PROJECT MANUAL

SPECIFICATIONS + RELATED DOCUMENTS

REQUEST FOR QUOTES SOL NO. TP19-024-10

CITY WEST RETAIL SPACE, WHITE BOX BUILD-OUT, DELI + JUICERY (1502 LINN STREET) – FIRE PROTECTION – EXISTING WET-PIPE SPRINKLER SYSTEM MODIFICATIONS

CINCINNATI METROPOLITAN HOUSING AUTHORITY
1627 WESTERN AVE., CINCINNATI, OH 45214

GREGORY D. JOHNSON, MS, PHM, EDEP CHIEF EXECUTIVE OFFICER

WWW.CINTIMHA.COM

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INSTRUCTIONS:

QUOTE DUE DATE:

All quotes must be submitted by no later than, Monday, December 09, 2019 at 10:00 a.m.

WALK THROUGH:

A walk through will be conducted on Wednesday, December 04, 2019 at 10:15 a.m. to review the existing conditions. Please meet in the 1502 Linn Street – Cincinnati, OH 45214

QUOTE SUBMISSION:

May be submitted via email to RECD@cintimha.com or delivered to:

Cincinnati Metropolitan Housing Authority
1627 Western Ave. ~ Cincinnati, OH 45214
(Quotes placed in bid box must be time stamped)

Quotes will not be opened and reviewed until after the due date and time.

PROJECT DESCRIPTION:

Name: Fire Protection – Existing Wet-Pipe Sprinkler System Modifications
Address: 1502 Linn St – Cincinnati, OH 45214

SCOPE OF WORK: WORK INCLUDES BUT NOT LIMITED TO: MODIFY THE EXISTING WET-PIPE SPRINKLER SYSTEM FOR NEW SPACE LAYOUT IN ACCORDANCE WITH ALL APPLICABLE CODES. SPRINKLER CONTRACTOR SHALL PROVIDE ANY AND ALL DRAWINGS AND CALCULATIONS NECESSARY TO OBTAIN REQUIRED PERMIT. SYSTEM DESIGN SHALL CONFORM TO REQUIREMENTS OF NFPA-13, CITY AND STATE.

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QUOTE FORMAT:

Failure to submit the appropriate forms may jeopardize the proposal/bid up to and including the possibility of said proposal/bid being deemed non-responsive.

The Contractor is responsible to acknowledge any and all addenda issued. Quote forms not displaying an acknowledgement of addenda shall be considered non-responsive.

All quote forms are to be in a sealed envelope. The envelope is to be clearly marked indicating the job being quoted.

All quotes MUST consist of, the following items:

- Completed Fee Submission Form **SIGNED**
- Proposer's Statement **SIGNED**
- Section 3 Contractor Action Plan **SIGNED**
- Section 3 Hiring / Training Opportunities Strategies **SIGNED**
- Section 3 Subcontracting Opportunity Strategies **SIGNED**
- Section 3 Assurance of Compliance Form **SIGNED**
- General Terms and Conditions **INITIALIZED**
- Workers Compensation and Insurance Requirements **INITIALIZED**
- Form HUD 5370-EZ **INITIALIZED**
- As specified in Form HUD 5370-EZ. **INITIALIZED**

QUESTIONS:

Questions or clarifications shall be asked at the Walk through and will be responded in writing.

Anyone claiming to be a Section 3 Business Concern shall be required, as set forth by procedure, to provide evidence of such status. Section 3 Business Concerns claiming Section 3 Preference status must meet that status at the time the bid, quote or proposal is submitted to CMHA.

If you need any assistance or help regarding Section 3, feel free to contact:
Jacquetta Brown
Economic Inclusion Coordinator
(513) 977-5683
Jacquetta.Brown@cintimha.com
Section3@cintimha.com

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CONTRACTOR'S FEE SUBMISSION FORM

OFFER'S:
In submitting this proposal, it is understood that the Cincinnati Metropolitan Housing Authority reserves the right to reject any and all quotes.

ADDENDA

Offer's acknowledges receipt of the following Addenda:

Addendum Number: _____ Dated: _____
Addendum Number: _____ Dated: _____
Addendum Number: _____ Dated: _____

CMHA intends to award a purchase order for **SOLICITATION #.: TP19 -024-10** entitled **CITY WEST RETAIL SPACE, WHITE BOX BUILD-OUT, DELI + JUICERY (1502 LINN ST): FIRE PROTECTION – EXISTING WET-PIPE SPRINKLER SYSTEM MODIFICATIONS** complying with the request for quotes and Addenda, if any, provided the Proposer's quote is reasonable and it is in the best interest of CMHA to accept it.

Please note that this document must be fully completed, dated and signed or the proposal will be deemed as nonresponsive. CMHA reserves the right to reject any proposals deemed by CMHA as not minimally responsive.

The proposed fees are all-inclusive of all related costs that the successful proposer will incur to provide the noted services. The Proposer is responsible for providing firm, fixed costs as specified below.

The completion of the form is no guarantee of a contract or the award of any services.

Firm, Fixed Cost $_____
(Figures)

_____ Dollars
(Written Dollar Amount)

NOTE: The Total Quote Amount shall be shown in both words and figures; in case of discrepancy, the amount in words shall govern.

PROPOSER'S STATEMENT

The undersigned proposer hereby states that by completing and submitting this Form and all other documents within this submittal, he/she is verifying that all information provided herein is, to the best of his/her knowledge, true and accurate, and that if the Authority discovers that any information entered herein to be false, such shall entitle the Authority to not consider or make award or to cancel any award with the undersigned party. Further, by completing and submitting the response, the undersigned is thereby agreeing to abide by all terms and conditions pertaining to this RFq as issued by the Authority, either in hard copy or on the noted Internet System. Upon issuance of a Purchase Order to proposer, CMHA is accepting Contractor's offer contained in the submittal and this Fee Submission. Unless said notice expressly states otherwise, Contract Commencement occurs in accordance with the issue of the Purchase order. Pursuant to all RFq Documents including attachments, this Fee Submission Form, and pursuant to all Documents submitted, the undersigned proposes to supply the Authority with the services described herein for the fee(s) submitted pertaining to this RFq.

_____ _____

Date Phone:

Company:

Address:

_____

City, State, Zip

By: (Signature of Offerer)

_____ _____

By: (Print Name) Title:

_____

Email Address

_____

Fed Tax ID:

Prospective Business Vendor:

Enclosed, you will find a variety of forms regarding Section 3 (Housing & Urban Development Opportunities Act of 1968, as amended). Please complete and attach the Section 3 forms with your bid submission. ***Failure to submit the appropriate forms may jeopardize the proposal/bid up to and including the possibility of said proposal/bid being deemed non-responsive***

Anyone claiming to be a Section 3 Business Concern shall be required, as set forth by procedure, to provide evidence of such status. Section 3 Business Concerns claiming Section 3 Preference status must meet that status at the time the bid, quote or proposal is submitted to CMHA.

Section 3 Required Forms:

a. Section 3 Assurance of Compliance & Section 3 Clause
b. Section 3 Action Plan
c. Section 3 Certification for Preference
d. Preference Category Acknowledgement S3 Residents

If you need any assistance or help regarding Section 3, feel free to contact us. We look forward to assisting you with Section 3 implementation.

Sincerely,

Jacquetta Brown

Jacquetta Brown
Economic Inclusion Coordinator
(513) 977-5683
Jacquetta.Brown@cintimha.com
Section3@cintimha.com

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Contractor
Section 3 Action Plan Submission

The Section 3 Action Plan is a requirement for contracting opportunities with CMHA. The Section 3 Action Plan must indicate/describe the proposed strategies for achieving the Section 3 training and/or employment goals, and subcontracting numerical goals, when and if **newly created opportunities** are generated upon awarding of contracts. ***Failure to submit the Section 3 Action plan may jeopardize the proposal/bid up to and including the possibility of said proposal/bid being deemed non-responsive.***

Please review the Section 3 Action Plan information attached. ***All Sections need to be completed and signed.*** This information will help to assist you in formulating your Section 3 Action Plan.
You will need to address each question and check the appropriate boxes in regards to how your company will strive to achieve Section 3 Compliance to the "**greatest extent feasible**".

Please identify individual(s) responsible for planning, implementing and tracking the projects' Section 3 training, employment and/or contracting goals:

Name(s): _____

Contact Info: _____

Title(s): _____

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Section 3 Hiring/Training Opportunity Strategies

Please check any and all efforts from the below mentioned categories that your company will utilize to recruit, solicit, encourage, facilitate and hire Section 3 Residents when new hiring/training opportunities are generated through the awarding of the contract. **Some of the items will be mandatory as indicated with **.** Your acknowledgement is still needed, so please check accordingly.

The Section 3 Action Plan is subject to audit at anytime during the awarding of the contract through the duration of the contract by the Section 3 Compliance Coordinator.

**** Commit that when new workers are hired by the company and/or subcontractors as a result of the contract, 30% of those hired will be Section 3 Residents.**

**** Contact the CMHA Section 3 Compliance Coordinator regarding new hiring and training opportunities.**

**** Provide the CMHA Section 3 Compliance Coordinator with a monthly report listing all hiring and training opportunities.**

**** Post notice (placards) at the worksite where the work is being done, indicating any new hiring and training opportunities**

Facilitate or co-facilitate Hiring Halls within close proximity to where the work is being done for Section 3 Residents.

Contact/Meet with Resident Associations informing them of new training and hiring opportunities.

Advertise new training and hiring opportunities in community and diversity newspapers/websites.

Sponsor or participate in job informational meetings or job fairs in the neighborhood or service area of the Section 3 covered project.

Establish an internal training program (pre-apprenticeship) that is consistent with Dept. of Labor requirements to provide Section 3 Residents with the opportunity to learn skills and job requirements.

Distribute flyers to CMHA owned sites indicating the number and types of jobs that will be offered with contact information.

Maintain a file of eligible qualified Section 3 Residents for future employment opportunities.

Incorporate into contract (after selection of bidders but prior to the execution of contracts), a negotiated provision for a specific number of Section 3 Residents to be trained and/or employed during the contract.

Other:

_____

_____

Note: You are required to the provide opportunities to "the greatest extent feasible" in order to comply with the requirements of Section 3. In the event that you are not able to hire/train and/or contract with Section 3 Residents and/or Section 3 Business Concerns, you will be required to document why you were unable to meet the numerical goals.

Signature: _____ *Date:* _____

Section 3 Subcontracting Opportunity Strategies

Please check any and all efforts from the below mentioned categories that your company will utilize to recruit, solicit, encourage, facilitate and contract with Section 3 Business Concerns when new subcontracting opportunities are generated through the awarding of the contract. **Some of the items will be mandatory as indicated with **.** Your acknowledgement is still needed, so please check accordingly.

The Section 3 Action Plan is subject to audit at anytime during the awarding of the contract through the duration of the contract by the Section 3 Compliance Coordinator.

**** Commit that when subcontracting occurs, 10% of the total dollar amount subcontracted out by the company and/or by subcontractors will go to Section 3 Business Concerns.**

**** Contact the CMHA Section 3 Compliance Coordinator regarding all new subcontracting opportunities.**

**** Provide the CMHA Section 3 Compliance Coordinator with a monthly report listing all subcontracting opportunities.**

Advertise new contracting opportunities in community and diversity newspapers/websites.

Maintain a file of eligible qualified Section 3 Business Concerns for future contracting opportunities.

Incorporate into contract (after selection of bidders but prior to the execution of contracts), a negotiated provision for a specific amount of work to be contracted with Section 3 Business Concern(s) during the contract.

Sponsor or participate in minority, women, small business expositions and or conferences in the Cincinnati, Ohio area to network and promote contracting opportunities with Section 3 Business Concerns.

Outreach to business assistance agencies, minority contracting associations, community organizations, to network and promote contracting opportunities with Section 3 Business Concerns.

Contact/Meet with Resident Associations informing them of new contracting opportunities.

Outreach to trade/labor organizations to network and promote contracting opportunities with Section 3 Business Concerns.

Host/Facilitate workshops geared to Section 3 Business concerns on contracting procedures and opportunities.

Become an active mentor to Section 3 Business Concerns.

Other:

_____

_____

Note: You are required to the provide opportunities to "the greatest extent feasible" in order to comply with the requirements of Section 3. In the event that you are not able to hire/train and/or contract with Section 3 Residents and/or Section 3 Business Concerns, you will be required to document why you were unable to meet the numerical goals.

Signature: _____ *Date:* _____

CMHA
Section 3 Assurance of Compliance Form

Training, Employment, and Contracting Opportunities for Section 3 Residents and Section 3 Business Concerns

A. The project assisted 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. 170u. Section 3 requires that to the *greatest extent feasible*, *newly created opportunities* that are generated by the awarding of this contract be given to:

- Section 3 Residents (30% minimum goal of new hires) upon their qualifications.
- Section 3 Business Concerns (10% of total construction subcontracting dollar amount awarded – based upon their qualifications).
- Section 3 Business Concerns (3% of total non-construction subcontracting dollar amount awarded- based upon their qualifications).

B. Notwithstanding any other provision of this contract, the applicant shall carry out the provisions of said Section 3 and the regulations issued pursuant thereto by the Secretary set forth in 24 CFR Part 135, and all applicable rules and orders of the Secretary issued thereunder prior to the execution of this contract. The requirements of said regulations include but are not limited to development and implementation of a Section 3 Action Plan/Strategy for utilizing Section 3 Business Concerns; the making of a good faith effort, as defined by the regulation, to provide training, employment and business opportunities required by Section 3; and incorporation of the "Section 3 Clause" specified by Section 135.20 (b) of the regulations in all contracts for work in connection with the project. The applicant and recipient agency, certifies and agrees that it is under no contractual or other disability which would prevent it from complying with these requirements.

C. Compliance with the provision of Section 3, the regulations set forth in 24 CFR Part 135, and all applicable rules and orders of the Secretary issued thereunder prior to approval by the Government of the application of this contract, shall be a condition of the Federal financial assistance provided to the project, binding upon the applicant, its contractors and subcontractors, its successors, and assigns to the sanctions specified by the contract, and to such sanctions as are specified by 24 CFR Section 135.

Applicant: _____

Signature: _____

Address: _____

Date: _____

Section 3 Clause

All Section 3 covered contracts shall include the following clause (referred to as the "Section 3 Clause"):

A. The work to be performed under this contract is subject to the requirements of section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.

B. The parties to this contract agree to comply with HUD's regulations in 24 CFR part 135, which implement section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulations.

C. The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.

D. The contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR part 135.

E. The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and(2) with persons other than those to whom the regulations of 24 CFR part 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR part 135.

F. Noncompliance with HUD's regulations in 24 CFR part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.

G. In the event of a determination by the Executive Director or his/her designee that the Contractor is not in compliance with the section 3 clause or any rule, regulation, or report submission requirements of the CMHA, this contract may be canceled, terminated, or suspended in whole or in part, and the Contractor may be declared ineligible for further CMHA contracts for a period of one to three years.

GENERAL CONDITIONS:

CONTRACT PERIOD:

14 Calendar Days initiating upon receipt of Purchase Order as establish in the Notice to Proceed (Written verification of the start date) to be issued by CMHA.

LIQUIDATED DAMAGES:

$150.00 per calendar day after the expiration of the contract period.

NOTES:

1. HUD-5370 EZ General Contract Conditions for Small Construction/Development Contracts and Small Purchase Contract General Terms and Conditions are incorporated within this Project Manual.
2. All contracts over $100,000.00 require performance and payment bonds for 100% of the contract price upon award of contract.
3. All work is subject to Prevailing Wage and payrolls must be submitted.
4. The Contractor is responsible to apply, pay for and acquire all necessary permits and inspections unless specifically noted otherwise in the Scope of Work.

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SUPPLEMENTAL GENERAL CONDITIONS

1) The following supplements modify, delete from, and/or add to the HUD General Conditions HUD 5370 as follows:
   a) All paragraphs, or portions thereof, which are not specifically modified, deleted, or superseded hereby, remain in full effect.
   b) The General Conditions also may be supplemented elsewhere in the Contract Documents by provisions located in, but not necessarily limited to, Division 1, of the specifications.

2) Add the following paragraphs to Clause 1:
   j) The terms "owner", "owner's representative". "CMHA", or "LHA" mean Cincinnati Metropolitan Housing Authority or its duly authorized representative.
   k) The terms "contractor", "general contractor" or "prime contractor" mean a person, firm or corporation, the holder of a direct contract with the owner for the entire project.
   m) The term "subcontractor" means a person, firm or corporation supplying labor and/or material under separate contract or agreement with the contractor or subcontractor, regardless of tier.
   n) The term "As Selected" means: as selected by Owner, Owner's Representative or the Architect-Engineer.
   o) The term "Provide" means: Furnish and install, complete and ready for intended use. The term "Guarantee & Warranty" are identical in meaning and used interchangeably unless otherwise indicated.
   p) The term "Repair" means that existing materials, devices or equipment should be patched, modified or restored to its original condition. This includes replacement of non-working parts and/or missing parts or components originally installed when new. This definition does not include refinishing or painting. This work must be called out separately or specifically noted.
   q) The term "Clean" means the materials, devices, or equipment are to be cleaned with an appropriate cleaner.
   r) The term "Install" means to provide the labor only, not material; other than fasteners and sealants. The unit or material will be provided by CMHA or others.
   s) The term "Remove" means to remove or take away the indicated material or product. The remaining surface where the removal occurred is to be left clean and smooth and prepared for new materials or finishes.
   t) The terms "Employee" and "Employed" means a person shown on the prime contractor's or subcontractor's payroll for which workmen's compensation and taxes are required to be paid.

3) Add the following to paragraph (b), Clause 2
   The following definitions and terms are hereby established:

(1) "Own organization" - persons employed by the prime contractor with which CMHA has a contract.

(2) "Work of value equivalent to at least (twelve percent) 12% of the total amount of work to be performed under the contract" - means twelve percent (12%) of the total labor dollar amount of the total prime contract amount as established by payrolls, exclusive of wages and hours expended by supervisory and administrative personnel and owners. Work performed must be performed on the site to be eligible for inclusions in the 12% minimum.

(3) Penalty for violation of this provision - CMHA will evaluate the payrolls at 50% of completion and at the final. If the contractor is found to be in violation of the 12% requirement at the 50% stage, evidence must be submitted to substantiate the contractor's ability to obtain the 12% by the completion of the work. If satisfactory documentation is not received by CMHA, CMHA reserves the right to reduce payment in an amount equal to the percentage of non-obtained participation of the total labor dollars paid to date. For example, if $10,000 of labor dollars has been accumulated during the first 50% of the work and only $1,000 can be attributed to the prime contractor (10% of total), a shortfall of 2% exists. Therefore, the penalty cost is equal to 2% x $10,000 = $200. This amount may be subtracted from the amount paid the contractor. The same conditions as described above for 50% completion pertain to the final completion of the project. Non-compliance with any portion of this paragraph may result in termination of the contract at the discretion of the CMHA Executive Director.

4) Add the following to paragraph (c), Clause 2:
The PHA has the right to direct the removal of any individual assigned to this contract, including the designated superintendent. The PHA shall have prior approval of any substitution or replacement of the superintendent.

5) Add the following paragraphs to Clause 2:

(j) The Contractor shall promptly notify the PHA of any ambiguity, inconsistency, or error which they may discover upon examination of the solicitation documents or of the premises and local conditions.

