

GALLERY 53

PROJECT MANUAL

Roofing, Masonry and Cornice Repairs

City of Meriden Project # B023-18

Architect Project # 51961.10

**Construction Documents
Volume 1 of 1**

Prepared For:

The City of Meriden
142 East Main Street
Meriden, CT 06450
and
Gallery 53
53 Colony Street
Meriden, CT 06451

Prepared By:

DeCARLO & DOLL, INC.
89 COLONY STREET
MERIDEN, CT 06451

October 12, 2022

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GALLERY 53
53 COLONY STREET
ROOFING, MASONRY AND CORNICE REPAIRS
MERIDEN, CT
Project No. 51961.10

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SECTION 000115 - LIST OF DRAWING SHEETS

1.1 LIST OF DRAWINGS

- A. Drawings: Drawings consist of the Contract Drawings and other drawings listed on the Table of Contents page of the separately bound drawing set titled GALLERY 53 ROOFING, MASONRY AND CORNICE REPAIR, Meriden, CT, dated October 12, 2022 and as modified by subsequent Addenda and Contract modifications.
- B. List of Drawings: Drawings consist of the following Contract Drawings and other drawings of type indicated:

COVER SHEET

A-050 GENERAL NOTES

RP-1 ROOF PLAN

R1 ROOF DETAILS

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END OF SECTION 000115



City of Meriden, Connecticut

Purchasing Department

Invitation to Bid

For

53 Colony Street Roofing, Masonry and Cornice Repairs

B023-18

Bids Due: November 10, 2022 @ 11:00 AM

Purchasing Department

142 East Main Street, Room 210

Meriden, CT 06450

(203) 630-4115

LEGAL NOTICE

INVITATION TO BID

The City of Meriden is accepting sealed bids for:

B023-18 - 53 Colony Street Roofing, Masonry and Cornice Repairs

The City of Meriden seeks the services of a contractor to furnish labor and materials to replace the roof with necessary masonry and cornice repairs for Gallery 53, 53 Colony Street, Meriden, CT 06451.

Bids shall be submitted on forms and in the manner specified. Forms and specifications may be obtained from the Purchasing Department, on the City of Meriden website (www.meridenct.gov/business/bids-rfps/), and on the State of Connecticut Department of Administrative Services website (<https://portal.ct.gov/DAS/CTSource>). Bids will be accepted at the Purchasing Department, 142 East Main Street, Room 210, Meriden, Connecticut 06450 until **11:00 A.M. local, eastern standard time on November 10, 2022** at which time they will be publicly opened and read. Any bid received after the time and date specified shall not be considered.

The right is reserved to reject any or all bids, in whole or in part, to award any item, group of items, or total bid, and to waive informality or technical defects, if it is deemed to be in the best interest of the City of Meriden. No bidder may withdraw its bid within sixty (60) days of the date of the bid opening.

There will be a Non-Mandatory Pre-Bid Walkthrough on Thursday, October 27th, 2022 at 10:00 AM at 53 Colony Street, Meriden, CT 06451.

Each bid shall be accompanied by a Certified Check or Bid Bond in the amount of Ten (10%) percent of the amount bid.

Labor and Material Payment Bond and a Performance bond for One Hundred Percent (100%) of the contract price, with a corporate surety approved by the City of Meriden, will be required of the lowest responsible bidder.

The attention of bidders is called to the requirement for minimum wage rates to be paid under this contract.

The City of Meriden is an Affirmative Action/Equal Opportunity Employer. Disadvantaged, minority, small, and women business enterprises are encouraged to respond.

Adam B. Tulin
Purchasing Officer
City of Meriden, CT 06450-8022
Dated: October 21, 2022

SECTION 001153 - CONTRACTOR QUALIFICATION STATEMENT

CONTRACTOR QUALIFICATION STATEMENT

PROJECT NAME: _____

PROJECT NUMBER: _____

PREQUALIFICATION FOR: GENERAL CONTRACTOR CONSTRUCTION MANAGER AT RISK
 TRADE: _____

General Information

MBE SBE WBE DBE

Name of Company: _____

Street Address: _____

City/State/Zip: _____

Main Office Regional Office Local Office

Corporation Partnership Sole Proprietorship LLC Joint Venture

Name of President/General Partners/Owner: _____

Parent Company: _____

Year Company Started: _____

State of Incorporation: _____ Date of Incorporation: _____

Other names your Company has operated under: _____

Federal ID Number: _____

List of Corporate Officers, Partners, Proprietors, & Members of your Organization: _____

Contractor's License Number: _____ State: _____ Expiration Date: _____

Contractor's License Number: _____ State: _____ Expiration Date: _____

Contractor's License Number: _____ State: _____ Expiration Date: _____

List any Subsidiaries and Affiliates of your Company: _____

List jurisdictions and/or trade categories in which your Firm is legally qualified to do business. It is mandatory that the firm be legally qualified to do business in the State of Connecticut. If the applicant is a joint venture, all joint venture partners must be qualified to do business in the State of Connecticut. Connecticut General Statutes: 20-341gg; 20-330 et seq.; 33-615. _____

RELEVANT EXPERIENCE

Trade that your Company is requesting to be qualified: _____

List categories of work that your company normally performs with its own forces: _____

Upon request provide the Agency with a list of major projects your organization has completed in the past five years, giving the name of the project, owner, architect, date of completion, and percentage of the cost of the work performed with your own forces.

DAS PREQUALIFICATION

Prequalification by the State of Connecticut, Department of Administrative Services (DAS) is not required however each bidding contractor so qualified shall complete information below.

DAS Prequalification (List all DAS Categories which your firm is currently Pre-Qualified): _____

Provide and attach to this Contractor Qualification Statement the following information;

- √ **Provide a copy of your current DAS Certificate for the Classification required in this specific project.**

CLAIMS & SUITS

Within the past 5 years has your firm or any part of your firm; any owner, or partial owner of your firm; or any other person in any way associated with or employed by your firm ever been barred, suspended, disqualified or otherwise precluded from bidding or offering a proposal on contracts by any municipality or any agency of the State of Connecticut, other states, or the Federal Government? **YES / NO**

- √ **If yes, on a separate page, include an explanation of any previous debarment and copies of any notice of reinstatement.**

State whether within the past 5 years you have been defaulted, terminated, or have had any liquidated damages or other contractual penalties for failures to timely or properly perform a contract assessed against you and indicate the current status of any litigation involving those transactions. **YES / NO**

- √ **If yes, on a separate page, include an explanation of any previous default, termination or damage assessment and copies of any notice of reinstatement.**

State whether within the past 5 years you have been declared to be a non-responsible bidder or proposer on any public work project? and identify the project and date of the findings. **YES / NO**

- √ **If yes, on a separate page, identify the project name, the Owner of the project and the date of the findings.**

Please indicate either yes or no to the following questions. You may attach a separate sheet to explain any yes answers. For any yes answer in response to the following questions please identify the offense, along with the location of the court or tribunal administering the matter, and the docket or proceeding number of the matter.

Has your firm or any part of your firm, any owner, or partial owner of your firm, or any person in any way associated with or employed by your firm ever:

Had a conviction or entry of a plea of guilty or nolo contendere for commission of a criminal offense as an incident to obtaining or attempting to obtain a public or private contract or subcontract or in the performance of such contract or subcontract? (Connecticut General Statute 31-57c) **YES / NO**

Had a conviction or entry of a plea of guilty or nolo contendere under state or federal law for embezzlement, theft, forgery, bribery, falsification or destruction of records, receiving stolen property, or any other offense indicating a lack of business integrity or business honesty which affects responsibility as a contractor? (Connecticut General Statute 31-57c) **YES / NO**

Had a conviction or entry of a plea of guilty or nolo contendere under state or federal antitrust, collusion or conspiracy statutes arising out of the submission of bids or proposals? (Connecticut General Statute 31-57c) **YES / NO**

Been cited for noncompliance with contract provisions on a public project, of a character regarded by the awarding authority to be of such gravity as to indicate a lack of responsibility to perform as a state contractor, including deliberate failure, without good cause, to perform in accordance with specifications or time limits provided in a contract? **YES / NO**

Within the previous 5 years compiled a record of failure to perform or of unsatisfactory performance in accordance with the terms of one or more contracts, unless such failure to perform or unsatisfactory performance was caused by acts beyond your control? **YES / NO**

On a public project or contract, been cited for any other cause the awarding authority determined to be so serious or compelling as to affect responsibility as a state contractor, including disqualification by another governmental entity, having caused financial loss to the state or having caused a serious delay or inability of state officials to carry out their duties on a past contract or contracts? **YES / NO**

On a separate sheet of paper, identify all litigation or arbitration proceedings including out of court settlements initiated by or against you within the past five (5) years including all pending cases. List the name of the project, the project location and the court or arbitration number and location. Briefly describe, use a separate sheet if necessary, the circumstances and disposition of each case. Specifically identify and provide details of each instance of claims or legal proceedings by or against a public or private Owner. Please note that generalized responses such as "litigation arising in the ordinary course of doing business" are not acceptable.

On a separate sheet of paper, identify any OSHA citations within the past five (5) years under present business name or any past business name. Have you been cited for three or more willful or serious violations of OSHA, or of any standard, order or regulations promulgated pursuant to such Act which violations were cited in accordance with the provisions of any State Occupational Safety and Health Act or the Occupational Safety and Health Act of 1970 and which were not abated within the time fixed by the citation; and which citation has not been set aside following appeal to the appropriate agency or court having jurisdiction? Additionally list any criminal convictions related to the injury or death of any employee. (Connecticut General Statute 31-57b)

Have you appeared on any list published by the Connecticut State Labor Department of persons or firms that have been found by the National Labor Relations Board and by a final decision rendered by a Federal Court to have been in violation of the National Labor Relations Act, 29 USC 151 et. seq. or to have been found in contempt of court by a final decision of a Federal Court for failure to correct a

violation of the National Labor Relations Act on three or more occasions involving different violations?
(Connecticut General Statute 31-57a) **YES / NO**

√ **If the answer to the preceding question is “yes” state the date of publication of such list by the Connecticut State Labor Department.** _____

On a separate sheet of paper, identify any instances within the previous five years in which you or any entity in which you have an interest, has appeared on a list published by the State of Connecticut Labor Department of persons or firms who the Labor Department has found you to have disregarded or violated your obligations to employees and subcontractors on public works projects under Connecticut General Statutes 31-53 and 31-76c (i.e. payment of prevailing wages and overtime payments) or in which you have been barred from Federal government contracts in accordance with the provisions of the Davis Beacon Act, 40 U.S. C. 276a-2. Describe in detail the circumstances of each violation, including but not limited to, the date and nature of the violation, the project on which the violation occurred, the source, if known, of any complaint giving rise to any Department of Labor investigation, the results of any such investigation, the penalty imposed or other action taken by the Department of Labor, any remedial action which was taken and any other resolution of any such complaint or violation. (Connecticut General Statute 31-53a)

On a separate sheet of paper, identify any instances in which any complaint has been made to, or any investigation or inquiry has been conducted by, the State of Connecticut Department of Labor regarding any alleged non-compliance by your or by any subcontractors on your previous projects, of any provision of Part III of Chapter 557 (Connecticut General Statutes Sections 31-52 through 31-57e, prevailing wage and other requirements) and Chapter 558 (Connecticut General Statutes Sections 31-58 through 31-761, minimum wage, overtime and other requirements) during the five calendar years immediately preceding this Application. Describe in detail the circumstances of each violation, including but not limited to, the date and nature of the violation, the project on which the violation occurred, the source, if known, of any complaint giving rise to any Department of Labor investigation, the results of any such investigation, the penalty imposed or other action taken by the Department of Labor, any remedial action which was taken and any other resolution of any such complain or violation.

√ If in the event that there were such instances as described in your responses, you are further required to provide with your Application a written statement of the policy and procedures you would implement on this project in an effort to insure that you and your subcontractors would remain in compliance with the statutory requirements for wage rates and payment of wages as noted above. _____

State whether you have ever been cited or penalized by any government agency for failure to comply with any affirmative action, non-discrimination, or other human rights requirements applicable to any work performed by you. If so, provide the date(s), details, disposition and docket number(s) for each such instance.

