall be precleaned. All objects and equipment that will remain in the restricted area during abatement shall be sealed with two layers of six mil polyethylene and tape.

E. The tent shall be a single use barrier constructed with a rigid frame and at least two layers of six mil polyethylene unless one layer of six mil polyethylene is otherwise permitted by Code Rule 56. Tents with twenty (20) square feet or less of floor space or no gross removal of friable ACM shall be constructed of one (1) layer of six mil polyethylene and shall include walls, ceilings and a floor (except portions of walls, floors and ceilings that are the removal surface) with double folded seams. All seams shall be sealed airtight using duct tape and/or spray adhesive.

F. The tent shall be constructed with at least one airlock for worker/waste egress.

G. A manometer shall be used for all OSHA Class I abatement.

H. Negative air shall be maintained at four (4) air changes per hour for non-friable and glovebag abatement tent enclosure work areas. Eight (8) air changes shall be maintained for friable gross removal tent enclosure work areas. In a Minor size abatement tent enclosure work area a HEPA vacuum may be used to maintain the required air changes.

I. OSHA compliance air monitoring is required per section 1.09.

J. ACM removal shall follow procedures defined in section 3.07.

K. Waste material shall be placed in properly labeled 6 mil plastic bags or other appropriate containers. The outside of the bags or containers shall be wet wiped and/or HEPA vacuumed in the washroom and shall then be placed in a second bag/container before being transferred to the waste storage container. All transportation of waste bags and containers outside the Work Area shall be in watertight carts. These carts shall be held in the holding

area until transfer to the waste container. The carts shall be wet cleaned and/or HEPA vacuumed at least once each day.

L. Following completion of gross abatement and after all accumulations of asbestos waste materials have been containerized, the following decontamination procedures shall be followed.

1. All bagged asbestos waste and unnecessary equipment shall be decontaminated and removed from the Work Area.
2. All surfaces in the Work Area shall be wet cleaned. A wet-purpose shop vacuum may be used to pick up excess liquid, and shall be decontaminated prior to removal from the Work Area.
3. The Contractor shall then apply a thin coat of encapsulant to all non-removal surfaces covered with plastic in the Work Area. In no event shall encapsulant be applied to any surface that was the subject of removal prior to obtaining satisfactory air monitoring results. Encapsulants shall be pigmented or tinted to provide an indication for completeness of coverage. The APM shall determine adequacy of coverage.
3. After the waiting/settling/drying time requirements have elapsed, the Asbestos Project Monitor shall conduct a visual inspection of the Work Area for cleanliness and completion of abatement. The APM shall document the results of the visual inspection in the Project Monitor Log and Contractor's Daily Project Log.
4. After satisfactory APM visual inspection, aggressive final clearance air sampling shall then be conducted by the Environmental Consultant.
5. Upon receipt of satisfactory final clearance air sampling results, the tent shall be collapsed into itself, placed in suitable disposal bags, and transferred through the washroom to the waste decontamination enclosure. Isolation and critical barriers shall then be removed and bagged as asbestos waste followed by satisfactory visual inspections by the project supervisor and the APM for cleanliness.

3.11 GLOVEBAG REMOVAL (NOT APPLICABLE)

A. Glovebag removals may only be used as specifically permitted by Code Rule 56 or a Site Specific Variance issued by the NYS Department of Labor. Glovebags may only be used on pipe or duct insulation.

B. In addition to conformance with applicable regulations and variances, glovebag removals are only permitted to be conducted within tent enclosures complying with these specifications.

C. The Contractor shall restrict access to the immediate area where tent/glovebag removal procedures are taking place using barrier tape and/or construction barriers. Caution signs shall be posted.

D. Remote personnel decontamination enclosures shall be constructed. Configuration shall be as required by Project size and a washroom with attached airlock shall be constructed contiguous to the tent enclosure.

E. Glovebag removals shall utilize commercially available glovebags of at least six mil thickness. Use shall be in accordance with the manufacturer's instructions and the following minimum requirements:

1. The sides of the glovebag shall be cut to fit the size pipe being removed. Tools shall be inserted into the attached tool pocket.
2. The glovebag shall be placed around the pipe and the open edges shall be folded and sealed with staples and duct tape. The glovebag shall also be sealed at the pipe to form a tight seal.
3. Openings shall be made in the glovebag for the wetting tube and HEPA vacuum hose. The opening shall be sealed to form a tight seal.
4. All glovebags shall be smoke tested by the Asbestos Project Monitor under negative pressure using the HEPA vacuum before removal operations commence. Glovebags that do not pass the smoke test shall be resealed and then retested.
5. After first wetting the materials to be removed, removal may commence. ACM shall be continuously wetted. After removal of the ACM, the piping shall be scrubbed or brushed so that no visible ACM remains. Open ends of pipe insulation shall be encapsulated.
6. After the piping is cleaned, the inside of the glovebag shall be washed down and the wetting tube removed. Using the HEPA vacuum, the glovebag shall be collapsed and then twisted and sealed with tape with the ACM at the bottom of the bag.
7. A disposal bag shall be placed around the glovebag that is then detached from the pipe. The disposal bag is then sealed and transferred through the washroom to the waste storage container.

F. After glovebag removals are complete, tent decontamination procedures shall be followed.

3.12 REMOVALS OF EXTERIOR NON-FRIABLE ACM

A. Except as modified by this section, removal of exterior non-friable ACM (i.e. roof flashings, built-up roofing, siding, caulking, glazing compound, transite, tars, sealers, coatings, and other NOB ACM) shall conform to all provisions of this specification.

B. Unless Site Specific Variances have been otherwise obtained, removals shall be conducted in accordance with the provisions of Code Rule 56.

C. The Work Area shall be the area from which ACM materials are being removed and shall extend 25 feet from the perimeter of the removal area.

D. Non-certified Workers are not allowed in the Work Area until the Work Area is cleared by the Asbestos Project Monitor (APM).

E. Remote personnel decontamination enclosures shall be constructed at a location in accordance with the approved Work Plan. Unless located outside the Work Area, decontamination enclosures are not permitted to be constructed on the roof.

Decontamination enclosures shall be constructed as close to the regulated abatement work

area as physically possible, but no greater than 50 feet from the building. It shall be cordoned off at a distance of 25 feet to separate it from public areas.

F. All openings (including but not limited to operable windows, doors, hatches, vents, ducts, and grilles) one story above, one story below, and within 25 feet of the work area shall be sealed with two layers of six mil polyethylene. Alternately, a polyethylene drape may be used instead of sealing windows individually where permitted by Code Rule 56.

G. The removal of the ACM may require the use of scrapers, solvents, mastic removal chemicals, or other methods/procedures to ensure complete removal.

H. The Contractor is required to provide temporary protection of the building (i.e. roof, window openings, construction joints, etc.) at the end of each Work shift so as to maintain the building in a watertight condition.

I. Dumpsters used for waste storage shall be lined with two layers of six mil polyethylene and shall have a hard top. Where open-top dumpsters are permitted by ICR 56 or a Site Specific Variance, the top shall be closed with polyethylene flaps that are sealed at the end of each work shift.

J. Personal protective equipment, including respirators, shall be utilized and worn during all removal operations until the Work Area is cleared by the APM.

K. The Owner may, at his discretion, choose to conduct air sampling. If air samples collected during abatement indicate any airborne asbestos fiber concentration(s) at or above 0.01 f/cc, Work shall be stopped immediately and Work methods shall be altered to reduce the airborne asbestos fiber concentration(s).

L. Following completion of gross abatement and after all accumulations of asbestos waste materials have been containerized, the following decontamination procedures shall be followed:

1. All surfaces in the Work Area shall be HEPA vacuumed and then wet cleaned.
2. The APM shall conduct a visual inspection of the Work Area for cleanliness and completeness of abatement. The APM shall document the results of the visual inspection in the Project Monitor Log and Contractor's Daily Project Log.
3. Upon satisfactory visual inspection results, the isolation and critical barriers shall be removed and bagged as asbestos waste. Following this, the decontamination enclosures shall be removed.

3.13 NON-FRIABLE FLOORING AND/OR MASTIC REMOVALS

A. The following procedures may only be used for the removal of non-friable flooring and/or mastic materials using manual and chemical methods. These procedures shall not apply to beadblaster use or other abrasive abatement methods.

B. The Contractor shall restrict access to the immediate Work Area where non-friable ACM removal procedures are taking place using barrier tape and/or construction barriers. Caution signs shall be posted.

C. Remote personnel decontamination enclosures may be utilized and shall be constructed at a location in accordance with the approved Work Plan. A washroom with attached airlock shall be constructed contiguous to each Work area enclosure.

D. The Work Area shall be prepared per section 3.05, except that ceilings, walls, and floors need not be fully plasticized. However, a four-foot high single layer of 6-mil fire retardant plastic sheeting shall be installed as a splashguard at all walls adjoining mastic removal portions of the work area, to prevent damage to the existing walls.

E. Negative air shall be maintained at six (6) air changes per hour.

F. OSHA compliance air monitoring is required per section 1.09.

G. ACM removal shall follow procedures defined in section 3.07.

H. Waste material shall be placed in properly labeled 6 mil plastic bags or other appropriate containers. The outside of the bags or containers shall be wet wiped and/or HEPA vacuumed in the washroom and double-bagged before being passed into the airlock. The bags or containers shall then be transported to the waste storage container. All transportation of waste bags and containers outside the Work Area shall be in watertight carts.

I. Following completion of gross abatement and after all accumulations of asbestos waste materials have been containerized, the following decontamination procedures shall be followed.

1. All bagged asbestos waste and unnecessary equipment shall be decontaminated and removed from the Work Area.
2. All plastic sheeting splashguards shall be removed and containerized, followed by all surfaces in the Work Area being wet cleaned. A wet-purpose shop vacuum may be used to pick up excess liquid, and shall be decontaminated prior to removal from the Work Area.
3. The Contractor shall then apply a thin coat of encapsulant to all non-removal surfaces in the Work Area. In no event shall encapsulant be applied to any surface that was the subject of removal prior to obtaining satisfactory air monitoring results. Encapsulants shall be pigmented or tinted to provide an indication for completeness of coverage. The APM shall determine adequacy of coverage.
4. After the waiting/settling/drying time requirements have elapsed, the Asbestos Project Monitor (APM) shall conduct a visual inspection of the Work Area for cleanliness and completion of abatement. The APM shall document the results of the visual inspection in the Project Monitor Log and Contractor's Daily Project Log.
5. After satisfactory APM visual inspection, aggressive final clearance air sampling shall then be conducted by the Environmental Consultant.

6. Upon receipt of satisfactory final clearance air sampling results, the isolation and critical barriers shall be removed and bagged as asbestos waste. Following this and satisfactory inspections by the project supervisor and the APM for cleanliness the decontamination enclosures shall be removed.

3.14 RESTORATION OF UTILITIES, FIRESTOPPING, AND FINISHES

A. After final clearance, remove locks and restore electrical and HVAC systems. All temporary power shall be disconnected, power lockouts removed and power restored. All temporary plumbing shall be removed.

B. Finishes damaged by asbestos abatement activities including, but not limited to, plaster/paint damage due to duct tape, staples, and spray adhesives, and floor tile lifted due to wet or humid conditions, shall be restored prior to final payment.

1. Finishes unable to be restored shall be replaced under this Contract at the Contractor's expense.
2. All foam and expandable foam products and materials used to seal Work Area openings shall be completely removed upon completion of abatement activities.

C. All penetrations (including, but not limited to, pipes, ducts, etc.) through fire rated construction shall be firestopped using materials and systems tested in accordance with ASTM E814 on Projects where reinsulation is part of the required work.

PART 4 DISPOSAL OF ASBESTOS WASTE

4.01 TRANSPORTATION AND DISPOSAL SITE

A. The Contractor's Hauler and Disposal Site shall be approved by the Owner. All waste generated during the asbestos project shall be disposed of as RACM asbestos waste.

B. The Contractor shall give twenty-four (24) hour notification prior to removing any waste from the site. Waste shall be removed from the site only during normal working hours unless otherwise specified. No waste may be taken from the site unless the Contractor and Environmental Consultant are present and the Environmental Consultant authorizes the release of the waste as described herein.

C. All waste generated as part of the asbestos project shall be removed from the site within ten (10) calendar days after successful completion of all asbestos abatement work.

D. Upon arrival at the Project Site, the Hauler must possess and present to the Environmental Consultant a valid New York State Department of Environmental Conservation Part 364 Asbestos Hauler's Permit. The Environmental Consultant may verify the authenticity of the hauler's permit with the proper authority.

E. The Hauler, with the Contractor and the Environmental Consultant, shall inspect all material in the transport container prior to taking possession and signing the Asbestos Waste Manifests.

4.02 WASTE STORAGE CONTAINERS

A. All waste containers shall be fully enclosed and lockable (i.e. enclosed dumpster, trailer, etc.). No open containers will be permitted on-site (i.e. open dumpster with canvas cover, etc.) unless specifically permitted by applicable regulation or a Site Specific Variance. When asbestos contaminated waste must be kept on the work site overnight or longer, it shall be double bagged and stored in accordance with Federal, State, and local laws.

B. The Environmental Consultant shall verify that the waste storage container and/or truck tags (license plates) match that listed on the New York State Department of Environmental Conservation Part 364 permit. Any container not listed on the permit shall be removed from the site immediately.

C. The container shall be plasticized and sealed with two (2) layers of 6 mil polyethylene. Once on site, it shall be kept locked at all times, except during load out. The waste container shall not be used for storage of equipment or contractor supplies.

D. While on-site, the container shall be labeled with EPA Danger signage:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

E. The New York State Department of Environmental Conservation Asbestos Hauler's Permit number shall be stenciled on both sides and back of the container.

F. The container is not permitted to be loaded unless it is properly plasticized, has the appropriate danger signage affixed, and has the permit number appropriately stenciled on the container.

G. Waste generated off-site is not permitted to be brought onto the Project site and loaded into the waste container.

H. All asbestos waste removed from the project site shall be transported directly to the disposal site without any additional waste being added to the container during transport.

4.03 HAULER’S ASBESTOS WASTE MANIFESTS

- A. The Hauler’s Manifest shall be completed by the Contractor and verified by the Environmental Consultant that all the information and amounts are accurate and the proper signatures are in place.
- B. The Manifests shall have the appropriate signatures of the Environmental Consultant, the Contractor, and the Hauler representatives prior to any waste being removed from the site.
- C. Copies of the completed Hauler’s Manifest shall be retained by the Environmental Consultant and the Contractor and shall remain on site for inspection.
- D. Upon arrival at the Disposal Site, the Hauler’s Manifest shall be signed by the Disposal Facility operator to certify receipt of ACM covered by the manifest.
- E. The Contractor shall forward copies of the Hauler’s Manifest to the Environmental Consultant within 14 days of the waste container being removed from the site. Failure to do so may result in payment being withheld from the Contractor.
- F. All waste disposal manifests and disposal logs shall be submitted by the Contractor to the Owner with the final close-out documentation.

SECTION 028700 - REMOVAL OF UNIVERSAL WASTE

1.1 GENERAL

A. Description Of Work

1. This specification covers the proper removal, storage, transportation and disposal of Universal Waste, which shall include removal of non-PCB fluorescent light ballasts, tubes, high intensity discharge lamps, batteries and mercury containing equipment. Demolition and removal of materials shall be as required to support the work.