(k) Work Hours

(1) Normal work hours are from 8:00 A.M. through 4:40 P.M., Monday through Friday. Contractors will not be permitted to work at other than normal work hours or on Saturday, Sunday or Federal holidays unless otherwise required in the Statement of Work or as authorized by the Contracting Officer. The following Federal holidays are observed: January 1st, 3rd Monday of January, 3rd Monday of February, last Monday of May, July 4th, 1st Monday of September, 2nd Monday of October, November 11th, 4th Thursday in November, 4th Friday in November (CMHA holiday) and December 25th. When one of the above designated Federal holidays falls on a Sunday, the following

(2) Monday will be observed as the Federal holiday. When a Federal holiday falls on a Saturday, the preceding Friday will be observed as the holiday.

(3) If the Contractor, for his convenience, desires to perform during other than normal work days, the contractor shall reimburse CMHA for any additional expense occasioned CMHA thereby, such as, but not limited to, overtime pay for CMHA employees and utilities services.

(l). Time Extensions for Unusually Severe Weather

This provision specifies the procedure for the determination of time extensions for unusually severe weather in accordance with the HUD General Conditions Clause 32 entitled "Default". In order for the Contracting Officer to award a time extension under this clause, the following conditions must be satisfied:

(1) The weather experienced at the project site during the contract period must be found to be unusually severe, that is, more severe than the adverse weather anticipated for the project location during any given month.

(2) The unusually severe weather must actually cause a delay to the completion of the project. The delay must be beyond the control and without the fault or negligence of the Contractor.

(3) The following schedule of monthly anticipated adverse weather delays is based on National Oceanic and Atmospheric Administration (NOAA) or similar data for the project location and will constitute the base line for monthly weather time evaluations. The Contractor's progress schedule must reflect these anticipated adverse weather delays in all-weather dependent activities.

MONTHLY ANTICIPATED ADVERSE WEATHER DELAY
WORK DAYS BASED ON (5) DAY WORK WEEK

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
13	10	6	5	4	4	4	4	4	4	6	8

Upon acknowledgement of the notice to proceed (NTP) and continuing throughout the contract, the contractor will record daily, the occurrence of adverse weather and resultant impact to normally scheduled work. Actual adverse weather delay days must prevent work on critical activities for 50 percent or more of the Contractor's scheduled work day. The number of actual adverse weather delay days shall include days impacted by actual adverse weather (even if adverse weather occurred in previous month), be calculated chronologically from the first to the last day of each month, and be recorded as full days. If the number of actual adverse weather delay days exceeds the number of days anticipated in the above paragraph, the Contracting Officer will convert any qualifying delays to calendar days, giving full consideration for equivalent fair weather work

days, and issue a modification in accordance with the HUD General Conditions Clause 32 entitled "Default".

6) Add the following to paragraph (a), Clause 6
The Contractor shall, within five calendar days after the "Notice to Proceed", prepare and submit to the Contracting Officer for approval three copies of a practical construction 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 a 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. The progress chart must be in a Critical Path Method (CPM) format. The schedule must be clear enough so that when delays occur, the effects on the Critical Path are readily apparent.

7) Add the following to paragraph (a), Clause 9:
In cases of difference between drawings and details, the more detailed drawings or descriptions shall govern.

8) Add the following paragraph b, Clause 12:
CMHA shall apply and pay for the original building permit (where applicable). The contractor is responsible for securing the permit. The contractor shall apply, pay for, and obtain any and all other permits and inspections as required by local laws, ordinances, rules and regulations. This includes but is not limited to, electrical, plumbing, HVAC, gas, telephone, cable and EPA. Any deviation from this clause will be specifically noted in the relevant division(s) of the Technical Specifications.

9) Add the following paragraphs to Clause 13:
   (f) The applicable provisions of the "Manual of Accident Prevention In Construction" of the Associated General Contractors of America, Inc. and IC-3 of the Industrial Commission of Ohio, the Department of Labor Occupational Safety and Health Act (OSHA) Act, and all other applicable laws, ordinances, rules, regulations, and orders of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury, or loss; and,
   (g) The Contractor shall take all precautions necessary to avoid fire and shall comply fully with the requirements of insurance and fire authorities. The Contractor shall maintain and enforce all safety regulations required to secure maximum protection.

(h) The Contractor shall at all times conduct his work as to assure the least possible inconvenience to the residents and the general public. The Contractor shall provide and maintain safeguards, safety devices and protective equipment and take any other needed actions as may be necessary to protect the public and property in connection with the work. The presence of barricades, lights, or other control devices, provided and maintained by any party other than the Contractor, shall not relieve the Contractor of his responsibility.

(i) The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the work. He shall take all necessary precautions for the safety of, and will provide the necessary protection to prevent damage, injury, or loss to all employees on the work and other persons who may be affected thereby, all the work and all materials or equipment to be incorporated adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation, or replacement in the course of construction. The Contractor shall erect and maintain, as required by the conditions and progress of the work, all necessary safeguards for safety and protection. The Contractor shall notify owners of adjacent utilities when prosecution of the work may affect them.

(j) In emergencies affecting the safety of persons or the work or property at the site or adjacent thereto, the Contractor, without special instructions or authorization from the PHA shall act to prevent threatened damage, injury, or loss. Federal Acquisition Regulation (FAR) clause 52.223-03, Hazardous Material Identification and Material Safety Data is hereby incorporated by reference into this contract as if fully re-written herein.

(k) Nothing in this paragraph relieves the contractor or his subcontractors from complying with all safety and health ordinances, regulations and requirements including but not limited to: OSHA, NIOSH, EPA, State Department of Health, 29CFR, Part 1926 and 1910. The contracting officer's right to stop work shall not be construed to mean that he nor any of the authority's employees have any obligation or liability for enforcing these ordinances or other safety practices.

10) Add the following to paragraph (a), Clause 16:

The Contractor shall maintain all lawns/sites within the area contracted for as described on the site plan. Lawns shall be cut a minimum of once every 10 days from March thru October. The Contractor shall also be responsible for the removal of all rubbish (exclusive of that in trash cans or CMHA dumpsters), debris limbs, leaves, etc., within the area.

11) Add the following to paragraph (f), Clause 27:

(1) Affidavits and releases are required for all payments. As a condition for the payment of any progress payment, the contractor shall have complied with all requirements of the Ohio Mechanic's lien statute and shall have submitted all affidavits and/or waivers and releases in the form specified by the owner.

(2) The contractor shall list any and all material men, suppliers and subcontractors on the affidavit. Separate releases and certificates shall be attached to the master affidavit for any persons or companies to which the contractor is obligated. CMHA is not responsible or liable for the contractor's omissions from the affidavits.

(3) CMHA reserves the right to issue two party checks to obligee and the prime contractor in order to resolve claims. CMHA also reserves the right to require paid-in-full affidavits and releases from all obligees prior to issuing payments when it is in the Authority's best interest to do so.

12) Add the following to paragraph (g), Clause 27:

(g) Stored material on or off the job site will not be taken into consideration in computing progress payments. The PHA will only pay for materials properly installed and in place according to these Specifications.

13) Add the following paragraph to Clause 29:

(k) In the event an equitable agreement cannot be reached between the contractor and CMHA, for additions to the scope of work, the CMHA reserves the right, but shall not be obligated, to obtain quotes from other contractors and to award contracts to others for the execution of the additional work according to paragraph 5 of these conditions. CMHA reserves the right, but shall not be contractor with subs, suppliers, manufacturers and others. This may include written invoices, bills of laden, shipping orders, and affidavits attesting to the costs submitted by the contractor to affect the change.

All Not To Exceed

	Overhead	Profit	Commission
To Contractor on work performed by other than its own forces -	-	-	5%
To first tier subcontractor on work performed by its subcontractor	-	-	5%
To Contractor and/or the subcontractor for that portion of the work performed with their respective forces	5%	10%	-

The remainder of the detail remains as published other than the provision that Part 31 of FAR (48CFR1.31) shall not be used in determining the allowable overhead and the percentage indicated above shall be used.

The Contractor shall submit with any proposal valued over $25,000, when requested by the PHA, a certification that:

1) The claim is made in good faith;
2) Supporting data are accurate and complete to the best of the Contractor's knowledge and belief; and the amount requested accurately reflects the contract adjustment for which the Contractor believes the PHA is liable.
3) Certification of Current Cost or Pricing Data as per FAR 15.804-4.

These certifications shall be signed by a senior company official in charge at the Contractor's location involved; or an officer or general partner of the Contractors having overall responsibility for the conduct of the Contractor's affairs.

The following Federal Acquisition Regulation (FAR) clauses are incorporated by reference and shall apply to this contract and any proposals submitted thereunder;

15.804-04 Certificate of Current Cost or Pricing Data
52.215-22 Price Reduction for Defective Cost or Pricing Data,
52.215-23 Price Reduction for Defective Cost or Pricing Data - Modifications,
52.215-24 Subcontractor Cost or Pricing Data,
52.215-25 Subcontractor Cost or Pricing Data - Modifications
52.230-03 Cost Accounting Standards

14) Add the following subparagraphs to Clause 36:

(d) Workers' compensation shall be required of all contractors and subcontractors regardless of number of employees and/or ownership.
(e) The amount of insurance to be carried by the contractor for Commercial General Liability with a combined single limit for bodily injury and property damage per occurrence will not be less than $500,000.
(f) The amount of insurance to be carried by the contractor for 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 per occurrence will not be less than $1,000,000.
(g) It shall be the responsibility of the contractor to verify with the PHA as to whether the PHA's insurance can be extended to cover the nonstructural additions and/or alterations. The contractor is obligated to provide insurance unless the PHA acknowledges in writing that its policy will be extended.

15) Add the following paragraphs to Clause 37

(f) The Contractor shall not contract with any proposed Subcontractor unless or until such entity has first been approved by the PHA. This approval does not constitute any responsibility of the PHA for the Subcontractor or its performance under this contract. The Contractor shall provide fully executed HUD Previous Participation Certificates, Form HUD - 2530, for each Subcontractor performing work on this contract with the Contractor's written request for approval. The Contractor shall allow a reasonable time for review of its request.

(g) The Contractor shall not permit lower-tier subcontracting without the expressed written approval of the PHA.

The general contractor shall first provide the PHA with written justification of any and all proposed lower-tier sub-contracting and shall demonstrate that any and all such endeavors are cost effective to the PHA.

16) Add the following to paragraphs to Clause 38:

(f) Participation

(1) It is the goal of Cincinnati Metropolitan Housing Authority to achieve 20% MBE, based upon the total contract amount.

Note: This is a goal of CMHA and not a requirement. (See paragraph 5 below)

(2) If MBE will be used the contractor must submit Form Attachment A - Minority Business Enterprise Certificate, which sets forth the minority firms that will participate in the completion of the work.

(3) In the event a contractor requests a waiver of the CMHA's goal for percentage of minority business enterprise participation of this contract, the contractor shall complete and submit to CMHA, MBE forms 1 and 2 or 3 as applicable (see forms) setting forth the efforts the efforts made to achieve such goals. A total of 20% MBE shall be accounted for either on Attachment A or on the MBE Forms 1,2 & 3.

(4) In the event a bidder fails to submit with the bid, Attachment A Minority Business Enterprise Certificate as provided in paragraph 2 above, CMHA will presume the contractor will have no minority business enterprise participation if awarded the contract. If MBE forms 1, 2 and 3 are not submitted as provided in paragraph 3 above, CMHA will presume the contractor has made no effort to secure minority business participation and may deem the bid to be non-responsive.

(5) CMHA will review the extent to which any proposed contractor has made reasonable efforts and taken the affirmative steps outlined in 24 CFR 85.36 (e) (2) in attempting to meet CMHA's goal for MBE participation in contracting. The failure of a proposed contractor to make reasonable efforts or comply with the affirmative steps, when possible, could be grounds for not considering that proposed contractor responsive in accordance with 24 CFR 85.36 (b) (8) and denying contract award. Such action would result not from

missing a goal, but non-compliance with the public policy requirement of affirmative action to increase MBE participation.

(g). Definitions

(1) The term "Minority Business Enterprise" or "MBE" means a business enterprise where fifty one percent (51%) or more of the profit and loss financial interest is held by person(s) in one or more of the basic racial and ethnic categories. These persons must have interests that are real and continuing and include proportionate control over management, interest in capital and interest in earnings. For this purpose minorities are of the basic racial and ethnic categories identified below:

a. American Indian or Alaskan Native means a person having origins in any of the original peoples of North America, and who maintains cultural identification through tribal affiliation or community recognition.

b. Asian or Pacific Islander means a person Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands. This area includes, for example: China, India, Japan, Korea, the Philippine Islands and Samoa.

c. Black means a person having origins in any of the black racial groups of Africa.

d. Hispanic means a person of Mexican, Puerto Rican, Cuban, Central or South America or other Spanish Culture or origin, regardless of race.

(2) The term "Minority Business Enterprise Joint Venture" means two (2) or more business enterprises that are jointly submitting a Bonafide bid for contracts and/or purchases in which fifty one percent or more of the total profit and loss financial interest is held by one or more minority business enterprise firm(s). These businesses must have interests that are real and continuing and include proportionate control over management, interest in capital and interest in earnings.

(3) The term "Non-minority Business Enterprise Joint Venture" means two (2) or more business enterprises that are jointly submitting a Bonafide bid for contracts and/or purchases in which fifty percent (50%) or less of the profit and loss financial interest is held by one or more minority principal(s).

(4) The term "Minority Principal" means the owner or partial owner of a business enterprise who is included in one or more of the basic racial and ethnic categories identified in Minority Business Enterprise - MBE above.

(5) The term "Stocking Supplier" means a supplier who maintains within it's inventory at least 20% of the materials and supplies to be invoiced for.

(6) The term "Non-stocking Supplier" means a supplier who does not maintain within its inventory at least 20% of the materials and supplies to be invoiced and less than an amount consistent with the average inventory of stocking suppliers within a reasonable market area.

(h) Procedure

In order for bidder or subcontractor(s) to attain the goal of expanding Minority Business Enterprise participation they shall utilize, when necessary, the following affirmative action steps:

(1) Bidder or subcontractor(s) shall send notices of procurement to those on minority contract/vendors mailing lists.

(2) Bidder or subcontractor(s) shall advertise within media that caters to minorities, i.e. journals, periodicals, newspapers, radio, television and other forms.

(3) Bidder or subcontractor(s) shall use the services available through private and public organizations to identify capable minority enterprises.

(4) Bidder or subcontractor(s) shall keep a record of those businesses that responded to a formally advertised solicitation for contract work.

(5) Bidder or subcontractor(s) shall maintain a record of any negotiations with minority businesses.

(6) Bidder or subcontractor(s) shall secure their own list of Minority Business Enterprises; however, the listing maintained by the Cincinnati Metropolitan Housing Authority shall be made available as requested by the bidder or subcontractors.

(i) Percentage Calculation

Percentage of the Minority Business Enterprise (MBE) participation will be determined by the Cincinnati Metropolitan Housing Authority in the following manner. This same procedure shall be used by the contractor in indicating percentages on Attachment A and MBE Forms 1, 2 & 3:

The MBE dollar amount for each subcontract and/or purchasing agreement (suppliers) identified in the bidder's "Minority Business Enterprise Certification" will be calculated as follows:

1) MBE CONSTRUCTION CONTRACTOR/SUBCONTRACTORS will be given credit for all labor, materials related to that labor, reasonable overhead and pro-fit.

   i. MBE STOCKING SUPPLIERS will be credited for the full amount in-voiced to the purchaser.

   ii. MBE NON-STOCKING SUPPLIERS will be credited with 5% of the full amount invoiced to the purchaser.

   iii. MBE JOINT VENTURES will be credited in the same manner as other MBE firms.

   iv. NON-MBE JOINT VENTURES will receive credit for the proportionate share of MBE participation within the joint venture in the same manner as other MBE firms.

2) The MBE dollar amount for all subcontract and/or purchase agreements (suppliers) will be added together.

3) The sum of item 2 above will be divided by the total bid price, and the quotient will be the MBE percentage.

The Cincinnati Metropolitan Housing Authority reserves the right to request satisfactory documentation of ownership and any portion thereof, of any bidder or business enterprise identified on the Minority Business Enterprise Certification. The responsibility of the timely submission of such documentation as may be required by CMHA is the sole responsibility of the bidder.

17) Clause 40 is modified as follows:

HUD Act of 1968, Section 3 has been revised effective August 1, 1994 and is hereby incorporated into this solicitation by reference and it is directly applicable to the contract. With the interest of complying with these regulations to the greatest extent feasible, the following requirements are hereby incorporated into the solicitation.

It is CMHA's goal that, at a minimum, 30 percent of new hires of the total aggregate construction workforce under contracts meeting the minimum financial criteria set forth in these requirements consists of Section 3 residents residing in Hamilton County. Residents who live in public housing will receive first priority for employment within the pool of qualified Section 3 residents. By signing the bid form, the bidder certifies that each entity undertaking a portion of the work to be performed under a particular bid shall take affirmative action in employment opportunities in order to meet CMHA's 30% Section 3 resident participation goal. The bidder further certifies that each entity undertaking a portion of the work to be performed under a particular bid is under no other contractual agreement or other disability that would prevent them from complying with the provisions set forth herein. As a part of the bid the Prime Contractor shall submit a Section 3 Plan for all awards. The plan must document action steps taken and the supporting results, to ensure employment opportunities for Section 3 residents equals 30 percent or more of new hires.

Prior to awarding a subcontract the Prime Contractor shall require a Section 3 Plan from each potential entity undertaking a portion of the work to be performed under the particular bid. The Section 3 Plans must be available for review by CMHA when the proposal is submitted. All reporting and inquiries shall be directed to the attention of the CMHA Section 3 Coordinator.

In order to assist CMHA, Contractors and Subcontractors in demonstrating compliance with these requirements, CMHA's Residents Service Division, will provide its database of Section 3 residents for interviewing purposes. This database includes addresses, skill sets and other relevant data for CMHA's residents that maybe beneficial for the purposes of hiring.

CMHA's Residents Service Department will also schedule "hiring halls", as necessary, at or near the construction location to provide opportunities for the prime contractor, subcontractors and CMHA residents to coordinate interviews. If the database or hiring hall does not provide a sufficient pool of qualified candidates, the Residents Service Division will work to recruit

additional candidates. This is a resource offered to the contractors, but they may also choose to recruit new employees independently that would satisfy the Section 3 requirements.

END OF SECTION

SMALL PURCHASE CONTRACT
GENERAL TERMS AND CONDITIONS

1. **INDEMNIFICATION**

Contractor hereby agrees to protect, defend, indemnify and hold harmless CMHA, its officers, employees, agents, and Board of Commissions from and against all losses, liabilities and any and all claims of whatever kind, nature or description which may be asserted or claimed against CMHA indemnities which arise from any act or omission of Contractor, its subcontractors, directors, officers and employees or results from any breach or violation by Contractor, its directors, officers, or employees. Contractor agrees, at its own expense, to pay the full cost thereof, including attorney's fees, if any, incurred by CMHA in defending any claim and shall pay any judgment rendered, with respect to the subject of the indemnity contained herein as well as any allegation of libel, slander, invasion of privacy, any failure to obtain any necessary release, permission or clearance, or any other cause of action or claim arising out of materials and elements provided for by Contractor under this Contract. Contractor will be liable, at all times, for damages or destruction of Contractor's equipment and materials, regardless of how such damage occurs. CMHA will be under no liability to reimburse Contractor for any such loss. If Contractor insures its equipment and material against physical loss of damage, then Contractor agrees to secure, if required in such insurance, a waiver of subrogation in favor of CMHA.

2. INSURANCE REQUIREMENTS

Contractor shall obtain and maintain at all times during the term of this contract, insurance in the following kinds and amounts:

A. Workers' Compensation Insurance as required by state statute and Employer's Liability Insurance covering all of Contractor's employees acting within the course and scope of this Contract.