On a separate sheet of paper, identify any criminal charges, indictments or civil enforcement actions currently pending against you or your principals involving any of the offenses or violations referred to above? If so identify the offense(s), court docket number and status of proceeding(s)._____

Have you ever been found by the Connecticut Department of Public Works, or another State Agency to be in violation of the subcontractor listing requirements or other provisions of Connecticut General Statutes Section 4b-95? **YES / NO**

√ **If yes, on a separate page, indicate the nature, date and circumstances of any such violation.**

Have you ever been cited for or been the subject of a civil or criminal court proceeding alleging that you have violated the provisions of Connecticut General Statutes Sections 31-52 or 31-52a regarding providing preference to Connecticut citizens or residents in the construction of public buildings or works? **YES / NO**

√ If yes, provide details concerning the date, circumstances and disposition of any such citation or court proceeding

MANAGERIAL ABILITY

Upon request provide the Owner with a list of construction experience and present commitments of the key individuals of your organization. Additionally list the personnel, together with their qualifications and resumes, of whom would most likely be assigned to the project team for this project, including but not limited to the Project Executive, Site Manager, Project Manager(s), Safety Engineer/Superintendent, support staff, either located at the University or your home office or both for administrative, accounting, estimating etc. State the specific anticipated involvement of each individual in the project. Such proposed project team shall demonstrate through their resumes, relevant experience in like size projects, duration and scope as the one you are submitting to be prequalified for.

TECHNICAL ABILITY

Every Firm is expected to have in place a QA/QC/CC program and procedures as well as a Health and Safety Plan. Upon request such information shall be provided to the Owner.

QA/QC/CC program and procedures should include, but not be limited to, a description of any and all inspection and testing procedures and activities, the various steps and procedures and methods used in the QA/QC/CC process, the nature and qualifications of the internal team and/or organizations and process are being followed from the planning, through construction, and through any applicable warranty or post construction period, the methods used to report on inspections and observations such as, Quality Control reports, the methods to report to the Owner and to address and correct instances of contract and code non-compliance and construction and/or design defects and deficiencies, and whether your firm's QA/QC/CC program and procedures are in writing.

FINANCIAL

Provide a letter from your Bonding Company or its representative confirming bonding limits.

Name and address of bonding company: _____

What is the most current rating the A.M. Best Company has assigned your bonding company? _____

Total bonding capacity as of the first working day of this month, state in dollars, not as a range:
\$ _____

Total bonding committed as of the first working day of this month, state in dollars not as a range:
\$ _____

Maximum bonding permitted by your Bonding Company for a single project for your firm, state in dollars not as a range:
\$ _____

Provide a listing of your anticipated completion of current bonded work to indicate when additional capacity will be available.

Does your bonding company hold a Certificate of Authority as an acceptable Surety and/or Reinsuring Company acceptable to the US Department of Treasury?

____yes ____no

If requested the Bidder shall provide a copy of the most recent Audited or Reviewed Financial Statement.

WORKERS COMPENSATION INSURANCE CERTIFICATE

Attach a sample copy of your Connecticut Workers Compensation Insurance Certificate. Also please provide your National Council on Compensation Insurance (NCCI) Experience Modification Sheet and state here your Workers Compensation Experience Modification: _____

If the Contractor's workers compensation experience modification rating is in excess of 1.00, the Contractor shall demonstrate to the satisfaction of the University with their submission, a letter detailing the reasons why your rating is in excess and what managerial commitment your firm is taking to reduce its rating as necessary for and satisfactory to the University for the proper performance of the work for which it intends to bid.

ACKNOWLEDGEMENT

Dated at _____ this _____ day of Two Thousand and _____ (_____)

Name of Company: _____

Completed by: _____

(must be an Officer of the Company)

Title: _____

Signature: _____

_____ being duly sworn deposes and says that
the information provided herein is true and sufficiently complete so as to not be misleading.

Subscribed and sworn before me this _____ Day of _____, _____

Notary Public: _____ My commission expires: _____

CONTRACTOR QUALIFICATION DOCUMENT CHECKLIST

As part of this submission, the Contractor shall include the following information (hard copy documentation):

- State Department of Administrative Services Certificate of Pre-qualification (NOT REQUIRED)
- Letter from Bonding Company
- National Council on Compensation Insurance (NCCI) experience Modification Sheet.
- Copies of your company's licenses, registrations, and/or certifications from the State of Connecticut.

Upon request, the Contractor shall be prepared to provide any or all of the following information (hard copy documentation) as part of or in addition to this submission:

- Explanation of any all Claims or Suits, attach all details
- A list if any citations for alleging that you or your company have violated the provisions of Connecticut General Statutes Sections 31-52 or 31-52a.
- List of construction experience and commitments of key individuals of your organization. Include list of personnel, with their qualifications and resumes. (See Section on Managerial Ability).
- Company Quality Assurance/Quality Control/Code Compliance Program and Procedures as well as Health and Safety Plan
- Copy of most recent Audited or Reviewed Financial Statement

CITY OF MERIDEN, CONNECTICUT

B023-18 - 53 Colony Street Roofing, Masonry and Cornice Repairs

INFORMATION TO BIDDERS

1. BIDDING PROCEDURES

Sealed Bids shall be submitted on the forms designated by the attached proposal bid forms. Bids will be received by the City of Meriden's Purchasing Department, Room 210, City Hall, 142 East Main Street, Meriden, Connecticut, 06450-8022 until 11:00 a.m. on November 10, 2022 and thereafter immediately read in public (the "bid opening").

2. BIDS

Bids are to be submitted on the attached proposal forms. Please submit two copies of the proposal forms and Bidder's Qualification Statement. One shall be an original and one can be a copy. **Please submit one complete copy of your bid on a flash drive.**

BID WILL BE AUTOMATICALLY REJECTED FOR ANYONE SUBMITTING A SURETY OTHER THAN THOSE SPECIFIED.

- a. Bids must be made out and signed in the corporate, or other, name of Bidder, and must be fully and properly executed by an authorized person.
- b. The sealed envelope must denote the Bidder's name and address in the upper left hand corner and the words "BID DOCUMENT – B023-18 – 53 Colony Street Roofing, Masonry and Cornice Repairs to be opened at 11:00 a.m." in the lower left hand corner. Mislabeled bids will not be considered.
- c. Bids received later than the time and date specified will not be considered.
- d. Amendments to or withdrawal of bids received later than the date and time set forth in the bid opening will not be considered.
- e. All prices must be in ink or typewritten. In the event of a bidder's mathematical error in tabulating any bid prices, *the written unit prices shall govern.*

3. BIDDER QUALIFICATIONS

Bidders will be required to fill out, and include as part of its bid, any attached Bidder's Qualification Statement.

In determining the qualifications of a bidder, the City of Meriden will consider the bidder's record of performance in any prior contracts for construction work. The City of Meriden expressly reserves the right to reject a bid if the bidder's historical performance, in the sole opinion of the City of Meriden, has been unsatisfactory in any manner or if the bidder has habitually and without just cause neglected the payment of bills or has otherwise disregarded its obligations to subcontractors, suppliers, or employees.

4. EXAMINATION OF BIDDING DOCUMENTS

Bidders are to examine all documents and visit the site in order to make a thorough examination of the conditions so that the bidder may familiarize itself with all of the existing requirements, conditions, and difficulties that will affect the execution of the work in order to determine the amount of work necessary to carry out the true intent of the specifications and work shown on the drawings.

The City of Meriden and its agents do not have any responsibility for the accuracy, completeness, or sufficiency of any bid document obtained from any other source other than from the City of Meriden. Obtaining documents from any other source(s) may result in obtaining incomplete and inaccurate information. Obtaining documents from any other source may also result in failure to receive any addenda, corrections, or other revisions to the documents that may be issued.

No request shall be honored if such request is made less than seven (7) calendar days prior to the date fixed for the opening of bids. Any and all such interpretations, and any supplementary instructions, will be in the form of a written addenda to the specifications which, if issued, will be made available on the City of Meriden website (www.meridenct.gov) unless it is to change the date fixed for the opening of bids, not later than three (3) days prior to the date fixed for the opening of bids. Bidders are encouraged to check the website regularly for addenda. Failure of any bidder to receive any such addenda shall not relieve any bidder from any obligations under its bid as submitted.

Any questions about the bid document must be submitted in writing via email to meridenpurchasing@meridenct.gov. Any other format of question will not be answered.

5. BIDS TO REMAIN OPEN

No bidder may withdraw its bid within sixty (60) days of the date of the bid opening. Should there be reason why the contract cannot be awarded within the specified period, the time may be extended by mutual agreement between the City of Meriden and the successful bidder.

6. AWARD OF CONTRACT

The Purchasing Officer reserves the right to make an award on the bid which, by the Purchasing Officer's judgment and recommendation from the Finance Department following bid evaluations, best meets the specifications and is deemed to be in the best interest of the City of Meriden.

The contract will not be awarded to any corporation, firm, or individual which/who is in arrears to the City of Meriden by debt or contract, or who is in default as security or otherwise by any obligation to the City of Meriden.

The right is reserved to reject any or all bids, in whole or in part, to award any item, group of items, or total bid, and to waive informality or technical defects, if it is deemed to be in the best interest of the City of Meriden.

7. BID PROTEST PROCEDURE

In the event that any bidder wishes to protest the potential award of a bid, or any procedure of act in the advertising or soliciting of the bids, said bidder must make said protest in writing, which shall state the reason therefore and request a conference with respect thereto. Said protest must be received in the City Purchasing Office within **FIVE (5)** business days after the delivery of bid results or decisions. A conference with respect to said protest shall be scheduled by the Purchasing Officer forthwith and shall be attended by him or his designee and such other persons as the Purchasing Officer and the City Manager shall require to attend. The subject matter of said conference shall be limited to the reasons for the protest specified in the written request for said conference. Said conference shall also include a discussion of all possibilities for a resolution of dispute. The City shall make a decision in writing within three (3) business days after said conference and forward the same to the protesting bidder forthwith. In the event that any protesting bidder wishes to take legal action against the City, they must fully comply with all of these instructions to bidders.

8. CITY OF MERIDEN, LOCAL PREFERENCE

N/A

9. EXTENSION OF AGREEMENT

N/A

10. TIME

Inasmuch as the contract concerns a public improvement, the provisions of the contract relating to the time of performance and completion of the work are of the essence of the contract. Accordingly, the successful bidder/contractor (“Contractor”) shall begin work on the day specified in AIA Contract.

11. SCHEDULE OF WORK

The Contractor shall schedule all work in a manner that will not disrupt City of Meriden operations. Once the work has begun, the Contractor shall work full-time until completion of the Contract.

12. TAXES

The City of Meriden is exempt under Connecticut General Statutes from the payment of the excise taxes imposed by the federal government and the Sales and Use Tax of the State of Connecticut; such taxes should not be included in the bid price. Upon request, exemption

certificates will be furnished to the successful bidder.

13. FAIR EMPLOYMENT PRACTICES

The Contractor shall agree that neither it or its subcontractors, except in the case of a bona fide occupational qualification or need, to refuse to hire or employ or to bar or to discharge from employment any individual or to discriminate against such individual in compensation or in terms, conditions or privileges of employment because of the individual's race, color, religious creed, age, sex, gender identity or expression, marital status, national origin, ancestry, present or past history of mental disability, intellectual disability, learning disability, physical disability, including, but not limited to, blindness or status as a veteran. The aforementioned terms are obtained from Connecticut General Statutes Section 46a-60, *et seq.*, entitled "Discriminatory employment practices prohibited," as amended.

14. FORM OF AGREEMENT BETWEEN CITY OF MERIDEN AND CONTRACTOR

The Agreement for the work will be written on the Agreement between City of Meriden and Contractor, wherein the basis of payment is a stipulated sum.

15. LOCAL SUBCONTRACTORS, SUPPLIERS, etc.

Local subcontractors, material suppliers, and labor in the City of Meriden should be considered and sought out insofar as it is practical in the performance of this project.

16. CITY OF MERIDEN CODE OF ETHICS

The City of Meriden has adopted a Code of Ethics located in Chapter 21 of the Code of the City of Meriden, sections 21-1 through 21-15, inclusive, which are expressly incorporated herein by reference. The terms of the Code of Ethics shall constitute a part of any contract or agreement entered into by the City of Meriden as a result of this bid as if those terms were fully set forth in such contract or agreement.

Bidders are specifically advised that the Code of Ethics prohibits public officers and employees, as well as their immediate families and businesses, with which they are associated from participating in any transaction which is incompatible with the proper discharge of official duties or responsibilities. Bidders are also advised that the Code of Ethics contain provisions with respect to paid contractors and former employees and officials.

BIDDERS SHOULD NOTE THAT BIDS, CONTRACTS, AND AGREEMENTS ENTERED INTO OR AWARDED IN VIOLATION OF THE CODE OF ETHICS ARE VOIDABLE BY RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MERIDEN.