B. Submittals

1. Before Start of Work: Submit the following to the Owner's Representative for review (A-I). Do not start the work until these submittals are returned with Owner's Representative's approval.
 - a. Copy of State or local license for hazardous waste hauler;
 - b. Certification of at least one on-site supervisor which has satisfactorily completed the OSHA 40 Hour Health and Safety Course for Handling Hazardous Materials;
 - c. Certificates of workers which have successfully completed at least the OSHA 40-Hour Health and Safety Course for Hazardous Materials;
 - d. Certificates of workers which have successfully completed the required employee training for universal waste or appropriate type of training to the type of wastes being managed;
 - e. Schedule of start and finish times and dates for this work;
 - f. Name and address of the universal waste handler or a destination facility where the waste materials is to be treated, deposited or recycled in accordance with all regulatory requirements (include contact person and telephone numbers), if the universal waste meets the definition of hazardous waste, the name and address of the hazardous waste treatment, storage and disposal (TSD) facility;
 - g. Material Safety Data Sheets for all materials requiring removal;
 - h. If General Contractor introduces any chemical into the work environmental, a MSDS for that chemical is required before use;
 - i. Contingency Plan for handling emergency spills or leaks;
 - j. Provide a copy of the NYS DEC Part 364 Waste Transporter permit for Universal Waste Transporters that transport more than 500 pounds of universal waste in a single shipment since they must be a permitted hazardous waste transporter.
 - k. Large Quantity Handlers of universal waste must provide documentation of notification to the EPA and/or the appropriate local government agency in advance of its intentions to transport the waste and receive from the facility or provide an EPA identification number prior to exceeding 5,000 kilograms of waste on-site and
 - l. Provide a record of all universal waste shipments received and sent offsite from the project.

C. Definitions

1. Large Quantity Handler (LQH) of Universal Waste shall be a waste handler who accumulates 5,000 kilograms or more of universal waste (batteries, pesticides, thermostats, or lamps, calculated collectively) at any time. This designation as a large quantity handler of universal waste is retained through the end of the calendar year in which 5,000 kilograms (11,000 pounds) or more total of universal waste is accumulated. The LQH shall notify the EPA, acquire or co-ordinate with a facility regarding an EPA

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identification number, and provide records for each shipment. The LQH shall ensure all employees are thoroughly familiar with proper waste handling and emergency procedures, relative to their responsibilities during normal facility operations and emergencies.

2. Small Quantity Handler of Universal Waste (SQH) shall be a waste handler who does not accumulate 5,000 kilograms (11,000 pounds) or more of total universal waste (batteries, pesticides, thermostats, or lamps, calculated collectively) at any time.
3. Destination Facility shall be a facility that legitimately and can legally accept universal waste from offsite so that the universal waste can be treated, disposed, or recycled in accordance with the regulatory requirements.
4. Universal Waste Transporter shall be anyone who transports universal waste. In New York, universal waste transporters that transport greater than 500 pounds of universal waste in a single shipment must be a permitted hazardous waste transporter pursuant to Federal and State regulations. Proper notification with the receiving handler agreeing to receive the shipment is required by the Universal Waste Transporter.
5. Employee training shall ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures, relative to their responsibilities during normal operations and emergencies and to the type of waste they are handling.
6. Universal Waste Regulations – Universal Waste Rule - 40 CFR Part 273, New York State – Standards for Universal Wastes 6 NYCRR Subpart 374-3.

1.2 PRODUCTS

A. Materials

1. Polyethylene Sheet: A single polyethylene film in the largest sheet size possible to minimize seams, 6.0 mil thick, clear, frosted, or black.
2. Duct Tape: Provide duct tape in 3" widths, with an adhesive which is formulated to stick aggressively to sheet polyethylene.
3. Spray Cement: Provide spray adhesive in aerosol cans which is specifically formulated to stick tenaciously to sheet polyethylene.
4. Disposal Bags: Provide 6 mil thick leak-tight polyethylene bags.
5. Labels: As required by the EPA and OSHA for handling, transportation, and disposal of hazardous waste.
6. Drums: Recovery or salvage drums acceptable for disposal of hazardous waste. Prior approval of drums is required. Drums or containers must meet the required OSHA EPA (40 CFR Parts 264-265 and 300), and DOT regulations (49 CFR Parts 171-178). Use of damaged drums will not be allowed.

A. Universal Waste

1. Once the properly labeled containers holding the universal waste have been filled and sealed, they shall be stored in designated accumulation areas as agreed upon by the Owners Representative and General Contractor. They shall not be allowed to store in transportation vehicles, or onsite for more than one year from when the waste has been generated.
2. Documentation when a universal waste in storage was first accumulated shall be provided. This is to be done by dating and labeling the waste with the date of the earliest accumulation that can document the length of time the universal waste has been accumulated.

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3. Maintenance of an inventory system on-site that identifies the earliest date that any universal waste in a group of universal waste items or a group of containers of universal waste became a waste was received.
4. Any waste developed from the work that exhibits one or more characteristics of hazardous waste must be handled accordingly and not as a universal waste.

B. Off-Site Shipment of Universal Waste

1. Off-Site shipments shall meet the requirements for offsite shipments and is prohibited from sending or taking universal waste to a place other than a designated universal waste handler or a universal waste destination facility.
2. LQH's of universal waste must notify EPA in writing and develop an EPA identification number or co-ordinate with the facility regarding use of their EPA identification number, prior to exceeding 5,000 kilograms of universal waste onsite.
3. SQH's do not need to notify EPA, receive and EPA identification number or keep records of shipments of universal waste.
4. LQH's must keep a record of all universal waste shipments received or sent offsite, and must retain those records for at least three years from the date of receipt or shipment. Records may include invoices, manifests, logs, bills of lading, or other shipping documents.

C. Storage Of Hazardous Waste (if required)

1. Once the properly labeled containers holding the hazardous waste have been filled and sealed, they shall be stored in designated areas as agreed upon by the Owners Representative and General Contractor. They shall not be allowed to store the hazardous waste for more than the storage limitations relating to quantities stored and the length of time the material may be stored.
2. Documentation when a hazardous waste in storage was first stored shall be provided. This is to be done by dating and labeling the waste with the date of the earliest accumulation that can document the length of time the hazardous waste has been accumulated.
3. Maintenance of an inventory system on-site that identifies the earliest date that any hazardous waste was placed into proper storage.

D. Off-Site Shipment of Hazardous Waste

1. Off site shipments shall meet the requirements for offsite shipments and is prohibited from sending or taking hazardous waste to a place other than an authorized treatment, storage and disposal (TSD) facility.
2. An EPA identification shall be developed or provided by the facility.
3. A copy of the transporter's Part 364 Permit shall be provided to the Owner's Representative and the facility representative.
4. A copy of all waste manifests and any test results or waste analysis utilized for the off- site transportation and disposal shall be submitted to DASNY.

END OF SECTION 028700

FAÇADE REHABILITATION

SECTION 040110-MASONRY CLEANING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes cleaning the following:
 - 1. Unit masonry surfaces.
 - 2. Stone surfaces.

1.2 DEFINITIONS

- A. Low-Pressure Spray: 100 to 400 psi (690 to 2750 kPa); 4 to 6 gpm (0.25 to 0.4 L/s)
- B. Medium-Pressure Spray: 400 to 800 psi (2750 to 5510 kPa); 4 to 6 gpm (0.25 to 0.4 L/s)
- C. High-Pressure Spray: 800 to 1200 psi (5510 to 8250 kPa); 4 to 6 gpm (0.25 to 0.4 L/s)

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.

1.4 QUALITY ASSURANCE

- A. Mockups: Prepare mockups of cleaning on existing surfaces to demonstrate aesthetic effects and to set quality standards for materials and execution.
 - 1. Cleaning: Clean an area [approximately 25 sq. ft. (2.3 sq. m)] [as indicated] <Insert dimension> for each type of masonry and surface condition.
 - a. Test cleaners and methods on samples of adjacent materials for possible adverse reactions. Do not test cleaners and methods known to have deleterious effect.
 - b. Allow a waiting period of not less than seven days after completion of sample cleaning to permit a study of sample panels for negative reactions.

PART 2 - PRODUCTS

2.1 PAINT REMOVERS

- A. Covered or Skin-Forming Alkaline Paint Remover: Manufacturer's standard covered or skinforming, alkaline paste or gel formulation, for removing paint from masonry; containing no methylene chloride.
- B. Low-Odor, Solvent-Type Paste Paint Remover: Manufacturer's standard low-odor, waterrinsable, solvent-type paste, gel, or foamed emulsion formulation, for removing paint coatings from masonry; containing no methanol or methylene chloride.

2.2 CLEANING MATERIALS

- A. Water: Potable.
- B. Hot Water: Water heated to a temperature of 140 to 160 deg F (60 to 71 deg C).
- C. Detergent Solution, Job Mixed: Solution prepared by mixing 2 cups (0.5 L) of tetrasodium pyrophosphate (TSPP), 1/2 cup (125 mL) of laundry detergent, and 20 quarts (20 L) of hot water for every 5 gal. (20 L) of solution required.

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- D. Mold, Mildew, and Algae Remover, Job Mixed: Solution prepared by mixing 2 cups (0.5 L) of tetrasodium pyrophosphate (TSPP), 5 quarts (5 L) of 5 percent sodium hypochlorite (bleach), and 15 quarts (15 L) of hot water for every 5 gal. (20 L) of solution required.
- E. Nonacidic Gel Cleaner: Manufacturer's standard gel formulation, with pH between 6 and 9, that contains detergents with chelating agents and is specifically formulated for cleaning masonry surfaces.
- F. Nonacidic Liquid Cleaner: Manufacturer's standard mildly alkaline liquid cleaner formulated for removing mold, mildew, and other organic soiling from ordinary building materials, including polished stone, brick, aluminum, plastics, and wood.
- G. Mild-Acid Cleaner: Manufacturer's standard mild-acid cleaner containing no muriatic (hydrochloric), hydrofluoric, or sulfuric acid; or ammonium bifluoride or chlorine bleaches.
- H. Acidic Cleaner: Manufacturer's standard acidic masonry cleaner composed of hydrofluoric acid or ammonium bifluoride blended with other acids, detergents, wetting agents, and inhibitors.
- I. One-Part Limestone Acidic Cleaner: Manufacturer's standard one-part acidic formulation for cleaning limestone.

2.3 CHEMICAL CLEANING SOLUTIONS

- A. Dilute chemical cleaners with water to produce solutions not exceeding concentration recommended in writing by chemical-cleaner manufacturer.
- B. Acidic Cleaner Solution for Nonglazed Masonry and Unpolished Stone: Dilute acidic cleaner with water to produce hydrofluoric acid content of 3 percent or less, but not greater than that recommended in writing by chemical-cleaner manufacturer.
1. Stones: Use only on unpolished granite, unpolished dolomite marble, and siliceous sandstone.

PART 3 - EXECUTION

3.1 PROTECTION

- A. Comply with each manufacturer's written instructions for protecting building and other surfaces against damage from exposure to its products. Prevent paint removers and chemical cleaning solutions from coming into contact with people, motor vehicles, landscaping, buildings, and other surfaces that could be harmed by such contact.
1. Cover adjacent surfaces with materials that are proven to resist paint removers and chemical cleaners used unless products being used will not damage adjacent surfaces. Use protective materials that are waterproof and UV resistant. Apply masking agents according to manufacturer's written instructions. Do not apply liquid strippable masking agent to painted or porous surfaces. When no longer needed, promptly remove masking to prevent adhesive staining.

3.2 CLEANING MASONRY, GENERAL

- A. Cleaning Appearance Standard: Cleaned surfaces are to have a uniform appearance as viewed from 10 feet (3 m) away by Architect.
- B. Proceed with cleaning in an orderly manner; work from top to bottom of each scaffold width and from one end of each elevation to the other. Ensure that dirty residues and rinse water do not wash over dry, cleaned surfaces.

FAÇADE REHABILITATION

- C. Use only those cleaning methods indicated for each masonry material and location.
1. Brushes: Do not use wire brushes or brushes that are not resistant to chemical cleaner being used.
 2. Spray Equipment: Use spray equipment that provides controlled application at volume and pressure indicated, measured at nozzle. Adjust pressure and volume to ensure that cleaning methods do not damage surfaces, including joints.
 - a. Equip units with pressure gages.
 - b. For chemical-cleaner spray application, use low-pressure tank or chemical pump suitable for chemical cleaner indicated, equipped with nozzle having a cone-shaped spray.
 - c. For water-spray application, use fan-shaped spray that disperses water at an angle of 25 to 50 degrees.
 - d. For heated water-spray application, use equipment capable of maintaining temperature between 140 and 160 deg F (60 and 71 deg C) at flow rates indicated.
- D. Perform each cleaning method indicated in a manner that results in uniform coverage of all surfaces, including corners, moldings, and interstices, and that produces an even effect without streaking or damaging masonry surfaces. Keep wall wet below area being cleaned to prevent streaking from runoff.
- E. Perform additional general cleaning, paint and stain removal, and spot cleaning of small areas that are noticeably different when viewed according to the "Cleaning Appearance Standard" Paragraph, so that cleaned surfaces blend smoothly into surrounding areas.
- F. Water-Spray Application Method: Unless otherwise indicated, hold spray nozzle at least 6 inches (150 mm) from masonry surface and apply water in horizontal back-and-forth sweeping motion, overlapping previous strokes to produce uniform coverage.
- G. Chemical-Cleaner Application Methods: Apply chemical cleaners to masonry surfaces according to chemical-cleaner manufacturer's written instructions; use brush[or spray] application. Do not spray apply at pressures exceeding 50 psi (345 kPa). Do not allow chemicals to remain on surface for periods longer than those indicated or recommended in writing by manufacturer.
- H. Rinse off chemical residue and soil by working upward from bottom to top of each treated area at each stage or scaffold setting. Periodically during each rinse, test pH of rinse water running off of cleaned area to determine that chemical cleaner is completely removed.
1. Apply neutralizing agent and repeat rinse if necessary to produce tested pH of between 6.7 and 7.5.

3.3 PRELIMINARY CLEANING

- A. Removing Plant Growth: Completely remove visible plant, moss, and shrub growth from masonry surfaces. Carefully remove plants, creepers, and vegetation by cutting at roots and allowing remaining growth to dry as long as possible before removal. Remove loose soil and plant debris from open joints to whatever depth they occur.
- B. Preliminary Cleaning: Before beginning general cleaning, remove extraneous substances that are resistant to planned cleaning methods. Extraneous substances include paint, calking, asphalt, and tar.

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1. Carefully remove heavy accumulations of rigid materials from masonry surface with sharp chisel. Do not scratch or chip masonry surface.
2. Remove paint and calking with alkaline paint remover.
 - a. Comply with requirements in "Paint Removal" Article.
 - b. Repeat application up to two times if needed.
3. Remove asphalt and tar with solvent-type paste paint remover.
 - a. Comply with requirements in "Paint Removal" Article.
 - b. Apply paint remover only to asphalt and tar by brush without prewetting.
 - c. Allow paint remover to remain on surface for 10 to 30 minutes.
 - d. Repeat application if needed.

3.4 PAINT REMOVAL

A. Paint-Remover Application, General: Apply paint removers according to paint-remover manufacturer's written instructions. Do not allow paint removers to remain on surface for periods longer than those indicated or recommended in writing by manufacturer. B. Paint Removal with Covered or Skin-Forming Alkaline Paint Remover:

1. Remove loose and peeling paint using low or medium pressure water spray, scrapers, stiff brushes, or a combination of these. Let surface dry thoroughly.
2. Apply paint remover to dry, painted surface with trowel, spatula, or as recommended in writing by manufacturer.
3. Apply cover according to manufacturer's written instructions.
4. Allow paint remover to remain on surface for period recommended in writing by manufacturer or as determined by preconstruction testing.
5. Scrape off paint and remover.
6. Rinse with cold water applied by low or medium pressure spray to remove chemicals and paint residue.
7. Apply acidic cleaner or manufacturer's recommended afterwash to surface, while surface is still wet, using low-pressure spray equipment or soft-fiber brush. Let cleaner or afterwash remain on surface as a neutralizing agent for period recommended by chemical-cleaner or afterwash manufacturer.
8. Rinse with cold water applied by low or medium pressure spray to remove chemicals and soil.
9. Retreat spots of remaining paint.

C. Paint Removal with Solvent-Type Paste Paint Remover:

1. Remove loose and peeling paint using low or medium pressure water spray, scrapers, stiff brushes, or a combination of these. Let surface dry thoroughly.
2. Apply thick coating of paint remover to painted surface with natural-fiber cleaning brush, deep-nap roller, or large paint brush. Apply in one or two coats according to manufacturer's written instructions.
3. Allow paint remover to remain on surface for period recommended in writing by manufacturer or as determined by preconstruction testing.