B. Commercial General Liability Insurance covering premises operations, fire damage, independent contractors, products and completed operations, blanket contractual liability, personal injury, and advertising liability with minimum limits as follows:

1. $1,000,000 each occurrence;
2. $1,000,000 general aggregate;
3. $ N/A products and completed operations aggregate; and
4. $50,000 damage to premises and fire damage; and
5. $5,000 medical expenses for any one person.

If any aggregate limit is reduced below $1,000,000 because of claims made or paid, the Contractor shall immediately obtain additional insurance to restore the full aggregate limit and furnish to CMHA a certificate of insurance showing compliance with this provision.

C. Professional liability and/or "errors and omissions" coverage with minimum limits as follows:
   1. $1,000,000 each occurrence;
   2. $1,000,000 general aggregate.

   If any aggregate limit is reduced below $1,000,000 because of claims made or paid, the Contractor shall immediately obtain additional insurance to restore the full aggregate limit and furnish to CMHA a certificate of insurance showing compliance with this provision. This coverage is required for vendors who render observational services to the Authority such as appraisers, inspectors, attorneys, engineers, or consultants.

D. Automobile Liability Insurance with CMHA named as an additional insured with minimum limits as follows:
   1. $1,000,000 combined single limit;
   2. $50,000/$100,000 for vehicles utilized during the contract when not owned by the Contractor;
   3. $5,000 medical pay.

CMHA shall be named as additional insured on the Commercial General Liability Insurance policy. Coverage required of this Contract will be primary over any insurance or self-insurance carried by CMHA.

The Insurance shall contain provisions preventing cancellation or non-renewal without at least 45 days' notice to CMHA and stating that the carrier will waive all rights of recovery, under subrogation or otherwise, against CMHA, its office, agents, employees or Board of Commissioners.

Contractor shall provide certificates evidencing such coverage as required by this Contract to CMHA upon execution of this Contract and annually thereafter evidencing renewals thereof. At any time during the term of this Contract, CMHA may request, in writing, and the Contractor shall thereupon within 10 days supply to CMHA evidence satisfactory of compliance with the provision of this section.

3. GOVERNING LAW

This Contract must be governed and construed exclusively by its terms and by the laws of the State of Ohio and any suit filed to enforce any term of this Contract shall be filed only in a court of competent jurisdiction in Hamilton County, Ohio.

4. ASSIGNABILITY

The rights and obligations of Contractor are personal and may be performed only by Contractor. Contractor shall not assign any interest rights or obligations under this Contract without prior written consent of CMHA. Any purported assignment that does not comply with this provision is void. This Contract is binding upon and inures to the benefit of the parties and their respective permitted successors and assigns.

5. SEVERABILITY

If any provision of this Contract is determined by a court having jurisdiction to be unenforceable to any extent, the rest of the provisions of this Contract will remain enforceable to the fullest extent permitted by law.

6. FORCE MAJEUR

Neither party shall be liable for failure to perform if such failure is caused by conditions beyond its control including, but not limited to, Acts of God, Government restrictions (including the denial or cancellation of any export or other necessary license), wars, insurrections and/or any other cause beyond the reasonable control of the party whose performance is affected.

7. AMENDMENTS/MODIFICATIONS

Any amendments or modifications of this Contract must be made in writing and signed by all Parties.

8. WAIVERS

If either party does not seek compensation for breach or insist upon strict performance of any provision of this Contract, that Party is not prevented from seeking compensation or insisting upon strict performance for a future breach of the same or similar provision.

9. HEADINGS

The headings, titles, and captions in this Contract are inserted for convenience only and are in no way intended to describe, interpret, define, prioritize or limit the scope, extent, or intent of this Contract or any provision herein.

5. NONDISCRIMINATION

During the performance of this Contract, Contractor shall comply with all federal and state nondiscrimination laws, regulations and policies.

Further, Contractor agrees to both of the following:

A. That, in the hiring of employees for the performance of work under the contract or any subcontract, no contractor or subcontractor, by reason of race, color, religion, sex, age, disability or military status as defined in section 4112.01 of the Ohio Revised Code, national origin, or ancestry, shall discriminate against any citizen of this state in the employment of a person qualified and available to perform the work to which the contract relates;

B. That no contractor, subcontractor, or person acting on behalf of any contractor or subcontractor, in any manner, shall discriminate against, intimidate, or retaliate against any employee hired for the performance of work under the contract on account of race, color, religion, sex, age, disability or military status as defined in section 4112.01 of the Ohio Revised Code, national origin, or ancestry.

11. PRIVACY

Any Personal information collected, used, or acquired in connection with this Contract shall be protected against unauthorized use, disclosure, modification or loss. Contractor shall ensure that

its directors, officers, employees, subcontractors or agents use personal information solely for the purposes of accomplishing the services set forth herein. Contractor agrees not to release, divulge, publish, transfer, sell or otherwise make known to unauthorized persons personal information without express written consent of CMHA or otherwise required by law. Contractor agrees to indemnify and hold harmless CMHA for any damages related to Contractor's unauthorized use of personal information.

12. PUBLICITY

Contractor agrees to submit to CMHA all advertising and publicity related matter relating to this Contract wherein CMHA's name is mentioned or language used from which the connection of CMHA's name may, in CMHA's judgment, be inferred or implied. Contractor shall not publish or use such advertising and publicity matters without prior express written consent of CMHA.

13. CONFLICTS OF INTEREST

The Contractor warrants that to the best of its knowledge and belief and except as otherwise disclosed, it does not have any organizational conflict of interest with regard to this contract.

The Contractor agrees that if after award it discovers an organizational conflict of interest with respect to this contract or any task/delivery order under the contract, he or she shall make an immediate and full disclosure in writing to the Contracting Officer.

14. CONTRACTOR'S STATUS

It is understood that the Contractor is an independent contractor and is not to be considered an employee of CMHA, or assume any right, privilege or duties of an employee.

15. LIENS

The Contractor is prohibited from placing a lien on CMHA's property. This prohibition shall apply to all subcontractors.

16. WARRANTIES

Contractor warrants that its services and materials provided will be of good quality and consistent with the professional skill and care ordinarily provided by professionals performing the same or similar service and such services and materials shall be provided in accordance with generally accepted industry standards. At all times Contractor shall comply with all applicable federal, state and local laws, rules, regulations, ordinances and codes and obtain any licenses or permits required to provide the services under this Contract.

17. IDENTIFICATION

CMHA may provide ID Badges for all contractors working on CMHA Properties. Employees of the Contractor may be prohibited from entering CMHA property without proper identification.

18. EXECUTIVE REVIEW

This Contract shall be subject to the written approval of CMHA's authorized representative and shall

not be binding until so approved.

19. COMPENSATION AND PAYMENT

CMHA will pay Contractor within approximately 30 days of receipt of properly completed invoices or acceptance of deliverable, whichever is later. If a performance standard is not met, the invoice must reflect the appropriate deduction(s). Payment shall be contingent upon review and acceptance of the Contractor's Deliverables by CMHA. CMHA may, in its sole discretion, withhold payments claimed by Contractor for services rendered if Contractor fails to satisfactorily comply with any term or condition of this Contract. Invoices shall be sent to Finance, 1635 Western Ave., Cincinnati, OH 45214 or accounts.payable@cintimha.com.

20. CRIMINAL HISTORY CHECKS AND DRUG SCREENING TESTS

Contractor shall perform criminal history checks and drug screening tests on all prospective employees performing work under this contract and provide summaries of the results to CMHA PO upon request, at the sole expense of the Contractor. Prospective employees whose criminal history check discloses a misdemeanor or felony involving crimes of moral turpitude, sexual assault or harm to persons or property will not be employed to perform work under this contract. Contractor is required to perform drug screening of all employees and to ensure acceptable test results.

21. INVOICE AUDITS

CMHA reserves the right to audit invoices for parts. Contractor shall provide invoices for parts within three (3) days of request by CMHA. Failure to provide invoices may result in withholding of payment for such parts.

22. TRASH DISPOSAL

Contractor shall legally dispose of all litter, trash and debris accumulated as a result of the services under this contract at an offsite location. The use of CMHA dumpsters or trash receptacles is strictly prohibited.

23. SAFETY

Contractor (including any and all contract or subcontract employees, etc. incidental to this contract) is to be cognizant of safety at all times and take necessary safety precautions, so as not to cause harm to any persons or property while performing service or while on site. Extreme care shall be maintained around pedestrians and personal belongings.

24. DAMAGE

Contractor shall repair or replace, at the contractor's expense, any and all items damaged or destroyed due to contractor's negligence.

25. CHANGE IN PERSONNEL

CMHA shall retain the right to demand and receive a change in personnel assigned to the work if CMHA believes that such change is in the best interest of CMHA and the completion of the contracted work.

26. EXAMINATION AND RETENTION OF CONTRACTOR'S RECORDS.

CMHA, HUD, or Comptroller General of the United States, or any of their duly authorized representatives shall, until three 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.

27. ENERGY EFFICIENCY

The Contractor shall comply with all 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 this contract is performed.

28. 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.

29. RIGHTS IN DATA (OWNERSHIP AND PROPRIETARY INTEREST)

CMHA shall have exclusive ownership of, all proprietary interest in, and the right to full and exclusive possession of all information, materials and documents discovered or produced by Contractor pursuant to the terms of this Contract, including but not limited to reports, memoranda, drawings or letters concerning the research and reporting tasks of this Contract. For data other than computer software, the Contractor grants to CMHA and others acting on its behalf, a paid-up, nonexclusive, irrevocable, world-wide license in such copyrighted data to reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly by or on behalf of CMHA.

Rights in data is clarified by 2 CFR 200.315, Appendix II to Part 200—Contract Provisions for Non-

Federal Entity Contracts Under Federal Awards (F), and 37 CFR Part 401. Rights in Data refer to data and records which are the products produced under the contract and the only part in which CMHA has ownership rights. CMHA does not have rights in the existing software systems of the contractor.

30. TERMINATION FOR CAUSE AND FOR CONVENIENCE

A. CMHA may terminate this contract in whole, or from time to time in part, for CMHA's convenience, whenever CMHA determines that such termination is in its best interest, or the failure of the Contractor to fulfill the contract obligations (cause/default). CMHA shall terminate by delivering to the Contractor a written Notice of Termination specifying the nature, extent to which the performance of the work under this Contract is terminated, and effective date of the termination. Upon receipt of the notice, the Contractor shall: (1) immediately discontinue all services affected (unless the notice directs otherwise), and (2) deliver to CMHA all information, reports, papers, and other materials accumulated or generated in performing the contract, whether completed or in process.

B. If the termination is for the convenience of CMHA or when CMHA determined that such termination is in its best interest, CMHA shall be liable only for payment for services rendered before the effective date of the termination.

C. If the termination is due to the failure of the Contractor to fulfill its obligations under the contract (cause/default), CMHA may (1) require the Contractor to deliver to it, in the manner and to the extent directed by CMHA, any work described in the Notice of Termination including but not limited to all information, reports, papers, and other materials accumulated or generated in performing his contract whether completed or in progress; (2) take over the work and prosecute the same to completion by contract of otherwise, and the Contractor shall be liable for any additional cost incurred by CMHA; and (3) withhold any payments to the Contractor, for the purpose of set-off or partial payment, as the case may be, of amounts owned by CMHA by the Contractor. In the event of termination for cause/default, CMHA shall be liable to the Contractor for reasonable costs incurred by the Contractor before the effective date of the termination. Any dispute shall be decided by the Contracting Officer.

D. If after termination for failure to fulfill contract obligations (default), it is determined that the Contractor had not failed, the termination shall be deemed to have been effected for the convenience of CMHA.

31. PATENT RIGHTS

Both parties hereby agree to comply with HUD Bulletin 90-23, which is the (a) Notice of Assistance Regarding Patent and Copyright Infringement.

32. ORDER OF PRECEDENCE

The term "Contract Documents" shall include the documents listed in this Provision. Each of the Contract Documents is an essential part of the agreement between the Parties, and a requirement occurring in one is as binding as though occurring in all. The Contract Documents are intended to be complementary and to provide for the entire agreement. In the event of any conflict among the Contract Documents, the order of precedence shall be:

A. Applicable Federal and State of Ohio statutes and regulations

B. Form HUD-5370-C General Conditions for Non-Construction Contracts, Section II (With Maintenance Work)
C. This Agreement
D. The Request for Quotations, including all addenda and attachments
E. The Contractor's Fee Submission
F. Contractor's Response subject to any limitations set forth in this Agreement
G. Contractor form of Agreement, if applicable
H. Other Documents incorporated by reference (if applicable)

33. SECTION 3

A. The work to be performed under this contract is subject to the requirements of section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.
B. The parties to this contract agree to comply with HUD's regulations in 24 CFR part 135, which implement section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulations.
C. The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.
D. The contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR part 135.
E. The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR part 135.
F. Noncompliance with HUD's regulations in 24 CFR part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.
G. In the event of a determination by the Executive Director or his/her designee that the Contractor is not in compliance with the section 3 clause or any rule, regulation, or report submission requirements of the CMHA, this contract may be canceled, terminated, or suspended in whole or in part, and the Contractor may be declared ineligible for further CMHA contracts for a period of one to three years.

END OF SECTION

HUD 5370-EZ

General Contract Conditions for Small Construction/Development Contracts

General Contract Conditions for Small Construction/Development Contracts

U.S. Department of Housing and Urban Development
Office of Public and Indian Housing
OMB Approval No. 2577-0157 (exp. 3/31/2020)

Applicability. The following contract clauses are applicable and must be inserted into **small construction/development contracts, greater than $2,000 but not more than $150,000.**

1. Definitions

Terms used in this form are the same as defined in form HUD-5370

2. 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. The only liens on the PHA's property shall be the Declaration of Trust or other liens approved by HUD.

3. Disputes

(a) Except for disputes arising under the **Labor Standards** clauses, 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.
(b) 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.
(c) The Contracting Officer shall, within 30 days after receipt of the request, decide the claim or notify the Contractor of the date by which the decision will be made.
(d) 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 days after receipt of the Contracting Officer's decision.
(e) The Contractor shall proceed diligently with performance of this contract, pending final resolution of any request for relief, claim, appeal, or action arising under or relating to the contract, and comply with any decision of the Contracting Officer.

4. 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 the 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; and
  (2) The Contractor, within 10 days from the beginning of such delay 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 obligation of the parties will be the same as if the termination had been for convenience of the PHA.

5. 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.

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

(3) Automobile Liability on owned and non -owned motor vehicles used on the site(s) or in connection therewith for a combined single limit for bodily injury and property damage of not less than $ _____ [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.

7. 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.

8. 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.

9. Examination and Retention of Contractor's Records

The HA, HUD, or Comptroller General of the United States, or any of their duly authorized representatives shall, until three 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.

10. Rights in Data and Patent Rights (Ownership and Proprietary Interest)

The HA shall have exclusive ownership of, all proprietary interest in, and the right to full and exclusive possession of all information, materials, and documents discovered or produced by Contractor pursuant to the terms of this Contract, including but not limited to reports, memoranda or letters concerning the research and reporting tasks of this Contract.

11. Energy Efficiency

The Contractor shall comply with all 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 this contract is performed.

12. 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.

13. Training and Employment Opportunities for Residents in the Project Area (Section 3, HUD Act of 1968; 24 CFR 135)

(a) The work to be performed under this contract is subject to the requirements of section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.

(b) The parties to this contract agree to comply with HUD's regulations in 24 CFR Part 135, which implement section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the Part 135 regulations.

(c) The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the

qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.

(d) The contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR Part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR Part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR Part 135.

(e) The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected but before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR Part 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR Part 135.

(f) Noncompliance with HUD's regulations in 24 CFR Part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.

14. Labor Standards - Davis-Bacon and Related Acts

(a) Minimum Wages.

(1) All laborers and mechanics employed under this contract in the construction or development 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 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 the 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 prime Contractor is responsible for the submission of copies of payrolls by all subcontractors. (Approved by the Office of Management and Budget under OMB Control Number 1214-0149.)

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

(A) That the payroll for the payroll period contains the information required to be maintained under paragraph (c)(1) of this clause and that such information is correct and complete;

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

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

(iii) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirements for submission of the "Statement of Compliance" required by subparagraph (c)(2)(ii) of this clause.

(iv) The falsification of any of the above certifications may subject the Contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 3729 of Title 31 of the United States Code.

(3) The Contractor or subcontractor shall make the records required under subparagraph (c)(1) available for inspection, copying, or transcription by authorized representatives of HUD or its designee, the Contracting Officer, or the Department of Labor and shall permit such representatives to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

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

(e) 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.

(f) 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.

(g) 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.

(h) Contract Termination; Debarment. A breach of the labor standards clauses in this contract may be grounds for termination of the contract and for debarment as a Contractor and a subcontractor as provided in 29 CFR 5.12.

(i) 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.

(j) 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.

(k) 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.

(l) 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.

(m) Non-Federal Prevailing Wage Rates. Any prevailing wage rate (including basic hourly rate and any fringe benefits), determined under State 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:

(i) 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;

(ii) 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

(iii) an applicable trainee wage rate based thereon specified in a DOL-certified trainee program.

In 2012, CMHA implemented its motto "Being an Asset to Hamilton County" in addition to establishing Gold Performance Standards which consist of the principles and values by which the Agency performs and how our partners, vendors, contractors and consultants are measured. **The Gold Performance Standards are: Respect, Timely, Exceptional, Initiative, Excellent, Quality, Accurate, Integrity, Value, Creativity, Accountability and Professionalism.**

It is CMHA's intent to procure Contractors that share these standards and can clearly demonstrate the services they can provide CMHA that no other contractor can offer.

It's very imperative that our partners, vendors, contractors and consultants abide by these standards that has been establish.

qP 10 – Fire Protection – Existing Wet-Pipe Sprinkler System Modifications

Job Number: TP19-024-010

Job Name: City West Retail, White Box Build-Out, Deli + Juicery

Subcontractor:

Commitment #: TBD

Scope of Work: Fire Protection – Existing Wet-Pipe Sprinkler System Modifications

GENERAL PROJECT SUMMARY

This project is tax-exempt. CMHA will provide certificate to awarded contractor and/or subcontractor.

WORKING HOURS: Working hours for this project are established as 8:00 AM to 4:30 PM Monday through Friday. If contractors and/or subcontractors desire to work outside of these hours, prior approval must be granted by CMHA Project Manger. Contractors and/or subcontractors shall be expected/permitted to work Saturday or Federal Holidays as necessary to maintain the progress of the construction schedule.

PROGRESS PAYMENTS: The PHA (Public Housing Authority) shall pay the contractor service fee as indicated on invoice. The PHA shall make shall make progress payments every 30 days as the proceeds, on estimates (invoices) of work accomplished (completed) which meets the standards of quality established under contract, as approved by CMHA Project Manager.

FINAL PAYMENT: Contractors and/or subcontractors is complies and submit it's completed punch list, provide close-out documents, spare parts (if applicable), O & M manuals, warranties, etc. upon completion of work.

Subcontractor is to provide a 1 year warranty for all work performed, stating on the day the certificate of occupancy is issued. This 1 year warranty must be officially submitted to CMHA Project Manager at the end of the project on company letterhead.

All non-registered vendor are required to complete CMHA's vendor registration packet that can be found at www.citimha.com, under business opportunities tab, vendor registration.

This project is subject to CMHA Section 3 program. The contractor is to abide by CMHA Section 3 rules and requirements. All forms and related documents within this packet related to CMHA Section 3 program must be completely filled-out and submitted with quote.