Copies of the Code of Ethics may be obtained from the office of the City Clerk or may be found online on the City of Meriden's website.

17. NON-COLLUSION BID STATEMENT

Each bidder submitting a bid to the City of Meriden for any portion of the work contemplated by the documents on which bidding is based shall execute and attach thereto the sworn Non-Collusive Bid Statement, to the effect that the bidder has not colluded with any other person, firm, or corporation in the submission of the bid.

18. SOIL CONDITIONS

The City of Meriden does not guarantee the accuracy of any information which it may have obtained as to the kind or condition of the soil that may be encountered in the performance of the proposed work; neither does the City of Meriden represent that the plans and specifications drawn are based upon any soil data so obtained. The City of Meriden does not make any representations as to the soil data so obtained. The City of Meriden does not make any representations as to the soil conditions to be encountered or as to foundation materials.

19. AWARD IN CASE OF A TIE

In the event there are two or more responsive bidders, the decision to award will be based by the following criteria and in the following order:

- a. The incumbent will be awarded the bid over that of another bidder.
- b. In the case of a multi-item bid, if one bidder has been awarded other items from the same bid and the other bidder has not, the bidder with the multiple awards will be awarded the bid over that of another bidder.
- c. The bidder located in the State of Connecticut will be awarded the bid over that of another bidder.
- d. The winner of a coin toss will be awarded the bid over that of another bidder.

20. ASSIGNMENT OF CONTRACT

No contract may be assigned without the written consent of the Purchasing Officer or designee.

21. PERMITS

The Contractor shall be responsible for obtaining any and all necessary permits required by the City of Meriden prior to the commencement of work. The Contractor may contact the City of Meriden Building Department for permit information at (203) 630-4091. For all other required permits, contact the City of Meriden Engineering Department at (203) 630-4018.

22. BID PRICE AND PAYMENT

The City of Meriden is exempt from the payment of the excise taxes imposed by the Federal government and the Sales and Use Tax of the State of Connecticut under Connecticut General Statutes; accordingly, such taxes shall not be included in the bid price.

The City of Meriden, unless stated otherwise in the bidding documents or Contract, will make payment to the Contractor not less than thirty (30) days following completion of services.

23. QUALITY

All materials, equipment, supplies, and services shall be subject to rigid inspection. If defective material, equipment, supplies, or services are discovered, the Contractor shall remove or make good such material, equipment, or supplies without extra compensation. It is expressly understood and agreed that any inspection by the City of Meriden will in no way lessen the responsibility of the Contractor or release Contractor from the obligation to perform and deliver to the City sound and satisfactory materials, equipment, supplies, or allow the cost to be deducted from any monies due it from the City of Meriden. All services will be performed in a workmanlike manner.

24. INSURANCE

The successful bidder shall be required to provide a Certificate of Insurance denoting general liability, automobile liability, workers compensation liability, and other coverage required by the City's Risk Manager.

25. CITY HALL CLOSING

If Meriden City Hall is closed due to inclement weather, or any other unforeseen event, bids will be due at the same time on the next business day that City Hall is open.

26. PAYMENT REQUISITIONS & CERTIFIED PAYROLL

Progress payment requisitions are due monthly on last day of the month for work completed during the contract period. Requisitions are to be sent to the Architect/Engineer and/or City of Meriden Department responsible for management/administration of the contracted work.

Certified Payroll for construction contracts that require State of Connecticut Prevailing Wage Determinations are required for each week of work by the Contractor and any or all the Contractor's Subcontractors and are due monthly with each requisition. One hard copy and one electronic copy shall be sent to the Architect/Engineer and the City of Meriden Purchasing Department. No progress payments will be issued to the Contractor without accompanying Certified Payroll.

For federally funded construction contracts with Davis Bacon Wage Determinations, Certified Payroll for all employees of the Contractor and any or all of the Contractor's Subcontractors are required to be submitted weekly to the Architect/Engineer and to the City of Meriden Purchasing Department. One hard copy and one electronic copy shall be sent to the Architect/Engineer and the City of Meriden Purchasing Department. Employees on the construction site will be interviewed by City of Meriden Staff and/or City of Meriden subcontracted Project Management/Clerk-of-the-Works/Owner's Representatives for Davis Bacon compliance. No progress payments will be issued to the Contractor without accompanying Certified Payroll.

GALLERY 53
53 COLONY STREET
ROOFING, MASONRY AND CORNICE REPAIRS
MERIDEN, CT
Project No. 51961.10

Duly sworn and subscribed to before me
this __ day of _____, 2022.

Notary Public
My Commission Expires:
Commissioner of the Superior Court

SECTION 001313 - BID SECURITY, PERFORMANCE AND PAYMENT FORMS

1.1 FORMS

- A. A Bid Bond will be required. AIA Document A310, "Bid Bond," is the recommended form for a bid bond. A bid bond acceptable to Owner, or other bid security as described in the Instructions to Bidders, is required to be attached to the Bid Form as a supplement.
- B. A Performance Bond will be required. AIA Document A312 "Performance Bond" will be used.
- C. A Payment Bond will be required. AIA Document A312 "Payment Bond" will be used.
- D. Copies of AIA standard forms may be obtained from The American Institute of Architects; www.aia.org/contractdocs/purchase/index.htm; email: docspurchases@aia.org; (800) 942-7732.

END OF SECTION 001313

SECTION 004113 - BID FORM

BID FORM

PROJECT NAME: 53 Colony Street Roofing, Masonry and Cornice Repairs

PROJECT NUMBER: B023-18

PROPSAL OF:

BIDDER'S NAME

BIDDER'S ADDRESS

DATE:

1. In accordance with Connecticut General Statutes Sections 10a-109a through 10a-109y and pursuant to, and in compliance with your Invitation to Bid, the Notice and Instructions to Bidders, the Form of Contract, including the conditions thereto, the form of required bond, I (we) propose to furnish the labor and/or materials installed as required for the project named and numbered on the BID FORM of this proposal to the extent of the Proposal submitted herein, furnishing all necessary equipment, machinery, tools, labor and other means of construction, and all materials specified in the manner and at the time prescribed strictly in accordance with the provisions of the Contract including specifications and/or drawings together with all addenda issued and received prior to the scheduled closing time for the receipt of the bids, and in conformity with requirements of the University of Connecticut and any laws or departmental regulations of the State of Connecticut or of the United States which may affect the same, for and in consideration of the price(s) stated on the said BID FORM, hereof.
2. The Lump Sum Base Bid by me (us) on the BID FORM includes all work indicated on the drawings and/or described in the specifications, except:
 - A. Work covered by Alternates as may be listed on the BID FORM.
 - B. Contingent work covered by Unit Prices as may be listed on the BID FORM.
 - C. Work covered by Options as may be listed on the BID FORM.
3. This proposal is submitted subject to and in compliance with the foregoing and following conditions and/or information.

- A. AWARD: All proposals shall be subject to the provisions and requirements of the Bid Documents and for purpose of award, consideration shall be given only to proposals submitted by qualified and responsible bidders.
- B. COMMENCEMENT AND COMPLETION OF WORK: Contractor shall commence and complete the work in accordance with the requirements of the Contract Documents.
- C. If the Contractor fails to complete the work within the time required by the Contract Documents, the University shall have the right to assess liquidated damages as provided in Paragraph 9.11 of the General Conditions.
- D. AVAILABILITY OF FUNDS:
- The funding for this project is contingent upon the continued availability of funds. Funds will be released based on project phases.
- E. CONTRACTORS INSURANCE REQUIRED:
1. The limits of liability and coverages shall be those set forth in Article 11 of the General Conditions.
- F. STATEMENT OF BIDDERS' QUALIFICATIONS AND INTENTION OF OBJECTIVE CRITERIA:
1. Each Project estimated to be \$500,000 and greater, Bidders shall be required to complete and submit qualification forms to obtain "Pre-qualified Status" prior to submission of Bids. Contractors not obtaining "Pre-qualified Status" shall not be allowed to submit a Bid on said projects.
 2. For Projects estimated to be less than \$500,000 the Bidder shall complete and submit with this BID FORM the Contractor's Qualification Statement in support of its Qualifications to perform the Work of this project, and to demonstrate its compliance with the University's Objective Criteria regarding Qualifications.
- G. FEDERAL & STATE WAGE DETERMINATIONS AND PRICING CONSIDERATION:
- 1 Each contractor who is awarded a contract on or after October 1, 2002 shall be subject to provisions of the Connecticut General Statutes, Section 31-53 as amended by Public Act 02-69, "An Act Concerning Annual Adjustments to Prevailing Wages".

2. In determining bid price, consideration should be given to Section 31-53 of the General Statutes of Connecticut as amended by Public Act 02-69, "An Act Concerning Annual Adjustments to Prevailing Wages". Such prevailing wage adjustment will not be considered a basis for an annual contract adjustment.
3. The State of Connecticut Labor Department Wage Schedule where required, shall be provided with these documents, typically as part of the issued documents, or will be incorporated in the Contract Documents as an Addendum. At the time of bidding, the bidder agrees to accept the current prevailing wage scale, as well as any annual adjustment to the prevailing wage scale, as provided by the Connecticut Department of Labor. Wage Rates will be posted each July 1st on the Department of Labor website: www.ctdol.state.ct.us. Such prevailing wage adjustment will not be considered a basis for an annual contract amendment.
4. I (We), the undersigned, hereby declare that I am (we are) the only person(s) interested in the proposal and that it is without any connection with any other person making any bid for the same work. No person acting for, or employed by, the State of Connecticut is directly interested in this proposal, or in any contract which may be made under it, or in expected profits to arise there from. This proposal is made without directly or indirectly influencing or attempting to influence any other person or corporation to bid or refrain from bidding or to influence the amount of the bid of any other person or corporation. This proposal is made in good faith without collusion or connection with any other person bidding for the same work and this proposal is made with distinct reference and relation to the plans and specifications prepared for this Contract. I (We) further declare that in regard to the conditions affecting the work to be done and the labor and materials needed, this proposal is based solely on my (our) investigation and research and not in reliance upon any representations of any employee, officer or agent of the State.
5. Each class of work set forth in a separate Section of the Specifications and designated as a sub-trade in Item 2A of the proposal pages shall be the matter of a subcontract made in accordance with the procedures set forth in the Bid and Contract Documents.
6. The undersigned agrees that, if selected as General Contractor, he shall, within five (5) days, Saturdays, Sundays and legal holidays excluded, after presentation thereof by the University of Connecticut, execute a contract in accordance with the terms of this general bid.
7. The undersigned agrees and warrants that he has made good faith efforts to employ minority business enterprises as subcontractors and suppliers of materials under such contract and shall provide the Commission on Human

Rights and Opportunities with such information as is requested by the Commission concerning his employment practices and procedures as they relate to the provisions of the Connecticut General Statutes governing contract requirements.

8. The undersigned agrees that if notice of acceptance of Bid is delivered to him within 120 calendar days from the date of bid opening, he will promptly execute a contract for the above stated compensation.

BID FORM CONTINUED ON NEXT PAGE

The undersigned proposes to furnish all labor and material required for:

Gallery 53 Roofing, Masonry and Cornice Repairs

Project Number: B023-18

in accordance with the accompanying Drawings and Specifications prepared for

Gallery 53

for the Contract Price specified below subject to additions and deductions according to the terms of the Contract Documents dated **September 21, 2022**.

A. ADDENDA:

This bid includes Addenda numbered: _____ Dated _____
_____ Dated _____
_____ Dated _____
_____ Dated _____

B. ALLOWANCES: Submit 004321 ALLOWANCE FORM

C. PROPOSED BASE CONTRACT PRICE:

_____ \$ _____
Written Figures

D. SCHEDULE OF ALTERNATES:

The undersigned Bidder further proposes and agrees that should the following Alternates be accepted and included in the Contract, the amount of the Lump Sum Bid, as heretofore stated, shall be adjusted by the amount of said Alternates. All materials and workmanship shall be in strict accordance with the Drawings and Specifications and shall be in-place prices.

Submit 004323 ALTERNATES FORM

E. SCHEDULE OF UNIT PRICES

Submit 004322 UNIT PRICES FORM

F. **SCHEDULE OF OPTIONS: not used**

G. **SUBDIVISION OF CONTRACT PRICE:**

The subdivision of the proposed Contract Price is as follows:

ITEM 1A Subcontractors and prices for the following trades must be listed (if such prices exceed \$25,000.00). However, the general bidder may list himself together with his price if he customarily performs any of the trades specified. If the general contractor requires a performance and/or labor & material payment bond then the general contractor must indicate below which of the subcontractors are subject to this requirement. The amount (%) shall not exceed the subcontractor's price listed below.