FAÇADE REHABILITATION

4. Rinse with cold water applied by low or medium pressure spray to remove chemicals and paint residue.

3.5 CLEANING MASONRY

A. Detergent Cleaning:

1. Wet surface with cold water applied by low-pressure spray.
2. Scrub surface with detergent solution using medium-soft brushes until soil is thoroughly dislodged and can be removed by rinsing. Use small brushes to remove soil from mortar joints and crevices. Dip brush in solution often to ensure that adequate fresh detergent is used and that surface remains wet.
3. Rinse with cold water applied by low or medium pressure spray to remove detergent solution and soil.
4. Repeat cleaning procedure above where required to produce cleaning effect established by mockup.

B. Mold, Mildew, and Algae Removal:

1. Wet surface with cold water applied by low-pressure spray.
2. Apply mold, mildew, and algae remover by brush or low-pressure spray.
3. Scrub surface with medium-soft brushes until mold, mildew, and algae are thoroughly dislodged and can be removed by rinsing. Use small brushes for mortar joints and crevices. Dip brush in mold, mildew, and algae remover often to ensure that adequate fresh cleaner is used and that surface remains wet.
4. Rinse with cold water applied by low or medium pressure spray to remove mold, mildew, and algae remover and soil.
5. Repeat cleaning procedure above where required to produce cleaning effect established by mockup.

C. Nonacidic Gel Chemical Cleaning:

1. Wet surface with cold water applied by low-pressure spray.
2. Apply gel cleaner in 1/8-inch (3-mm) thickness by brush, working into joints and crevices. Apply quickly and do not brush out excessively, so area is uniformly covered with fresh cleaner and dwell time is uniform throughout area being cleaned.
3. Let cleaner remain on surface for period recommended in writing by chemical-cleaner manufacturer.
4. Remove bulk of gel cleaner.
5. Rinse with cold water applied by low or medium pressure spray to remove chemicals and soil.
6. Repeat cleaning procedure above where required to produce cleaning effect established by mockup. Do not repeat more than once. If additional cleaning is required, use steam cleaning.

D. Nonacidic Liquid Chemical Cleaning:

1. Wet surface with hot water applied by low-pressure spray.
2. Apply cleaner to surface in two applications by brush or low-pressure spray.

FAÇADE REHABILITATION

3. Let cleaner remain on surface for period recommended in writing by chemical-cleaner manufacturer.
 4. Rinse with cold water applied by low or medium pressure spray to remove chemicals and soil.
 5. Repeat cleaning procedure above where required to produce cleaning effect established by mockup. Do not repeat more than once. If additional cleaning is required, use steam cleaning.
- E. Mild-Acid Chemical Cleaning:
1. Wet surface with cold water applied by low-pressure spray.
 2. Apply cleaner to surface in two applications by brush or low-pressure spray.
 3. Let cleaner remain on surface for period recommended in writing by chemical-cleaner manufacturer.
 4. Rinse with cold water applied by low or medium pressure spray to remove chemicals and soil.
 5. Repeat cleaning procedure above where required to produce cleaning effect established by mockup. Do not repeat more than once. If additional cleaning is required, use steam cleaning.
- F. Acidic Chemical Cleaning:
1. Wet surface with cold water applied by low-pressure spray.
 2. Apply cleaner to surface in two applications by brush or low-pressure spray.
 3. Let cleaner remain on surface for period recommended in writing by chemical-cleaner manufacturer.
 4. Rinse with cold water applied by low or medium pressure spray to remove chemicals and soil.
 5. Repeat cleaning procedure above where required to produce cleaning effect established by mockup. Do not repeat more than once. If additional cleaning is required, use steam cleaning.

END OF SECTION 040110

SECTION 04 20 00 - UNIT MASONRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Concrete masonry units.
2. Masonry-joint reinforcement.
3. Ties and anchors.
4. Embedded flashing.
5. Miscellaneous masonry accessories.
6. Masonry-cell fill.
7. Building in of items furnished by others into masonry, including access doors, door frames, anchors, sleeves and inserts, and other similar items to be embedded in masonry.
8. Grouting in of metal items built into masonry work.
9. Protection, pointing and cleaning of masonry.

B. Products Installed but not Furnished under This Section:

1. Steel lintels in unit masonry.
2. Steel shelf angles for supporting unit masonry.

C. Related Requirements:

1. Section 07 62 00 "Sheet Metal Flashing and Trim" for sheet metal flashing and for furnishing manufactured reglets installed in masonry joints.
2. Section 07 92 00 "Joint Sealants".

1.3 DEFINITIONS

- A. CMU(s): Concrete masonry unit(s).
- B. Reinforced Masonry: Masonry containing reinforcing steel in grouted cells.

1.4 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site. Prior to installation of masonry and associated work, General Contractor shall arrange a meeting with Masonry Subcontractor, installers of related work, and other entities concerned with masonry wall performance, including the Architect and Owner. General Contractor shall record discussions and agreements and furnish copy to each participant. Provide at least seventy-two (72) hours' advance notice to participants prior to convening conference. Review methods and procedures related to masonry work, including, but not limited to, the following:

1. Review masonry requirements (drawings, specifications and other Contract Documents).
2. Review submittals, both completed and yet to be completed.
3. Review and finalize construction schedule related to masonry work and verify availability of materials, installer's personnel, equipment and facilities needed to make progress and avoid delays.
4. Review required inspection, testing, certifying and material usage accounting procedures.
5. Review weather and forecasted weather conditions, and procedures for coping with unfavorable conditions.
6. Coordinate work with air/vapor barrier membrane and related flashing, review details to avoid conflicts.

1.5 ACTION SUBMITTALS

A. Product Data: For each type of product.

1.6 INFORMATIONAL SUBMITTALS

A. List of Materials Used in Constructing Mockups: List generic product names together with manufacturers, manufacturers' product names, model numbers, lot numbers, batch numbers, source of supply, and other information as required to identify materials used. Include mix proportions for mortar and grout and source of aggregates.

1. Submittal is for information only. Receipt of list does not constitute approval of deviations from the Contract Documents unless such deviations are specifically brought to the attention of Architect and approved in writing. B. Qualification Data: For testing agency.

C. Material Certificates: For each type and size of the following:

1. Masonry units.
 - a. Include material test reports substantiating compliance with requirements.
 - b. For brick, include size-variation data verifying that actual range of sizes falls within specified tolerances.
 - c. For exposed brick, include test report for efflorescence according to ASTM C67.
2. Integral water repellent used in CMUs.
3. Cementitious materials. Include name of manufacturer, brand name, and type.
4. Mortar admixtures.
5. Preblended, dry mortar mixes. Include description of type and proportions of ingredients.
6. Grout mixes. Include description of type and proportions of ingredients.
7. Reinforcing bars.
8. Joint reinforcement.
9. Anchors, ties, and metal accessories.
10. Flashing material, descriptive literature.

D. Mix Designs: For each type of mortar and grout. Include description of type and proportions of ingredients.

1. Include test reports for mortar mixes required to comply with property specification. Test according to ASTM C109/C109M for compressive strength, ASTM C1506 for water retention, and ASTM C91/C91M for air content.
2. Include test reports, according to ASTM C1019, for grout mixes required to comply with compressive strength requirement.

E. Statement of Compressive Strength of Masonry: For each combination of masonry unit type and mortar type, provide statement of average net-area compressive strength of masonry units, mortar type, and resulting net-area compressive strength of masonry determined according to TMS 602/ACI 530.1/ASCE 6.

F. Cold-Weather and Hot-Weather Procedures: Detailed description of methods, materials, and equipment to be used to comply with requirements.

G. Procedures and materials for cleaning masonry work; including certification that cleaner will not adversely affect stone, gaskets, sealant, etc.

1.7 QUALITY ASSURANCE

- A. Work of this Section shall conform to the requirements of the following (unless otherwise superseded by prevailing Building Code):

1. 2011 "Building Code Requirements for Masonry Structures," (TMS 402-11/ACI 530.1-11/ASCE 5-11).
2. 2011 "Specification for Masonry Structures," (TMS 602-11/ACI 530.1-11/ASCE 6-11).
3. Brick Industry Association (BIA) "Technical Notes on Brick Construction."

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Store masonry units on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied. If units become wet, do not install until they are dry.
- B. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.
- C. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.
- D. Deliver preblended, dry mortar mix in moisture-resistant containers. Store preblended, dry mortar mix in delivery containers on elevated platforms in a dry location or in covered weatherproof dispensing silos.
- E. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.
- F. Store reinforcement and anchors so that when placed, they will be free of soil, dirt, ice, loose rust, scale, or other coating which would destroy or reduce bond with mortar, and will not be disfigured or bent out of shape.

1.9 FIELD CONDITIONS

- A. Protection of Masonry: During construction, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.
 1. Extend cover a minimum of 24 inches down both sides of walls, and hold cover securely in place.
 2. Where one wythe of multiwythe masonry walls is completed in advance of other wythes, secure cover a minimum of 24 inches down face next to unconstructed wythe, and hold cover in place.

B. Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry to be left exposed or painted. Immediately remove grout, mortar, and soil that come in contact with such masonry.

1. Protect base of walls from rain-splashed mud and from mortar splatter by spreading coverings on ground and over wall surface.
2. Protect sills, ledges, and projections from mortar droppings.
3. Protect surfaces of window and door frames, as well as similar products with painted and integral finishes, from mortar droppings.
4. Turn scaffold boards near the wall on edge at the end of each day to prevent rain from splashing mortar and dirt onto completed masonry.

C. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold-weather construction requirements contained in TMS 602/ACI 530.1/ASCE 6. In cold weather, when the outside temperature is below forty (4) degrees F., conform to the requirements of "Cold Weather Masonry Construction and Protection Recommendations" publication by Brick Industry Association (BIA). No anti-freeze admixtures are permitted.

1. In addition, conform to the following:

- a. Masonry materials must be warmed as required.
- b. Brickwork must be protected by a minimum of 24 hours after installation so as to maintain enough heat for hydration of the cement in the mortar.

2. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 deg F and higher and will remain so until masonry has dried, but not less than seven days after completing cleaning.

D. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in TMS 602/ACI 530.1/ASCE 6. Protect unit masonry work when temperature and humidity conditions produce excessive evaporation of water from mortar and grout. Provide artificial shade and wind breaks and use cooled materials as required. Do not apply mortar to substrates with temperatures of 100 deg. F. and above. In addition, conform to the following:

1. Masonry materials must be cool.
2. Mortar must be used within 2 hours of initial mixing.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Source Limitations for Masonry Units: Obtain exposed masonry units of a uniform texture and color, or a uniform blend within the ranges accepted for these characteristics, from single source from single manufacturer for each product required.

B. Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color for exposed masonry, from single manufacturer for each cementitious component and from single source or producer for each aggregate.

2.2 PERFORMANCE REQUIREMENTS

A. Provide structural unit masonry that develops indicated net-area compressive strengths at 28 days.

1. Determine net-area compressive strength of masonry from average net-area compressive strengths of masonry units and mortar types (unit-strength method) according to TMS 602/ACI 530.1/ASCE 6.

2. Determine net-area compressive strength of masonry by testing masonry prisms according to ASTM C1314.

2.3 UNIT MASONRY, GENERAL

A. Masonry Standard: Comply with TMS 602/ACI 530.1/ASCE 6, except as modified by requirements in the Contract Documents.

B. Defective Units: Referenced masonry unit standards may allow a certain percentage of units to contain chips, cracks, or other defects exceeding limits stated. Do not use units where such defects are exposed in the completed Work.

C. Fire-Resistance Ratings: Comply with requirements for fire-resistance-rated assembly designs indicated.

1. Where fire-resistance-rated construction is indicated, units shall be listed and labeled by a qualified testing agency acceptable to authorities having jurisdiction.

2.4 CONCRETE MASONRY UNITS

A. Portland cement, ASTM C 150, Type I, low alkali (less than 65) one source.

B. Shapes: Provide shapes to match existing, with exposed surfaces matching exposed faces of adjacent units unless otherwise indicated.

C. Aggregates, ASTM C 331, lightweight expanded shale, clay or slate aggregates, manufactured by the rotary kiln process equal to "Solite," "Norlite," or "Haydite."

1. Block scheduled to receive painted finish shall contain normal weight aggregate meeting ASTM C-33 in addition to light weight aggregate in order to receive a smooth, uniform finish.

D. Load bearing lightweight aggregate concrete masonry units conforming to the requirements of ASTM C 90.

1. Block for rated walls shall be 75% solid units.
2. All other block may be hollow units.

E. The producer of the concrete masonry units shall furnish certification from an independent testing laboratory confirming that all 8" or larger masonry units meet all of the UL 618 requirements for two (2) hours or better (as required), referencing full scale fire test reports (ASTM E 119). All 4" and 6" units shall conform to "National Bureau of Standards" and "National Research Council" full scale fire tests.

F. Finish: For exposed or painted block surfaces, in addition to ASTM requirements, block shall have uniformly dense, flat, fine grain texture, with no cracks, chips, spalls, or other defects which would impair appearance. For concealed CMU, surfaces shall be free from deleterious materials that would stain plaster or corrode metal.

G. Curing: All concrete block shall be steam cured, and air dried for not less than thirty (30) days before delivery.

H. Density of concrete block shall not exceed one hundred and five (105) lbs. per cubic foot.

I. Shrinkage: Shrinkage of concrete blocks shall not exceed 0.065% when tested in accordance with ASTM C 426-99.

J. Water Content:

1. At the time of delivery to the job site, concrete masonry units shall have a value, in weight of contained water, of not more than thirty (30) percent of the fully saturated content for the unit tested.
2. Ship all units from the factory, and store at the job site, with all necessary protection to prevent increase of water content from rain and other sources.

2.5 MORTAR AND GROUT MATERIALS

A. Portland Cement: ASTM C150/C150M, Type I with color to match existing.

1. Alkali content shall not be more than 0.1 percent when tested according to ASTM C114.

B. Hydrated Lime: ASTM C207, Type S, as manufactured by Corsons, or approved equal.

C. Aggregate for Mortar: ASTM C144.

1. For mortar that is exposed to view, use washed aggregate consisting of natural sand or crushed stone.
2. For joints less than 1/4 inch thick, use aggregate graded with 100 percent passing the No. 16 sieve.
3. White-Mortar Aggregates: Natural white sand or crushed white stone.
4. Colored-Mortar Aggregates: Natural sand or crushed stone of color necessary to produce required mortar color.

D. Aggregate for Grout: ASTM C404.

E. Epoxy Pointing Mortar: ASTM C395, epoxy-resin-based material formulated for use as pointing mortar for glazed or pre-faced masonry units (and approved for such use by manufacturer of units); in color indicated or, if not otherwise indicated, as selected by Architect from manufacturer's colors. F. Water: Potable.

2.6 REINFORCEMENT

A. Uncoated-Steel Reinforcing Bars: ASTM A615/A615M, Grade 60.

B. Reinforcing Bar Positioners: Wire units designed to fit into mortar bed joints spanning masonry unit cells and to hold reinforcing bars in center of cells. Units are formed from 0.148-inch steel wire, hot-dip galvanized after fabrication. Provide units designed for number of bars indicated.

C. Masonry-Joint Reinforcement for Multiwythe Masonry:

1. For anchoring face brick to CMU back-up, provide No. 280 "S.I.S. Dub'l Loop-Lock Ladder Seismiclip Interlock System" made by Hohmann & Barnard or equal manufacturer noted below. All wire used in assembly shall be 3/16" dia. Assembly shall contain ladder reinforcing, welded loops, box tie, seismiclip and continuous wire in face brick mortar joint. Provide special formed prefabricated pieces at corners and intersections of walls or partitions. Reinforcing wire in face brick mortar joint to extend at least 2" into face of brick. Show anchor locations on approved shop drawings.
 - a. Reinforcing assembly shall be stainless steel conforming to ASTM A 580, AISI Type 304.