INSURANCE REQUIREMENTS: General Contractor and/or Subcontractor shall and maintain at all times during the term of this contract and project duration, insurance in the following kinds and amounts:

a) **Workers' Compensation Insurance** as by state statute and Employer's Liability Insurance covering all of Contractor's employees acting within the course and scope of this project.

b) **Commercial General Liability Insurance** covering premises operations, fire damage, independent contractors, products and completed operations, blanket contractual liability, personal injury, and advertising liability with minimum single limit of $1,000,000.

c) **Automobile Liability Insurance** covering any auto with minimum single limit of $1,000,000.

CMHA shall be named as additional insured on the Commercial General Liability Insurance policy. Coverage required of this contract will be primary over any insurance or self-insurance carried by CMHA.

The insurance shall contain provisions preventing cancellation or non-renewal without at 45 days notice to CMHA and stating the carrier will waive all rights of recovery, under subrogation or otherwise, against CMHA, it office, agents, employees or Board of Commissioners.

Contractor and/or subcontractor shall provide certificates evidencing such coverage as required by this Contract to CMHA upon execution of this Contract and annually thereafter evidencing renewals thereof. At any time during the term of this Contract, CMHA may request, in writing, and the Contractor and/or subcontractor shall thereupon within 10 days supply to CMHA evidence satisfactory of compliance with the provision of this section.

Contractor and/or subcontractor must submit their insurances when submitting quote.

PERMITS & FEES: CMHA will obtain the General Building permit. Contractor and/or subcontractor shall apply and obtain all required permit(s) that is associated with their scope of work/construction activities. Which are but not limited to:

a) Electrical
b) HVAC
c) Plumbing
d) Fire Protection

The contractor shall perform all tests, adjustments, etc. as required on all new installed devices. The equipment and devices are to be 100% operable/functional after installation.

All CMHA CONSTRUCTION jobsites are TOBACCO FREE. All smoking, dipping, chewing, etc. must be done off site, in area Please inform your smoker(s) crew(s), as this will be enforced.

Maintain cleanliness of roadways to the satisfaction of CMHA Project Manager, neighborhood, and local authorities for the duration of your work on site. Contractor and/or subcontractor is responsible for cleaning dirt/debris from road if it is caused by their crew, equipment, trucks, etc. If dirt/debris is tracked onto the road and not cleaned by end of the work, CMHA Project Manager will have clean and back charge contractor and/or subcontractor. Reasonable notification will be given to allow cleaning prior to assuming responsibility of cleaning.

Keep construction site clean on a daily basis. All un-used construction material and personnel trash (i.e. lunch bags, wrapper, bottles, cans, etc.) shall be remove from site at the end of each workday. Contractor and/or subcontractor are prohibited from using any dumpsters and/or toters that are on site. If the job site is not in a neat and orderly condition, then all contractors and/or subcontractors on the jobsite will be responsible to pay for the cost plus fee to have a third party contractor make the job site clean, neat and orderly.

All material and workmanship shall comply with the latest/current edition including all addendums of the national codes, state and local, as well as other regulations that apply to such work.

All work shall be performed by OSHA regulations and standards. All safety issues are to be corrected and paid for by this subcontractor.

Hard hats, work boots, protective eyewear and gloves are required for all personnel on-site.

All deliveries and staging of materials must be coordinated with the CMHA Project Manager.

Proactive thinking and coordination with CMHA Project Manager and other subcontractors is expected and required throughout this project.

STORAGE: The contractor may store materials, tools and equipment on site as instructed by the owner. It will be the contractor's responsibility to protect and secure all materials, tools and equipment stored on the site. CMHA assumes no liability for these material, tools and equipment that may become missing and/or damaged.

All work to be in compliance with the contract documents (plans and specifications).

Provide accurate As-Built drawings (if applicable).

All materials and equipment must conform and be installed to the manufacturer's recommendations.

Any functioning system turned off or disconnected during the day must be put back in service by the end of the workday. Workday is to be considered day or evening shift depending on where the work is taking place.

THE CONTRACTOR IS RESPONSIBLE FOR COMPREHENDING THE SPECIFICATIONS, PLANS AND BECOMING FAMILIAR WITH THE SITE LOCATION WHERE WORK IS TO BE PERFORMED. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING/COMPLETING ALL THE WORK IN THE SPECIFICATIONS AT HIGH STANDARDS. IT IS URGENT THAT THE CONTRACTOR READS THE SPECIFICATIONS AND PLANS THOROUGHLY. ALL WORK IS TO BE DONE IN A PROFESSIONALLY MANNER/LEVEL.

Contractor and/or subcontractor is responsible for the examination of the existing job conditions to determine if any modifications/alterations is needed as it may effect his own work and verifying all existing conditions, dimensions, distances, elevations, clearances, depth, height, material type, etc. that is associated with their scope and base their quote and work on verified conditions. Report substantial discrepancies to CMHA Project Manager immediately, prior to submitting quote. **NO EXTRAS WILL BE ALLOWED FOR EXISTING CONDITIONS.**

Removal or cutting of structural members is not permitted. Consult with CMHA Construction Manager regarding repair or removal of structural items.

The drawing dimensions are plus/minus. **Do not scale the drawing-dimensions.** Dimensions on the drawings will precedence over scaled dimensions. The drawings are diagrammatic and show the general intent of the work. They are not intended to show every offset, component, location, etc.

The contractor is required to have at least one person in charge and on site during the duration of the project. This person shall be familiar with the project scope and daily construction activities and other persons in the work area and shall remove debris that may obstruct passage or otherwise present a danger to other trades.

FIRE PROTECTION SUMMARY

Provide all labor, material, equipment, supplies, supervision, inspections, manufacturer's warranty and permits to perform the modifications to the existing wet-pipe sprinkler system work for White Box Build-Out, Deli + Juicery project in Cincinnati, Ohio.

Specifications directly applicable to this scope of work:

Division 21 – 210500, Common Results for Fire-Suppression
21053, Submittals for Fire-Suppression
210517, Sleeves & Sleeve Seal for Fire-Suppression
210518, Escutcheons for Fire-Suppression Piping
211313, Wet-Pipe Sprinkler System

Project Scope of Work Description: Existing Wet Pipe Sprinkler System Modifications

Work includes but not limited to: Modify the existing wet-pipe sprinkler system for new space layout in accordance with all applicable codes. Sprinkler contractor shall provide any and all drawings and calculations necessary to obtain required permit. System design shall conform to requirements of NFPA 13, city and state.

SECTION 210500 - COMMON WORK RESULTS FOR FIRE-SUPPRESSION

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 general requirements for fire-suppression systems.

B. Examine the drawings, specifications, and visit the site prior to submitting a bid.

C. The base bid shall include furnishing all materials, labor, tools, equipment and installation of all work required to install complete fire-suppression systems as outlined in Division-21.

D. Products and Topics in this Section Include:
1. Definitions.
2. Submittals.
3. Supplemental Engineering Services.
4. Interpretation of Documents.
5. Electronic Files.
6. Quality Assurance.
7. Performance Qualifications.
8. Performance Requirements.
9. Permits and Fees.
10. Warranty (Period of Correction).
11. Record Drawings.
12. Dielectric fittings.
13. Fastener systems.
14. Manufacturers.
15. Coordination of Fire-suppression Work.
16. Interruption of Utilities.
17. Damage by Leakage.
18. Emergency Repairs.
19. Phasing.
20. Supervision and Workmanship.
21. Locations and Inspection of Site
22. Product Delivery, Storage, and Handling.
23. Substitutions.
24. Explanation and Precedence of Drawings and Specifications
25. Cutting, Patching, and Demolition.
26. System Tests.
27. Cleaning Premises.
28. Maintenance, Operation Instructions, Etc.
29. Project Site Safety
30. Work in Existing Spaces.

3.1. Fire Alarm Work Related to Fire-suppression Systems.
3.2. Architectural Coordination Items

1.3 DEFINITIONS

A. Acceptance Testing Authorities (ATA): The individuals and/or business entities that participate in Acceptance Testing and report to the Owner when work appears to be compete. These parties represent the interest of the Owner.

B. Authority Having Jurisdiction (AHJ): The governmental agency or sub-agency having authority over the construction process and having the ultimate authority to enforce, uphold and rule on codes and safety compliance at the project site.

C. Contractor: The entity(s) contractually responsible for performing work of this Division.

D. Wherever the words "Site," "Project Site," or "Premises" appear in these specifications or related drawings, it shall be interpreted to mean real estate, buildings and structures where work shall be performed and where products shall be installed and reside.

E. Commissioning Authority: An agent of the Owner, often independent of the design team, responsible for ensuring compliance with the Owner's project intent. The commissioning authority represents the interest of the Owner.

F. Contractor of Record: A business entity entering into a contract for any element of work defined in the Project Documents directly with the Owner, directly with the Construction Manager or directly with a General Contractor.

G. Designer: The Consultant(s) representing the Owner and directly responsible for specification of work within this Division, including related drawings. The Designer may or may not be affiliated with the architectural or an engineering firm of record for the Project. The Designer is a member of the project Design Team.

H. Furnish: To supply product or labor (context dependent) including associated shipping, storage, travel, lodging, miscellaneous and warranty expenses.

I. Install: To supply labor, tools and incidental materials necessary to handle, store, mount, terminate, program, configure and adjust a product in order to fulfill the requirements of the Project.

J. Provide: To furnish and install, inclusive of accessories, modules, and ancillary items necessary to render the respective product and system fully operational and usable to the Owner for the intended purpose.

K. Substantial Completion Division 21 only:
1. The point in the Project where work of this Division that occurs at the project site has been completed. For work to be substantially complete, the following must be valid:
   a. Products have been delivered and installed at the project site, and;
   b. Systems have been installed, tested, adjusted and are operational for their intended purpose, and;

c. Products have been labeled in accordance with the Contract Documents, and;
d. Systems are performing in accordance with the design intent, and;
e. Systems have been demonstrated to the Owner as complete and working.

L. Supply: Used interchangeably with "furnish." See "Furnish."

M. This Division: This Section and each specification section beginning with the same two digit number.

N. Work: The supply of products, materials, labor, incidentals and services necessary to fulfill the requirements of the Project.

1.4 SUBMITTALS

A. General:
1. Comply with Section 21 05 03.00 "Submittals for Fire-Suppression."

B. Product Data (PD):
1. Provide product datasheets for all fire-suppression materials, components, valves, devices, and equipment. Include rated capacities, operating characteristics, electrical characteristics, and furnished specialties and accessories

C. Shop Drawings (SD), Delegated-Design Submittal: For fire-suppression systems in compliance with performance requirements and design criteria, all applicable codes, the authority having jurisdiction, and NFPA guidelines. Shop Drawings and associated hydraulic calculations shall be signed and sealed by the qualified professional engineer responsible for their preparation.
1. Include plans, elevations, sections, and attachment details.
2. Include water flow test data and calculations on the drawings.
3. Coordination Drawings: Sprinkler systems, drawn to scale, on which the following items are shown and coordinated with each other, using input from installers of the items involved:
a. Items penetrating finished ceiling include the following:
1) Lighting fixtures.
2) Air outlets and inlets.
b. Coordinate with all equipment, piping, conduit, ductwork, from other contractors.

D. Closeout Submittals (CO):
1. Provide operation and maintenance manuals for all fire-suppression components, valves, devices, and equipment.
2. Field Test Reports and Certificates: Indicate and interpret test results for compliance with performance requirements and as described in NFPA. Include "Contractor's Material and Test Certificate for Aboveground Piping."

1.5 SUPPLEMENTAL ENGINEERING SERVICES

A. In the event that the Designer is required to provide additional services as a result of Contractor errors, omissions or failure to conform to the requirements of the Contract Documents, or if the Designer is required to examine and evaluate any changes proposed by the Contractor solely for the convenience of the Contractor, then the Designer's expenses in connection with such

additional services shall be paid by the Contractor and shall be deducted from any monies owed to the Contractor or billed separately, solely at the discretion of the Designer. Billable rates are the Designers standard rates, up to a maximum of $150 per man-hour.

1.6 INTERPRETATION OF DOCUMENTS

A. In the event of inconsistencies or conflict within or between the Contract Documents, provide the better quality, more costly or greater quantity of Work and comply with the more stringent requirements. Seek the direction of the Architect, Engineer or Designer for clarification of conflicts as soon as a conflict is identified.

1.7 ELECTRONIC FILES

A. Drawings for this project were prepared using AutoCAD software. Electronic files are available upon request for use by the successful contractor{s) for planning, coordination and installation.

B. There will be no charge for drawing files that were prepared using AutoCAD. These files will be available in the version in which they were created.

C. The Request Drawings form can be accessed, filled out and submitted at the following internet address {scroll down to bottom of home page): http://www.klhenqrs.com.

1.8 QUALITY ASSURANCE

A. General: Refer to Division 1 Sections for general administrative/procedural requirements related to compliance with codes and standards.

B. Application: It is a general requirement that mechanical work comply with applicable requirements and recommendations of standards published by listed agencies and trade associations, except to extent more detailed and stringent requirements are indicated or required by governing regulations.

C. Listing of Associations, Standards and Abbreviations Specific to Fire Suppression Work {in addition to standards specified in individual work sections), confonn to following applicable standards:

1. AWS American Welding Society, Inc.
2. AWWA American Water Works Association, Inc.
3. EPA Environmental Protection Agency
4. FM Factory Mutual System
5. NIST National Institute for Standards and Technology
6. NEC National Electrical Code by NFPA
7. NFPA National Fire Protection Association
8. OSHA Occupational Safety and Health Administration (U.S. Department of Labor)
9. UL Underwriter's Laboratories, Inc.

D. Specifications

1. Specifications shall be interpreted in connection with the drawings hereinbefore described, and if anything is shown on drawings and not mentioned in the specifications, or

vice versa, it is to be included in the work the same as though clearly set forth by both.

2. Furthermore, all materials and labor previously required to fully complete the work shall be included in the work even though each item necessarily involved be not specifically mentioned or shown. Such work and/or materials shall be of the same grade and quality as the parts actually specified and shown. Should there be a conflict between the plans and specifications, the greater quantity or better quality shall be furnished.

E. Plans
1. Plans are diagrammatic indicating required size, points of termination of piping and suggested routes. However, it is not intended that drawings indicate all necessary offsets. Install piping in such manner as to conform to the structure, avoid obstructions and preserve headroom.
2. Coordination Drawings: Provide coordination drawings and attend meetings as required to make sure all disciplines are coordinated and fit into specified spaces (i.e. ceilings, chases, and all others). The elevations of all disciplines shall be clearly marked throughout the drawings so that no interferences occur. Drawings shall depict actual clearances of installed equipment, penetration locations and service clearances. Indicate scheduling, sequencing, movement and positioning of large equipment during construction. Indicate where space is limited for installation and access and where sequencing and coordination of installations are of importance to the efficient flow of the work. Conflicts in equipment and materials shall be corrected prior to installation.
3. All piping shall be run as straight as possible and symmetrical with architectural items.
4. Piping shall be concealed in pipe shafts, pipe spaces, and furring wherever possible.
5. Piping fabricated before coordination with the other trades will be done at one's own risk.

F. Installer's Qualifications: Firm with at least three (3) years of successful installation experience on projects with work similar to this project and meet applicable regulatory agencies requirements.

G. Compatibility: Provide products which are compatible with other products of the mechanical work, and with other work requiring interface with the mechanical work. Provide products with the proper and correct power characteristics, fuel-burning characteristics and similar adaptations for this project. Coordinate the selections from among options (if any) for compatibility of products.

H. Electrical Characteristics for Fire-Suppression Equipment: Equipment of higher electrical characteristics may be furnished provided such proposed equipment is approved in writing and connecting electrical services, circuit breakers, and conduit sizes are appropriately modified. Additional costs to other contractors as a result of providing equipment with higher electrical characteristics shall be the responsibility of the contractor making the substitution. If minimum energy ratings or efficiencies are specified, equipment shall comply with those requirements.

1.9 PERFORMANCE QUALIFICATIONS

A Installer's Qualifications: Firm with at least five (5) years of successful installation experience on projects with work similar to this project and meet applicable regulatory agencies requirements.

8. Compatibility: Provide products which are compatible with other products of the mechanical work and with other work requiring interface with the mechanical work. Provide products with

the proper or correct power characteristics, fuel-burning characteristics and similar adaptations for this project. Coordinate the selections from among options (if any) for compatibility of products.

C. Welding: Qualify procedures and personnel according to ASME Boiler and Pressure Vessel Code: Section IX.

D. Steel Support Welding: Qualify processes and operators according to AWS D1.1, "Structural Welding Code--Steel."

E. Steel Pipe Welding: Qualify processes and operators according to ASME Boiler and Pressure Vessel Code: Section IX, "Welding and Brazing Qualifications."
   1. Comply with provisions in ASME 831 Series, "Code for Pressure Piping."
   2. Certify that each welder has passed AWS qualification tests for welding processes involved and that certification is current.

F. Electrical Characteristics for Fire Protection Equipment: Equipment of higher electrical characteristics may be furnished provided such proposed equipment is approved in writing and connecting electrical services, circuit breakers, and conduit sizes are appropriately modified. If minimum energy ratings or efficiencies are specified, equipment shall comply with requirements.

1.10 PERFORMANCE REQUIREMENTS

A. Examine all Mechanical, Electrical, Architectural, Site and Structural Drawings, and available soil reports. Visit site and become acquainted with all conditions which may affect execution of work.

B. Provide all work in accordance with State and Local Codes, Regulations and/or Ordinances, and meet approval of authorities having jurisdiction. Provide only new material and as specified.

C. Furnish to the owner, with a copy to the owner a Certificate of Final Approval from governing authority prior to owner's final acceptance, where applicable.

D. General Outline: The facilities and systems of the mechanical work include all Division 21 Sections.

E. Design supports for multiple pipes capable of supporting combined weight of supported systems, system contents, and test water.

F. Design equipment supports capable of supporting combined operating weight of supported equipment and connected systems and components.

1.11 PERMITS AND FEES

A Unless specifically described differently in another front-end specification section, all permits and fees of every nature required in connection with this work shall be obtained and paid for by contractor, including installation fees and similar charges.

B. Laws and regulations which bear upon or affect the various branches of this work shall be complied with.

C. All work which laws require to be inspected shall be submitted to the proper public officials for inspections and certificates of final approval must be furnished to the Owner before final acceptance will be given by the Engineer.

1.12 WARRANTY {PERIOD OF CORRECTION)

A Where not specifically listed within each specific specification section, products and workmanship shall be covered by the Contractor for a period of {1) year from the date of Substantial Completion.
1. Supplied products with manufacturer's warranties of less than the warranty term shall be extended and warranted by the Contractor for the full specified warranty term.
2. Supplied products featuring a standard manufacturer's warranty whose term extends beyond the Contract Warranty term shall be facilitated by the Contractor for the full duration and under the terms and conditions of the manufacturer's warranty.

B. The Warranty supplied shall be a full "System Warranty" that covers workmanship and products and includes coverage of onsite and off-site labor and related personnel transportation and product shipping expenses.
1. During this period, the Contractor shall remedy {at no cost to the Owner) any problem with the system, or any of its related components that is the result of defective materials, equipment settings, workmanship, or loss of programming.

C. Individual sections of this Division may feature more stringent requirements than those set forth in this Section. The most stringent of these requirements shall apply.

D. Warranty work shall be performed at the Contractor's expense and to the satisfaction of the Owner.

E. Incomplete work discovered after assertion of work completion is not subject to the {1) year warranty limit and shall be performed upon discovery over the life of the facility(s).

F. Response Requirements:
1. During the Warranty Period, the Contractor shall:
a. Respond by phone within four (4) business hours of notice by the Owner of a problem, and;
b. Supply qualified personnel onsite within one {1) business day to begin remediation of the problem, if the problem cannot be remediated over the phone in less time, and;
c. Supply "on-call" emergency response service labor (at the request and authorization of the Owner) at an hourly rate that does not exceed the Contractor's published emergency service rates, or two-times the Contractor's standard hourly rate, whichever is lower.