**FOR REQUIRED SUBCONTRACTOR LIST, SEE SECTION 007300
SUPPLEMENTAL CONDITIONS**

The undersigned agrees that each of the subcontractors listed on this BID FORM will be used for the work indicated at the amount stated, unless a substitution is permitted by the University of Connecticut Health Center. Such permission shall only be granted for "good cause" as defined by Connecticut General Statute Section 4B-95(C).

ITEM 1B SCHEDULE OF VALUES:

FOR REQUIRED SCHEDULE OF VALUES FORMAT SEE 012900 PAYMENT PROCEDURES. SCHEDULE OF VALUES IS TO BE SUBMITTED AS PART OF THE BID.

The undersigned agrees that the Schedule of Values submitted with this Bid is a true representation of the distribution of the costs of this project and **equals the Proposed Base Contract Price shown above**. The Schedule of Values is an integral part of this proposal. Please indicate N/A for those divisions of work not applicable.

H. CONTRACTORS CERTIFICATION

We certify that we are familiar with the contents of the Contract Documents for this project and that we have examined the site and accept the conditions under which the work will be done.

NOTE: All proposals must be signed by a duly authorized representative of the firm.
NO FACSIMILE SIGNATURE PERMITTED.

If this proposal is being submitted by a Joint Venture, each Joint Venture shall sign the Proposal, and each Joint Venture agrees to be bound by the terms and conditions thereof.

Signed the _____ day of _____ 20____.

Project Number: _____

(TO BE FILLED IN AND SIGNED BY THE BIDDER)

Firm Name: _____

Street: _____

City/State/Zip Code: _____

Telephone: _____

Fax Number: _____

Duly Authorized Signature: _____

Name / Title _____

(TO BE FILLED IN AND SIGNED BY JOINT VENTURE IF APPLICABLE)

GALLERY 53
53 COLONY STREET
ROOFING, MASONRY AND CORNICE REPAIRS
MERIDEN, CT
Project No. 51961.10

Firm Name: _____

Street: _____

City/State/Zip Code: _____

Telephone: _____

Fax Number: _____

Duly Authorized Signature: _____

Name / Title _____

Duly Authorized Signature: _____

Name / Title _____

END OF SECTION

SECTION 004321 - ALLOWANCE FORM

1.1 BID INFORMATION

- A. Bidder: _____.
- B. Project Name: Gallery 53 Roofing, Masonry and Cornice Repairs.
- C. Project Location: 53 Colony Street, Meriden, Connecticut.
- D. Owner: Gallery 53.
- E. Architect: DeCarlo & Doll, Inc.
- F. Architect Project Number: 51961.10.

1.2 BID FORM SUPPLEMENT

- A. This form is required to be attached to the Bid Form.
- B. The undersigned Bidder certifies that Base Bid submission to which this Bid Supplement is attached includes the following allowances and amounts described in the Contract Documents and scheduled in Section 012100 "Allowances."
 - 1. Allowance No. 1: For Brick Repointing B1A, Pressed Brick: Remove Patched Repointing, Repoint. Allow for 50 SF of Repointing as shown on the Contract Documents. At the Unit Price quoted under 012200 UNIT PRICES, 50 SF of Repointing will be:
_____ Dollars (\$_____).
 - 2. Allowance No. 2: For Brick Repointing B1B, Pressed Brick: Repoint. Allow for 40 SF of Repointing as shown on the Contract Documents. At the Unit Price quoted under 012200 UNIT PRICES, 40 SF of Repointing will be:
_____ Dollars (\$_____).
 - 3. Allowance No. 3: For Brick Repointing B2, Face Brick: Repoint. Allow for 80 SF of Repointing as shown on the Contract Documents. At the Unit Price quoted under 012200 UNIT PRICES, 80 SF of Repointing will be:
_____ Dollars (\$_____).
 - 4. Allowance No. 4: For Replacement Pressed Brick. Allow for 10 Replacement Pressed Brick as specified in the Contract Documents. At the Unit Price quoted under 012200 UNIT PRICES, 10 Replacement Pressed Brick will be:
_____ Dollars (\$_____).

5. Allowance No. 5: For Replacement Face Brick. Allow for 24 Replacement Face Brick as specified in the Contract Documents. At the Unit Price quoted under 012200 UNIT PRICES, 10 Replacement Face Brick will be: _____ Dollars (\$_____).

1.3 SUBMISSION OF BID SUPPLEMENT

- A. Respectfully submitted this ____ day of _____, 2022.
- B. Submitted By: _____(Insert name of bidding firm or corporation).
- C. Authorized Signature: _____(Handwritten signature).
- D. Signed By: _____(Type or print name).
- E. Title: _____(Owner/Partner/President/Vice President).

END OF SECTION 004321

SECTION 004322 - UNIT PRICES FORM

1.1 BID INFORMATION

- A. Bidder: _____.
- B. Project Gallery 53 Roofing, Masonry and Cornice Repair.
- C. Project Location: 53 Colony Street, Meriden, Connecticut.
- D. Owner: Gallery 53.
- E. Architect: DeCarlo & Doll, Inc.
- F. Architect Project Number: 51961.10.

1.2 BID FORM SUPPLEMENT

- A. This form is required to be attached to the Bid Form.
- B. The undersigned Bidder proposes the amounts below be added to or deducted from the Contract Sum on performance and measurement of the individual items of Work and for adjustment of the quantity given in the Unit-Price Allowance for the actual measurement of individual items of the Work.
- C. If the unit price does not affect the Work of this Contract, the Bidder shall indicate "NOT APPLICABLE."

1.3 UNIT PRICES

- A. Unit-Price No. 1: For Brick Repointing B1A, Pressed Brick: Remove Patched Repointing, Repoint. Based upon 50 SF of Repointing as shown on the Contract Documents.
 - 1. _____ Dollars (\$_____) per SF.
- B. Unit-Price No. 2: For Brick Repointing B1B, Pressed Brick: Repoint. Based upon 40 SF of Repointing as shown on the Contract Documents.
 - 1. _____ Dollars (\$_____) per SF.
- C. Unit-Price No. 3: For Brick Repointing B2, Face Brick: Repoint. Based upon 80 SF of Repointing as shown on the Contract Documents.
 - 1. _____ Dollars (\$_____) per SF.

D. Unit-Price No. 4: Furnish and install Replacement Pressed Brick. Based upon 10 Replacement Pressed Brick as specified in the Contract Documents.

1. _____ Dollars (\$_____) per brick

E. Unit-Price No. 5: Furnish and install Replacement Face Brick. Based upon 24 Replacement Pressed Brick as specified in the Contract Documents.

1. _____ Dollars (\$_____) per brick.

1.4 SUBMISSION OF BID SUPPLEMENT

A. Respectfully submitted this ____ day of _____, 2022.

B. Submitted By: _____(Insert name of bidding firm or corporation).

C. Authorized Signature: _____(Handwritten signature).

D. Signed By: _____(Type or print name).

E. Title: _____(Owner/Partner/President/Vice President).

END OF SECTION 004322

SECTION 004323 - ALTERNATES FORM

1.1 BID INFORMATION

- A. Bidder: _____.
- B. Project Name: Gallery 53 Roofing, Masonry and Cornice Repairs.
- C. Project Location: 53 Colony Street, Meriden, Connecticut.
- D. Owner: Gallery 53.
- E. Architect: DeCarlo & Doll, Inc.
- F. Architect Project Number: 51961.10.

1.2 BID FORM SUPPLEMENT

- A. This form is required to be attached to the Bid Form.

1.3 DESCRIPTION

- A. The undersigned Bidder proposes the amount below be added to or deducted from the Base Bid if particular alternates are accepted by Owner. Amounts listed for each alternate include costs of related coordination, modification, or adjustment.
 - 1. Cost-Plus-Fee Contract: Alternate price given below includes adjustment to Contractor's Fee.
- B. If the alternate does not affect the Contract Sum, the Bidder shall indicate "NO CHANGE."
- C. If the alternate does not affect the Work of this Contract, the Bidder shall indicate "NOT APPLICABLE."
- D. The Bidder shall be responsible for determining from the Contract Documents the affects of each alternate on the Contract Time and the Contract Sum.
- E. Owner reserves the right to accept or reject any alternate, in any order, and to award or amend the Contract accordingly within **90** days of the Notice of Award unless otherwise indicated in the Contract Documents.
- F. Acceptance or non-acceptance of any alternates by the Owner shall have no affect on the Contract Time unless the "Schedule of Alternates" Article below provides a formatted space for the adjustment of the Contract Time.

1.4 SCHEDULE OF ALTERNATES

- A. Alternate No. 1: Restoration of street front fabricated metal cornice and 3 finials:
1. ADD ___ DEDUCT ___ NO CHANGE ___ NOT APPLICABLE ___.
 2. _____ Dollars (\$ _____).
 3. ADD ___ DEDUCT ___ calendar days to adjust the Contract Time for this alternate.
- B. Alternate No. 2: Restoration of rear (trackside) fabricated metal cornice:
1. ADD ___ DEDUCT ___ NO CHANGE ___ NOT APPLICABLE ___.
 2. _____ Dollars \$ _____).
 3. ADD ___ DEDUCT ___ calendar days to adjust the Contract Time for this alternate.
- C. Alternate No. 3: Rebuilding chimney on south wall:
1. ADD ___ DEDUCT ___ NO CHANGE ___ NOT APPLICABLE ___.
 2. _____ Dollars \$ _____).
 3. ADD ___ DEDUCT ___ calendar days to adjust the Contract Time for this alternate.
- D. Alternate No. 4: Repointing of Pressed Brick on street front and returns:
1. ADD ___ DEDUCT ___ NO CHANGE ___ NOT APPLICABLE ___.
 2. _____ Dollars (\$ _____).
 3. ADD ___ DEDUCT ___ calendar days to adjust the Contract Time for this alternate.
- E. Alternate No. 5: Repointing of Face Brick on sides and rear façade.

1.5 SUBMISSION OF BID SUPPLEMENT

- A. Respectfully submitted this ___ day of _____, 2022.
- B. Submitted By: _____ (Insert name of bidding firm or corporation).
- C. Authorized Signature: _____ (Handwritten signature).
- D. Signed By: _____ (Type or print name).
- E. Title: _____ (Owner/Partner/President/Vice President).

END OF SECTION 004323

SECTION 006000 – PROJECT FORMS

1.1 FORM OF AGREEMENT AND GENERAL CONDITIONS

- A. The following form of Owner/Contractor Agreement and form of the General Conditions shall be used for Project:
1. AIA Document A101, "Standard Form of Agreement between Owner and Contractor, Stipulated Sum."
 - a. The General Conditions for Project are AIA Document A201, "General Conditions of the Contract for Construction."
 2. The General Conditions are **incorporated by reference**.
 3. The Supplementary Conditions for Project **are included as Section 007300 Supplementary Conditions**.
 4. Owner's document(s) bound following this Document.

1.2 ADMINISTRATIVE FORMS

- A. Administrative Forms: Additional administrative forms are specified in Division 01 General Requirements.
- B. Copies of AIA standard forms may be obtained from the American Institute of Architects; <http://www.aia.org/contractdocs/purchase/index.htm>; docspurchases@aia.org; (800) 942-7732.
- C. Preconstruction Forms:
1. For Bid Security forms see 004113 BID SECURITY FORMS.
 2. For insurance requirements see 007300 SUPPLEMENTARY CONDITIONS
- D. Information and Modification Forms:
1. Form for Requests for Information (RFIs): AIA Document G716, "Request for Information (RFI)."
 2. Form of Request for Proposal: AIA Document G709, "Work Changes Proposal Request."
 3. Change Order Form: AIA Document G701, "Change Order."
 4. Form of Architect's Memorandum for Minor Changes in the Work: AIA Document G707, "Architect's Supplemental Instructions."
 5. Form of Change Directive: AIA Document G714, "Construction Change Directive."
- E. Payment Forms:
1. Schedule of Values Form: AIA Document G703, "Continuation Sheet."

GALLERY 53
53 COLONY STREET
ROOFING, MASONRY AND CORNICE REPAIRS
MERIDEN, CT
Project No. 51961.10

2. Payment Application: AIA Document G702/703, "Application and Certificate for Payment and Continuation Sheet."
3. Form of Contractor's Affidavit: AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
4. Form of Affidavit of Release of Liens: AIA Document G706A, "Contractor's Affidavit of Payment of Release of Liens."
5. Form of Consent of Surety: AIA Document G707, "Consent of Surety to Final Payment."