D. Approved Joint Reinforcing Manufacturers

1. Hohmann & Barnard
2. Wire-Bond
3. Heckmann Building Products
4. National Wire Products Industries, Inc.

2.7 CONTROL AND EXPANSION JOINT FILLERS

- A. Isolation joint filler at abutting construction and at intersecting concrete walls: Compressible and resilient closed cell neoprene gasket with pressure sensitive adhesive backing, thickness 30% greater than thickness of joint. Acceptable joint filler shall be "Everlastic, Type NN-1" by Williams Products, Inc., or approved equal. Recess joint filler and install backer rod and sealant as per drawings and Section 079200 of these specifications.

2.8 EMBEDDED FLASHING MATERIALS

A. Metal Flashing: Provide metal flashing complying with SMACNA's "Architectural Sheet Metal Manual" and as follows:

1. Copper: ASTM B370, Temper H00, cold-rolled copper sheet, 16-oz./sq. ft. weight or 0.0216 inch thick or ASTM B370, Temper H01, high-yield copper sheet, 12-oz./sq. ft. weight or 0.0162 inch thick.
2. Fabricate continuous flashings in sections 96 inches long minimum, but not exceeding 12 feet. Provide splice plates at joints of formed, smooth metal flashing.
3. Fabricate through-wall metal flashing embedded in masonry from copper, with ribs at 3 inch intervals along length of flashing to provide an integral mortar bond.
4. Fabricate through-wall flashing with drip edge unless otherwise indicated. Fabricate by extending flashing 1/2 inch out from wall, with outer edge bent down 30 degrees and hemmed.
5. Fabricate through-wall flashing with sealant stop unless otherwise indicated. Fabricate by bending metal back on itself 3/4 inch at exterior face of wall and down into joint 1/4 inch to form a stop for retaining sealant backer rod.
6. Fabricate metal drip edges and sealant stops for ribbed metal flashing from plain metal flashing of same metal as ribbed flashing and extending at least 3 inches into wall with hemmed inner edge to receive ribbed flashing and form a hooked seam. Form hem on upper surface of metal so that completed seam sheds water.
7. Fabricate metal expansion-joint strips from copper to shapes indicated.
8. Solder metal items at corners.

B. Flexible Flashing: Use one of the following unless otherwise indicated:

1. Copper-Laminated Flashing: 5-oz./sq. ft. copper sheet bonded between two layers of glass-fiber cloth. Use only where flashing is fully concealed in masonry.

a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

- 1) Advanced Building Products, Inc.
- 2) Hohmann & Barnard, Inc.
- 3) York Manufacturing, Inc. 4) Approved Equal.

C. Application: Unless otherwise indicated, use the following:

1. Where flashing is indicated to receive counterflashing, use metal flashing.
2. Where flashing is indicated to be turned down at or beyond the wall face, use metal flashing.
3. Where flashing is partly exposed and is indicated to terminate at the wall face, use metal flashing with a drip edge.
4. Where flashing is fully concealed, use metal flashing or flexible flashing.

D. Solder and Sealants for Sheet Metal Flashings: As specified in Section 076200 "Sheet Metal Flashing and Trim."

1. Solder for Copper: ASTM B32, Grade Sn50 with maximum lead content of 0.2 percent.

2. Elastomeric Sealant: ASTM C920, chemically curing sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and remain watertight.

E. Adhesives, Primers, and Seam Tapes for Flashings: Flashing manufacturer's standard products or products recommended by flashing manufacturer for bonding flashing sheets to each other and to substrates.

F. Termination Bars for Flexible Flashing: Stainless steel sheet 0.019 inch by 1-1/2 inches with a 3/8 inch sealant flange at top.

2.9 MISCELLANEOUS MASONRY ACCESSORIES

A. Compressible Filler: Premolded filler strips complying with ASTM D1056, Grade 2A1; compressible up to 35 percent; of width and thickness indicated; formulated from neoprene, urethane or PVC.

B. Preformed Control-Joint Gaskets: Made from styrene-butadiene-rubber compound, complying with ASTM D2000, Designation M2AA-805 or PVC, complying with ASTM D2287, Type PVC-65406 and designed to fit standard sash block and to maintain lateral stability in masonry wall; size and configuration as indicated.

C. Bond-Breaker Strips: Asphalt-saturated felt complying with ASTM D226/D226M, Type I (No. 15 asphalt felt).

2.10 MASONRY-CELL FILL

A. Lightweight-Aggregate Fill: ASTM C331/C331M.

2.11 MASONRY CLEANERS

A. Proprietary Acidic Cleaner: Manufacturer's standard-strength cleaner designed for removing mortar/grout stains, efflorescence, and other new construction stains from new masonry without discoloring or damaging masonry surfaces. Use product expressly approved for intended use by cleaner manufacturer and manufacturer of masonry units being cleaned.

2.12 MORTAR AND GROUT MIXES

A. Mortar Materials:

1. Portland Cement: ASTM C 150, Type 1, standard color, one source.

2. Hydrated Lime: ASTM C 207, Type S, as manufactured by Corsons, or approved equal.

3. Aggregate: Clean, washed, buff colored sand, graded per ASTM C 144.

4. Water: Clean, fresh and suitable for drinking.

B. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures unless otherwise indicated.

1. Do not use calcium chloride in mortar or grout.
2. Use portland cement-lime mortar unless otherwise indicated.
3. Add cold-weather admixture (if used) at same rate for all mortar that will be exposed to view, regardless of weather conditions, to ensure that mortar color is consistent.

C. Exterior Face Brick Construction: Mortar mixes shall meet ASTM C 270, Type N, cement/lime mortar. Colors of mortars shall use coloring agent made by Davis Colors, Lehigh Cement or approved equal. Color of mortar to meet with Architect's approval. The General Contractor may use pre-packaged colored mortar equal to "Color Mortar Blend" made by Glen-Gery.

D. Exterior Block Back-Up Construction: Provide Portland cement/lime mortar as noted above conforming to ASTM C 270, Type N.

E. Interior Masonry Construction: Provide Portland cement/lime mortar conforming to ASTM C 270, Type N.

F. Mortar for Unit Masonry: Comply with ASTM C270, Proportion Specification. Provide the following types of mortar for applications stated unless another type is indicated or needed to provide required compressive strength of masonry.

1. For exterior, above-grade, load-bearing and nonload-bearing walls and parapet walls; for interior load-bearing walls; for interior nonload-bearing partitions; and for other applications where another type is not indicated, use Type N.
2. For interior nonload-bearing partitions, Type O may be used instead of Type N. G.

Grout for Unit Masonry: Comply with ASTM C476.

1. Use grout of type indicated or, if not otherwise indicated, of type (fine or coarse) that will comply with TMS 602/ACI 530.1/ASCE 6 for dimensions of grout spaces and pour height.
2. Proportion grout in accordance with ASTM C476, Table 1 or paragraph 4.2.2 for specified 28-day compressive strength indicated, but not less than 3000 psi.
3. Provide grout with a slump of 8 to 11 inches as measured according to ASTM C143/C143M.

H. Mixing

1. General: Add cement just before mixing and mix dry. Use sufficient amount of water as necessary to produce workable mix. Mix in small batches to make plastic mass.

2. Mixing: Machine mix all mortars in approved type mixer with device to accurately and uniformly control water. Add hydrated lime dry. Mix dry materials not less than two (2) minutes. Add water, then mix not less than three (3) minutes, not to exceed five (5) minutes. Mix only amount of mortar that can be used before initial set. Do not use mortar which has reached its initial set or two (2) hours after initial mixing, whichever comes earlier. Mortar may not be re-tempered. Clean mixer for each batch, whenever type is changed, and at end of each day's work.

3. Acceleration or other admixtures not permitted.

4. Mortar shall have a flow after suction of not less than seventy-five (75) percent of that immediately after mixing as determined by ASTM C 91.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

1. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.
2. Verify that foundations are within tolerances specified.
3. Verify that reinforcing dowels are properly placed.
4. Verify that substrates are free of substances that impair mortar bond.
5. Verify that masonry may be installed in accordance with all pertinent codes and regulations, the referenced standards, and the original design.

B. Before installation, examine rough-in and built-in construction for piping systems to verify actual locations of piping connections.

C. Do not start any work until mock-ups are approved by the Architect. Proceed with installation only after unsatisfactory conditions have been corrected.

D. Discrepancies: In the event of discrepancy, immediately notify the Architect in writing. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved. Starting of work by the General Contractor means acceptance by the General Contractor of the substrate.

3.2 COORDINATION

A. Carefully coordinate with all other trades to ensure proper and adequate interface of the work of other trades with the work of this Section.

3.3 INSTALLATION

A. GENERAL

1. Thickness: Build cavity and composite walls and other masonry construction to full thickness shown. Build single-wythe walls to actual widths of masonry units, using units of widths indicated.
2. Build chases and recesses to accommodate items specified in this and other Sections.
3. Leave openings for equipment to be installed before completing masonry. After installing equipment, complete masonry to match construction immediately adjacent to opening.
4. Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit adjoining construction, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow units to dry before laying unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.
5. Select and arrange units for exposed unit masonry to produce a uniform blend of colors and textures. Mix units from several pallets or cubes as they are placed.
6. Matching Existing Masonry: Match coursing, bonding, color, and texture of existing masonry.
7. Wetting of Brick: Wet brick before laying if initial rate of absorption exceeds 30 g/30 sq. in. per minute when tested according to ASTM C67. Allow units to absorb water so they are damp but not wet at time of laying. Do not wet concrete block units.
8. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint widths and to properly locate openings, movement type joints, returns and off-sets. Avoid the use of less than half size units at corners, jambs and wherever possible.
9. Lay up walls plumb and true with courses level, accurately spaced and coordinated with other work.
10. Do not use any brick that do not meet chippage and tolerances of the applicable ASTM standard noted herein for the grade, type or class of brick.
11. Mortar, ties and reinforcement must not extend into or bridge any expansion joints.

B. Mortar Bedding and Jointing

1. All joints between bricks shall be completely filled with mortar. Bed joints shall be beveled per BMI recommendations, with the brick then shoved in place. Head joints shall be completely filled with mortar and shall be formed by applying a full coat of mortar to the entire end or the entire side, as the case requires, and then shoving the mortar covered end and/or side of the brick tightly against the bricks previously laid; the practice of “slushing” by throwing mortar into the head joints will not be permitted. All brick shall be laid without disturbing the brick previously laid. Brick shall be laid within a minute or

so after the mortar is placed. Dry or butt joints will not be permitted. Grouting shall be done only as necessary. Do not slush head joints.

2. After brick placement, mortar squeezed out of bed joints shall be cut off before tooling.

3. Lay concrete masonry units with full mortar coverage on horizontal and vertical face shells. Bed webs in mortar in starting course on exterior walls and in all courses where solid CMU is used and where adjacent to cells or cavities to be reinforced or filled with concrete or grout.

a. To ensure alignment of brick and block coursing, adjust block back-up by cutting block to insure alignment of coursing or use adjustable anchorage.

4. Lay masonry walls with 3/8” joints unless otherwise shown on drawings.

5. Tool exposed joints slightly concave after mortar is “thumbprint” hard. Concealed joints shall be struck flush.

6. Remove masonry units disturbed after laying; clean and reset in fresh mortar. Do not pound corners at jambs to fit stretcher units which have been set in position. If adjustments are required, remove units, clean off mortar and reset in fresh mortar.

3.4 TOLERANCES

A. Dimensions and Locations of Elements:

1. For dimensions in cross section or elevation, do not vary by more than plus 1/2 inch or minus 1/4 inch.

2. For location of elements in plan, do not vary from that indicated by more than plus or minus 1/4 inch.

3. For established positions in plan related to existing columns and partitions, do not vary from that indicated in any bay or 1/4 inch in 20 feet maximum.

4. For location of elements in elevation, do not vary from that indicated by more than plus or minus 1/4 inch in a story height or 1/2 inch total.

B. Lines and Levels:

1. For bed joints and top surfaces of bearing walls, do not vary from level by more than 1/4 inch in 10 feet, or 3/8-inch maximum.
 2. For conspicuous horizontal lines, such as lintels, sills, parapets, and reveals, do not vary from level by more than 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 3/8-inch maximum.
 3. For vertical lines and surfaces, do not vary from plumb by more than 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 3/8-inch maximum.
 4. For conspicuous vertical lines, such as external corners, door jambs, reveals, and expansion and control joints, do not vary from plumb by more than 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 3/8-inch maximum.
 5. For lines and surfaces, do not vary from straight by more than 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 3/8-inch maximum.
 6. For vertical alignment of exposed head joints, do not vary from plumb by more than 1/4 inch in 10 feet, or 3/8-inch maximum.
 7. For faces of adjacent exposed masonry units, do not vary from flush alignment by more than 1/16 inch except due to warpage of masonry units within tolerances specified for warpage of units.
- C. Joints:
1. For bed joints, do not vary from thickness indicated by more than plus or minus 1/8 inch, with a maximum thickness limited to 1/2 inch.
 2. For exposed bed joints, do not vary from bed-joint thickness of adjacent courses by more than 1/8 inch.
 3. For head and collar joints, do not vary from thickness indicated by more than plus 3/8 inch or minus 1/4 inch.
 4. For exposed head joints, do not vary from thickness indicated by more than plus or minus 1/8 inch. Do not vary from adjacent bed-joint and head-joint thicknesses by more than 1/8 inch.
 5. For exposed bed joints and head joints of stacked bond, do not vary from a straight line by more than 1/16 inch from one masonry unit to the next.

3.5 LAYING MASONRY WALLS

- A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.
- B. Bond Pattern for Exposed Masonry: Unless otherwise indicated, lay exposed masonry at boiler rooms in bond pattern matching existing; do not use units with less-than-nominal 4-inch horizontal face dimensions at corners or jambs. At areas of new construction associated with the new Community Center, lay exposed masonry in stack bond.
- C. Lay concealed masonry with all units in a wythe in running bond or bonded by lapping not less than 4 inches. Bond and interlock each course of each wythe at corners. Do not use units with less-than-nominal 4-inch horizontal face dimensions at corners or jambs.

D. Stopping and Resuming Work: Stop work by stepping back units in each course from those in course below; rake back 1/2 brick length in each course; do not tooth. When resuming work, clean masonry surfaces that are to receive mortar, remove loose masonry units and mortar, and wet brick if required before laying fresh masonry.

E. Built-in Work:

1. As construction progresses, build in items specified in this and other Sections. Fill in solidly with masonry around built-in items.

2. Mortar in door frames, access doors, louvers and other metal items embedded or built into masonry work solidly with mortar as masonry units are laid up.

3. Grout under lintels, bearing plates, and steel bearing on masonry with solid bed grout.

F. Fill space between steel frames and masonry solidly with mortar unless otherwise indicated.

G. Where built-in items are to be embedded in cores of hollow masonry units, place a layer of metal lath, wire mesh, or plastic mesh in the joint below, and rod mortar or grout into core.

H. Fill cores in hollow CMUs with grout 24 inches under bearing plates, beams, lintels, posts, and similar items unless otherwise indicated.

I. Cutting and Patching:

1. All exposed masonry which requires cutting or fitting shall be cut accurately to size with motorized carborundum or diamond saw, producing cut edges.

2. Do not saw cut any masonry openings in face brick construction without Architect's approval and after a procedure has been reviewed and approved.

3. Holes made in exposed masonry units for attachment of brackets, conduit, piping and similar items shall be neatly drilled to proper size.

4. All masonry which requires patching in exposed work, if approved by the Architect, shall be patched neatly with mortar to match appearance of masonry as closely as possible and to the Architect's satisfaction. Rake back joints and use pointing mortar to match as required.

J. Solid Wall Construction

1. Fill the vertical longitudinal joint between wythes solidly with mortar by parging the in-place wythe and shoving units into the parging.

2. Tie wythes with continuous horizontal reinforcement embedded in mortar joints sixteen (16) inches o.c. vertically.

K. Interior Block Partitions

1. Patch areas of missing block as indicated on drawings. At fire rated partitions, fill void with fire stop material meeting the requirements of Section 078400.