1.13 RECORD DRAWINGS

A. Provide and maintain on the work site 1 complete set of Record Drawings for the Division 21 work. Carefully record on this set of drawings all work including fixtures, equipment, piping, fittings, components, etc which is installed differently from that indicated on the Drawings; locate dimensionally from fixed points all buried piping including depths relative to finish floor or finish grade elevations as applicable. The depth shall also be indicated for all plugged wyes, tees and capped lines. Mark all changes of location of piping, fixtures and equipment in accordance with Division 1 Sections.

B. All existing lines discovered shall be indicated on these Drawings and located dimensionally from fixed points along with depths, if buried.

C. The Record Drawings shall be continuously kept up-to-date and shall be available for inspection anytime during normal working hours.

D. At completion of the work, provide a neat and legible reproducible set of the Record Drawings, which shall be individually signed and dated by the Contractor and Project Supervisor as to their accuracy.

E. Such drawings shall be submitted to for acceptance and approval to the Owner before a final certificate of acceptance will be issued.

1.14 INTERIM LIFE SAFETY WORK

A. Provide interim fire protection (sprinkler) work in all demolition and construction areas for full code coverage. Further definition will be provided in field if required.

PART 2 - PRODUCTS

2.1 DIELECTRIC FITTINGS

A. Dielectric fittings shall be provided where two materials of different types of metal connect or come in contact with each other.

2.2 FASTENER SYSTEMS

A. Powder-Actuated Fasteners: Threaded-steel stud, for use in hardened portland cement concrete with pull-out, tension, and shear capacities appropriate for supported loads and building materials where used.

B. Mechanical-Expansion Anchors: Insert-wedge-type stainless steel, for use in hardened portland cement concrete with pull-out, tension, and shear capacities appropriate for supported loads and building materials where used.
   1. Coordinate subparagraph and list below with Part 2 "Manufacturers" Article. Retain "Available" for nonproprietary and delete for semiproprietary specifications.

C. Manufacturers:
1. Hilti, Inc.
2. B-Line Systems, Inc.; a division of Cooper Industries.
3. ITW Ramset/Red Head.
4. Masterset Fastening Systems, Inc.
5. MKT Fastening, LLC.
6. Powers Fasteners.
7. Empire Fastening, LLC

PART 3 - EXECUTION

3.1 MANUFACTURERS

A. Provide products from manufacturers regularly engaged in the manufacture of products of quality, types and sizes required; and which have been in satisfactory use of not less than four (4) years in similar service, except as otherwise noted in specific sections of this division.

3.2 COORDINATION OF FIRE-SUPPRESSION WORK

A. Refer to Division 1 Sections for general coordination requirements applicable to entire work. The contract documents are diagrammatic in showing certain physical relationships which must be established within mechanical work, and in its interface with other work, including utilities, control and electrical work.

B. Arrange fir-suppression work in a neat, well organized manner, with piping and similar services running parallel with primary lines of the building.

C. Give right-of-way to piping which may slope for drainage.

D. Locate operating and control equipment properly to provide easy access, and arrange entire fire-suppression work with adequate access for operation and maintenance.

E. Advise other trades of openings required in their work for the subsequent move-in of large units of fire-suppression work (equipment).

3.3 INTERRUPTION OF UTILITIES

A This project includes elements of work that will require disconnection and modification of existing systems, with resultant outages. These episodes must be strictly limited and controlled. No outage affecting any portion of the existing facilities will be allowed without specific written authorization by the Owner.

B. The Contractor shall schedule and coordinate all interruptions of utilities with the applicable utility provider and the Owner within 20 working days after award of contract. At least 3 working days prior to the interruption, the Contractor shall submit to the Owner a schedule request indicating the proposed date, time and duration of interruption, the work to be accomplished, the area(s) that will be affected and a proposed contingency plan to be followed in the event that

normal services or facilities cannot be restored on schedule. Do not commence with the work until the Owner has approved the time, date and contingency in writing.

C. Provide all labor, materials, equipment and personnel necessary to restore services on a contingency basis should normal service of facilities not be restored on schedule.

3.4 DAMAGE BY LEAKAGE

A The Contractor shall be responsible for damage to the grounds, walks, roads, buildings (including walls, floors and ceilings), piping systems, mechanical and electrical systems (and their related equipment and contents) caused by leakage in the piping systems being installed or having been installed herein. The Contractor shall repair all damage caused at no additional cost to the Owner. All repair work shall be performed as directed by the Owner.

3.5 EMERGENCY REPAIRS

A The Owner reserves the right to make emergency repairs as may be required to keep equipment in operation without voiding the Contractor's guarantee bond or relieving the Contractor of his responsibilities.

3.6 PHASING

A General: Where the scope of work dictates that the project shall be constructed in phases, all costs shall be included for any temporary work required so that previous phases can be operational while construction is being done to adjacent spaces.

3.7 SUPERVISION AND WORKMANSHIP

A Workmanship throughout shall conform to the standards of best practice and all labor employed must be competent to do all the work required.

B. Furnish the services of an experienced superintendent to be in constant charge of the work at all times.

C. Quality Assurances: If requested, provide documentation that confirms the ability to perform all work to be included under the contract. Assurance if requested, shall be in the form of a list of past projects of similar size and complexity and a list of six (6) references pertaining to those projects. Failure to demonstrate these quality assurances shall be taken as a statement of inability to perform.

D. A minimum of five (5) years experience in the installation of fire-suppression systems similar to the systems specified is required.

E. Core Drilling: Use core drills rather than percussion type equipment for making holes in concrete. All percussion type drilling including hammer drills must be scheduled through owner's representative.

F. Inspection: Provisions shall be made for owner's representative to make rough-in and open ceil-

ing inspections prior to covering up work.

3.8 LOCATIONS AND INSPECTION OF SITE

A. The Contractor shall fully familiarize himself regarding any and all peculiarities and limitations of the spaces available for the installation of all work and materials furnished and installed under this Contract. Coordinate with all other trades in advance of the work, requirements for openings, recesses and chases in the walls, partitions, equipment housekeeping pads, framing or openings, requirements for servicing equipment and routing of piping relative to each trade to alleviate conflicts. Should furnishing this information be neglected, delayed or incorrect and additional cutting is required, the cost of it shall be borne by the Contractor. Nothing in this paragraph shall be construed to relieve the Contractor of the responsibility for providing and paying for the required core drillings and openings in existing work.

B. Diagrammatic indications on the Drawings are:
1. Approximate only.
2. Shown distorted at various locations.
3. Possibly moved for visual clarity.

C. Exact locations shall:
1. Be required for proper installation in available space.
2. Be as required to preserve the required space for the servicing of equipment and components.
3. Avoid interference with Architecturaland Structural features and the work of all other trades.
4. Be coordinated with the work of all other trades toward the general purpose of having the work progress rapidly and smoothly with a minimum interference between one trade and another.
5. Preserve headroom and keep openings and passageways clear.
6. Conceal all piping above ceilings, in walls, pipe shafts, pipe spaces and furring whenever possible.

D. Include a neat, orderly arrangement of piping symmetrical to building lines, light and tile patterns and other building elements. Any deviations not shown on the Drawings shall be requested in writing prior to implementation.

3.9 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Protect products against dirt, water, chemical and mechanical damage. Do not install damaged products.

B. Deliver products to site in factory fabricated containers, with the manufacturer's label clearly visible. Handle carefully to avoid damage to components, enclosure and finish, and in strict accordance with manufacturer's instructions.

C. Store products in clean dry place in original containers, protected from weather and construction traffic.

3.10 SUBSTITUTIONS

A. A substitution is the use of any product other than that identified as the "Basis of Design, the "Standard of Quality,» or an "Additional Approved Product.»

B. Substitutions require pre-bid approval. Only substitutions authorized via addendum shall be considered.

C. Substitutions are considered on a product-by-product and model specific basis.

D. Substitution Submittal Requirements:
1. Substitution requests must be received by the Designer sufficiently in advance of the scheduled bid date to allow time for review and issuance of an Addendum. If the timing of the request does not permit an Addendum, substitution shall not be considered or acceptable.
2. Substitution requests shall consist of the following for each proposed substitution:
   a. Substitution Request Letter:
      1) On company letterhead, for each specific product substitution request. The letter shall include the following:
         a) The specification section and paragraph number and drawing number where the product requirement is identified.
         b) The specific system in which the product is to be used.
         c) The reason the Contractor is requesting the substitution.
         d) Statement of impact on the system(s) in which the product is used.
         e) An enumeration declaring each difference between the Basis of Design product and the proposed substitute, including performance differences, technical specifications difference, feature differences, method of operation differences, warranty differences, dimensional differences, method and means of control differences, compliance differences. Failure to disclose 100-percent of the differences in this manner may be grounds for a post-bid and/or post-installation rejection of Contractor proposed substitute product.
      2) A separate letter shall be furnished for each product substitution request.
   b. Product Datasheets/Brochures:
      1) Complete system brochure(s) and/or individual product data sheet(s), as applicable and appropriate for the Basis of Design product(s) the requested substitute is intended to replace.
      2) Complete system brochure(s) and/or individual product data sheet(s), as applicable, for the proposed substitute product(s).
3. Failure to furnish the required information is sufficient grounds for rejection of the request for substitution.
4. A demonstration of the proposed substitute equipment and/or system(s) may be required by the Designer prior to consideration of substitute products or system(s). Costs associated with these demonstrations are the responsibility of the entity submitting the request.
5. Substitution Pre-Bid Submittal Exceptions:
   a. Additional Approved Manufacturer(s):
      1) These specifications may use phrases such as "or equal by,• or "Additional Approved Manufacture(st for products. When a product category uses these designations, it is an indication that a product model from one of the listed manufacturer(s) may be provided without the requirement to obtain pre-bid approval for the model selected, provided that the Contractor has adequately researched and has become familiar with the Basis of Design product and intends to supply a model that is equal to or superior than the Basis of Design product.
      2) Since it is impractical to enumerate every characteristic of modern electronic

products, it is incumbent upon the Contractor to research manufacturer's publications to obtain the fullest possible understanding of Basis of Design / Standard of Quality products the Contractor proposes to substitute with a product from any Additional Approved Manufacturer considered.

3) Although not mandatory, for the Contractor's own protection, model specific pre-bid approval is strongly encouraged.

4) The decision as to whether a Contractor selected model from a list of Approved Additional Manufacturer(s) is acceptable remains solely with the Designer, and the Designer's decision is final.

E. Costs that result from the use of substitute products and/or Additional Approved Manufacturer(s), including costs for additional equipment, coordination, accessories, modules, interface products, cables, software, and programming, as well as costs for any additional labor, materials, and products incurred by other trades or members of the project Design Team or Owner, are the sole responsibility of the Contractor making the substitution. This includes costs that may not be incurred or known until after Contract award or Work execution. Such costs shall be deducted from final sum payable to the Contractor.

F. Post Contract award substitutions may be considered, but only if the proposed substitution includes substantial additional benefit to the Owner. Post award substitutions are considered solely at the discretion and convenience of the Designer. For a post Contract award substitution to be considered, one or more of the following shall apply:

1. The Designer initiates the request for substitution.
2. A basis of design product has become discontinued and is no longer available, and as a result, the use of a substitute product has become a necessity to meet the Owner's objectives for the Project. See "Discontinued Products."
3. The request for substitution is accompanied by a proposal that identifies the benefits to the Owner, including a fair-market Contract price reduction.

3.11 EXPLANATION AND PRECEDENCE OF DRAWINGS AND SPECIFICATIONS

A Prior to submitting his bid, the Contractor shall review all Drawings and Specifications to determine any conflict with all applicable local codes, rules or regulations. The Contractor shall obtain clarification of such during bidding.

B. When the work as indicated on the Drawings and/or Specifications exceeds the minimum required by any code, standard, rule or regulation, the Drawings and/or Specifications shall govern the design and installation of the work.

C. For purposes of clarity and legibility, the Drawings are essentially diagrammatic although size and location of equipment are drawn to scale wherever possible. The Contractor shall make use of and verify all information on the Drawings and Specifications.

D. The Contractor shall fully inform himself regarding any and all peculiarities and limitations of the spaces available for the installation of all work and materials furnish and installed under this Contract. He shall exercise due and particular caution to determine that all parts of his work are

made readily accessible.

E. The Drawings indicate required sizes and points of termination of piping and suggests proper routes to conform to structure, avoid obstructions and preserve clearances. However, it is not intended that the Drawings indicate all necessary offsets, and it shall be the work of the Contractor to make the installation in such a manner as to conform to the structure, avoid obstructions, preserve headroom, keep openings and passageways clear and maintain required service clearances without additional cost to the Owner.

F. Significant changes by the Contractor in design, sizing and/or location of system piping, fixtures and/or equipment as shown on the Drawings are prohibited without prior written approval by the Owner. Should the Contractor fail to obtain the Owner's written approval and proceed to make these unauthorized changes, he does so at the risk of accepting total responsibility and related costs therein for the design elements he may alter.

G. It is intended that all fire protection devices, piping, etc. be located symmetrically with all Architectural elements. Refer to the Drawings and Specifications of all disciplines in completing the required coordination.

H. Where the Drawings and/or Specifications are in conflict, obtain clarification of such during bidding. Official clarification will only be given in written form. Any clarification issued by other than written form will not be considered official and shall be non-binding for work under this Contract. Where clarification cannot be delivered in a timely manner, the Contractor shall base his bid on the greater quantities, higher standards or more restrictive requirements. In the event of discrepancies in the Drawings and/or Specifications after the bid period, the Contractor shall advise the Architect and Engineer of such prior to proceeding with the work in question in order that correct progress of the work may be insured.

I. Prior to submitting his bid, the Contractor shall review all Drawings and Specifications to determine any conflict with all applicable local codes, rules or regulations. The Contractor shall obtain clarification of such during bidding as outlined above.

J. The submittal of his bid shall indicate the Contractor has examined the site; all applicable local codes, rules and regulations; the Drawings and Specifications and has included all required allowances in his bid. No allowance shall be made for any error or omission resulting from the Contractor's failure to visit the job site and/or review the Drawings and Specifications. The Contractor's bid shall include costs for all required drawings and changes as outlined above at no additional cost to the Owner.

3.12 CUTTING, PATCHING, AND DEMOLITION

A Refer to Division 1 Sections "Cutting and Patching" and "Selective Demolition" for general demolition requirements and procedures.

8. Contractor shall include all necessary cutting and patching required to perform their work. For interior work, cut and patch all walls, ceilings, and floors as applicable. For exterior work, provide saw-cutting, replacement of concrete, paving, re-seeding/straw for grassy areas, and replacement of landscaping areas where applicable.

C. All cutting of concrete work by the Contractor shall be by core drilling or concrete saws with dust collection systems. No cutting or coring of structural members shall be done without first

obtaining the permission of the Owner. All cuts by the Contractor shall be plumb, square and

true.

D. Core Drilling: Use core drills rather than percussion type equipment for making holes in concrete. All percussion type drilling including hammer drills must be scheduled through the Owner.

E. All patching of existing, adjacent surfaces shall match existing material and finish in a manner satisfactory to the Architect.

F. Disconnect, demolish, and remove fire protection systems, equipment, and components indicated to be removed and as necessary to perform the described scope of work.
1. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
2. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material.
3. Equipment to Be Removed: Disconnect and cap services and remove equipment.
4. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
5. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.

G. If pipe, insulation, or equipment to remain is damaged in appearance or is unserviceable, remove damaged or unserviceable portions and replace with new products of equal capacity and quality.

H. No means of demolition shall be used that would result in damage to structures, materials, equipment or components indicated to remain or endanger the health, safety and welfare of the general public. The use of explosives is strictly prohibited. Where piping, insulation, fixtures, equipment or components to remain are damaged or disturbed, remove damaged portions and install new products of equal capacity and quality, subject to the approval of and at no additional cost to the Owner.

I. Demolition Scope of Work:
1. Before beginning demolition, make all arrangements required to tum off and disconnect utilities and other such facilities involved.
2. The Owner has the right of first refusal of all removed materials as indicated on the Drawings. All items designated to remain as the Owner's property shall be removed, cleaned and presented to him as he may direct.
3. All items to be removed and relocated shall be removed and responsibly stored, cleaned, repaired (as required and to satisfactory working order), reinstalled (complete with new fittings, trim, etc), reconnected and made operational by the Contractor.
4. All other demolished items shall become property of the Contractor and shall be responsibly disposed of in accordance with applicable codes and regulations or salvaged. All costs associated with disposal or salvaging are the Contractor's responsibility.

3.13 SYSTEM TESTS

A. Perform all system tests in the presence of an authorized representative of the Owner and local authority having jurisdiction as applicable. Notify the Owner of all system's tests at least 48

hours in advance.

3.14 CLEANING PREMISES

A. During the progress of the work, clean up and leave the premises and all portions of the building in which work was performed in a clean and safe condition. Refer to Division 1.

3.15 MAINTENANCE, OPERATION INSTRUCTIONS, ETC.

A. General: Before final acceptance of the project by the Owner, the Contractor shall schedule with the Owner's maintenance personnel, at a time mutually convenient, a training session. At this time, he will thoroughly familiarize the Owner's maintenance personnel with all operating and service procedures (routine and emergency) associated with the building systems and equipment. Provide the Owner with a list of all equipment including the following information:
1. Manufacturer's name.
2. Equipment model number
3. Equipment serial number.
4. Local sales representative (including postal & email addresses and telephone & fax numbers).
5. Parts list, complete with source(s) of supply.
6. Complete internal wiring diagrams.
7. Warranties.

B. All directions for operation furnished by the manufacturer shall be carefully saved and turned over to the Owner, together with written sequence of operation, operating and maintenance schedules & instructions (routine and emergency) for each system and its equipment. All verbiage and units of measure shall be in English.

3.16 PROJECT SITE SAFETY

A. The Engineer claims no expertise in and assumes no responsibility for any and all safety procedures and protocols associated with the Contractor's work. The Contractor shall exercise due diligence and comply with all established safety standards and regulations as listed by OSHA and any equipment manufacturers' requirements as they may relate to personal safety. The Contractor shall insure that all of his subcontractor(s) and/or tradesmen are apprised of all safety-related standards and procedures as they may relate to their work and immediately correct any violation of OSHA standards and regulations or equipment manufacturers' safety recommendations.

3.17 WORK IN EXISTING SPACES

A. General: Care shall be taken when working in existing spaces so as not to damage existing walls and ceilings where work is being performed.

B. Existing Ceilings: Where work is being performed above ceilings, and the architectural drawings do not indicate ceiling modifications are the responsibility of others, remove and replace existing ceilings where work is being performed. In those instances, costs for all repair and installation of new grid, ceiling panels, etc shall be included. Match existing finishes.

C. New Ceilings: Where existing sprinklers are to remain, and the architectural drawings indicate replacement of the ceilings, temporarily remove and reinstall sprinkler escutcheons, etc. as required to accommodate the ceiling removal.

D. Walls & Floors: Patch existing walls and floors and match existing finishes where work is being removed or installed and patching is being performed, unless noted otherwise on the architectural drawings.

3.18 FIRE ALARM RELATED WORK FOR FIRE-SUPPRESSION SYSTEMS

A. The following applies whether or not shown on drawings. Prior to submitting a bid, review documents of all other disciplines which may have an impact on such work.
   1. If a sprinkler system exists in the building, furnish and install all required flow and tamper switches. Wiring and installation of the fire alarm devices shall not be included.

3.19 ARCHITECTURAL COORDINATION ITEMS

A. Cut and drill all openings in walls and floors required for the installation. Secure approval of Engineer before cutting and drilling. Neatly patch all openings cut.