END OF SECTION 006000

DRAFT AIA® Document A101™ – 2017

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

AIA A101-2017 FOR GC PROJECT

FINAL 10/31/18 rev. 11/28/18

AGREEMENT made and effective as of the date that the Agreement is fully executed by the parties hereto« »
(In words, indicate day, month and year.)

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

« »« »
« »
« »
« »

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

« »« »
« »
« »
« »

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

« »
« »
« »

The Architect:
(Name, address and other information)

« »« »
« »
« »
« »

The Owner and Contractor agree as follows.

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

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

The parties should complete A101™-2017, Exhibit A, Insurance and Bonds, contemporaneously with this Agreement. AIA Document A201™-2017, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.



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TABLE OF ARTICLES

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

EXHIBIT A INSURANCE AND BONDS

ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, the AIA A201-2017 General Conditions, as modified by the Owner prior to the execution of this Agreement (as so modified, the “General Conditions”), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. An enumeration of the Contract Documents, other than a Modification, appears in Article 9.

ARTICLE 2 THE WORK OF THIS CONTRACT

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

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be:
(Check one of the following boxes.)

- « »** The date of this Agreement.
- « X »** A date set forth in a notice to proceed issued by the Owner.
- « »** Established as follows:
(Insert a date or a means to determine the date of commencement of the Work.)

§ 3.2 The Contract Time shall be measured from the date of commencement of the Work.

§ 3.3 Substantial Completion

§ 3.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion of the entire Work:
(Check one of the following boxes and complete the necessary information.)

- « »** Not later than () days from the date of commencement of the Work.
- « »** By the following date:

In addition to the foregoing, the Work shall be performed in general conformance with the preliminary construction schedule attached hereto as Exhibit D. Upon the Owner's approval of the construction schedule to be submitted by the Contractor pursuant to the requirements set forth in Section 3.10.1 of the General Conditions, such preliminary construction schedule shall be superseded and replaced by such approved construction schedule.

§ 3.3.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work are to be completed prior to Substantial Completion of the entire Work, the Contractor shall achieve Substantial Completion of such portions by the following dates:

Portion of Work	Substantial Completion Date

§ 3.3.3 If the Contractor fails to achieve Substantial Completion as provided in this Section 3.3, liquidated damages, if any, shall be assessed as set forth in Section 4.5.

ARTICLE 4 CONTRACT SUM

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be « » (\$ « »), subject to additions and deductions as provided in the Contract Documents.

§ 4.2.1 The Contract Sum is based upon and includes the following alternates, if any, which are further described in the Contract Documents and are hereby accepted by the Owner.

--	--

All alternate prices set forth in this Section 4.2.1 and in Section 4.2.2 below are "All-Inclusive Prices". For the purposes of this Agreement an "All Inclusive Price" is a price for a portion of the Work which represents the total cost to the Owner for the Contractor's performance, furnishing and installation of such portion of the Work including, without limitation, overhead and profit thereon. Alternate prices are good for both adds and deducts.

§ 4.2.2 Subject to the conditions noted below, the following alternates may be accepted by the Owner following execution of this Agreement. Upon acceptance, the Owner shall issue a Modification to this Agreement.

(Insert below each alternate and the conditions that must be met for the Owner to accept the alternate.)

Item	Price	Conditions for Acceptance

§ 4.3 Allowances, if any, included in the Contract Sum:
(Identify each allowance.)

Item	Price

§ 4.4 Unit prices applicable to the Work, if any, are set forth below (the "Unit Prices"). Unit Prices shall be valid for the life of the Project and represent All-Inclusive Prices. Unit prices are good for both adds and deducts.

Item	Units and Limitations	Price per Unit (\$0.00)

§ 4.5 Liquidated Damages:

It is acknowledged that the Contractor's failure to achieve Substantial Completion of the Work within the Contract Time provided by the Contract Documents will cause the Owner to incur substantial economic damages and losses of types and in amounts which are impossible to compute and ascertain with certainty as a basis for recovery by the Owner of actual damages, and that liquidated damages represent a fair, reasonable and appropriate estimate thereof. Accordingly, in lieu of actual damages for such delay, the Contractor agrees that liquidated damages may be assessed and recovered by the Owner as against the Contractor and its Surety in the event of delayed completion, without the Owner being required to present any evidence of the amount or character of actual damages sustained by reason thereof.

Therefore, the Contractor shall be liable to the Owner for payment of liquidated damages in the amount of _____ Dollars (\$_____) for each day that Substantial Completion is delayed beyond the date set forth herein for the achievement of Substantial Completion, as adjusted for time extensions as may have been granted pursuant to the terms and conditions of the Contract Documents. Such liquidated damages are intended to represent estimated actual damages and are not intended as a penalty, and the Contractor shall pay them to the Owner without limiting the Owner's right to terminate this Agreement as provided elsewhere herein.

If, pursuant to Section 3.3.2, the Contractor is required to achieve Substantial Completion of any portion of the Work prior to the date required for the Substantial Completion of the entirety of the Work, the Owner shall be entitled to assess the foregoing liquidated damages for the failure of the Contractor to complete such portion of the Work by the applicable Substantial Completion Date reflected in Section 3.3.2, as adjusted for time extensions as may have been granted pursuant to the terms and conditions of the Contract Documents.

The collection of liquidated damages by the Owner under this Section 4.5 shall be in addition to, and not in lieu of, the Owner's right to recover from the Contractor the Owner's increased costs to complete the Project arising from the Contractor's delay. Further, such liquidated damages shall in no way limit the Owner's other rights under this Agreement or the Owner's entitlement to damages for any other injury, damage or loss, other than for delay, for which the Contractor may be responsible.

§ 4.6 Not Used.

ARTICLE 5 PAYMENTS

§ 5.1 Progress Payments

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

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month.

§ 5.1.3 The Owner shall make payments of amounts certified by the Architect and properly due to the Contractor under each Application for Payment within thirty (30) days after the Owner's and the Architect's receipt of such Application for Payment, provided it is properly submitted, correct and accepted by the Owner in accordance with the provisions of Article 9 of the General Conditions.

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

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

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

§ 5.1.6.1 The amount of each progress payment shall first include:

- .1 That portion of the Contract Sum properly allocable to completed Work; and
- .2 That portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction, and, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing.

§ 5.1.6.2 The amount of each progress payment shall then be reduced by:

- .1 The aggregate of any amounts previously paid by the Owner;
- .2 The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of the General Conditions;
- .3 Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;
- .4 For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of the General Conditions;
- .5 Retainage withheld pursuant to Section 5.1.8; and
- .6 Any additional amounts required by law to be withheld by the Owner due to the Contractor's failure to comply with its obligations under Connecticut General Statutes Sections 4a-60, 4a-60(a) or Sections 46a-68c to 46a-68f, inclusive. Unless otherwise required by applicable law, the Owner shall withhold two percent (2%) of each progress payment (the "CHRO Holdback") until such time as the Connecticut Commission on Human Rights and Opportunities ("CHRO") notifies the Owner that it may release the CHRO Holdback to the Contractor.

§ 5.1.7 In addition to the foregoing, the Owner shall make the following payments:

§5.1.7.1 Upon determination by the Owner Representative that "Fifty Percent of the Contract is Completed", the Owner shall calculate the "Excess Retainage Amount" and shall pay the "Excess Retainage Amount" to the Contractor within ninety days after the Owner's receipt of the Application for Payment that first reflects that "Fifty Percent of the Contract is Completed".

§5.1.7.2 Upon Substantial Completion of the Work, the Contractor shall be entitled to payment of the balance of the Contract Sum net of amounts the Owner Representative determines for incomplete or nonconforming Work, retainage applicable to such incomplete or nonconforming Work, the CHRO Holdback, as applicable, and unsettled claims.

§5.1.7.3 Upon acceptance and written consent of the Contractor's surety, if any, and a written statement from the CHRO releasing the Owner from any obligation to withhold the CHRO Holdback, the Contractor shall be entitled to payment of the CHRO Holdback.

§5.1.7.4 If final completion of the Work is materially delayed through no fault of the Contractor, any Subcontractor, Sub-subcontractor or any other party for whom any of them is responsible, the Contractor shall be entitled to payment of any amounts payable in accordance with Section 9.10.3 of the General Conditions.

§ 5.1.8 Retainage

§ 5.1.8.1 For Applications for Payment Prior to Determination that Fifty Percent of the Contract is Completed: Retainage withheld by the Owner shall be seven and one-half percent (7.5%) of each progress payment.

§ 5.1.8.2 For Applications for Payment Following Determination that Fifty Percent of the Contract is Completed: Retainage withheld by the Owner shall be five percent (5.0%) of each progress payment.

§ 5.1.8.3 The Contractor shall not withhold retainage from any Subcontractor in excess of that withheld by the Owner in connection with such Subcontractor's Work. The Contractor shall release retainage to each Subcontractor upon the Contractor's receipt of retainage from the Owner attributable to the Work performed by such Subcontractor.

§ 5.1.8.4 For the purposes of Section 5.1.7 above and this Section 5.1.8, the following terms shall have the following meanings:

§ 5.1.8.4.1 "Fifty Percent of the Contract is Completed" is the stage in the progress of the Work when Certificates for Payment have been issued by the Architect and payment thereof approved by the Owner for an aggregate amount equal to fifty percent (50%) of the Contract Sum, as it may have been adjusted in accordance with the Contract Documents. For the purposes of this subsection 5.1.8.4.1, the Contract Sum shall include amounts payable for pending construction change orders and other pending change directives described in Section 9.3.1.1 of the General Conditions and excludes any amounts paid by joint check pursuant to Section 9.5.4 of the General Conditions.

§ 5.1.8.4.2 "Excess Retainage Amount" shall mean the amount by which the total retainage then withheld by the Owner exceeds the amount of retainage that would have then been withheld by the Owner if the applicable retainage withheld thus far had been based on five percent (5%) of each progress payment made instead of seven and one-half percent (7.5%).

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

§ 5.2 Final Payment

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

- .1 the Contractor has fully performed the Work and all of its obligations under the Contract Documents except for the Contractor's responsibility to correct Work as provided in Article 12 of the General Conditions, and to satisfy other requirements, if any, which extend beyond final payment; and
- .2 a final Certificate for Payment has been issued by the Architect.

§ 5.2.2 The Owner's final payment to the Contractor shall be made no later than thirty (30) days after the issuance of the Architect's final Certificate for Payment subject to the provisions of Article 9 of the General Conditions.

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 Initial Decision Maker

The Associate Vice President for University Planning, Design and Construction for the Owner (or his/her designee) and in the case of a project for UCONN Health ("UCH"), its Associate Vice President for Facilities Development & Operations (or his/her designee) or their respective successors in function will serve as the Initial Decision Maker pursuant to Article 15 of the General Conditions, unless the parties appoint below another individual, not a party to this Agreement, to serve as the Initial Decision Maker.

§ 6.2 Not Used.

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of the General Conditions.

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of the General Conditions.

ARTICLE 8 MISCELLANEOUS PROVISIONS

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

§ 8.2 The Owner Representative

Prior to the commencement of the Work, the Owner shall provide the Contractor with the name and contact information (including an email address for notice pursuant to Section 8.6) for the individual who will serve as the primary point of contact for the Contractor's day to day communications with the University. Except as otherwise expressly provided in the Contract Documents, such individual shall not have the authority to approve or execute Change Orders, or other amendments to the Contract. Claims shall be submitted as provided in Article 15 of the General Conditions.

§ 8.3 The Contractor's Representative

(Name, address, email address, and other information)

§ 8.4 The Contractor's representative shall not be changed without ten days' prior notice to the Owner.

§ 8.5 Insurance and Bonds

§ 8.5.1 The Owner and the Contractor shall purchase and maintain insurance as set forth in Exhibit A attached hereto and as provided elsewhere in the Contract Documents.

§ 8.5.2 The Contractor shall provide bonds as described in Article 11 of the General Conditions.

§ 8.6 Notice in electronic format for the purposes of Section 1.6.1 of the General Conditions from one party to this Agreement to the other shall be transmitted by electronic mail to the email addresses for the designated representatives as provided in Sections 8.2 and 8.3 of this Agreement.