3.6 MORTAR BEDDING AND JOINTING

A. Lay CMUs as follows:

1. Bed face shells in mortar and make head joints of depth equal to bed joints.
2. Bed webs in mortar in all courses of piers, columns, and pilasters.
3. Bed webs in mortar in grouted masonry, including starting course on footings.
4. Fully bed entire units, including areas under cells, at starting course on footings where cells are not grouted.
5. Fully bed units and fill cells with mortar at anchors and ties as needed to fully embed anchors and ties in mortar.

B. Lay solid masonry units with completely filled bed and head joints; butter ends with sufficient mortar to fill head joints and shove into place. Do not deeply furrow bed joints or slush head joints.

C. Set cast-stone trim units in full bed of mortar with full vertical joints. Fill dowel, anchor, and similar holes.

1. Clean soiled surfaces with fiber brush and soap powder and rinse thoroughly with clear water.
2. Allow cleaned surfaces to dry before setting.
3. Wet joint surfaces thoroughly before applying mortar.
4. Rake out mortar joints for pointing with sealant.

D. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness unless otherwise indicated.

E. Cut joints flush where indicated to receive waterproofing unless otherwise indicated.

3.7 COMPOSITE MASONRY

A. Bond wythes of composite masonry together using one of the following methods:

1. Individual Metal Ties: Provide ties as shown installed in horizontal joints, but not less than one metal tie for 2.67 sq. ft. of wall area spaced not to exceed 24 inches o.c. horizontally and 16 inches o.c. vertically. Stagger ties in alternate courses. Provide additional ties within 12

inches of openings and space not more than 36 inches apart around perimeter of openings. At intersecting and abutting walls, provide ties at no more than 24 inches o.c. vertically.

- a. Where bed joints of wythes do not align, use adjustable-type (two-piece-type) ties.
2. Masonry-Joint Reinforcement: Installed in horizontal mortar joints.
 - a. Where bed joints of both wythes align, use ladder-type reinforcement extending across both wythes.
 - b. Where bed joints of wythes do not align, use adjustable-type (two-piece-type) reinforcement with continuous horizontal wire in facing wythe attached to ties.
3. Header Bonding: Provide masonry unit headers extending not less than 3 inches into each wythe. Space headers not more than 12 inches clear horizontally and 16 inches clear vertically.
- B. Corners: Provide interlocking masonry unit bond in each wythe and course at corners unless otherwise indicated.
 1. Provide continuity with masonry-joint reinforcement at corners by using prefabricated Lshaped units as well as masonry bonding.

3.8 CONTROL AND EXPANSION JOINTS

- A. General: Install control- and expansion-joint materials in unit masonry as masonry progresses, aligning with existing construction. Do not allow materials to span control and expansion joints without provision to allow for in-plane wall or partition movement.
- B. Form control joints in concrete masonry using one of the following methods, matching existing:
 1. Fit bond-breaker strips into hollow contour in ends of CMUs on one side of control joint. Fill resultant core with grout, and rake out joints in exposed faces for application of sealant.
 2. Install preformed control-joint gaskets designed to fit standard sash block.
 3. Install interlocking units designed for control joints. Install bond-breaker strips at joint. Keep head joints free and clear of mortar, or rake out joint for application of sealant.
 4. Install temporary foam-plastic filler in head joints, and remove filler when unit masonry is complete for application of sealant.
- C. Form expansion joints in brick as follows:
 1. Build flanges of metal expansion strips into masonry. Lap each joint 4 inches in direction of water flow. Seal joints below grade and at junctures with horizontal expansion joints if any.
 2. Build flanges of factory-fabricated, expansion-joint units into masonry.
 3. Build in compressible joint fillers where indicated.

4. Form open joint full depth of brick wythe and of width indicated, but not less than 3/8 inch for installation of sealant and backer rod specified in Section 079200 "Joint Sealants."

D. Provide horizontal, pressure-relieving joints by either leaving an airspace or inserting a compressible filler of width required for installing sealant and backer rod specified in Section 079200 "Joint Sealants," but not less than 3/8 inch.

1. Locate horizontal, pressure-relieving joints beneath shelf angles supporting masonry.

3.9 LINTELS

- A. Install steel lintels where indicated.
- B. Provide minimum bearing of 8 inches at each end unless otherwise indicated.

3.10 FLASHING, WEEP HOLES, AND CAVITY VENTS

A. General: Install embedded flashing and weep holes in masonry at shelf angles, lintels, ledges, other obstructions to downward flow of water in wall, and where indicated. B. Install flashing as follows unless otherwise indicated:

1. Prepare masonry surfaces so they are smooth and free from projections that could puncture flashing. Where flashing is within mortar joint, place through-wall flashing on sloping bed of mortar and cover with mortar. Before covering with mortar, seal penetrations in flashing with adhesive, sealant, or tape as recommended by flashing manufacturer.
2. At multiwythe masonry walls, including cavity walls, extend flashing through outer wythe, turned up a minimum of 6 inches, and 1-1/2 inches into the inner wythe. Form 1/4-inch hook in edge of flashing embedded in inner wythe.
3. At lintels and shelf angles, extend flashing a minimum of 6 inches into masonry at each end.
4. Interlock end joints of ribbed sheet metal flashing by overlapping ribs not less than 1-1/2 inches or as recommended by flashing manufacturer, and seal lap with elastomeric sealant complying with requirements in Section 079200 "Joint Sealants" for application indicated.
5. Install metal drip edges and sealant stops with ribbed sheet metal flashing by interlocking hemmed edges to form hooked seam. Seal seam with elastomeric sealant complying with requirements in Section 079200 "Joint Sealants" for application indicated.

6. Install metal drip edges beneath flexible flashing at exterior face of wall. Stop flexible flashing 1/2 inch back from outside face of wall, and adhere flexible flashing to top of metal drip edge.
 7. Install metal flashing termination beneath flexible flashing at exterior face of wall. Stop flexible flashing 1/2 inch back from outside face of wall, and adhere flexible flashing to top of metal flashing termination.
 8. Cut flexible flashing off flush with face of wall after masonry wall construction is completed.
- C. Install reglets and nailers for flashing and other related construction where they are shown to be built into masonry.
- D. Install weep holes in exterior wythes and veneers in head joints of first course of masonry immediately above embedded flashing.
1. Provide clear plastic weep holes 3/8" wide and 1-1/2" high by four (4) inches long equal to No. 342 made by Hohmann & Barnard or approved equal manufacturer listed above.

3.11 FIELD QUALITY CONTROL

- A. Testing and Inspecting: Owner will engage special inspectors to perform tests and inspections and prepare reports. Allow inspectors access to scaffolding and work areas as needed to perform tests and inspections. Retesting of materials that fail to comply with specified requirements shall be done at General Contractor's expense.
- B. Inspections: Special inspections according to Level B in TMS 402/ACI 530/ASCE 5.
1. Begin masonry construction only after inspectors have verified proportions of site-prepared mortar.
 2. Place grout only after inspectors have verified compliance of grout spaces and of grades, sizes, and locations of reinforcement.
 3. Place grout only after inspectors have verified proportions of site-prepared grout.
- C. Testing Prior to Construction: One set of tests.
- D. Testing Frequency: One set of tests for each 5000 sq. ft. of wall area or portion thereof.
- E. Clay Masonry Unit Test: For each type of unit provided, according to ASTM C67 for compressive strength.
- F. Concrete Masonry Unit Test: For each type of unit provided, according to ASTM C140 for compressive strength.
- G. Mortar Aggregate Ratio Test (Proportion Specification): For each mix provided, according to ASTM C780.

H. Mortar Test (Property Specification): For each mix provided, according to ASTM C780. Test mortar for mortar air content and compressive strength.

I. Grout Test (Compressive Strength): For each mix provided, according to ASTM C1019.

J. Prism Test: For each type of construction provided, according to ASTM C1314 at 7 days and at 28 days.

3.12 REPAIRING, POINTING, AND CLEANING

A. Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Install new units to match adjoining units; install in fresh mortar, pointed to eliminate evidence of replacement.

B. Pointing: During the tooling of joints, enlarge voids and holes, except weep holes, and completely fill with mortar. Point up joints, including corners, openings, and adjacent construction, to provide a neat, uniform appearance. Prepare joints for sealant application, where indicated.

C. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.

D. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:

1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
2. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes. Obtain Architect's approval of sample cleaning before proceeding with cleaning of masonry.
3. Protect adjacent stone and nonmasonry surfaces from contact with cleaner by covering them with liquid strippable masking agent or polyethylene film and waterproof masking tape.
4. Wet wall surfaces with water before applying cleaners; remove cleaners promptly by rinsing surfaces thoroughly with clear water.
5. Upon completion, all exposed masonry shall be thoroughly cleaned by bucket-and-brush hand-cleaning method described in BIA Technical Notes 20. Before applying any cleaning agent to the entire wall, it shall be applied to a sample wall area of approximately 4' x 4' in a location approved by the Architect. No further cleaning work may proceed until the sample area has been approved by the Architect, after which time the same cleaning materials and methods shall be used on the remaining wall area. If stiff brushes and water do not suffice, the surface shall be thoroughly saturated with clear water and then scrubbed with a solution of an approved detergent masonry cleaner, equal to "Vana Trol" made by ProSoCo Inc. or equal made by Diedrich or approved equal, mixed and applied as per manufacturer's directions, followed immediately by a thorough rinsing with clear water. All adjacent non-masonry surfaces shall be thoroughly protected during cleaning.

- a. Unless otherwise required by cleaning agent manufacturer, use only low pressure device (30 to 50 psi) for application of cleaning agent and water rinsing.

6. Pointing: Point any defective joint with mortar identical with that specified for that joint.

3.13 MASONRY WASTE DISPOSAL

A. Salvageable Materials: Unless otherwise indicated, excess masonry materials are General Contractor's property. At completion of unit masonry work, remove from Project site.

B. Waste Disposal as Fill Material: Dispose of clean masonry waste, including excess or soilcontaminated sand, waste mortar, and broken masonry units, by crushing and mixing with fill material as fill is placed.

1. Crush masonry waste to less than 4 inches in each dimension.
2. Mix masonry waste with at least two parts of specified fill material for each part of masonry waste. Fill material is specified in Section 312000 "Earth Moving."
3. Do not dispose of masonry waste as fill within 18 inches of finished grade.

C. Masonry Waste Recycling: Return broken CMUs not used as fill to manufacturer for recycling.

D. Excess Masonry Waste: Remove excess clean masonry waste that cannot be used as fill, as described above or recycled, and other masonry waste, and legally dispose of off Owner's property.

END OF SECTION 042000

SECTION 072500 - WEATHER BARRIERS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Building wrap.
2. Drainage material.

1.3 SUBMITTALS

- A. Submittals for this section are subject to the re-evaluation fee identified in Article 4 of the General Conditions.
- B. Manufacturer's installation instructions shall be provided along with product data.
- C. Submittals shall be provided in the order in which they are specified and tabbed (for combined submittals).
- D. Product Data: For each type of product.
1. For building wrap, include data on air and water-vapor permeance based on testing according to referenced standards.
 2. Include manufacturer's installation instructions.
- E. Shop Drawings: Show details of building **[paper]** **[wrap]** at terminations, openings, and penetrations. Show details of flexible flashing applications.
- F. Quality Control Submittals:
1. Evaluation Reports: For **[water-resistive barrier]** **[and]** **[flexible flashing]**, from UNIFORM CODE-ES.

PART 2 - PRODUCTS

2.1 WATER-RESISTIVE BARRIER

- A. Building Wrap: ASTM E1677, Type I air barrier; with flame-spread and smoke-developed indexes of less than 25 and 450, respectively, when tested according to ASTM E84; UV stabilized; and acceptable to authorities having jurisdiction.

1. Water-Vapor Permeance: Not less than **[75 perms] [20 perms] [8 perms] <Insert value>** per ASTM E96, Desiccant Method (Procedure A).
2. Air Permeance: Not more than 0.004 cfm/sq. ft. at 0.3-inch wg when tested according to ASTM E2178.
3. Allowable UV Exposure Time: Not less than three months.

B. Building-Wrap Tape: Pressure-sensitive plastic tape recommended by building-wrap manufacturer for sealing joints and penetrations in building wrap.

2.2 DRAINAGE MATERIAL

- A. Drainage Material: Product shall maintain a continuous open space between water-resistive barrier and exterior cladding to create a drainage plane and shall be used under adhered masonry veneer.

PART 3 - EXECUTION

3.1 WATER-RESISTIVE BARRIER INSTALLATION

- A. Cover exposed exterior surface of sheathing with water-resistive barrier securely fastened to framing immediately after sheathing is installed.
- B. Cover sheathing with water-resistive barrier as follows:
1. Cut back barrier 1/2 inch on each side of the break in supporting members at expansion- or control-joint locations.
 2. Apply barrier to cover vertical flashing with a minimum 4-inch overlap unless otherwise indicated.
- C. Building Wrap: Comply with manufacturer's written instructions and warranty requirements.
1. Seal seams, edges, fasteners, and penetrations with tape.
 2. Extend into jambs of openings and seal corners with tape.

3.2 DRAINAGE MATERIAL INSTALLATION

- A. Install drainage material over building wrap and flashing to comply with manufacturer's written instructions.

END OF SECTION 072500

SECTION 076200.02 - SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:

1. Low-slope roof sheet metal fabrications.
2. Miscellaneous sheet metal flashing and trim.

B. Related Requirements:

1. Division 07 low slope membrane roofing section for installing sheet metal flashing and trim integral with roofing and for related warranty requirements.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each manufactured product and accessory.

B. Shop Drawings: For sheet metal flashing and trim.

1. Include plans, elevations, sections, and attachment details.
2. Include identification of material, thickness, weight, and finish for each item and location in Project.
3. Indicate details meet requirements of SMACNA and NRCA required by this Section.
4. Detail formed flashing and trim at scale of not less than 1-1/2 inches per 12 inches (1:10).

C. Samples for Verification: For each type of exposed finish.

1.3 INFORMATIONAL SUBMITTALS

- A. Contractor's Product Certificates: For each type of coping and roof edge flashing that is

ANSI/SPRI ES-1 tested.

1.4 CLOSEOUT SUBMITTALS

- A. Warranties: Manufacturer's executed warranty documents. Submit prior to acceptance of Work.
- 1.5 QUALITY ASSURANCE

- A. Fabricator Qualifications: Employs skilled workers who custom fabricate sheet metal flashing and trim similar to that required for this Project and whose products have a record of successful in-service performance.

1. For copings and roof edge flashings that are ANSI/SPRI ES-1 tested; fabrication shop shall be listed as able to fabricate required details as tested and approved.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Do not store sheet metal flashing and trim materials in contact with other materials that might cause staining, denting, or other surface damage. Store sheet metal flashing and trim materials away from uncured concrete and masonry.

- B. Protect strippable protective covering on sheet metal flashing and trim from exposure to sunlight and high humidity, except to extent necessary for period of sheet metal flashing and trim installation.

1.7 WARRANTY

- A. Refer to warranty requirements of Division 07 Section 075600.13 - FLUID-APPLIED MEMBRANE ROOFING, INSULATED for terms and conditions of warranties covering work of this Section.

- B. Special Warranty on Finishes: Manufacturer agrees to repair finish or replace sheet metal flashing and trim that shows evidence of deterioration of factory-applied finishes within specified warranty period.

1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:

- a. Color fading more than 5 Hunter units when tested according to ASTM D2244.
- b. Chalking in excess of a No. 8 rating when tested according to ASTM D4214.
- c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.

2. Finish Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. General: Sheet metal flashing and trim assemblies shall withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim shall not rattle, leak, or loosen, and shall remain watertight.

B. Sheet Metal Standard for Flashing and Trim: Comply with NRCA's "The NRCA Roofing Manual" and SMACNA's "Architectural Sheet Metal Manual" requirements for dimensions and profiles shown unless more stringent requirements are indicated.