B. Cutting and patching to be held to a minimum. Coordinate locations of sleeves and openings before construction is started.

C. Patching through fire rated walls and enclosures shall not diminish the rating of that wall or enclosure. Patch shall be equal to rockwool, firestop, caulk or approved "rated" patch.

D. Caulk or fire safe between sleeves and pipes, see Division 7 for caulking and fire-safing requirements and the floor plan and partition schedule for partition ratings.

E. Furnish all access panels required for proper servicing of equipment. Provide access panels for all concealed valves, controls, and sprinkler devices required by NFPA. Provide frame as required for finish. Exact locations to be approved by the Architect. Minimum size to be 12" x 12", units to be 16 gauge steel, locking device shall be screwdriver cam locks. Refer to Division 9 for access panel manufacturers and material requirements. Provide phenolic plate with ID of item behind access panel on the face of the door.

F. Install steel pipe sleeves two sizes larger than pipes passing through floors, walls or masonry construction.

G. Sleeves through walls to be cut flush with both faces.

H. Sleeves through floor to extend one inch above floor top elevation.

I. Caulk or fire safe between sleeves and pipes, see Division 7 for caulking and fire-sating requirements and the floor plan partition schedule for partition ratings.

J. Install manufactured chromium plated escutcheon plates wherever uninsulated exposed pipes pass through walls, floors, or ceilings. Escutcheon inside diameter to closely fit around pipe and

outside diameter to completely cover opening.

K. Furnish and set all forms required in masonry walls or foundation to accommodate pipes.

L. Provide flexible connectors where all pipes cross building expansion joints. Coordinate exact quantity & location with Architectural plans prior to installation of piping.

END OF SECTION 210500

SECTION 210503 - SUBMITTALS FOR FIRE-SUPPRESSION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, Division 01 Specification Sections and Division 21 General Requirements Section apply to this Section.

1.2 SUMMARY

A Section Includes: Administrative, content and format requirements for preparation and submission of submittals.

B. Work of this Section is supplemental and additive to the requirements of Section 013300 where included in the Project Manual.

1.3 PRICE AND PAYMENT PROCEDURES

A Payment in full or in part may be withheld from the Contractor for failure to comply with submittal requirements articulated in the Contract Documents.

1.4 SUBMITTALS

A Submittals shall be furnished for each Section that includes one or more of the following elements of work:
1. Supply of one or more products.
2. Installation of one or more products.
3. Integration of one or more products.
4. Creation of one or more deliverable products.
5. Labeling of one or more products.
6. Contractor-based design or engineering of one or more products or systems.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 GENERAL

A. Submittals shall be routed through established Project channels as identified by the Owner's representative.

B. Coordinate, assemble, title, transmit and track Project submittals.

C. Label each submittalof each type similarly for consistency and so they appear as if prepared by the same entity. Like-type submittals (e.g., Product Data) from different Sections shall feature the same appearance and organization as those of other Sections.

D. Submittals prepared by subcontractors or vendors shall not be accepted unless prepared in compliance with the Contract Documents.

E. Submittal items listed in this Section represent the common items required to be supplied for the various specification Sections throughout the duration of the Project. Individual Sections will vary and may include additional or lesser requirements.

F. Designer reserves the right to require additional submittals or to waive select submittal requirements on a Section-by-Section basis. Additional submittals shall be provided at the Contractor's expense.

G. The cost for preparation and transportation of submittals is Work of the Contract.

H. Bind physical/hardcopy submittals together. Do not submit loose or paper clipped documents.

I. Supply separate submittals for each Section. Do not combine multiple Sections together into a single submittal, except where expressly directed within the Contract Documents.

J. Where electronic submittals are required or permitted, comply with the requirements for electronic submittals as identified in the Contract Documents.

K. Organize submittals as identified in the Contract Documents.

L. Furnish submittals for different Sections each with its own transmittal form. A single transmittal shall not be used to identify submittals for more than one (1) Section at a time. This allows for tracking and processing efficiency, so that:
1. Each Section may be reviewed simultaneously by different individuals, as appropriate.
2. Individual Sections may be processed and returned more quickly than others when some Sections require longer review times.
3. Submittals that are returned and marked as "Revise and Resubmir do not cause submittals for other Sections to be also be resubmitted due to the fact that they were bound together as a single unit.

M. Use of Electronic Drawings from the Owner's Design Team:
1. Plan drawings for the Project were created with AutoCAD .
2. If expressly permitted by the Owner and the terms of the Contract, editable electronic versions of standard-scale, AutoCAD-based plan drawings may be made available for the creation of shop and as-built drawings.
3. Due to the proprietary nature of internal design systems, editable native-software versions of some drawings, including but not limited to system diagrams and details will not be made available in an editable form. In these cases, electronic versions of the drawings may be made available only in PDF, JPG or similar non-editable electronic form, at the sole discretion of the Designer.

3.2 SUBMITIAL TYPES

A. The following are the common submittal types referenced in this Section:
   1. Quality Assurance (QA).
   2. Quality Control (QC).
   3. Product Data (PD).
   4. Shop Drawing (SD).
   5. Training (TG).
   6. Field Observation Response (FO).
   7. Closeout Submittal (CO).

3.3 SUBMITIAL SEQUENCE

A. Quality Assurance Submittal:
   1. Submit with bid/pricing when expressly identified on the bid or pricing response form, or as otherwise directed within the Instructions to Bidders.

B. Product Data Submittal:
   1. Submit with bid/pricing when expressly identified on the bid or pricing response form, or included as a requirement within the Instructions to Bidders.

C. Shop Drawing Submittal:
   1. Submit for review prior to commencement of fabrication and installation.
   2. Submit concurrently with Section-specific Product Data submittals.

D. Samples Submittal:
   1. Submit concurrent with, or soon after, product data and shop drawings and prior to installation of Work.

E. Training Submittal:
   1. Submit thirty (30) days prior to the first training session.

F. Field Observation Report Submittal:
   1. Submit five (5) business days prior to punch list walkthrough.

G. Closeout Submittal:
   1. Submit following completion of onsite work but not more than ten (10) business days following successful Acceptance Testing.

3.4 SUBMITIAL IDENTIFICATION

A. Identify each submittal uniquely.

B. Identify each submittal by specification Section number, submittal type, and submittal iteration.

C. The format for labeling the submittals shall be as follows:
   1. Section Number-Submittal Type Abbreviation-Submittal Iteration.
   2. Examples:

      a. First Product Data Submittal for section 211313: "211313-PD-OO."
      b. Revised Product Data Submittal for section 211313: M211313-PD-Oe
      c. Second Revised Product Data Submittal for 211313: "211313-PD-02."

3.5 SUBMITIAL CONTENTS

A. All Submittals:
1. Transmittal:
a. Supply a dedicated transmittal for submittals for each individual Section.
b. Itemize the specific submittals included by Section, submittal type, and iteration.
2. Title Sheet:
a. Include a separate title sheet with each submittal, of each type.
b. Title sheets for each Section, for each submittal type, shall have the same appearance.
c. Title sheets for product data submittals shall be 8-1/2 inches x 11 inches.
d. Title sheets for drawings shall be the same size as the associated drawings.
e. Create title sheets to have the appearance and information identified on the sample title sheet published at the end of this Section.
3. Index:
a. Include an index outlining and identifying the contents of the submittal.
b. The index for drawing submittals shall be incorporated onto the title sheet of the corresponding drawing set.
4. Checklists:
a. Include the checklist(s) published in the Contract Documents corresponding to the type of submittal being supplied. Applicable checklists are found at the end of this Section and may also be found within individual Sections.
5. Title Blocks:
a. Drawing submittals shall be created on the Contractor's, manufacturer's, or vendor's own title block. The title blocks of the owner, Architect, Engineer, Designer or their Consultants shall not be reproduced on any document (electronic or hardcopy) that is prepared or altered by the Contractor.
6. Legend:
a. Drawing submittals shall include a legend of symbology.
7. Resubmittals:
a. Resubmittals shall include a replica of the reviewer's comments that necessitated the resubmittal, along with an accompanying item-by-item explanation of the actions taken and changes that will be found within the resubmittal.

B. Quality Assurance Submittals:
1. List of Subcontractors to be used on the Project along with a description of the role each will play on the Project.
2. The last six (6) projects that the Contractor (and each proposed Subcontractor) has completed that are of similar scope, size and contract value. References shall include:
a. owner's name and current contact information.
b. Project address.
c. Description of the system(s) and scope of actual work performed.
d. Monetary contract value of the Work performed.
3. Financial Disclosure of the Contractor: Prior to contract award, upon request.

C. Product Data Submittals:
1. Bill of Materials (BOM):
a. Separate list for each system:

1) When a Section covers products for use in multiple systems, supply

separate BOM for each unique system covered by the Section. Label each with the system name, space/room name, and room number.

b. Include the following:
   1) Make, model, and description of each product.
   2) Quantity estimates for each product.
   3) Section paragraph number from which the product requirement is derived. Use drawing and detail references when the requirement is derived from the Drawings.

c. Organize the BOM to follow the order in which products appear within the Section. Products shown on the Drawings but not enumerated within the Specifications shall be placed at the end of the list and include a reference to the Drawing from which the product requirement was derived.

2. Product Datasheets Submittals:
   a. Separate manufacturer datasheets for each product.
   b. Datasheets shall be manufacturer originals or first generation printed versions (i.e., from PDF) of the manufacturer's official electronic datasheet:
      1) Distributor modified, distributor branded, and/or html based "web· datasheets are not acceptable.
      2) Datasheets shall include size and technical support data.
   c. Where manufacturer's datasheets depict multiple products, versions and options, indicate via highlighting, underlining, or with bold visible arrows the model(s), version(s) and option(s) being supplied. Exact catalog number(s) shall be indicated.
   d. Each datasheet shall be labeled with the Section paragraph reference number. Datasheets shall include the Drawing reference when no specific paragraph reference exists within the Section.

D. Shop Drawing Submittals:
   1. General:
      a. Drawing descriptions identify the required contents of common drawings required under the Contract.
      b. Drawings identified within individual Sections, along with any additional drawings deemed necessary by the Designer, are required.
      c. Drawing Scales:
         1) Floor plans shall be drawn to scale.
         2) Section drawings shall be drawn to scale.
         3) Elevation drawings shall be drawn to scale.
         4) Details of physical items shall be drawn to scale.
      d. Sizes:
         1) Sheet sizes shall match the size of the Contract Drawings sheets, except where otherwise expressly requested or approved in advance by the Designer.
   2. Floor Plans:
      a. Fire-suppression components per NFPA guidelines.
      b. Location of sprinklers, piping, valves, devices, and equipment.

E. Training Submittals:
   1. Proposed schedule.
   2. Training agendas for each session.
   3. Identification of personnel that will conduct training.
   4. Handouts proposed for distribution during training.

F. Field Observation Report Submittals:

1. Written responses to Field Observation Reports supplied to the Contractor during the course of the Project:
   a. The response shall include a copy of the original Field Observation Report.
   b. The response shall include detail of the corrective action taken, the date the action was taken and the identity of the individual who took the action.

G. Closeout Submittals:
   1. As-Built Drawings:
      a. General:
         1) Requirements for Shop Drawings apply to "As-Built" drawings.
      b. Required Drawings:
         1) Title Sheet.
         2) Floor Plans.
         3) As-built version of each Project shop drawing.
      c. Drawing Formats:
         1) Electronic Editable: Editable version using the native application used to create the file (e.g., Revit, AutoCAD).
         2) Non-Editable: PDF file format.
         3) Printed Hardcopy.
         4) Sheets shall be the same size and feature consistent title block information in the lower-right corner.
      d. Drawing Organization:
         1) Hardcopy drawings shall be bound together into logical sets, bound along the left. edge of the sheets.
         2) The first page of the set shall include a detailed index and sheet-by-sheet description of each drawing sheet.
   2. Operation and Maintenance Manuals:
      a. Manual Format:
         1) Hard-cover 3-ring type binder.
         2) Front clear plastic cover pocket complete with Project and system Information insert.
         3) Clear plastic spine pocket with Project and system Information insert.
         4) Binder sized to suit the contents only, neither oversized nor undersized.
         5) Maximum binder thickness: 3 inches.
      b. Manual Contents and Organization:
         1) General:
            a) Separate binder (or binder set) for each system, labeled. Provide no more than one system per binder (or binder set).
            b) Separate CD-ROM (or CD-ROM set) for each system, labeled. Provide no more than one system per CD-ROM (or CD-ROM set).
            c) Do not overfill. Binders shall not be filled beyond an easily usable capacity.
            d) Insert labeled tabs within binder to identify separate contents of the manual.
            e) Labeled sub-directories shall be created on the CD-ROM to label and separate contents for the manual.
         2) Project Information Cover:
            a) Title of Project.
            b) Name and address of Owner, Designer, Architect, Contractor of Record and Subcontractor.
            c) System name and specification references.
         3) Index:
            a) Contents of the manual.

4) Warranty Statement:
   a) A warranty statement shall be included for each system. The warranty statement shall reiterate the terms of warranty identified within the Contract Documents, as well as identify how the Owner is to obtain warranty service.
   b) The warranty statement shall clearly identify which products are covered by Manufacturer warranties beyond the Contractor required minimum warranty period. The term of manufacturer warranty shall also be identified (e.g.,2 year parts and labor).
   c) A separate warranty statement shall be supplied for each system.
   d) Identify the date that the warranty for the system starts. This date shall be the date listed on the Certificate of Substantial Completion (if one was issued to the contractor specifically for the system) or the date listed on the Notice of Final Completion.
   e) Supply standard out-of-warranty service rates and service contact information.
5) Bill of Materials:
   a) List of products supplied.
   b) Serial numbers of each product.
6) Product Datasheets (supply only in the electronic version of Operation and Maintenance Manual):
   a) Manufacturer datasheets for each product supplied.
7) Manufacturer Owner / User Manuals:
   a) Manufacturer's Owner's or User's manual for each product.
   b) Manufacturer's Installation instructions and other documentation supplied with the product.
8) Test Reports and Checklists:
   a) Test reports, checklists, and other forms generated and completed during the course of the Project.
9) Training Information:
   a) Photocopy of training outlines / agendas.
   b) Photocopy of training session handouts.
   c) Photocopy of training sign-in sheets.
   d) Photocopy of signed delivery receipt for each training session recording (applicable to those Sections/systems requiring recording).
10) As-Built Drawings:
   a) The hardcopy manual shall contain reduced scale printed version (11x17) of system-specific drawings.
   b) The electronic manual shall contain electronic PDF version of the as-built drawings.

3.6 SUBMITIAL QUANTITY

A. General:
   1. The quantity of submittals required shall be the greater of the following:
      a. Quantity identified within Division 01.
      b. Quantity identified within the individual Section.
      c. Quantity identified herein.
   2. In addition to the Contract required quantity, the Contractor shall also submit any additional quantities required for its own use and records, and for distribution to other trades.
   3. The Designer shall retain a copy of each submittal received. Others in the submittal communication chain may also retain copies.

B. Product Data Submittals:
   1. Two (2) Hardcopies.
   2. One (1) Electronic.

C. Shop Drawings Submittals:
   1. Two (2) Hardcopies.
   2. One (1) Electronic.

D. Training Submittals:
   1. Two (2) Hardcopies.
   2. One (1) Electronic.

E. Field Observation Report Submittals:
   1. Two (2) Hardcopies.
   2. One (1) Electronic.

F. Samples Submittals:
   1. Two (2) Hardcopies.
   2. One (1) Electronic.

G. Closeout Submittals:
   1. Two (2) Hardcopies.
   2. One (2) Electronic.

3.7 SUBMITTAL REJECTION

A The following items are representative reasons that submittals may need to be revised and resubmitted:
   1. Binding submittals for multiple Sections together.
   2. Failing to supply separate transmittal for submittals for each Section.
   3. Failing to include a submittal title sheet.
   4. Failing to use and accurately complete the published title sheet.
   5. Failing to supply and accurately complete the submittal checklists.
   6. Failing to supply product data and shop drawings at the same time.
   7. Failing to include a detailed BOM with the product data.
   8. Failing to supply product data sheets.
   9. Failing to supply product data sheets with the correct product and required accessories enumerated.
   10. Failing to supply shop drawings.
   11. Failing to supply shop drawings with required information.
   12. Failing to supply accurate information.
   13. Failing to supply relevant information required by the Specifications.
   14. Failing to supply products that are in compliance with the Specifications.
   15. Failing to supply the required information in the required format.

3.8 RESUBMITTALS

A. Revise and Resubmit:
   1. When a submittal is rejected and flagged as "Revise and Resubmit," the entire submittal shall be reviewed, revised and resubmitted in totality.

   2. Resubmittals shall be checked for compliance with the Contract Documents, inclusive of requirements for submittals. In addition, any comments and deficiencies identified by the reviewer shall be appropriately acted upon.

B. Exceptions Noted:
   1. When a submittal is flagged as "Exceptions Noted," the specific actions identified shall be taken.
   2. If the reviewer's comments include selective rejection of products, the resubmittal shall be limited to include those items commented upon.

C. Resubmittals shall:
   1. Include a copy of the reviewer's previous comments.
   2. Include a written description of the action(s) taken.
   3. Be labeled chronologically.
   4. Be inclusive of all corrective action identified by the previous reviewer.

3.9 ELECTRONIC SUBMITTALS

A. Electronic submittals shall only be permissible where electronic submittals are expressly required and where express approval for such has been granted.

B. Electronic submittal files shall be compatible for opening and viewing with electronic PDF file readers that fully support and recognize the Adobe PDF Portable Document Format Standard, version 1.5.

C. Major text within the files shall be electronically searchable using the search-for-text features of current generation Adobe PDF reader software. Files shall be prepared in such manner that reviewers will have the option to search for and find words and phrases that appear within the document, electronically. Documents featuring raster-based text and text that is otherwise not searchable shall not be acceptable. This precludes the use of documents that have been electronically scanned and then converted to or embedded within an electronic file.

D. The organization, contents, and labeling of information along with other requirements for submittals apply also to electronic versions of the submittals.