§ 8.7 Other Provisions

§ 8.7.1 The Contractor is hereby specifically cautioned that unless specifically authorized, in writing, by the University's Vice President of Communications or successor in function, on a case by case basis, the Contractor shall have no right to use, and shall not use, in any manner, the name of the University of Connecticut, its officials or employees, or the Seal of the University:

- (a) in any advertising, publicity, promotion nor;
- (b) to express or to imply any endorsement of the Contractor's work product or services.

§ 8.7.2 The Contractor shall comply, and shall require all Subcontractors, Sub-subcontractors and suppliers to comply, with all of the State Requirements set forth on Exhibit F to the extent applicable.

§ 8.7.3 This Agreement may be executed in counterparts, and each counterpart shall have the same force and effect as an original and, when taken together, shall constitute one and the same instrument and an effective binding agreement on the part of each of the undersigned. Execution of a facsimile or PDF copy shall have the same force and effect as execution of an original. Signed copies of this Agreement may be faxed and e-mailed with the same force and effect as if the originally executed Agreement had been delivered.

§ 8.8 Joint Venture/General Partnership

§ 8.8.1 If the Contractor is a joint venture or a general partnership, each member of the joint venture (a "Member") or partner of the partnership ("Partner"), as applicable, shall be jointly, severally and individually responsible to the Owner for the performance of all obligations of the Contractor under the Contract Documents and jointly, severally and individually liable to the Owner for the Contractor's failure to perform such obligations. In its dealings with the Owner, each Member or Partner, as applicable, shall have full authority to act on behalf of and to bind the Contractor as well as all Members or Partners, as applicable. Each Member or Partner, as applicable, shall be considered to be the agent of the Contractor and of all other Members or Partners.

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

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

- .1 This Agreement
- .2 Exhibit A, Insurance
- .3 The General Conditions
- .4 Not Used
- .5 Drawings prepared by _____ and dated _____, and listed on the List of Drawings attached as Exhibit B, as the same may have been modified or supplemented by Bid Clarifications and Addenda.
- .6 Specifications prepared by _____ and dated _____, and which are listed in the Table of Contents attached as Exhibit C
- .7 Bid Clarifications and Addenda, if any, are as follows:

Number	Date	Pages

- .8 Other Exhibits:
 Exhibit D - Preliminary Construction Schedule
 Exhibit E - Labor Rates
 Exhibit F - State Requirements

.9 Other documents, if any, forming part of the Contract Documents are listed below:

- i. Invitation to Bid for the Project issued by the Owner on _____, _____ including all exhibits and schedule attached thereto and all other documents incorporated therein by reference.
- ii. The Owner's Contractor Environmental, Health & Safety Manual current as of the date of the execution of this Agreement by the Owner.
- iii. The Owner's Code of Conduct current as of the date of the execution of this Agreement by the Owner.

Signed and agreed by:

OWNER (Signature)

 << >>

 (Printed name and title)
 Date: _____

CONTRACTOR (Signature)

 << >><< >>

 (Printed name and title)
 Date: _____



DRAFT AIA® Document A201™ – 2017

General Conditions of the Contract for Construction

AIA A201-2017 FOR USE WITH A101-2017 FOR GC PROJECT

Rev. 12-19-18

for the following PROJECT:

(Name and location or address)

<< >>< >

THE OWNER:

(Name and address)

<< >>< >

<< >

THE CONTRACTOR:

(Name and address)

<< >>< >

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THE ARCHITECT:

(Name and address)

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TABLE OF ARTICLES

- 1 GENERAL PROVISIONS
- 2 OWNER
- 3 CONTRACTOR
- 4 ARCHITECT
- 5 SUBCONTRACTORS
- 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS
- 7 CHANGES IN THE WORK
- 8 TIME
- 9 PAYMENTS AND COMPLETION
- 10 PROTECTION OF PERSONS AND PROPERTY
- 11 INSURANCE AND BONDS
- 12 UNCOVERING AND CORRECTION OF WORK

ADDITIONS AND DELETIONS:

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

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

For guidance in modifying this document to include supplementary conditions, see AIA Document A503™, *Guide for Supplementary Conditions*.

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- 13 MISCELLANEOUS PROVISIONS
- 14 TERMINATION OR SUSPENSION OF THE CONTRACT
- 15 CLAIMS AND DISPUTES



DRAFT AIA® Document A201™ – 2017

General Conditions of the Contract for Construction

ARTICLE 1 GENERAL PROVISIONS

§ 1.1 Basic Definitions

§ 1.1.1 The Contract Documents

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the “Agreement”) and consist of the Agreement, these General Conditions of the Contract for Construction (hereinafter the “General Conditions”), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties; (2) a Change Order; (3) a Construction Change Directive; or (4) a written order for a minor change in the Work issued by the Architect.

§ 1.1.2 The Contract

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

§ 1.1.3 The Work

The term “Work” means all of the construction and services required by, described in, reasonably inferable from, and as necessary to produce the results required by the Contract Documents, whether completed or partially completed, and includes, without limitation, the furnishing of (1) all materials, supplies, equipment, fixtures, tools, implements, and other items and facilities required for, or in connection with, or for inclusion or incorporation into, the Project; and (2) all labor, supervision, transportation, utilities, storage and all other services required for or in connection with the Project, except as specifically indicated in the Contract Documents to be the responsibility of others. The Work may constitute the whole or a part of the Project, whether on or off the site of the Project.

§ 1.1.4 The Project

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part, and which may include construction by the Owner and by Separate Contractors.

§ 1.1.5 The Drawings

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

§ 1.1.6 The Specifications

The Specifications are that portion of the Contract Documents consisting of the

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

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

For guidance in modifying this document to include supplementary conditions, see AIA Document A503™, Guide for Supplementary Conditions.

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written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

§ 1.1.7 Instruments of Service

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials and Instruments of Service may be in paper or electronic form.

§ 1.1.8 Initial Decision Maker

The Initial Decision Maker is the person identified in Section 6.1 of the Agreement to render initial decisions on Claims in accordance with Section 15.2.

§ 1.2 Correlation and Intent of the Contract Documents

§ 1.2.1 Intent of the Contract Documents

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

§ 1.2.1.1 Severability

The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

§ 1.2.1.2 Inconsistencies

In the event of inconsistencies within or between parts of the Contract Documents or between the Contract Documents and applicable standards, codes, and ordinances, the Contractor shall: (1) provide the better quality or greater quantity of Work; or (2) comply with the more stringent requirement; either or both in accordance with the Owner Representative's interpretation. The terms and conditions of this Section 1.2.1.2 however, shall not relieve the Contractor of any of the obligations set forth in Sections 3.2 and 3.7.

§ 1.2.1.1.1 Before ordering any materials or equipment or performing any Work, the Contractor shall verify the figures shown on the Drawings before laying out the Work and will be responsible for any errors or inaccuracies resulting from Contractor's failure to do so. In the event that the Contractor shall, while laying out the Work, become aware of: (1) any conflicts between (a) the Drawings, the Specifications or any Modification to the Drawings or the Specifications and (b) the actual layout of the Work, or (2) any conflicts or inconsistencies in the Drawings, the Specifications or any Modification to the Drawings or the Specifications themselves, Contractor shall promptly notify the Architect. If the Contractor proceeds without the Architect's clarification and instruction on the matter, the Contractor shall proceed at Contractor's own risk.

§ 1.2.1.1.2 If a minor change in the Work is found necessary to address actual field conditions, the Contractor shall submit detailed drawings to reflect such change for approval by the Architect before implementing such change in the Work.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized

meanings.

§ 1.3 Capitalization

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles or (3) the titles of other documents published by the American Institute of Architects.

§ 1.4 Interpretation

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

§ 1.5 Ownership and Use of Drawings, Specifications and other Instruments of Service

§ 1.5.1 The Owner will retain all common law, statutory and other reserved rights, including copyrights, in the Instruments of Service as provided in the contract between the Owner and the Architect. Unless otherwise indicated in such contract, the Architect and the Architect's consultants shall be deemed the authors of their respective Instruments of Service. Upon completion of the Work, and at the request of the Architect, all copies of the Instruments of Service, except one record set that may be retained by the Contractor, shall be returned or suitably accounted for to the Architect. None of the Contractor, Subcontractor, Sub-subcontractor, or any material or equipment supplier shall own or claim a copyright in the Instruments of Service. The Instruments of Service and other documents prepared by the Architect and the Architect's consultants, and copies thereof furnished to the Contractor, are for use solely with respect to the Project. None of the Contractor, a Subcontractor, Sub-subcontractor, or any material or equipment suppliers may use the Instruments of Service on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the Owner, Architect, and the Architect's consultants.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are authorized to use and reproduce applicable portions of the Drawings, Specifications and other documents prepared by the Architect and the Architect's consultants appropriate to and for use in the execution of the Work under the Contract Documents. All copies made under this authorization shall bear the statutory copyright notice, if any, shown on the Drawings, Specifications and other documents. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

§ 1.6 Notice

§ 1.6.1 Except as otherwise provided in Section 1.6.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if a method for electronic transmission is set forth in the Agreement.

§ 1.6.2 Notice of Claims as provided in Section 15.1.3 shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed (and also, in the case of a Notice of Claims by the Contractor to the Owner, to the Owner's Representative and the Initial Decision Maker) by certified or registered mail, or by courier providing proof of delivery.

§ 1.7 Transmission of Data in Digital Form

If the parties intend to transmit Instruments of Service or any other information or documentation in digital form, they shall endeavor to establish necessary protocols governing such transmissions, unless otherwise already provided in the Contract or the Contract Documents.

§ 1.8 Digital Data Use and Transmission

The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties may use AIA Document E203™-2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

§ 1.9 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document G202™–2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

§ 1.10 Provisions Required by Law Deemed Inserted

§ 1.10.1 Each and every provision of law and clause required by law to be inserted in this Contract shall be deemed to be inserted herein and the Contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party, the Contract shall forthwith be physically amended to make such insertion.

ARTICLE 2 OWNER

§ 2.1 General

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. Except as otherwise provided in Section 4.2.1, the Architect does not have any authority to act on behalf of the Owner. The term "Owner" means the Owner or the Owner's authorized representative.

§ 2.1.1.1 Pursuant to Section 8.2 of the Agreement, the Owner shall designate a representative through whom all communications by the Contractor with the Owner shall be made except as otherwise provided in the Contract Documents or instructed in writing by the Owner. If the Owner retains a third party (other than the Architect) to provide construction administration services, the Owner shall instruct the Contractor as to the role of such third party in the Project (including, without limitation, the extent to which the Contractor is to communicate directly with such third party) and the authority of such third party, if any, to act on behalf of the Owner.

§ 2.1.2 Not Used.

§ 2.2 Not Used.

§ 2.3 Information and Services Required of the Owner

§ 2.3.1 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

§ 2.3.2 The Owner shall retain an architect lawfully licensed to practice architecture, or an entity lawfully practicing architecture, in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 2.3.3 If the employment of the Architect terminates, the Owner shall employ a successor whose status under the Contract Documents shall be that of the Architect.

§ 2.3.4 To the extent such surveys are in the possession of the Owner and are required for the performance of the Work, the Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project. The Contractor shall exercise proper precautions relating to the safe performance of the Work. Contractor shall review such surveys and notify the Owner of any inaccuracies therein within fourteen (14) days of its receipt.

§ 2.3.5 Data concerning the Project site, size of the Project site, access to the Project site, staging and storing,

present obstructions on or near the Project site, conditions of existing adjacent structures, locations and depths of sewers, conduits or pipes, gas lines, position of sidewalks, curbs and pavements, and other data concerning site conditions to the extent provided by the Owner, has been obtained from sources Owner believes reliable. Accuracy of such data, however, is not guaranteed and is furnished solely for accommodation of Contractor. Use of such data is made at the Contractor's sole risk and expense.

§ 2.3.6 The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

§ 2.3.7 The Contractor shall be responsible for determining how many copies of the Drawings and other Contract Documents are necessary for the execution of the Work. The Contractor shall be responsible for the reproduction and distribution of such copies.

§ 2.4 Owner's Right to Stop the Work

If the Contractor (1) fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2; (2) repeatedly fails to carry out Work in accordance with the Contract Documents; or (3) creates a situation which the Owner believes, in its sole judgement, poses an imminent risk of loss to property or persons, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

§ 2.5 Owner's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and (1) fails within a seven-day period after receipt of notice of such default or neglect from the Owner to commence and continue correction of such default or neglect with diligence and promptness, and (2) further fails to do so within three days after receipt of a second such notice from the Owner, the Owner shall be entitled to (but not obligated to), without prejudice to other rights and remedies Owner may have, correct the deficiencies in the Work. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the Owner's cost of correcting such deficiencies in the Work, including expenses and compensation payable to the Architect for additional services made necessary by Contractor's default, neglect or failure. The Contractor shall also be responsible for all of the Owner's other costs, damages, delays, and associated impacts arising from the Owner's exercise of its rights under this Section 2.5. If payments then or thereafter due the Contractor are not sufficient to cover amounts payable to the Owner under this Section 2.5, the Contractor shall pay the difference to the Owner.