C. Flashings and Fastening: Comply with requirements of Division 07 roofing sections. Provide base flashings, perimeter flashings, detail flashings and component materials and installation techniques that comply with requirements and recommendations of the following:

1. FM Global 1-49: "Property Loss Prevention Data Sheet for Perimeter Flashings."

2. FM Global 1-29: "Property Loss Prevention Data Sheet for Above Deck Roof Components."

3. NRCA: "The NRCA Roofing Manual" for construction details and recommendations.

D. SPRI Wind Design Standard: Manufacture and install copings and roof edge flashings tested in accordance with ANSI/SPRI/FM 4435/ES-1.

1. Design Pressure: As indicated on Drawings.

E. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes to prevent buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects.

2.2 SHEET METALS

A. General: Protect mechanical and other finishes on exposed surfaces from damage by applying strippable, temporary protective film before shipping.

B. Aluminum Sheet: ASTM B209/B209M, alloy as standard with manufacturer for finish required, with temper as required to suit forming operations and performance required; with smooth, flat surface., alloy as standard with manufacturer for finish required, with temper as required to suit forming operations and performance required; with

1. Basis of Design Product: Tremco, Inc., TremLock Sheet.

2. Exposed Coil-Coated Finish:

- a. Two-Coat Fluoropolymer: AAMA 2605. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
- b. Color: Match Project sample.

3. As-Milled Finish: Mill.

C. Lead Sheet: ASTM B749 lead sheet.

2.3 UNDERLAYMENT MATERIALS

- A. Self-Adhering, High-Temperature Sheet: Minimum 30 mils (0.76 mm) thick, consisting of a slip-resistant polyethylene- or polypropylene-film top surface laminated to a layer of butyl- or SBS-modified asphalt adhesive, with release-paper backing; specifically designed to withstand high metal temperatures beneath metal roofing. Provide primer according to written recommendations of underlayment manufacturer.

- 1. Low-Temperature Flexibility: ASTM D1970; passes after testing at minus 20 deg F (29 deg C) or lower.

2.4 MISCELLANEOUS MATERIALS

- A. General: Provide materials and types of fasteners, solder, protective coatings, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation and as recommended by manufacturer of primary sheet metal or manufactured item unless otherwise indicated.

- B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads and recommended by manufacturer of primary sheet metal or manufactured item.

- 1. General: Blind fasteners or self-drilling screws, gasketed, with hex-washer head.
 - a. Exposed Fasteners: Heads matching color of sheet metal using plastic caps or factory-applied coating. Provide metal-backed EPDM or PVC sealing washers under heads of exposed fasteners bearing on weather side of metal.
 - b. Blind Fasteners: High-strength aluminum or stainless-steel rivets suitable for metal being fastened.

- 2. Fasteners for Aluminum Sheet: Aluminum or Series 300 stainless steel.

C. Solder:

1. For Copper: ASTM B32, Grade Sn50, 50 percent tin and 50 percent lead.

D. Sealant Tape: Pressure-sensitive, 100 percent solids, polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2 inch (13 mm) wide and 1/8 inch (3 mm) thick.

E. Elastomeric Sealant: ASTM C920, elastomeric polyurethane at concealed joints and silicone at exposed joints; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.

F. Butyl Sealant: ASTM C1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for hooked-type expansion joints with limited movement.

G. Bituminous Coating: Cold-applied asphalt emulsion according to ASTM D1187.

H. Asphalt Roofing Cement: ASTM D4586, asbestos free, of consistency required for application.

2.5 FABRICATION, GENERAL

A. General: Custom fabricate sheet metal flashing and trim to comply with details shown and recommendations in cited sheet metal standard that apply to design, dimensions, geometry, metal thickness, and other characteristics of item required. Fabricate sheet metal flashing and trim in shop to greatest extent possible.

1. Fabricate sheet metal flashing and trim in thickness or weight needed to comply with performance requirements, but not less than that specified for each application and metal.
2. Obtain field measurements for accurate fit before shop fabrication.
3. Form sheet metal flashing and trim to fit substrates without excessive oil canning, buckling, and tool marks; true to line, levels, and slopes; and with exposed edges folded back to form hems.
4. Conceal fasteners and expansion provisions where possible. Do not use exposed fasteners on faces exposed to view.

B. Fabrication Tolerances: Fabricate sheet metal flashing and trim that is capable of installation to a tolerance of 1/4 inch in 20 feet (6 mm in 6 m) on slope and location lines indicated on Drawings and within 1/8-inch (3-mm) offset of adjoining faces and of alignment of matching profiles.

- C. Expansion Provisions: Form metal for thermal expansion of exposed flashing and trim.
1. Form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with butyl sealant concealed within joints.
 2. Use lapped expansion joints only where indicated on Drawings.
- D. Sealant Joints: Where movable, nonexpansion-type joints are required, form metal to provide for proper installation of elastomeric sealant according to cited sheet metal standard.
- E. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal.
- F. Fabricate cleats and attachment devices of sizes as recommended by cited sheet metal standard for application, but not less than thickness of metal being secured.
- G. Seams: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with elastomeric sealant unless otherwise recommended by sealant manufacturer for intended use. Rivet joints where necessary for strength.
- H. Seams for Uncoated Aluminum: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with epoxy seam sealer. Rivet joints where necessary for strength.
- I. Do not use graphite pencils to mark metal surfaces.

PART 3 - EXECUTION

3.1 UNDERLAYMENT INSTALLATION

- A. Self-Adhering Sheet Underlayment: Install self-adhering sheet underlayment, wrinkle free. Prime substrate if recommended by underlayment manufacturer. Comply with temperature restrictions of underlayment manufacturer for installation; use primer for installing underlayment at low temperatures. Apply in shingle fashion to shed water, with end laps of not less than 6 inches (150 mm) staggered 24 inches (600 mm) between courses. Overlap side edges not less than 3-1/2 inches (90 mm). Roll laps and edges with roller. Cover underlayment within 14 days.

3.2 INSTALLATION, GENERAL

- A. Install sheet metal flashing and trim to comply with details indicated and recommendations of cited sheet metal standard that apply to installation characteristics required unless otherwise indicated on Drawings.
1. Space cleats not more than 12 inches (300 mm) apart. Attach each cleat with at least two fasteners. Bend tabs over fasteners.

2. Do not use graphite pencils to mark metal surfaces.

B. Metal Protection: Where dissimilar metals contact each other, or where metal contacts pressure-treated wood or other corrosive substrates, protect against galvanic action or corrosion by painting contact surfaces with bituminous coating or by other permanent separation as recommended by sheet metal manufacturer or cited sheet metal standard.

1. Coat concealed side of uncoated-aluminum and stainless steel sheet metal flashing and trim with bituminous coating where flashing and trim contact wood, ferrous metal, or cementitious construction.
2. Underlayment: Where installing sheet metal flashing and trim directly on cementitious or wood substrates, install underlayment and cover with slip sheet.

C. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at maximum of 10 feet (3 m) with no joints within 24 inches (600 mm) of corner or intersection.

1. Form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with sealant concealed within joints.
2. Use lapped expansion joints only where indicated on Drawings.

D. Fasteners: Use fastener sizes that penetrate wood blocking or sheathing not less than 1-1/4 inches (32 mm) for nails and not less than 3/4 inch (19 mm) for wood screws.

E. Conceal fasteners and expansion provisions where possible in exposed work and locate to minimize possibility of leakage. Cover and seal fasteners and anchors as required for a tight installation.

F. Seal joints as required for watertight construction.

1. Use sealant-filled joints unless otherwise indicated. Embed hooked flanges of joint members not less than 1 inch (25 mm) into sealant. Form joints to completely conceal sealant. When ambient temperature at time of installation is between 40 and 70 deg F (4 and 21 deg C), set joint members for 50 percent movement each way. Adjust setting proportionately for installation at higher ambient temperatures. Do not install sealant-type joints at temperatures below 40 deg F (4 deg C).
2. Prepare joints and apply sealants to comply with recommendations in ASTM C1193 for use of joint sealants as applicable to materials, applications, and conditions.

3.3 ROOF FLASHING INSTALLATION

A. Install sheet metal flashing and trim to comply with performance requirements and cited sheet metal standard.

1. Provide concealed fasteners where possible, and set units true to line, levels, and slopes.
2. Install work with laps, joints, and seams that are permanently watertight and weather resistant.

B. Pipe or Post Counterflashing: Install counterflashing umbrella with close-fitting collar with top edge flared for elastomeric sealant, extending minimum of 4 inches (100 mm) over base flashing. Install stainless-steel draw band and tighten.

C. Counterflashing: Coordinate installation of counterflashing with installation of base flashing. Insert counterflashing in reglets or receivers and fit tightly to base flashing.

1. Insert counterflashing in reglets or receivers and fit tightly to base flashing.
2. Extend counterflashing 4 inches (100 mm) over base flashing.
3. Lap counterflashing joints minimum of 4 inches (100 mm).

D. Roof-Penetration Flashing: Coordinate installation of roof-penetration flashing with installation of roofing and other items penetrating roof. Seal with sealant and clamp flashing to pipes that penetrate roof.

3.4 ERECTION TOLERANCES

A. Installation Tolerances: Shim and align sheet metal flashing and trim within installed tolerance of 1/4 inch in 20 feet (6 mm in 6 m) on slope and location lines indicated on Drawings and within 1/8-inch (3-mm) offset of adjoining faces and of alignment of matching profiles.

3.5 CLEANING AND PROTECTION

A. Clean off excess sealants.

B. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed unless otherwise indicated in manufacturer's written installation instructions. On completion of sheet metal flashing and trim installation, remove unused materials and clean finished surfaces as recommended by sheet metal flashing and trim manufacturer. Maintain sheet metal flashing and trim in clean condition during construction.

C. Replace sheet metal flashing and trim that have been damaged or that have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

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END OF SECTION 076200.02

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Manufactured copings.
2. Manufactured roof-edge specialties (fasciae, drip edges and gravel stops). B.

Related Information:

1. Division 06 Section "Miscellaneous Rough Carpentry" for wood nailers, curbs, and blocking.
2. Division 07 Section "Sheet Metal Flashing and Trim" for custom- and site-fabricated sheet metal flashing and trim.
3. Division 07 Section "Preparation for Re-Roofing" for removal of existing manufactured counter flashings, fasciae, roof edge metal and copings.

1.2 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site, in conjunction with roofing preinstallation conference specified in Division 07 roofing section.

1. Meet with Owner, Architect, Owner's insurer if applicable, Installer, and installers whose work interfaces with or affects roof specialties including installers of roofing materials and accessories.
2. Examine substrate conditions for compliance with requirements, including flatness and attachment to structural members.
3. Review special roof details, roof drainage, and condition of other construction that will affect roof specialties.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes. B. Shop

Drawings: For roof specialties.

1. Include plans, elevations, expansion-joint locations, keyed details, and attachments to other work. Distinguish between plant- and field-assembled work.
2. Indicate profile and pattern of seams and layout of fasteners, cleats, clips, and other attachments.

3. Detail termination points and assemblies, including fixed points.

- C. Samples for Initial Selection: For each type of roof specialty indicated with factory-applied color finishes.

1.4 INFORMATIONAL SUBMITTALS

- A. Product Certificates: Provide manufacturer's certificates for copings and roof-edge specialties indicating compliance with performance requirements including the following:

1. ANSI/SPRI/FM 4435/ES-1 compliance.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For roofing specialties to include in maintenance manuals.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A qualified manufacturer offering products meeting requirements that are ANSI/SPRI ES-1 tested to specified design pressure.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Do not store roof specialties in contact with other materials that might cause staining, denting, or other surface damage. Store roof specialties away from uncured concrete and masonry.

- B. Protect strippable protective covering on roof specialties from exposure to sunlight and high humidity, except to extent necessary for the period of roof specialties installation.

1.8 PROJECT / FIELD CONDITIONS

- A. Field Measurements: Verify profiles and tolerances of roof-specialty substrates by field measurements before fabrication and indicate measurements on Shop Drawings.

- B. Coordination: Coordinate roof specialties with flashing, trim, and construction of parapets, roof deck, roof and wall panels, and other adjoining work to provide a leakproof, secure, and noncorrosive installation.

1.9 WARRANTY

- A. Roofing-System Warranty: Roof specialties are included in warranty provisions in Division 07 roofing Section.

- B. Special Warranty on Painted Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace roof specialties that show evidence of deterioration of factoryapplied finishes within specified warranty period.

1. Fluoropolymer Finish: Deterioration includes, but is not limited to, the following:

- a. Color fading more than 5 Hunter units when tested according to ASTM D2244.
 - b. Chalking in excess of a No. 8 rating when tested according to ASTM D4214.
 - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
2. Finish Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. General Performance: Roof specialties shall withstand exposure to weather and resist thermally induced movement without failure, rattling, leaking, or fastener disengagement due to defective manufacture, fabrication, installation, or other defects in construction
- B. SPRI Wind Design Standard: Manufacture and install copings and roof-edge specialties tested according to ANSI/SPRI ES-1.
1. Design Pressure: 123.94 psf.
- C. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes to prevent buckling, opening of joints, hole elongation, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Provide clips that resist rotation and avoid shear stress as a result of thermal movements. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
1. Temperature Change (Range): 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

2.2 MANUFACTURERS

- A. Basis of Design: The roof system specified in this Section is based upon products of Tremco CPG Inc, www.tremcoroofing.com that are named in other Part 2 articles. Provide specified products or comparable products of one of the following.
1. Tremco CPG Inc., Basis-of-design.
 2. Metal-Era.
- B. Source Limitations: Obtain roof specialties approved by manufacturer providing roofing-system warranty specified in Division 07 roofing Section.

2.3 EXPOSED METALS

- A. Aluminum Sheet: ASTM B209/B209M, alloy as standard with manufacturer for finish required, with temper to suit forming operations and performance required.

1. Surface: Smooth, flat finish as indicated.

2.4 CONCEALED METALS

- A. Aluminum Extrusions: ASTM B221/B221M, alloy and temper recommended by manufacturer for type of use and structural performance indicated, mill finished.
- B. Zinc-Coated (Galvanized) Steel Sheet: ASTM A653/A653M, G90 (Z275) coating designation.

2.5 UNDERLAYMENT MATERIALS

- A. Self-Adhering, High-Temperature Sheet: Minimum 30 to 40 mils (0.76 to 1.0 mm) thick, consisting of slip-resisting polyethylene-film top surface laminated to layer of butyl or SBSmodified asphalt adhesive, with release-paper backing; cold applied. Provide primer when recommended by underlayment manufacturer.
 1. Thermal Stability: ASTM D1970/D1970M; stable after testing at 240 deg F (116 deg C).
 2. Low-Temperature Flexibility: ASTM D1970/D1970M; passes after testing at minus 20 deg F (29 deg C).

2.6 MISCELLANEOUS MATERIALS

- A. General: Provide materials and types of fasteners, protective coatings, sealants, and other miscellaneous items required by manufacturer for a complete installation.
- B. Fasteners: Manufacturer's recommended fasteners, suitable for application and designed to meet performance requirements. Furnish the following unless otherwise indicated:
 1. Exposed Penetrating Fasteners: Gasketed screws with hex washer heads matching color of sheet metal.
 2. Fasteners for Aluminum: Aluminum or Series 300 stainless steel.
 3. Fasteners for Zinc-Coated (Galvanized) Steel Sheet: Series 300 stainless steel or hot-dip zinc-coated steel according to ASTM A153/A153M or ASTM F2329.
- C. Elastomeric Sealant: ASTM C920, elastomeric silicone polymer sealant of type, grade, class, and use classifications required by roofing-specialty manufacturer for each application.

2.7 MANUFACTURED COPINGS

- A. Copings: Manufactured coping system consisting of formed-metal coping cap in section lengths not exceeding 12 feet (3.6 m), concealed anchorage; corner units, end cap units, and concealed splice plates with same finish as coping caps.
 1. Coping Profile: As indicated on Drawings.
 - a. Unit Face Height: Accommodate existing height plus additional insulation and

blocking indicated.

2. Basis-of-Design Product: Tremco, TremLock Infinity Gold Coping.
3. Coping-Cap Material: Formed aluminum sheet, nominal 0.040-inch (1.02-mm) thick.
 - a. Finish: High-performance organic (PVDF) coating.
 - b. Color: As selected by Architect from manufacturer's full range.
4. Corners: Factory mitered.
5. Coping-Cap Attachment Method: Snap-on, fabricated from coping-cap material.
6. Snap-on-Coping Anchor Plates: Concealed, galvanized-steel sheet, 12 inches (300 mm) wide, with integral cleats.