E. Single File Submission:
   1. Option 1 - Single File, PDF Format:
      a. Single PDF file submittals shall be assembled from a series of individual files that are organized, indexed, bound together as one composite file that is bookmarked to aid the reviewer in navigating the content.
      b. The file shall feature a navigational tree of contents, organized by content groups (e.g., Title Page, Index, BOM, Datasheets, Shop Drawings). Content groups shall be organized in the same relative order identified within the Contract Documents.
      c. Within each content group shall be the supporting elements of the group (e.g., product datasheets under the Datasheets group). Each element of the content group shall appear separately as a subordinate element of the group (e.g.,

separate entry for each product datasheet, separate entry for each shop drawing), and viewable from the navigational contents tree.

d. Under the Datasheets content group, individual product datasheet entries shall be identified by Make/Brand and Model. Entries shall be organized in a sorted manner, first by make, then by model.
e. If the resulting size of the composite PDF file exceeds 10 Megabytes, supply the submittal using the Single Zip File method instead, as described in this Section.
f. The file name used to label the submittal shall be the section number followed by the submittal instance number for that Section (e.g., 211313-PD-01.pdf).
   1) Where the Designer directs the supply of multiple zip files for a submittal, add additional text to the file name to identify that the file is part of a multi-file set of submittals, as per the following examples:
      a) 211313-PD-01 (1 of 3).pdf
      b) 211313-PD-01 (2 of 3).pdf
      c) 211313-PD-01 (3 of 3).pdf

2. Option 2 – Single File, Zip Format:
   a. Single Zip File submittals shall be assembled from a series of individual PDF files and file directories that are contained with a single compressed WinZip compatible •.zipn file.
   b. The file shall contain separate top-level directories that are used to group related content (e.g., 00-Title Page, 01-Index, 02-BOM, 03-Datasheets, 04-Shop Drawings), with each directory appearing in the same relative order as that identified in the Contract Documents.
   c. Within each content group directory shall be separate PDF-compliant files featuring the information required (e.g., separate datasheet file for each product, separate file for each drawing, separate file for each BOM).
   d. Product datasheet files shall be named using a consistent naming convention that enables those files to appear sorted and grouped when the file is opened for navigation, viewing or extraction by the reviewer.
   e. Product datasheet files shall be consistently named with the make/brand of the product, followed by model number, followed by any additional information beneficial.
   f. Consult the Designer for supplement instructions should the WinZip file exceed 50 Megabytes in size.
   g. The file name used for the submittal shall be the Section number followed by the submittal instance number for that Section (e.g., 211313-PD-01.zip).
      1) Where the Designer directs the supply of multiple zip files for a submittal, add text to the file name that identifies the file is part of a multi-file set as per the following examples:
         a) 211313-PD-01 (1 of 3).zip
         b) 211313-PD-01 (2 of 3).zip
         c) 211313-PD-01 (3 of 3).zip

END OF SECTION 210503

SUBMITTAL TITLE SHEET
EXAMPLE
(Form: Sub-1)

PROJECT TITLE:
Project Name Line 1
Project Name Line 2
Project Name Line 2

SUBMITTAL TYPE:
Product Data

SECTION SUBMITTAL NUMBER
21 1313-PD-OO

SECTION TITLE:
Wet-Pipe Sprinkler Systems

Date Prepared:
yyyy-mm-dd

CONTRACTOR OF RECORD:
Firm Name
Address1
Address 2
City, State, Zip
Phone (000) 000-0000, Fax (000) 000-0000
Project Manager: Full Name
PM E-Mail: xxxxxxxx@xxxx.xxx

SECTION SUBCONTRACTOR(SJ:

Firm Name
Address 1
Address 2
City, State Zip
Phone (000) 000-0000
Fax (000) 000-0000
PM Name: Full Name
PM E-Mail: xxxxxxxxx@xxxx. xx

Firm Name
Address 1
Address 2
City, State Zip
Phone (000) 000-0000
Fax (000) 000-0000
PM Name: Full Name
PM E-Mail:xxxxxxxxx@xxxx.xx

PRODUCT DATA SUBMITTAL CHECKLIST

(Form: Sub-2)

Each line below featuring text shall be supplied with an answer.

	No	Yes
Transmittal		
Title Sheet		
Project Name		
Specification Section number		
Submittal iteration number *(0 for firstiteration, 1 + for each subseauentiteration (e.a., 211313-0, 211313-1))*		
Contractor of Record identified		
Sub-contractor / vendor / suoolier name identified		
Title Sheet aooearance consistent with sample title sheet		
Bill of Materials		
Section paragraph and/or Drawing reference identified		
Make		
Model		
Product Description		
Separate lists included for each system		
Checklists included		
This checklist		
Checklists from Section being submitted (where applicable)		
Previous submittal review, with contractor actions and comments		
Product Datasheets included		
Datasheets are manufacturer originals		
Datasheets for each product included		
Section paragraph and/or Drawing reference on each datasheet		
Product accessories and options identified		
Products oraanized bv paraaraoh (or alohabeticallv bv brand)		
No photocopies, faxes and other illegible datasheets included		
Shop Drawinas included		
Shop drawings accompany this product data submittal.		
This submittal contains product data for one Section onlv.		

This checklist serves as a simple and abbreviated reminder of the contents and format of the aforementioned submittal. Refer to Section 210503 "Submittalsfor Fire-Suppression" and each specific Sectionfor additional submittal requirements. Submittals are subject to rejection if this checklist is not accurately completed and provided along with the specified information. Reproduce this checklist and submit with each submittal for each Section.

SECTION 210517 - SLEEVES AND SLEEVE SEALS FOR FIRE SUPPRESSION

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. Sleeves.
2. Stack-sleeve fittings.
3. Mechanical Sleeve-seal systems.
4. Sleeve-seal fittings.
5. Grout.

1.3 SUBMITTALS

A General:
1. Comply with Section 21 05 03.00 Submittals for Fire-Suppression."

B. Product Data (PD):
1. Product Datasheets for Sleeve Seals.

PART 2 - PRODUCTS

2.1 SLEEVES

A. Galvanized-steel Sheet: 0.0239 inch minimum thickness; round tube closed with welded longitudinal joint.

B. Steel Pipe: ASTM A 53, Type E, Grade B, Schedule 40, galvanized, plain ends.

C. Cast iron: Cast or fabricated "wall pipe" equivalent to ductile-iron pressure pipe, with plain ends and integral waterstop, unless otherwise indicated.

D. Install steel pipe sleeves two sizes larger than pipes passing through floors, walls or masonry construction.

2.2 STACK-SLEEVE FITTINGS

A Description: Manufactured, cast-iron sleeve with integral clamping flange. Include clamping ring, bolts, and nuts for membrane flashing.

1. Underdeck Clamp: Clamping ring with setscrews.

2.3 MECHANICAL SLEEVE-SEAL SYSTEMS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Advance Products & Systems, Inc.
2. CALPICO, Inc.
3. Metraflex Company {The).
4. Pipeline Seal and Insulator, Inc.
5. Proco Products, Inc.
6. Link-Seal Modular Seals

B. Description: Modular sealing-element unit, designed for field assembly, for filling annular space between piping and sleeve.
1. Sealing Elements: EPDM-rubber interlocking links shaped to fit surface of pipe. Include type and number required for pipe materialand size of pipe.
2. Pressure Plates: Carbon steel.
3. Connecting Bolts and Nuts: Carbon steel, with corrosion-resistant coating, of length re- quired to secure pressure plates to sealing elements.

2.4 SLEEVE-SEAL FITTINGS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Presealed Systems.
2. Advance Products & Systems, Inc.
3. CALPICO, Inc.
4. Metraflex Company {The).
5. Pipeline Seal and Insulator, Inc.
6. Proco Products, Inc.
7. Link-Seal Modular Seals

B. Description: Manufactured plastic, sleeve-type, waterstop assembly made for imbedding in concrete slab or wall. Unit has plastic or rubber waterstop collar with center opening to match piping OD.

2.5 GROUT

A. Standard: ASTM C 1107/C 1107M, Grade B, post-hardening and volume-adjusting, dry, hydraulic-cement grout.

B. Characteristics: Post-hardening, volume-adjusting, nonstaining, noncorrosive, nongaseous, nonshrink, and recommended for interior and exterior applications.

C. Design Mix: 5000-psi, 28-day compressive strength.

D. Packaging: Premixed and factory packaged.

PART 3 - EXECUTION

3.1 SLEEVE INSTALLATION

A. Install sleeves for piping passing through penetrations in floors, partitions, roofs, and walls. For sleeves that will have sleeve-seal system installed, select sleeves of size large enough to pro- vide 1-inch annular clear space between piping and concrete slabs and walls.
   1. Sleeves are not required for core-drilled holes.

B. Install sleeves in concrete floors, concrete roof slabs, and concrete walls as new slabs and walls are constructed.
   1. Permanent sleeves are not required for holes in slabs formed by molded-PE or -PP sleeves.
   2. Cut sleeves to length for mounting flush with both surfaces.
      a. Exception: Extend sleeves installed in floors of mechanical equipment areas or other wet areas 2 inches above finished floor level.
   3. Using grout, seal the space outside of sleeves in slabs and walls without sleeve-seal sys- tem.

C. Install sleeves for pipes passing through interior partitions.
   1. Cut sleeves to length for mounting flush with both surfaces.
   2. Install sleeves that are large enough to provide 1/4-inch annular clear space between sleeve and pipe or pipe insulation.
   3. Seal annular space between sleeve and piping or piping insulation; use joint sealants appropriate for size, depth, and location of joint. Comply with requirements for sealants specified in Section 079200 "Joint Sealants."

D. Fire-Barrier Penetrations: Maintain indicated fire rating of walls, partitions, ceilings, and floors at pipe penetrations. Seal pipe penetrations with firestop materials. Comply with requirements for firestopping specified in Section 078413 "Penetration Firestopping."

3.2 STACK-SLEEVE-FITTING INSTALLATION

A. Install stack-sleeve fittings in new slabs as slabs are constructed.

B. Install fittings that are large enough to provide 1/4-inch annular clear space between sleeve and pipe or pipe insulation.

C. Secure flashing between clamping flanges for pipes penetrating floors with membrane water- proofing. Comply with requirements for flashing specified in Section 076200 "Sheet Metal Flashing and Trim."

D. Install section of cast-iron soil pipe to extend sleeve to 2 inches above finished floor level.

E. Extend cast-iron sleeve fittings below floor slab as required to secure clamping ring if ring is specified.

F. Using grout, seal the space around outside of stack-sleeve fittings.

G. Fire-Barrier Penetrations: Maintain indicated fire rating of floors at pipe penetrations. Seal pipe penetrations with firestop materials. Comply with requirements for firestopping specified in Section 078413 "Penetration Firestopping."

3.3 SLEEVE-SEAL-SYSTEM INSTALLATION

A. Install sleeve-seal systems in sleeves in exterior concrete walls and slabs-on-grade at service piping entries into building.

B. Select type, size, and number of sealing elements required for piping material and size and for sleeve ID or hole size. Position piping in center of sleeve. Center piping in penetration, assemble sleeve-seal system components, and install in annular space between piping and sleeve. Tighten bolts against pressure plates that cause sealing elements to expand and make a water- tight seal.

3.4 SLEEVE-SEAL-FITTING INSTALLATION

A. Install sleeve-seal fittings in new walls and slabs as they are constructed.

B. Assemble fitting components of length to be flush with both surfaces of concrete slabs and walls. Position waterstop flange to be centered in concrete slab or wall.

C. Secure nailing flanges to concrete forms.

D. Using grout, seal the space around outside of sleeve-seal fittings.

3.5 SLEEVE AND SLEEVE-SEAL SCHEDULE

A. Use sleeves and sleeve seals for the following piping-penetration applications:
1. Exterior Concrete Walls above Grade:
   a. Galvanized-steel-pipe sleeves.
2. Exterior Concrete Walls below Grade:
   a. Cast-iron wall sleeves with sleeve-seal system.
      1) Select sleeve size to allow for 1-inch annular clear space between piping and sleeve for installing sleeve-seal system.
3. Concrete Slabs-on-Grade:
   a. Cast-iron wall sleeves with sleeve-seal system.
      1) Select sleeve size to allow for 1-inch annular clear space between piping and sleeve for installing sleeve-seal system.
4. Concrete Slabs above Grade:
   a. Stack-sleeve fittings
   b. Steel Pipe: ASTM A 53, Type E, Grade B, Schedule 40, galvanized, plain ends.
5. Interior Partitions:
   a. Steel Pipe: ASTM A 53, Type E, Grade B, Schedule 40, galvanized, plain ends.

END OF SECTION 210517

SECTION 210518 - ESCUTCHEONS FOR FIRE-SUPPRESSION

PIPING 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. Escutcheons.
2. Floor plates.

1.3 SUBMITTALS

A General:
1. Comply with Section 21 05 03.00 Submittals for Fire-Suppression."

PART 2 - PRODUCTS

2.1 ESCUTCHEONS

A. One-Piece, Cast-Brass Type: With polished, chrome-plated finish and setscrew fastener.

B. Split-Casting Brass Type: With polished, chrome-plated finish and with concealed hinge and setscrew.

2.2 FLOOR PLATES

A. One-Piece Floor Plates: Cast-iron flange with holes for fasteners.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install escutcheons for piping penetrations of walls, ceilings, and finished floors.

B. Install escutcheons with ID to closely fit around pipe, tube, and insulation of piping and with OD that completely covers opening.
1. Escutcheons for New Piping:
   a. Piping with Fitting or Sleeve Protruding from Wall: One-piece, deep-pattern type.

   b. Chrome-Plated Piping: One-piece, cast-brass or split-casting brass type

with polished, chrome-plated finish.

c. Bare Piping at Wall and Floor Penetrations in Finished Spaces: One-piece, cast- brass or split-casting brass type with polished, chrome-plated finish.
d. Bare Piping at Ceiling Penetrations in Finished Spaces: One-piece, cast-brass or split-casting brass type with polished, chrome-plated finish.
e. Bare Piping in Unfinished Service Spaces: One-piece, cast-brass or split-casting brass type with rough-brass finish.
f. Bare Piping in Equipment Rooms: One-piece, cast-brass or split-casting brass type with rough-brass finish.

2. Escutcheons for Existing Piping:
   a. Chrome-Plated Piping: Split-casting brass type with polished, chrome-plated finish.
   b. Bare Piping at Wall and Floor Penetrations in Finished Spaces: Split-casting brass type with polished, chrome-plated finish.
   c. Bare Piping at Ceiling Penetrations in Finished Spaces: Split-casting brass type with polished, chrome-plated finish.
   d. Bare Piping in Unfinished Service Spaces: Split-casting brass type with rough- brass finish.
   e. Bare Piping in Equipment Rooms: Split-casting brass type with rough-brass finish.

C. Install floor plates for piping penetrations of equipment-room floors.

D. Install floor plates with ID to closely fit around pipe, tube, and insulation of piping and with OD that completely covers opening.
   1. New Piping: One-piece, floor-plate type.
   2. Existing Piping: Split-casting, floor-plate type.

3.2 FIELD QUALITY CONTROL

A. Replace broken and damaged escutcheons and floor plates using new materials.

END OF SECTION 210518

SECTION 211313 - WET-PIPE SPRINKLER SYSTEMS

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. Pipes, fittings, and specialties.
2. Fire-protection valves.
3. Sprinklers.

1.3 DEFINITIONS

A Standard-Pressure Sprinkler Piping: Wet-pipe sprinkler system piping designed to operate at working pressure of 175 psig maximum.

1.4 SYSTEM DESCRIPTIONS

A Wet-Pipe Sprinkler System: Automatic sprinklers are attached to piping containing water and that is connected to water supply through alarm valve. Water discharges immediately from sprinklers when they are opened. Sprinklers open when heat melts fusible link or destroys frangible device. Hose connections are included if indicated.

1.5 PERFORMANCE REQUIREMENTS

A Standard-Pressure Piping System Component: Listed for 175-psig minimum working pressure.

B. Delegated Design: Design sprinkler system(s), including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.
1. Margin of Safety for Available Water Flow and Pressure: 10 percent, including losses through water-service piping, valves, and backflow preventers.
2. Sprinkler Occupancy Hazard Classifications:
   a. Office and Public Areas: Light Hazard.
   b. Educational: Light Hazard.
   c. Building Service Areas: Ordinary Hazard, Group
   d. Electrical Equipment Rooms: Ordinary Hazard, Group 1.
   e. General Storage Areas: Ordinary Hazard, Group 1.
   f. Mechanical Equipment Rooms: Ordinary Hazard, Group 1.
3. Minimum Density for Automatic-Sprinkler Piping Design:
   a. Light-Hazard Occupancy: 0.10 gpm over 1500-sq. ft. area.
   b. Ordinary-Hazard, Group 1 Occupancy: 0.15 gpm over 1500-sq. ft. area.

c. Ordinary-Hazard, Group 2 Occupancy: 0.20 gpm over 1500-sq. ft. area.

4. Maximum Protection Area per Sprinkler: Per UL listing.
   a. Office Spaces: 225 sq. ft.
   b. Storage Areas: 130 sq. ft.
   c. Mechanical Equipment Rooms: 130 sq. ft.
   d. Electrical Equipment Rooms: 130 sq. ft.
   e. Other Areas: According to NFPA 13 recommendations unless otherwise indicated.
5. Total Combined Hose-Stream Demand Requirement: According to NFPA 13 unless otherwise indicated:
   a. Light-Hazard Occupancies: 100 gpm for 30 minutes.
   b. Ordinary-Hazard Occupancies: 250 gpm for 60 to 90 minutes.

1.6 SUBMITTALS

A. General:
1. Comply with Section 21 05 03.00 Submittals for Fire-Suppression."

B. Product Data (PD):
1. Provide product datasheets for all fire-suppression materials, components, valves, devices, and equipment. Include rated capacities, operating characteristics, electrical characteristics, and furnished specialties and accessories

C. Shop Drawings (SD), Delegated-Design Submittal: For fire-suppression systems in compliance with performance requirements and design criteria, all applicable codes, the authority having jurisdiction, and NFPA guidelines. Shop Drawings and associated hydraulic calculations shall be signed and sealed by the qualified professional engineer responsible for their preparation.
1. Include plans, elevations, sections, and attachment details.
2. Include water flow test data and calculations on the drawings.
3. Coordination Drawings: Sprinkler systems, drawn to scale, on which the following items are shown and coordinated with each other, using input from installers of the items involved:
   a. Items penetrating finished ceiling include the following:
      1) Lighting fixtures.
      2) Air outlets and inlets.
   b. Coordinate with all equipment, piping, conduit, ductwork, from other contractors.

D. Closeout Submittals (CO):
1. Provide operation and maintenance manuals for all fire-suppression components, valves, devices, and equipment.
2. Field Test Reports and Certificates: Indicate and interpret test results for compliance with performance requirements and as described in NFPA. Include "Contractor's Material and Test Certificate for Aboveground Piping."

1.7 QUALITY ASSURANCE

A Installer Qualifications:
1. Installer's responsibilities include designing, fabricating, and installing sprinkler systems and providing professional engineering services needed to assume engineering responsibility. Base calculations on results of fire-hydrant flow test.
   a. Engineering Responsibility: Preparation of working plans, calculations, and field test reports by a qualified professional engineer.

B. Welding Qualifications: Qualify procedures and operators according to ASME Boiler and Pressure Vessel Code.

C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

D. NFPA Standards: Sprinkler system equipment, specialties, accessories, installation, and testing shall comply with the following:
1. NFPA 13, "Installation of Sprinkler Systems."
2. NFPA 13R, "Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height."
3. NFPA 24, "Installation of Private Fire Service Mains and Their Appurtenances."

1.8 PROJECT CONDITIONS

A. Interruption of Existing Sprinkler Service: Do not interrupt sprinkler service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary sprinkler service according to requirements indicated:
1. Notify Architect and Owner no fewer than seven days in advance of proposed interruption of sprinkler service.
2. Do not proceed with interruption of sprinkler service without Architect's and Owner's written permission.

1.9 COORDINATION

A Coordinate layout and installation of sprinklers with other construction that penetrates ceilings, including light fixtures, HVAC equipment, and partition assemblies.

1.10 EXTRA MATERIALS

A Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
1. Sprinkler Cabinets: Finished, wall-mounted, steel cabinet with hinged cover, and with space for minimum of six spare sprinklers plus sprinkler wrench. Include number of sprinklers required by NFPA 13 and sprinkler wrench. Include separate cabinet with sprinklers and wrench for each type of sprinkler used on Project.

PART 2 - PRODUCTS

2.1 PIPING MATERIALS

A Comply with requirements in "Piping Schedule" Article for applications of pipe, tube, and fitting materials, and for joining methods for specific services, service locations, and pipe sizes.

2.2 STEEL PIPE AND FITTINGS

A Piping 2" and smaller shall be Standard Weight, Black-Steel Pipe: ASTM A 53/A 53M, Type E,

Grade B. Pipe ends may be factory or field formed to match joining method.

B. Piping 2-1/2» and larger shall be Schedule 10, Black-Steel Pipe: ASTM A 135 or ASTM A 795/A 795M, Schedule 10 in NPS 5 and smaller; and NFPA 13-specified wall thickness in NPS 6 to NPS 10, plain end.