§2.6 Extent of Owner Rights

§2.6.1 The rights stated in Article 2 and elsewhere in the Contract Documents are cumulative and not in limitation of any rights of the Owner (1) granted in the Contract Documents, (2) at law or (3) in equity.

§2.6.2 In no event shall the Owner have control over, charge of, or any responsibility for construction means, methods, techniques, sequences or procedures for safety precautions and programs in connection with the Work, notwithstanding any of the rights and authority granted the Owner in the Contract Documents.

ARTICLE 3 CONTRACTOR

§ 3.1 General

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor has designated the representative set forth as Contractor's representative in Section 8.3 of the Agreement who has express authority to bind the Contractor with respect to all matters under this Contract. Any and all notices to be provided to the Contractor by the Owner or Architect under the Contract Documents shall be delivered to such Contractor's representative. The term "Contractor" means the Contractor or the Contractor's authorized representative. The Contractor shall not replace the Contractor's representative without ten days prior written notice and the

prior written consent of the Owner.

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

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

§ 3.1.4 The Contractor represents and warrants the following to the Owner (in addition to the other representations and warranties contained in the Contract Documents) as an inducement to the Owner to execute the Contract, which representations and warranties shall survive the execution and delivery of the Contract and the final completion of the Work:

- .1 That it is financially solvent, able to pay its debts as they mature and possesses sufficient working capital to complete the Work and perform its obligations under the Contract Documents;
- .2 That it, through its Subcontractors or otherwise, is able to furnish the tools, materials, supplies, equipment and labor required to complete the Work and perform its obligations hereunder and has sufficient experience and competence to do so;
- .3 That it is authorized to do business in the State where the Project is located and properly licensed by all necessary governmental and public and quasi-public authorities having jurisdiction over it and over the Work and the site of the Project;
- .4 That its execution of the Contract and its performance thereunder have been duly authorized by all necessary corporate action; and
- .5 That its duly authorized representative has visited the site of the Project, familiarized himself or herself with the local conditions under which the Work is to be performed and correlated his/her observations with the requirements of the Contract Documents.

§ 3.2 Review of Contract Documents and Field Conditions by Contractor

§ 3.2.1 The Contractor shall, along with such Subcontractors as the Contractor deems necessary, visit the Project site prior to the execution of the Contract. The execution of the Contract by the Contractor is a representation that the Contractor and such Subcontractors have visited the Project site, become familiar with all existing conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents.

§ 3.2.2 The Contractor may request permission from the Owner to conduct, at Contractor's sole cost and expense, tests, examinations and/or inspections as Contractor deems necessary to become sufficiently acquainted with existing conditions on the Project site. No such tests, examinations or inspections shall be conducted without the Owner's prior written approval and any engineer or consultant engaged by the Contractor or a Subcontractor to perform such test, examination or inspection shall be subject to the Owner's prior approval.

§ 3.2.3 Because the Contract Documents are complementary, the Contractor shall, before ordering any materials or starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.3, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect and Owner Representative any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect and the Owner may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a

licensed design professional, unless otherwise specifically provided in the Contract Documents. After reporting to the Architect any error, inconsistency, or omission in or among the Contract Documents which the Contractor discovers or which is made known to the Contractor, the Contractor shall not proceed with the subject Work without the Architect's written response and/or clarifications and, if required, Owner's approval of any associated adjustments to the Contract Documents.

§ 3.2.4 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, building codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect and the Owner any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.

§ 3.2.5 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall submit Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner, as would have been avoided if the Contractor had performed such obligations and the Contractor shall be responsible for associated delays and impacts. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities unless the Contractor should have but failed to recognize such error, inconsistency, omission or difference.

§ 3.2.6 No additional compensation or time will be granted to the Contractor by reason of conditions which the Contractor could have discovered or reasonably anticipated through the fulfillment of its obligations under this Section 3.2.

§ 3.3 Supervision and Construction Procedures

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract. The Contractor shall schedule and perform the Work so as not to interfere with the Owner's on-going business operations or any other work being performed by or on behalf of the Owner in or about the Project site. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely notice to the Owner and Architect, and shall propose alternative means, methods, techniques, sequences, or procedures. The Architect shall evaluate the proposed alternative solely for conformance with the design intent for the completed construction. Unless the Architect objects to the Contractor's proposed alternative, the Contractor shall perform the Work using its alternative means, methods, techniques, sequences or procedures.

§ 3.3.2 The Contractor shall be responsible to the Owner for any claims against the Owner and any damages, losses, costs and expenses incurred by the Owner resulting or arising from the acts and omissions of the Contractor's employees, Subcontractors, Sub-subcontractors, material and equipment suppliers, and their respective agents and employees, and any other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any Subcontractors or Sub-subcontractors or material and equipment suppliers.

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

§ 3.3.4 The Contractor's qualified representative shall attend all periodic progress meetings which will be held at such time and at such place as the Architect or the Owner shall designate.

§ 3.4 Labor and Materials

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

§ 3.4.2 Except in the case of minor changes in the Work approved by the Architect in accordance with Section 3.12.8 or ordered by the Architect in accordance with Section 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.

§ 3.4.2.1 Contractor's request for any substitution shall constitute a representation by the Contractor that:

- .1 the Contractor and any Subcontractors and Sub-subcontractors impacted by such substitution have investigated the proposed substitute product and determined that it is equal or superior in all respects to the product specified;
- .2 the Contractor and proposed manufacturer will provide the same or superior warranty coverage for the substitution that the Contractor would for the product specified;
- .3 the cost data presented is complete and includes all related costs under this Contract, and Contractor waives all claims for additional costs related to the substitution which subsequently become apparent;
- .4 Contractor shall coordinate the installation of the accepted substitution, making such changes as may be required for the Work to be complete in all respects;
- .5 Contractor shall make requests for substitutions for Contractor's convenience within fourteen (14) days after Contract award or at the preconstruction meeting; and
- .6 Contractor shall reimburse and compensate the Owner for any costs incurred in connection with, and/or the value of, any services performed by the Architect and/or the Owner associated with, addressing the request for substitution.

§ 3.4.3 All labor shall be performed by workmen skilled in their respective trades, and workmanship shall be of good quality so that first class work in accordance with the standards of construction set forth in the Contract Documents will be achieved. The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit the employment of unfit persons or persons not properly skilled in tasks assigned to them.

§ 3.4.3.1 The Contractor shall neither permit nor suffer the use of offensive language or lewd conduct by Contractor's employees or other persons carrying out the Work on or about the Project site. All of the Owner's buildings are smoke-free buildings. The Contractor shall not permit (1) smoking in the Owner's buildings, (2) outdoor smoking, where outdoor smoking could create a hazard, or (3) the introduction or use of drugs, spirituous or intoxicating liquors, on or about the Owner's property by the Contractor's employees or other persons carrying out the Work. The Contractor shall comply with the Owner's current "Policy on Discrimination Harassment and Related Interpersonal Violence" including its provisions prohibiting sexual harassment. The Contractor shall be fully responsible to the Owner for the acts and omissions of the Contractor's employees, Subcontractors, Sub-subcontractors and material and equipment suppliers, and all persons either directly or indirectly employed by any of them to perform any part of the Work.

§ 3.5 Warranty

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

§ 3.5.2 The Contractor shall procure and assign to the Owner at the time of Substantial Completion of the Work any and all Subcontractor, Sub-subcontractor, manufacturer or supplier warranties relating to any materials or labor used in the Work. Such warranties shall supplement the warranties provided by the Contractor in Section 3.5.1. All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.8.4.

§ 3.5.3 Directions, specifications and recommendations by manufacturers for installation, handling, storing, adjustment, and operation of their materials or equipment shall be complied with, but the Contractor shall nonetheless have the responsibility of determining whether such directions, specifications, and recommendations may safely and suitably be employed in the Work, and of notifying the Architect and Owner in advance in writing of any deviation or modification necessary for installation safety or proper operation of the item.

§ 3.6 Taxes

The Owner is a tax-exempt institution. The Contractor shall be familiar with the current regulations of the Department of Revenue Service. The tax on materials or supplies exempted by such regulations shall not be included as part of the Contract Sum, or any Application for Payment, or request for Change Order or other compensation. A Sales Tax Certificate for the duration of the Project is available from the Owner's Purchasing Department upon written request.

§ 3.7 Permits, Fees, Notices, and Compliance with Laws

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

§ 3.7.2 The Contractor shall comply with, be responsible for the performance of the Work in accordance with, and give notices required by all local, state and federal laws, statutes, ordinances, codes, building codes, rules, regulations, permits, and orders enacted, promulgated, issued or ordered by any governmental body or public or quasi-public authority having jurisdiction over the Work, the Contractor and/ or the site of the Project. The foregoing requirements shall include, without limitation, those relating to equal opportunity, labor, wages, and employment.

§ 3.7.3 If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules, and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.7.4 If any governmental body having jurisdiction over the Work requires licenses or registrations for the performance of the Work, or any part thereof, the Contractor shall hold such valid licenses or registrations as may be required by law to prosecute the Work to completion. If any part of the Work for which such a license or registration is required to be performed by a Subcontractor or Sub-subcontractor, the Contractor shall ensure that any such subcontractor holds such valid licenses or registrations as may be required by law to prosecute said Work to completion.

§ 3.7.5 Concealed or Unknown Conditions. See Section 15.1.9 of these General Conditions.

§ 3.7.6 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

§ 3.8 Allowances

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

§ 3.8.2 Unless otherwise provided in the Contract Documents,

- .1** Allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- .2** Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances, except when installation is specified as part of the allowance in Division 1 Specifications; and
- .3** Whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1; and (2) changes in Contractor's costs under Section 3.8.2.2, except when installation is specified as part of the allowance in the General Requirements (Division 1 of the Specifications).

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.9 Superintendent and Project Manager

§ 3.9.1 The Contractor shall employ a competent, experienced, full-time superintendent(s) and necessary assistants who shall be in attendance at the Project site during performance of the Work for the duration of the entire Project. The superintendent shall be satisfactory to the Owner and the Contractor shall not replace the superintendent without the prior written consent of the Owner. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

§ 3.9.2 If not already identified as part of the Owner's pre-qualification process, the Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner and Architect the name, qualifications and references of the proposed superintendent(s).

§ 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. If, for any reason, the Owner finds the superintendent(s) to be unsatisfactory, the Contractor will, within five (5) days after the request of Owner, replace such superintendent with a qualified individual to whom neither the Owner nor the Architect has objection. The Contractor shall not change the superintendent without the Owner's written consent, which shall not unreasonably be withheld or delayed.

§ 3.9.4 The Contractor shall employ a competent Project Manager and necessary assistants who shall be in attendance at the Project site during performance of the Work for the duration of the entire Project. The Project Manager shall be satisfactory to the Owner and the Contractor shall not replace the Project Manager without the prior written consent of the Owner. The Project Manager shall represent the Contractor and communications given to the Project Manager shall be as binding as if given to the Contractor. Important communications shall be confirmed in writing. Other communications shall be similarly confirmed on written request in each case.

§ 3.9.5 If not already identified as part of the Owner's pre-qualification process, the Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner and the Architect the name, qualifications, and references of the proposed Project Manager. The Contractor shall not employ a proposed Project Manager to whom the Owner or Architect has made reasonable and timely objection. If, for any reason the Owner finds a Project Manager to be unsatisfactory, the Contractor shall, upon the request of the Owner, replace such Project Manager with a qualified individual to whom neither the Owner nor the Architect has objection. The Contractor shall not replace the Project Manager without the prior written

consent of the Owner.

§ 3.9.6 Additional key personnel may be required for the Project. The Contractor shall provide additional personnel as required to ensure proper project management and coordination.

§ 3.10 Contractor's Construction Schedule

§ 3.10.1 The Contractor shall, within ten (10) days after the execution of the Contract, submit for the Owner's approval and the Architect's information a construction schedule for the Work including such detail and information and in the form as described in Division 1 of the Specifications. The schedule shall include, without limitation, (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of each portion of the Work. The schedule shall provide for the orderly progression of the Work to completion and shall not exceed time limits current under the Contract Documents. Upon the Owner's approval of the schedule, such approved schedule shall be deemed to supersede and replace the preliminary schedule attached as Exhibit D to the Agreement and such approved schedule shall constitute a Contract Document. The schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project.