2.8 MANUFACTURED ROOF-EDGE SPECIALTIES

- A. Roof-Edge Fascia: Snap-on type fascia with vertical profile.
 1. Description: Manufactured two-piece roof-edge fasciae systems consisting of formed metal fascia covers in section lengths not exceeding 12 feet (3.6 m), with an extruded anchor bar to engage and secure fascia cover, and concealed splice plates. Provide matching prefabricated continuously welded corner units.
 - a. Roof-Edge Fasciae Profile: As indicated on Drawings.
 - 1) Unit Face Height: Accommodate existing height plus additional insulation and blocking indicated.
 - b. Splice Plates: Of same material and finish as roof edge flashing units, 8 inches (203 mm) long with factory-installed dual non-curling butyl sealant strips.
 2. Basis-of-Design Product: Tremco, TremLock 215 Fascia.
 3. Fascia Cover Securement: Snap-on, over continuous extruded aluminum anchor bar.
 4. Roofing System: Modified bitumen.
 5. Fascia Cover Material: Formed aluminum sheet, nominal 0.040-inch (1.02-mm) thick.
 - a. Finish: High-performance organic (PVDF) coating.
 - b. Color: As selected by Architect from manufacturer's full range.
- B. Fascia Accessories: Provide accessories fabricated from the same materials and for compatibility with roof edge system; provide the following accessories:

1. Fascia extenders.
2. Wall cap.
3. Overflow scuppers.
4. Spill-out scuppers.
5. Downspout scuppers with integral conductor head and downspout adapters.

2.9 FINISHES

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.
- D. High-Performance Organic (PVDF) Coating: Prepare, pretreat, and apply coating to exposed metal surfaces to comply with ASTM A755/A755M and coating and resin manufacturers' written instructions.
 1. Aluminum Coil Coating Finishes: Two-Coat Fluoropolymer: AAMA 2605 and as additionally required to meet specified finish performance and warranty requirements. Fluoropolymer finish containing not less than 70 percent polyvinylidene fluoride (PVDF) resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
- E. Concealed Surface Finish: Apply pretreatment and manufacturer's standard acrylic or polyester backer finish consisting of prime coat and wash coat with a minimum total dry film thickness of 0.5 mil (0.013 mm).

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, to verify actual locations, dimensions, and other conditions affecting performance of the Work.
- B. Examine walls, roof edges, and parapets for suitable conditions for roof specialties.
- C. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION OF UNDERLAYMENT

- A. Self-Adhering Sheet Underlayment: Install wrinkle free over exposed wood blocking & nailers. Apply primer if required by underlayment manufacturer. Comply with temperature restrictions of underlayment manufacturer for installation; use primer rather than nails for installing underlayment at low temperatures. Apply in shingle fashion to shed water. Overlap edges not less than 3-1/2 inches (90 mm). Roll laps with roller. Cover underlayment within 14 days.

3.3 INSTALLATION, GENERAL

- A. General: Install roof specialties according to manufacturer's written instructions. Anchor roof specialties securely in place, with provisions for thermal and structural movement. Use fasteners, solder, protective coatings, separators, sealants, and other miscellaneous items as required to complete roof-specialty systems.

1. Install roof specialties level, plumb, true to line and elevation; with limited oil-canning and without warping, jogs in alignment, buckling, or tool marks.
2. Provide uniform, neat seams with minimum exposure of solder and sealant.
3. Install roof specialties to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before manufacture.
4. Torch cutting of roof specialties is not permitted.
5. Do not use graphite pencils to mark metal surfaces.

- B. Metal Protection: Protect metals against galvanic action by separating dissimilar metals from contact with each other or with corrosive substrates by painting contact surfaces with bituminous coating or by other permanent separation as recommended by manufacturer.

1. Coat concealed side of uncoated aluminum roof specialties with bituminous coating where in contact with wood, ferrous metal, or cementitious construction.
2. Underlayment: Where installing metal flashing directly on cementitious or wood substrates, install a course of self-adhering, high-temperature sheet underlayment.
3. Bed flanges in thick coat of asphalt roofing cement where required by manufacturers of roof specialties for waterproof performance.

- C. Expansion Provisions: Allow for thermal expansion of exposed roof specialties.

1. Space movement joints at a maximum of 12 feet (3.6 m) with no joints within 18 inches (450 mm) of corners or intersections unless otherwise shown on Drawings.
2. When ambient temperature at time of installation is between 40 and 70 deg F (4 and 21 deg C), set joint members for 50 percent movement each way. Adjust setting proportionately for installation at higher ambient temperatures.

D. Fastener Sizes:

1. Wood Blocking or Sheathing: Use fasteners of sizes that penetrate wood blocking or sheathing not less than 1-1/4 inches (32 mm) for nails and not less than 3/4 inch (19 mm) for wood screws.

2. Other Substrates: Use fasteners of sizes that penetrate substrate not less than recommended by fastener manufacturer to achieve maximum pull-out resistance. E. Seal joints with elastomeric sealant as required by roofing-specialty manufacturer.
- F. Seal joints as required for watertight construction. Place sealant to be completely concealed in joint. Do not install sealants at temperatures below 40 deg F (4 deg C).

3.4 INSTALLATION OF COPINGS

- A. Install clips, cleats, anchor plates, and other anchoring and attachment accessories and devices with concealed fasteners.
- B. Anchor copings with manufacturer's required devices, fasteners, and fastener spacing to meet performance requirements.
 1. Interlock face and back leg drip edges of snap-on coping cap into cleated anchor plates anchored to substrate at manufacturer's required spacing that meets performance requirements.

3.5 INSTALLATION OF ROOF-EDGE SPECIALTIES

- A. Install clips, cleats, cants, and other anchoring and attachment accessories and devices with concealed fasteners.
- B. Anchor roof edgings with manufacturer's required devices, fasteners, and fastener spacing to meet performance requirements.

3.6 CLEANING AND PROTECTION

- A. Clean exposed metal surfaces.
- B. Clean off excess sealants.
- C. Remove temporary protective coverings and strippable films as roof specialties are installed. On completion of installation, clean finished surfaces including removing unused fasteners, metal filings, pop rivet stems, and pieces of flashing. Maintain roof specialties in a clean condition during construction.
- D. Replace roof specialties that have been damaged or that cannot be successfully repaired by finish touchup or similar minor repair procedures.

END OF SECTION 077100

SECTION 079200- JOINT

SEALANTS PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Replacement of existing joint sealants.
2. New joint sealants for existing exterior building joints.
3. New joint sealants for existing traffic-bearing surfaces.
4. Joint backup materials and accessories.

1.02 REFERENCES

- A. ASTM C 661 – Standard Test Method for Indentation Hardness of Elastomeric-Type Sealants by Means of a Durometer
- B. ASTM C 719 – Standard Method for Adhesion and Cohesion of Elastomeric Joint Sealants under Cyclic Movement (Hockman Cycle)
- C. ASTM C 920 – Standard Specification for Elastomeric Joint Sealants
- D. ASTM C 1248 – Standard Test Method for Staining of Porous Substrate by Joint Sealants
- E. ASTM C 1330 – Standard Specification for Cylindrical Backing for Use with Cold Liquid Applied Sealants
- F. ASTM C 1521 – Standard Practice for Evaluating Adhesion of Installed Weatherproofing Sealant Joints
- G. ASTM C 1523 – Standard Test Method for Determining Modulus, Tear and Adhesion Properties of Precured Elastomeric Joint Sealants
- H. ASTM D 412 – Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers–Tension
- I. ASTM D 3960 – Standard Practice for Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings

J. SCAQMD Rule 1168 – South Coast Air Quality Management District Adhesive and Sealant Applications; amended January 7, 2005, effective July 1, 2005.

K. SWRI Validation – SWR Institute Validated Products listing; Sealant, Waterproofing and Restoration Institute; <http://www.swrionline.org/ValidatedSealants>.

1.03 ACTION SUBMITTALS

A. Product Data: For each joint sealant, sealant primer and joint backup material indicated; manufacturer's technical data, tested physical, performance properties.

B. Samples for Initial Selection: For each sealant exposed to view, three color charts showing manufacturer's full range of available colors.

C. Samples for Verification: For each color of joint sealant required, three cured samples of manufacturer's standard size.

D. Warranties: For each sealant, sample of manufacturer's warranties.

1.04 INFORMATIONAL SUBMITTALS

A. Manufacturer's Instructions: For each sealant, joint preparation, priming, and application instructions; include storage and handling requirements.

B. Preconstruction Field Adhesion Test Reports: Completed field adhesion test log, from manufacturer; submit within 10 days after completion of tests.

C. Field Adhesion Test Reports: For each joint sealant application tested, from manufacturer.

D. Qualification Statements: For installer, from manufacturer.

1.05 CLOSEOUT SUBMITTALS

A. Warranties: For each sealant, executed warranty documents.

1.06 QUALITY ASSURANCE

A. Installer Qualifications: Engage installers trained or qualified by manufacturer.

B. Mockups: Install minimum 48-inch lengths of each type of sealant required in prepared Project joints in accordance with installation methods specified in this section.

C. Preinstallation Conference: Convene conference at Project site before start of work in accordance with provisions of Section 01 30 00 Administrative Requirements.

1.07 PRECONSTRUCTION TESTING

A. Preconstruction Field Adhesion Testing: Before start of work, test sealants using ASTM C 1521, Method A.

1. For each sealant required, perform three tests. Perform two tests using separate primers recommended by manufacturer; perform one test on unprimed joint.
2. Locate test joints where indicated or, if not indicated, as directed by Architect.
3. Arrange for tests to take place in presence of sealant manufacturer's authorized personnel.
4. Evaluate results and report whether sealant adhered to joint substrate during testing or failed and mode of failure (adhesive or cohesive), if any. Include, test method used, sealant tested, Project location, joint size and substrate material, sealant backup, test date and name of person who conducted test.
5. Sealants not experiencing adhesive failure will be considered satisfactory. Do not use sealants that do not adhere to joint substrates during testing.

1.08 DELIVERY, STORAGE, AND HANDLING

A. Store materials in original undamaged packaging, within temperature limits recommended by manufacturer; protect from direct sunlight.

B. Remove and replace sealants that cannot be installed within their stated shelf life.

1.09 FIELD CONDITIONS

A. Do not proceed with installation of joint sealants under the following conditions:

1. When ambient and substrate temperature conditions are outside limits permitted by joint sealant manufacturer.

2. When joint substrates are wet.
3. Where contaminants capable of interfering with adhesion have not been removed from joint substrates.

1.10 WARRANTY

A. Manufacturer's Warranty: Provide manufacturer's standard material warranty against manufacturing defects commencing at date of Substantial Completion.

1. Polyurethane Joint Sealants: 5 years.
2. Silicone Joint Sealants: 20 years; include coverage against staining of exposed materials.

B. Specified warranties exclude deterioration or failure of joint sealants from the following:

1. Movement of the structure resulting in stresses on the sealant exceeding the sealant manufacturer's written specifications for sealant elongation and compression caused by structural settlement or errors attributable to design or construction.
2. Disintegration of joint substrates from natural causes (lightening, hurricane, tornado, fire, etc.) exceeding design specifications.
3. Mechanical damage caused by individuals, tools or other outside agents.
4. Changes in sealant appearance caused by accumulation of dirt or other atmospheric contaminants,

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Manufacturer:** Design is based on products manufactured by Emseal Joint Systems, Ltd.; 25 Bridle Lane, Westborough, MA; Toll Free Tel: 800-526-8365; Tel: 508-836-0280; Fax: 508-836-0281; Email: techinfo@emseal.com; Web: <http://www.emseal.com>; Contact: Anthony Scoppettone, Metro Building Solutions, 347-603-6581

2.02 MATERIALS, GENERAL

A. Compatibility: Provide joint sealants, backings, and accessory materials that are compatible with one another and with Project joint substrates.

B. Validation: Provide joint sealants with current SWR Validation as of receipt of bids.

C. VOC Content of Sealant and Primers: Provide joint sealants and sealant primers that comply with SCAQMD Rule 1168.

2.03 NON-STAINING SILICONE JOINT SEALANTS

A. Non-staining Silicone Sealants: Nonstaining to porous stone when tested in accordance with ASTM C 1248.

B. Type JS-01: Nonstaining, Single-component, Non-sag, Neutral Moisture-curing, Silicone Sealant:

1. Compliance: ASTM C 920, Type S, Grade NS, Class 100/50, Use NT, M, G, A, O.
2. Performance: Dynamic movement capability of plus 100 percent and minus 50 percent per ASTM C 719.
3. Color: As selected from manufacturer's standard range.
4. Basis-of-Design Product: Sikasil WS-295 (if no coating is present on concrete)

C. Type JS-02: Non-staining, Single-component, Non-sag, Neutral Moisture-curing, Silicone Sealant:

1. Compliance: ASTM C 920, Type S, Grade NS, Class 100/50, Use NT, M, G, A, O.
2. Performance: Dynamic movement capability of plus 100 percent and minus 50 percent per ASTM C 719.
3. Color: As selected from manufacturer's standard range.
4. Basis-of-Design Product: Sika Hyflex 150-LM (if coating on concrete is present)

2.04 ACRYLIC INFUSED SILICONE-COATED PRECOMPRESSED PRIMARY SEAL

A. Type JS-03: Polyurethane Sealant:

1. Compliance: ASTM E 331, ASTM E 283
2. Joint size applicable:
 - a. Sticks: 1/2" to 10"
3. Performance: Dynamic movement capability of plus 50 percent and minus 50 percent per ASTM C 719
4. Color: As selected from manufacturer's standard range.
5. Location: Concrete Joints
6. Basis-of-Design Product: Sika Emseal Seismic Colorseal/ Colorseal-DS
7. Joint Seal to be used with field applied silicone corner bead JS-01 or JS-02.

2.05 ACRYLIC INFUSED POLYURETHANE PREFORMED FOAM SECONDARY SEAL

A. JS-04: Polyurethane Sealant:

1. Compliance: ASTM E 331, ASTM E 283
2. Joint size applicable:
 - a. Rolls: 1/8" to 1"
 - b. Sticks: 1-1/4" to 10"
3. Performance: Dynamic movement capability of plus 25 percent or minus 25 percent per ASTM C 719.
4. Color: As selected from manufacturer's standard range.
5. Location: Concrete Joints, Metal Panels, Doors, Windows
6. Basis-of-Design Product: Sika Emseal Backerseal

7. Joint Seal assembly to be used with backer rod and field applied silicone liquid sealant JS-01 or JS-02.

2.06 ACCESSORIES

A. Joint Cleaners: Non-corrosive, non-staining cleaners recommended by manufacturers of sealants for Project substrates and sealant backings.

B. Primer: Joint sealant primer determined by results of preconstruction field adhesion testing, recommended by manufacturer.

C. Sealant Backup Materials (backer rod): Nonstaining, flexible, compressible cylindrical material complying with ASTM C 1330.

1. Size: Oversized 25 to 33 percent greater than joint width.

D. Bond Breaker Tape: Polyethylene tape, approved by sealant manufacturer.

E. Masking Tape: Non-staining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.01 EXAMINATION

3.02 Examine joints and joint surfaces to receive sealants. Notify Architect if conditions are not acceptable.

- A. Verify joint dimensions are as indicated on Drawings.
- B. Verify that joints in concrete that are to receive rigid joint sealant have cured minimum 28 days.
- C. Do not begin surface preparation or sealant application until unacceptable conditions have been corrected.