C. Black-Steel Pipe Nipples: ASTM A 733, made of ASTM A 53/A 53M, standard-weight, seam- less steel pipe with threaded ends.

D. Steel Couplings: ASTM A 865, threaded.

E. Gray-Iron Threaded Fittings: ASME 816.4, Class 125, standard pattern.

F. Malleable- or Ductile-Iron Unions: UL 860.

G. Cast-Iron Flanges: ASME 16.1, Class 125.

H. Steel Flanges and Flanged Fittings: ASME 816.5, Class 150.

I. Steel Welding Fittings: ASTM A 234/A 234M and ASME 816.9.

J. Grooved-Joint, Steel-Pipe Appurtenances:
1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   a. Anvil International, Inc.
   b. Corcoran Piping System Co.
   c. National Fittings, Inc.
   d. Shurjoint Piping Products.
   e. Tyco Fire & Building Products LP.
   f. Victaulic Company.
2. Pressure Rating: 175 psig minimum.
3. Grooved-End Fittings for Steel Piping: ASTM A 47/A 47M, malleable-iron casting or ASTM A 536, ductile-iron casting; with dimensions matching steel pipe.
4. Grooved-End-Pipe Couplings for Steel Piping: AWWA C606 and UL 213, rigid pattern, unless otherwise indicated, for steel-pipe dimensions. Include ferrous housing sections, EPDM-rubber gasket, and bolts and nuts. Fittings in paragraph below are available in NPS 3/4 to NPS 2 (DN 20 to DN 50).

K. Steel Pressure-Seal Fittings: UL 213, FM-approved, 175-psig pressure rating with steel housing, rubber 0-rings, and pipe stop; for use with fitting manufacturers' pressure-seal tools.

2.3 PIPING JOINING MATERIALS

A. Pipe-Flange Gasket Materials: AWWA C110, rubber, flat face, 1/8 inch thick or ASME 816.21, nonmetallic and asbestos free.
1. Class 125, Cast-Iron Flanges and Class 150, Bronze Flat-Face Flanges: Full-face gaskets.
2. Class 250, Cast-Iron Flanges and Class 300, Steel Raised-Face Flanges: Ring-type gaskets.

B. Metal, Pipe-Flange Bolts and Nuts: ASME B18.2.1, carbon steel unless otherwise indicated.

C. Brazing Filler Metals: AWS A5.8/A5.8M, BCuP Series, copper-phosphorus alloys for general-duty brazing unless otherwise indicated.

D. Welding Filler Metals: Comply with AWS D10.12M/D10.12 for welding materials appropriate for wall thickness and chemical analysis of steel pipe being welded.

E. Plastic, Pipe-Flange Gasket, and Bolts and Nuts: Type and material recommended by piping system manufacturer unless otherwise indicated.

2.4 LISTED FIRE-PROTECTION VALVES

A. General Requirements:

1. Valves shall be UL listed or FM approved.
2. Minimum Pressure Rating for Standard-Pressure Piping: 175 psig.

2.5 TRIM AND DRAIN VALVES

A. General Requirements:
1. Standard: UL's "Fire Protection Equipment Directory" listing or "Approval Guide," published by FM Global, listing.
2. Pressure Rating: 175 psig minimum.

2.6 SPECIALTY VALVES

A General Requirements:
1. Standard: UL's "Fire Protection Equipment Directory" listing or "Approval Guide," published by FM Global, listing.
2. Pressure Rating:
   a. Standard-Pressure Piping Specialty Valves: 175 psig.
3. Body Material: Cast or ductile iron.
4. Size: Same as connected piping.
5. End Connections: Flanged or grooved.

2.7 SPRINKLER SPECIALTY PIPE FITTINGS

A. Branch Outlet Fittings:
1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   a. Anvil International, Inc.
   b. National Fittings, Inc.
   c. Shurjoint Piping Products.
   d. Tyco Fire & Building Products LP.
   e. Victaulic Company.
2. Standard: UL 213.

3. Pressure Rating: 175 psig minimum.
4. Body Material: Ductile-iron housing with EPDM seals and bolts and nuts.
5. Type: Mechanical-T and -cross fittings.
6. Configurations: Snap-on and strapless, ductile-iron housing with branch outlets.
7. Size: Of dimension to fit onto sprinkler main and with outlet connections as required to match connected branch piping.
8. Branch Outlets: Grooved, plain-end pipe, or threaded.

B. Flow Detection and Test Assemblies:
1. Manufacturers: Subject to compliance with requirements, available manufacturers offer- ing products that may be incorporated into the Work include, but are not limited to, the following:
   a. AGF Manufacturing Inc.
   b. Reliable Automatic Sprinkler Co., Inc.
   c. Tyco Fire & Building Products LP.
   d. Victaulic Company.
2. Standard: UL's "Fire Protection Equipment Directory" listing or "Approval Guide," published by FM Global, listing.
3. Pressure Rating: 175 psig minimum.
4. Body Material: Cast- or ductile-iron housing with orifice, sight glass, and integral test valve.
5. Size: Same as connected piping.
6. Inlet and Outlet: Threaded.

C. Branch Line Testers:
1. Manufacturers: Subject to compliance with requirements, available manufacturers offer- ing products that may be incorporated into the Work include, but are not limited to, the following:
   a. Elkhart Brass Mfg. Company, Inc.
   b. Fire-End & Croker Corporation.
   c. Potter Roemer.
2. Standard: UL 199.
3. Pressure Rating: 175 psig
4. Body Material: Brass.
5. Size: Same as connected piping.
6. Inlet: Threaded.
7. Drain Outlet: Threaded and capped.
8. Branch Outlet: Threaded, for sprinkler.

D. Sprinkler Inspector's Test Fittings:
1. Manufacturers: Subject to compliance with requirements, available manufacturers offer- ing products that may be incorporated into the Work include, but are not limited to, the following:
   a. AGF Manufacturing Inc.
   b. Triple R Specialty.
   c. Tyco Fire & Building Products LP.
   d. Victaulic Company.
   e. Viking Corporation.
2. Standard: UL's "Fire Protection Equipment Directory" listing or "Approval Guide,"
3. published by FM Global, listing.
4. Pressure Rating: 175 psig minimum.
5. Body Material: Cast- or ductile-iron housing with sight glass.
6. Size: Same as connected piping.
7. Inlet and Outlet: Threaded.

E. Adjustable Drop Nipples:
1. Manufacturers: Subject to compliance with requirements, available manufacturers offer- ing products that may be incorporated into the Work include, but are not limited to, the following:
   a. CECA, LLC.
   b. Corcoran Piping System Co.
   c. Merit Manufacturing; a division of Anvil International, Inc.
2. Standard: UL 1474.
3. Pressure Rating: 250 psig minimum.
4. Body Material: Steel pipe with EPDM-rubber 0-ring seals.
5. Size: Same as connected piping.
6. Length: Adjustable.
7. Inlet and Outlet: Threaded.

F. Flexible, Sprinkler Hose Fittings:
1. Flexible, stainless steel sprinkler fittings equal to Victaulic Vic-Flex Sprinkler Fittings shall be approved. Where used, the flexible extensions shall be a minimum of three feet in length and installed in a manner that will allow the sprinkler to be adjusted to any location within the ceiling tile that it is installed in. The intent is to allow for some flexibility in the event that future renovations require the ceiling and/or sprinkler location to be adjusted without modification of the rigid piping serving the sprinkler.
2. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   a. FlexHead Industries, Inc.
   b. Victaulic Company.
   c. Aquaflex
   d. Viking
3. Standard: UL 1474.
4. Type: Multiple-use flexible drop with hose for connection to sprinkler, and with AB1 open-gate bracket for connection to ceiling grid.
   a. The bracket shall allow installation before the ceiling tile is in place.
5. Pressure Rating: 175 psig minimum.
6. The drop shall include a UL approved braided hose with a bend radius to allow for proper installation in confined spaces.
7. Union joints shall be provided for ease of installation.
8. Size: Same as connected piping, for sprinkler.

2.8 SPRINKLERS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. AFAC Inc.
2. Globe Fire Sprinkler Corporation.
3. Reliable Automatic Sprinkler Co., Inc.
4. Tyco Fire & Building Products LP.
5. Venus Fire Protection Ltd.
6. Victaulic Company.
7. Viking Corporation.

B. General Requirements:
1. Standard: UL's "Fire Protection Equipment Directory" listing or "Approval Guide," published by FM Global, listing.

2. Pressure Rating for Residential Sprinklers: 175 psig maximum.
3. Pressure Rating for Automatic Sprinklers: 175 psig minimum.
4. Pressure Rating for High-Pressure Automatic Sprinklers: 300 psig.

C. Automatic Sprinklers with Heat-Responsive Element:
1. Early-Suppression on, Fast-Response Applications: UL 1767.
2. Nonresidential Applications: UL 199.
3. Residential Applications: UL 1626.
4. Characteristics: Nominal 1/2-inch orifice with Discharge Coefficient K of 5.6, and for "Ordinary" temperature classification rating unless otherwise indicated or required by
5. application.

D. Sprinkler Escutcheons: Materials, types, and finishes for the following sprinkler mounting applications. Escutcheons for concealed, flush, and recessed-type sprinklers are specified with sprinklers.
1. Ceiling Mounting: Chrome-plated steel, one piece, flat, with 1-inch vertical adjustment.
2. Sidewall Mounting: Chrome-plated steel, one piece, flat.

E. Sprinkler Guards:
1. Provide sprinkler guards to protect exposed sprinklers in mechanical rooms, in
2. gymnasiums, and all other locations subject to damage.
3. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   a. Reliable Automatic Sprinkler Co., Inc.
   b. Tyco Fire & Building Products LP.
   c. Victaulic Company.
   d. Viking Corporation.
4. Standard: UL 199.
5. Type: Wire cage with fastening device for attaching to sprinkler.

2.9 ADDITIONAL SPRINKLERS

A. For each type of sprinkler being used, provide and maintain a minimum of four spare sprinklers on the premises during construction so that any sprinklers that have operated or been damaged in any way can be promptly replaced.

B. For each type of sprinkler being used, provide the owner with a minimum of four additional sprinklers in a wall mounted storage cabinet. Coordinate location of storage cabinet with owner.

C. Where dry sprinklers of different lengths are installed, spare dry sprinklers shall not be required, provided that a means of returning the system to service is furnished.

D. Furnish and install a sprinkler head storage cabinet(s) large enough to house all of the spare sprinklers and tools. Install the cabinet where the temperature to which they are subject will at no time exceed 100 F.

E. A special sprinkler wrench shall be provided and kept in the cabinet to be used in the removal and installation of sprinklers. One sprinkler wrench shall be provided for each type of sprinkler installed.

2.10 ALARM DEVICES

A. Alarm-device types shall match piping and equipment connections.

PART 3 - EXECUTION

3.1 PREPARATION

A. Perform fire-hydrant flow test according to NFPA 13 and NFPA 291. Use results for system de- sign calculations required in "Quality Assurance" Article.

B. Report test results promptly and in writing.

3.2 WATER-SUPPLY CONNECTIONS

A. Connect sprinkler piping to building's interior water-distribution piping.

3.3 PIPING INSTALLATION

A. Locations and Arrangements: Drawing plans, schematics, and diagrams indicate general location and arrangement of piping. Install piping as indicated, as far as practical.
   1. Deviations from approved working plans for piping require written approval from authorities having jurisdiction. File written approval with Architect before deviating from approved working plans.

B. Piping Standard: Comply with requirements for installation of sprinkler piping in NFPA 13.

C. Use listed fittings to make changes in direction, branch takeoffs from mains, and reductions in pipe sizes.

D. Install unions adjacent to each valve in pipes NPS 2 and smaller.

E. Install flanges, flange adapters, or couplings for grooved-end piping on valves, apparatus, and equipment having NPS 2-112 and larger end connections.

F. Install "Inspector's Test Connections" in sprinkler system piping, complete with shutoff valve, and sized and located according to NFPA 13.

G. Install sprinkler piping with drains for complete system drainage.

H. Install sprinkler control valves, test assemblies, and drain risers adjacent to standpipes when sprinkler piping is connected to standpipes.

I. Install automatic (ball drip) drain valve at each check valve for fire-department connection, to drain piping between fire-department connection and check valve. Install drain piping to and spill over floor drain or to outside building.

J. Install alarm devices in piping systems.

K. Install hangers and supports for sprinkler system piping according to NFPA 13. Comply with requirements for hanger materials in NFPA 13.

L. Install pressure gages on riser or feed main, at each sprinkler test connection, and at top of each standpipe. Include pressure gages with connection not less than NPS 1/4 and with soft metal seated globe valve, arranged for draining pipe between gage and valve. Install gages to permit removal, and install where they will not be subject to freezing.

M. Fill sprinkler system piping with water.

N. Install sleeves for piping penetrations of walls, ceilings, and floors. Comply with requirements for sleeves specified in Section 210517 "Sleeves and Sleeve Seals for Fire-Suppression Piping."

O. Install sleeve seals for piping penetrations of concrete walls and slabs. Comply with

requirements for sleeve seals specified in Section 210517 "Sleeves and Sleeve Seals for Fire-Suppression Piping."

P. Install escutcheons for piping penetrations of walls, ceilings, and floors. Comply with requirements for escutcheons specified in Section 210518 "Escutcheons for Fire-Suppression Piping."

3.4 JOINT CONSTRUCTION

A Install couplings, flanges, flanged fittings, unions, nipples, and transition and special fittings that have finish and pressure ratings same as or higher than system's pressure rating for above- ground applications unless otherwise indicated.

B. Install unions adjacent to each valve in pipes NPS 2 and smaller.

C. Install flanges, flange adapters, or couplings for grooved-end piping on valves, apparatus, and equipment having NPS 2-1/2 and larger end connections.

D. Ream ends of pipes and tubes and remove burrs. Bevel plain ends of steel pipe.

E. Remove scale, slag, dirt, and debris from inside and outside of pipes, tubes, and fittings before assembly.

F. Flanged Joints: Select appropriate gasket material in size, type, and thickness suitable for water service. Join flanges with gasket and bolts according to ASME 831.9.

G. Threaded Joints: Thread pipe with tapered pipe threads according to ASME 81.20.1. Cut threads full and clean using sharp dies. Ream threaded pipe ends to remove burrs and restore full ID. Join pipe fittings and valves as follows:
1. Apply appropriate tape or thread compound to external pipe threads.
2. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or

damaged.

H. Twist-Locked Joints: Insert plain end of steel pipe into plain-end-pipe fitting. Rotate retainer lugs one-quarter tum or tighten retainer pin.

I. Steel-Piping, Pressure-Sealed Joints: Join light wall steel pipe and steel pressure-seal fittings with tools recommended by fitting manufacturer.

J. Welded Joints: Construct joints according to AWS D10.12M/D10.12, using qualified processes and welding operators according to "Quality Assurance" Article.
1. Shop weld pipe joints where welded piping is indicated. Do not use welded joints for galvanized-steel pipe.

K. Steel-Piping, Cut-Grooved Joints: Cut square-edge groove in end of pipe according to AWVVA C606. Assemble coupling with housing, gasket, lubricant, and bolts. Join steel pipe and grooved-end fittings according to AWVVA C606 for steel-pipe joints.

L. Steel-Piping, Roll-Grooved Joints: Roll rounded-edge groove in end of pipe according to AWVIIA C606. Assemble coupling with housing, gasket, lubricant, and bolts. Join steel pipe and grooved-end fittings according to AWVIIA C606 for steel-pipe grooved joints.

M. Steel-Piping, Pressure-Sealed Joints: Join Schedule 5 steel pipe and steel pressure-seal fittings with tools recommended by fitting manufacturer.

N. Brazed Joints: Join copper tube and fittings according to CDA's "Copper Tube Handbook," "Brazed Joints" Chapter.

O. Copper-Tubing Grooved Joints: Roll rounded-edge groove in end of tube according to AWVIIA C606. Assemble coupling with housing, gasket, lubricant, and bolts. Join copper tube and grooved-end fittings according to AWVIIA C606 for steel-pipe grooved joints.

P. Copper-Tubing, Pressure-Sealed Joints: Join copper tube and copper pressure-seal fittings with tools recommended by fitting manufacturer.

Q. Extruded-Tee Connections: Form tee in copper tube according to ASTM F 2014. Use tool designed for copper tube; drill pilot hole, form collar for outlet, dimple tube to form seating stop, and braze branch tube into collar.

R. Dissimilar-Material Piping Joints: Make joints using adapters compatible with materials of both piping systems.

S. Plastic-Piping, Solvent-Cement Joints: Clean and dry joining surfaces. Join pipe and fittings according to the following:

1. Comply with ASTM F 402 for safe-handling practice of cleaners, primers, and solvent cements. Apply primer.
2. CPVC Piping: Join according to ASTM D 2846/D 2846M Appendix.

3.5 VALVE AND SPECIALTIES INSTALLATION

A. Install listed fire-protection valves, trim and drain valves, specialty valves and trim, controls, and specialties according to NFPA 13 and authorities having jurisdiction.

B. Install listed fire-protection shutoff valves supervised open, located to control sources of water supply except from fire-department connections. Install permanent identification signs indicating portion of system controlled by each valve.

C. Install check valve in each water-supply connection. Install backflow preventers instead of check valves in potable-water-supply sources.

D. Specialty Valves:
1. General Requirements: Install in vertical position for proper direction of flow, in main supply to system.
2. Alarm Valves: Include bypass check valve and retarding chamber drain-line connection.
3. Deluge Valves: Install in vertical position, in proper direction of flow, and in main supply to deluge system. Install trim sets for drain, priming level, alarm connections, ball drip valves, pressure gages, priming chamber attachment, and fill-line attachment.

3.6 SPRINKLER INSTALLATION

A. Install sprinklers in suspended ceilings within 1 inch in both directions, in the center of a 2x2 ceiling tile or in the center of a 2x2 end-section of a 2x4 ceiling tile.

B. Install dry-type sprinklers with water supply from heated space. Do not install pendent or side-wall, wet-type sprinklers in areas subject to freezing.

3.7 IDENTIFICATION

A. Install labeling and pipe markers on equipment and piping according to requirements in NFPA 13.

B. Identify system components, wiring, cabling, and terminals. Comply with requirements for identification specified in Section 260553 "Identification for Electrical Systems."

3.8 FIELD QUALITY CONTROL

A. Perform tests and inspections.

B. Tests and Inspections:
1. Leak Test: After installation, charge systems and test for leaks. Repair leaks and retest until no leaks exist.

2. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and

equipment.

3. Flush, test, and inspect sprinkler systems according to NFPA 13, "Systems Acceptance" Chapter.
4. Energize circuits to electrical equipment and devices.
5. Coordinate with fire-alarm tests. Operate as required.
6. Coordinate with fire-pump tests. Operate as required.
7. Verify that equipment hose threads are same as local fire-department equipment.

C. Sprinkler piping system will be considered defective if it does not pass tests and inspections.

D. Prepare test and inspection reports.

3.9 CLEANING

A. Clean dirt and debris from sprinklers.

B. Remove and replace sprinklers with paint other than factory finish.

3.10 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain specialty valves.

3.11 SPRINKLER SCHEDULE

A Use sprinkler types in subparagraphs below for the following applications:

1. Rooms without Ceilings: Upright sprinklers with rough bronze finish or horizontal sidewall sprinklers with rough bronze finish.
2. Finished Rooms with Ceilings:
   a. Ceilings: Fully concealed pendent sprinklers with rough bronze finish on sprinkler and factory-painted adjustable white cover.
   b. Walls: Concealed horizontal sidewall sprinklers with factory-painted white cover.
3. Spaces Subject to Freezing: Dry pendent sprinklers or dry sidewall sprinklers.

END OF SECTION 211313

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