3.03 PREPARATION

3.04 Prepare surfaces to receive new sealants in accordance with joint sealant manufacturer's instructions.

- A. Existing Joint Sealants: Remove existing joint sealants from Project joints, as follows:
 - 1. Cut away sealants as close as possible to the joint edge.
 - 2. Remove joint sealants, sealant residue, sealant-backing materials, and other film-forming or bond-inhibiting substances from joint surfaces to the depth that new sealant backings and joint sealants will be installed.
 - 3. Leave joint surfaces clean, dry, and ready to receive specified sealants.
- B. Clean joint surfaces by one or a combination of the following methods:
 - 1. Porous Substrates: Clean concrete and masonry by brushing, grinding or mechanical abrading.
 - 2. Non-porous Substrates: Clean metal, glass and other non-porous surfaces using razor knife, followed by solvent wipe.
- C. Remove frost, dust, loose particles and other foreign materials from joint substrates by vacuuming or blowing out with oil-free compressed air; make as many passes as required to result in clean joints.
- D. Remove rust, mill scale and deteriorated coatings from ferrous metals by wire brush, grinding or sandblasting.
- E. Joint Priming: Apply joint sealant primer to sides of joints in accordance with manufacturer's instructions.
- F. Apply masking tape where required to prevent contact of sealant primer or joint sealants with adjoining surfaces. Remove tape immediately after tooling without disturbing joint seal.

3.05 INSTALLATION

- A. Apply joint-sealants per joint sealant manufacturer's instructions.
- B. Measure joint dimensions and size joint backers to achieve width-to-depth ratio and surface bond area as recommended by manufacturer.
 - 1. Install joint sealant backings to support sealant during application and to achieve recommended joint depth and proportions.

- C. Completely fill joints with sealant and ensure full contact of sealant to sides of joints.
- D. Install sealant free of air pockets, foreign embedded matter, ridges or sags.
- E. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.
- F. Immediately after sealant application and before skinning or curing begins, tool sealants to form smooth, uniform beads. Tool joints to concave profile.

3.06 INSTALLATION – PRECURED SILICONE EXTRUSIONS

- A. Install precured silicone extrusions in accordance with manufacturer's installation instructions.
- B. Clean substrates with isopropyl alcohol and prime where field testing indicates need for priming to achieve acceptable adhesion.
- C. Apply beads of silicone sealant/adhesive of color matching silicone extrusion to both sides of the joint.
- D. Position precured silicone extrusions over joint openings and bed into silicone sealant/adhesive.
- E. Using roller, roll and apply uniform pressure continuously along edges to bond precured silicone extrusions to substrate surfaces.
- F. Remove excess sealant/adhesive, trim ends and terminate with a cap bead of nonstaining silicone sealant/adhesive.
- G. Install precured silicone extrusions with straight edges and without wrinkles, fishmouths and other surface defects.

3.07 FIELD QUALITY CONTROL

- A. Field Adhesion Testing: Test installed sealants using ASTM C 1521, Method A.
 - 1. Perform tests at the following rates for each type of sealant and joint substrate:
 - a. Ten tests for the first 1000 feet of joint length.
 - b. One test for each additional 1000 feet of joint length.

2. Arrange for tests to take place in presence of sealant manufacturer's authorized personnel.
3. Inspect joints for complete fill, absence of voids, sealant dimensions and configurations, and whether sealant adhered to joint substrate during testing or failed and mode of failure (adhesive or cohesive), if any. Include data on pull distance used to test each type of sealant and each joint substrate.
4. Evaluate results to determine if adhesion passes manufacturer's field adhesion hand pull test criteria.
5. Report on whether joints were primed, sealants tested, test locations, test dates, adhesion results and percent elongation, whether sealant installation complied with specified requirements, dates sealant was installed and names of sealant installers.
6. Sealants not experiencing adhesive failure will be considered satisfactory.
7. Remove and replace failed portions of sealants using same materials and procedures as indicated for original installation.
8. Repair sealants pulled from test joints immediately after evaluation and recording of results; contact original sealant with new sealant.

3.08 CLEANING

- A. Remove sealant from adjacent surfaces as application progresses using cleaning materials recommended by joint sealant manufacturer.

3.09 PROTECTION

- A. Protect installed joint sealants from damage until fully cured.

3.10 JOINT SEALANT SCHEDULE

- A. Exterior Weather Seal Joints in Vertical and Non-traffic-bearing Horizontal Surfaces:
 1. Control and Expansion Joints in Precast Concrete: JS-03.
 2. Joints between Precast Concrete and Metal Panels: JS-04, match panel color.

3. Perimeters of Hollow Metal Door Frames and Aluminum Windows, Storefronts, and Louvers: JS-04, match frame color.

END OF SECTION 079200

SECTION 099600- HIGH PERFORMANCE COATINGS

PART 1- GENERAL

1.1 REFERENCES

- A SSPC-SP 1 - Solvent Cleaning
- B SSPC-SP 2 - Hand Tool Cleaning
- C SSPC-SP 3 - Power Tool Cleaning

1.2 SUBMITTALS

- A Submit under provisions of Section 01 33 00, Submittal Procedures.
- B Product Data: Manufacturer's data sheets on each paint and coating product should include:
 - 1 Product characteristics
 - 2 Surface preparation instructions and recommendations
 - 3 Primer requirements and finish specification
 - 4 Storage and handling requirements and recommendations
 - 5 Application methods
 - 6 Cleanup Information
- C Selection Samples: Submit a complete set of color chips that represent the full range of manufacturer's color samples available.
- D Coating Maintenance Manual: upon conclusion of the project, the Contractor or paint manufacturer/supplier shall furnish a coating maintenance manual. Manual shall include an Area Summary with finish schedule, Area Detail designating where each product/color/finish was used, product data pages, Safety Data Sheets, care and cleaning instructions, touch-up procedures, and color samples of each color and finish used.

1.3 MOCK-UP

Include a mock-up if the project size and/or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project might be specified. When deciding on the extent of the mockup, consider all the major different types of painting on the project.

- A Finish surfaces for verification of products, colors, & sheens
- B Finish area designated by Architect

- C Provide samples that designate prime & finish coats
- D Do not proceed with remaining work until the Architect approves the mock-up samples

1.4 DELIVERY, STORAGE, AND HANDLING

A Delivery: Deliver manufacturer's unopened containers to the work site. Packaging shall bear the manufacturer's name, label, and the following list of information:

Product name, type (description)
Application & use instructions
Surface preparation
VOC content
Environmental handling and SDS
Batch date
Color number

B Storage: Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction. Store materials in an area that is within the acceptable temperature range, per manufacturer's instructions. Protect from freezing.

C Handling: Maintain a clean, dry storage area to prevent contamination or damage to the coatings.

1.5 PROJECT CONDITIONS

A Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not apply coatings under environmental conditions outside manufacturer's absolute limits. This specification does not take into consideration wet areas.

Part 2 PRODUCTS

2.1 MANUFACTURERS

A Acceptable Manufacturer:
TNEMEC Company
123 West 23 Avenue
North Kansas City, Missouri, USA
Tel: (816)-483-3400
www.tnemec.com

B. Substitutions: Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 Product Requirements.

When submitting request for substitution, provide complete product data specified above under Submittals, for each substitute product.

2.2 APPLICATION/SCOPE

A Surfaces to Be Coated:

Metal- Ferrous -Structural Steel Beams and columns and steel plates

2.3 SCHEDULE

A. METAL Ferrous - (Structural Steel Columns and Beams, Steel Plates)

1.

a.

PRIMER: TNEMEC Series 132 -SSPC-SP3 power tool clean for surface preparation

Intermediate Coat: TNEMEC Series V69F

2nd Coat: Series TNEMEC Series 1095

2.4 MATERIALS - GENERAL REQUIREMENTS

A Paints and Coatings - General:

- 1 Unless otherwise indicated, provide factory-mixed coatings. When required, mix coatings to correct consistency in accordance with manufacturer's instructions before application. Do not reduce, thin, or dilute coatings or add materials to coatings unless such procedure is specifically described in manufacturer's product instructions.

B Primers:

- 1 Where the manufacturer offers options on primers for a particular substrate, use primer categorized as "best" by the manufacturer.

2.5 ACCESSORIES

A Coating Application Accessories:

- 1 Provide all primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials required, per manufacturer's specifications.

Part 3 EXECUTION

3.1 EXAMINATION

A Do not begin application of coatings until substrates have been properly examined and prepared. Notify Architect of unsatisfactory conditions before proceeding.

B If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

C Proceed with work only after conditions have been corrected and approved by all parties, otherwise application of coatings will be considered as an acceptance of surface conditions.

D Previously Painted Surfaces: Verify that existing painted surfaces do not contain lead based paints, notify Architect immediately if lead based paints are encountered.

3.2 SURFACE PREPARATION:

WARNING! Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800424-LEAD (in US) or contact your local health authority. Removal must be done in accordance with EPA Renovation, Repair and Painting Rule and all related state and local regulations. Care should be taken to follow all state and local regulations which may be more strict than those set under the federal RRP Rule.

A Proper product selection, surface preparation and application affect coating performance. Coating integrity and service life will be reduced because of improperly prepared surfaces. Selection and implementation of proper surface preparation ensures coating adhesion to the substrate and prolongs the service life of the coating system.

B Selection of the proper method of surface preparation depends on the substrate, the environment, and the expected service life of the coating system. Economics, surface contamination, and the effect on the substrate will also influence the selection of surface preparation methods.

C The surface must be dry and in sound condition. Remove oil, dust, dirt, loose rust, peeling paint or other contamination to ensure good adhesion. Recognize that any surface preparation short of total removal of the old coating may compromise the service length of the system.

D Prior to attempting to remove mildew, it is always recommended to test any cleaner on a small, inconspicuous area prior to use. Bleach and bleaching type cleaners may damage or discolor existing paint films. Bleach alternative cleaning solutions may be advised. Mildew may be removed before painting by washing with a solution of 1-part liquid bleach and 3-parts water. Apply the solution and scrub the mildewed area. Allow the solution to remain on the surface for 10 minutes. Rinse thoroughly with water and allow the surface to dry before painting. Wear protective eyewear, waterproof gloves, and protective clothing. Quickly wash off any of the mixture that comes in contact with your skin. Do not add detergents or ammonia to the bleach/water solution.

E No exterior painting should be done immediately after a rain, during foggy weather, when rain is predicted, or when the temperature is below 50 F unless the specified product is designed for the marginal conditions. On large expanses of metal siding, the air, surface, and material temperatures must be 50 F or higher to use low temperature products.

8 Steel: Structural, Plate, etc.

Should be cleaned by one or more of the surface preparations described below. These methods are used throughout the world for describing methods for cleaning structural steel. Visual standards are

available through the Society of Protective Coatings. A brief description of these standards together with numbers by which they can be specified follow.

9 Solvent Cleaning, SSPC-SP1

Solvent cleaning is a method for removing all visible oil, grease, soil, drawing and cutting compounds, and other soluble contaminants. Solvent cleaning does not remove rust or mill scale. Change rags and cleaning solution frequently so that deposits of oil and grease are not spread over additional areas in the cleaning process. Be sure to allow adequate ventilation.

10 Hand Tool Cleaning, SSPC-SP2

Hand Tool Cleaning removes all loose mill scale, loose rust, and other detrimental foreign matter. It is not intended that adherent mill scale, rust, and paint be removed by this process. Before Hand Tool Cleaning, remove visible oil, grease, soluble welding residues, and salts by the methods outlined in SSPC-SP1.

11 Power Tool Cleaning, SSPC-SP3

Power Tool Cleaning removes all loose mill scale, loose rust, and other detrimental foreign matter. It is not intended that adherent mill scale, rust, and paint be removed by this process. Before Power Tool Cleaning, remove visible oil, grease, soluble welding residues, and salts by the methods outlined in SSPC-SP1.

12 White Metal Blast Cleaning, SSPC-SP5 or NACE 1

A White Metal Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP1 or other agreed upon methods.

13 Commercial Blast Cleaning, SSPC-SP6 or NACE 3

A Commercial Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter, except for staining. Staining shall be limited to no more than 33 percent of each square inch of surface area and may consist of light shadows, slight streaks, or minor discoloration caused by stains of rust, stains of mill scale, or stains of previously applied paint. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP1 or other agreed upon methods.

14 Brush-Off Blast Cleaning, SSPC-SP7 or NACE 4

A Brush-Off Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, loose mill scale, loose rust, and loose paint. Tightly adherent mill scale, rust, and paint may remain on the surface. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP 1 or other agreed upon methods.

15 Brush-Off Blast Cleaning of Coated and Uncoated Galvanized Steel, Stainless Steels, and NonFerrous Metals, SSPC-SP16

This standard covers the requirements for brush-off blast cleaning of uncoated or coated metal surfaces other than carbon steel by the use of abrasives. These requirements include visual verification of the end condition of the surface and materials and procedures necessary to achieve and verify the end

condition. A brush-off blast cleaned non-ferrous metal surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, metal oxides (corrosion products), and other foreign matter. Intact, tightly adherent coating is permitted to remain. A coating is considered tightly adherent if it cannot be removed by lifting with a dull putty knife.

16 Power Tool Cleaning to Bare Metal, SSPC-SP11

Metallic surfaces that are prepared according to this specification, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxide corrosion products, and other foreign matter. Slight residues of rust and paint may be left in the lower portions of pits if the original surface is pitted. Prior to power tool surface preparation, remove visible deposits of oil or grease by any of the methods specified in SSPC-SP1, Solvent Cleaning, or other agreed upon methods.

17 Near-White Blast Cleaning, SSPC-SP10 or NACE 2

A Near White Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter, except for staining. Staining shall be limited to no more than 5 percent of each square inch of surface area and may consist of light shadows, slight streaks, or minor discoloration caused by stains of rust, stains of mill scale, or stains of previously applied paint. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP1 or other agreed upon methods.

18 High- and Ultra-High Pressure Water Jetting for Steel and Other Hard Materials

SSPC-SP WJ-1/NACE WJ-1, Clean to Bare Substrate (WJ-1) is intended to be similar to the degree of surface cleanliness of SSPC-SP 5/NACE 1, except that stains are permitted to remain on the surface. This standard is used when the objective is to remove every trace of rust and other corrosion products, coating and mill scale.

SP WJ-2/NACE WJ-2, Very Thorough Cleaning (WJ-2) is intended to be similar to the degree of surface cleanliness of SSPC-SP 10/NACE 2, except that tightly adherent material, rather than only stains, is permitted to remain on the surface. This standard is used when the objective is to remove almost all rust and other corrosion products, coating, and mill scale.

SP WJ-3/NACE WJ-3, Thorough Cleaning (WJ-3) is intended to be similar to the degree of surface cleanliness of SSPC-SP 10/NACE 2, except that tightly adherent material, rather than only stains, is permitted to remain on the surface. This standard is used when the objective is to remove much of the rust and other corrosion products, coating, and mill scale, leaving tightly adherent thin films.

SSPC WJ-4/NACE WJ-4, Light Cleaning (WJ-4) is intended to be similar to the degree of surface cleanliness of SSPC-SP 10/NACE 2, except that tightly adherent material, rather than only stains, is permitted to remain on the surface. This standard is used when the objective is to allow as much of the tightly adherent rust and other corrosion products, coating, and mill scale to remain as possible, Discoloration of the surface may be present.

19 Water Blasting, NACE Standard RP-01-72

Removal of oil grease dirt, loose rust, loose mill scale, and loose paint by water at pressures of 2,000 to 2,500 psi at a flow of 4 to 14 gallons per minute.

3.3 INSTALLATION

- A Apply all coatings and materials with the manufacturer's specifications in mind. Mix and thin coatings according to manufacturer's recommendations.
- B Do not apply to wet or damp surfaces.
- C Apply coatings using methods recommended by manufacturer.
- D Uniformly apply coatings without runs, drips, or sags, without brush marks, and with consistent sheen.
- E Apply coatings at spreading rate required to achieve the manufacturer's recommended dry film thickness.
- F Regardless of number of coats specified, apply as many coats as necessary for complete hide, and uniform appearance.
- G Inspection: The coated surface must be inspected and approved by the Architect or Engineer just prior to the application of each coat.

3.4 PROTECTION

- A Protect finished coatings from damage until completion of project.
- B Touch-up damaged coatings after substantial completion, following manufacturer's recommendation for touch up or repair of damaged coatings. Repair any defects that will hinder the performance of the coatings.

END OF SECTION 099600