§ 3.10.2 The Contractor, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, shall submit a submittal schedule for simultaneous review and approval by the Owner and Architect. The Owner and Architect's approval shall not be unreasonably delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule; and (2) allow the Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, or fails to provide submittals in accordance with the approved submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.11 Documents and Samples at the Site

§ 3.11.1 The Contractor shall make available, at the Project site, the Contract Documents, including Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and similar required submittals. These shall be in electronic form or paper copy as required by the Owner, available to the Architect and Owner, and delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

§ 3.11.2 In addition, the Contractor shall indicate on the Drawings, as best as possible, all new and existing pipe and conduit runs which are concealed in the floor slabs, walls, ceilings, etc. The Contractor shall indicate on the Drawing the electrical distribution panel and circuit number supplying each item installed or reconnected, with diagrammatic lines showing sequence of connections. All changes shall be identified and circled on the Architect's and Engineer's drawings at the time they occur for each such field change.

§ 3.12 Shop Drawings, Product Data and Samples

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

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

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

§ 3.12.4 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. Their purpose is to demonstrate how the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract

Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve and submit to the Architect Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of Separate Contractors. Submittals which are not marked as reviewed for compliance with the Contract Documents and approved by the Contractor may be returned by the Architect or Engineer without action. Such return without action will not be grounds for an increase in the Contract Time.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them; (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so; and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Architect.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically notified and informed the Architect and the Owner of such deviation at the time of submittal and (1) the Owner has given written approval to the specific deviation as a minor change in the Work; or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect's approval thereof.

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

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures. The Contractor shall not be required to provide professional services in violation of applicable law.

§ 3.12.10.1 If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall be entitled to reasonably rely upon the adequacy and accuracy of the performance and design criteria provided in the Contract Documents. The Contractor shall cause such services or certifications to be provided by a properly licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings, and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor the performance and design

criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review, approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

§ 3.12.10.2 If the Contract Documents require the Contractor's design professional to certify that the Work has been performed in accordance with the design criteria, the Contractor shall furnish such certifications to the Architect at the time and in the form specified by the Architect.

§ 3.12.11 See Specifications for additional information on Shop Drawings.

§ 3.13 Use of Site

§ 3.13.1 The Contractor shall confine operations at the Project site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

§ 3.13.2 Nothing contained in the Contract Documents shall be interpreted as giving the Contractor exclusive use of the Project site.

§ 3.13.3 The performance of the Work shall not impede the Owner's normal, continuous, and safe use and operation of its roadways and buildings in and around the Project site. If it appears that the performance of the Work will impede such use and operation, the timing and manner of the performance of the Work shall be subject to the approval of the Owner.

§ 3.13.4 The Contractor shall comply with the following procedures when working in occupied areas including classrooms, hallways, and office spaces.

§ 3.13.4.1 The Contractor shall notify the Owner two (2) days prior to commencing Work in an occupied area. This notification shall include a detailed description of the Work to be performed in the occupied area.

§ 3.13.4.2 There shall be no overhead Work (e.g. demolition, HVAC ductwork, and/or electrical) performed directly over occupied areas.

§ 3.13.5 The Contractor shall produce a site logistics plan for the Owner's review and approval before beginning operations on the Project site. This document shall be updated and submitted to the Owner on a periodic basis as required by the Owner. No deviations from this plan will be allowed without the prior approval of the Owner.

§ 3.14 Cutting and Patching

§ 3.14.1 The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting, or patching shall be restored to the condition existing prior to the cutting, fitting, or patching, unless otherwise required by the Contract Documents.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or Separate Contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter construction by the Owner or a Separate Contractor except with written consent of the Owner and of the Separate Contractor. Consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold, from the Owner or a Separate Contractor, its consent to cutting or otherwise altering the Work.

§ 3.14.3 Unless authorized in writing by the Architect, structural elements of the Work shall not be cut, patched, or otherwise altered or repaired. Existing Work that is cut, damaged, disturbed or otherwise interfered with by the Contractor, a Subcontractor, Sub-subcontractor or anyone for whom any of them is responsible, shall be fully, properly, and carefully repaired by the responsible Contractor, Subcontractor or Sub-subcontractor. All such repairs shall be completed to the satisfaction of the Architect, and shall match similar existing adjoining work.

§ 3.14.4 See Specifications for additional information on Cutting and Patching.

§ 3.15 Cleaning Up

§ 3.15.1 The Contractor shall keep the premises and surrounding area and roadways free from accumulation of waste materials and rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus materials and shall clean and/or remove all stains, spots, marks, blemishes, foreign matter and dirt from surfaces of the Work and from other surfaces not a part of the Work but where such conditions resulted from the Contractor's operations from and about the Project.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the Owner shall be entitled to reimbursement from the Contractor.

§ 3.16 Access to Work

The Contractor shall provide the Owner and Architect with access to the Work in preparation and progress wherever located.

§ 3.17 Royalties, Patents and Copyrights

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for defense or loss when a particular design, process or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications or other documents prepared by the Owner or Architect. However, if the Contractor has reason to believe that the required design, process or product is an infringement of a copyright or patent or such infringement is discovered by, or made known to, the Contractor, the Contractor shall be responsible for the loss unless the information is promptly furnished to the Architect. In the event of legal action arising out of such infringement for which the Contractor is responsible and which action has the effect of stopping the Work, the Owner may require the Contractor to substitute other products of like kind as will make it possible to pursue and complete the Work. Costs and expenses caused thereby shall be borne by the Contractor.

§ 3.18 Indemnification

§ 3.18.1 To the fullest extent permitted by law the Contractor shall defend, indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of Owner and Architect from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the willful, wanton or negligent acts or omissions of the Contractor, a Subcontractor, Sub-subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Section 3.18. Nothing in this Section shall be construed as obligating the Contractor to indemnify or hold harmless any of the parties indemnified hereunder against liability for damage arising out of bodily injury to persons or damage to property caused by or resulting from the negligence of any such indemnified party, or such party's agents or employees.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, Sub-subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor, a Subcontractor or Sub-subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

§ 3.18.3 Additional Indemnification Obligations

§ 3.18.3.1 The Contractor shall defend, indemnify and hold harmless the Owner, the Architect, and the Architect's consultants and the Owner's and Architect's agents and employees from and against all claims, damages, losses, including, but not limited to, attorneys' fees, arising out of or resulting from any type of pollution and/or environmental impairment into or upon the land, the atmosphere, or any course or body of water that is above or below ground, which is caused by any negligent or willful or wanton act or omission of the Contractor, Subcontractors, Sub-subcontractors or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable.

§ 3.18.3.2 The Contractor shall defend, indemnify and hold harmless the Owner, the Architect, and the Architect's consultants, and the agents and employees of the Owner and Architect from and against all claims, damages, losses, including, but not limited to, attorneys' fees, arising out of or resulting from any acts of Contractor, Subcontractors, Sub-subcontractors or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable that are outside of the Contract Specifications, and without the supervision or direction of the Owner, its Architects and Engineers.

§ 3.18.3.3 The Contractor shall defend, indemnify and hold harmless the Owner, the Architect, and the Architect's consultants, and the agents and employees of the Owner and Architect from and against all claims, damages, losses, and expenses including, but not limited to, attorneys' fees, arising out of or resulting from the misuse or malfunction of any equipment rented, owned, or leased by the Contractor, any Subcontractor, Sub-subcontractor or anyone directly or indirectly employed by any of them or anyone for whose acts they may be liable.

§ 3.18.3.4 Nothing in Section 3.18.3 shall be construed as obligating the Contractor to indemnify or hold harmless any of the parties indemnified hereunder against liability for damage arising out of bodily injury to persons or damage to property caused by or resulting from the negligence of any such indemnified party, or such party's agents or employees.

§ 3.18.3.5 The Owner assumes no responsibility or liability from loss or damage to the Contractor's equipment, materials, or supplies.

§ 3.19 The Contractor shall obtain and maintain at its expense such general liability insurance coverage as will insure its indemnification obligations under Section 3.18 and any other contractual indemnity obligations assumed by the Contractor under the Contract Documents.

ARTICLE 4 ARCHITECT

§ 4.1 General

§ 4.1.1 The Architect is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement.

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

§ 4.2 Administration of the Contract

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that such portion of the Work is, and when the Work is fully completed the entirety of the Work will be, in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for, the construction means, methods, techniques, sequences or

procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents.

§ 4.2.2.1 Where it is stated in the Contract Documents that the Contractor shall pay for or reimburse the Owner for services of the Architect, such payment shall be at a rate of two and one half (2.5) times the Architect's Direct Personnel Expense plus any expenses incurred in providing such services. Direct Personnel Expense is defined as the direct salaries of the Architect's personnel engaged on the Project and the portion of the cost of their mandatory and customary contributions and benefits related thereto, such as employment taxes and other statutory employee benefits, insurance, sick leave, holidays, vacations, pensions, and similar contribution and benefits.

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner (1) known deviations from the Contract Documents; (2) known deviations from the most recent construction schedule submitted by the Contractor; and (3) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 4.2.4 Communications

Owner and Contractor shall include the Architect in all communications that relate to or affect the Architect's services or professional responsibilities. The Owner shall promptly notify the Architect of the substance of any direct communications between the Owner and the Contractor otherwise relating to the Project. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and suppliers shall be through the Contractor. Communications by and with Separate Contractors shall be through the Owner. The Contract Documents may specify other communication protocols.

§ 4.2.5 Based on the Architect's evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 Each of the Owner and the Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Owner or the Architect considers it necessary or advisable for implementation of the intent of the Contract Documents, the Owner or the Architect, as applicable, will have authority to require additional inspection or testing of the Work in accordance with Sections 13.4.2 and 13.4.3, whether or not such Work is fabricated, installed or completed. The Architect shall advise and assist the Owner in performing any of the functions set forth in this Section that are performed by the Owner.

§ 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5, and 3.12. The Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.8 The Owner or the Architect will prepare Change Orders and Construction Change Directives and may order minor changes in the Work as provided in Section 7.4.

§ 4.2.9 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10. The undertaking of inspections by the Architect is not to be construed as supervision of construction activities nor an assumption by the Architect of any responsibility for job site safety for the performance of Work.

§ 4.2.10 Not Used.

§ 4.2.11 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon provided that, if not agreed otherwise, the Architect shall respond to such requests within fifteen (15) days after Architect's receipt of such request. If such written request is made of the Architect, and the Owner or the Contractor disagrees with the Architect's response to such request, the matter shall be submitted to the Initial Decision Maker pursuant to Article 15.

§ 4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either and will not be liable for results of interpretations or decisions rendered in good faith.

§ 4.2.13 The decision of the Owner, in consultation with the Architect, on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

§ 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon provided that, unless agreed otherwise, the Architect shall respond to such requests within fifteen days after Architect's receipt of such request. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 Definitions

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a Separate Contractor or the subcontractors of a Separate Contractor.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site and, unless otherwise expressly indicated, refers to subcontractors of all tiers performing any part of the Work (other than Subcontractors). The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

§ 5.2 Award of Subcontracts and Other Contracts for Portions of the Work

§ 5.2.1 Unless otherwise stated in the Contract Documents, the Contractor, as soon as practicable, but in no event more than ten days after the Owner's execution of the Contract (or such shorter period of time as required by applicable law), shall notify the Owner and Architect of the names, addresses, Connecticut Tax Registration numbers, and Federal Employer Identification numbers (or social security numbers as to individuals) of the persons or entities proposed for each principal portion of the Work, including those who are to furnish materials or equipment fabricated to a special design. Within fourteen days of receipt of the information, the Architect or Owner may notify the Contractor whether the Owner or the Architect (1) has reasonable objection to any such proposed person or entity; or (2) requires additional time for review. Failure of the Architect or Owner to provide notice within the fourteen-day period shall constitute notice of no

reasonable objection.

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection.

§ 5.2.2.1 The Contractor shall not contract with a person or entity who appears on the State of Connecticut Debarment List, the Federal Davis Bacon Act Debarment List, both of which are available through:

<http://www.ctdol.state.ct.us/>

or the Federal List of Excluded Parties Listing System available through <http://epls.arnet.gov/>

§ 5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work and is not ineligible to be contracted with in accordance with Section 5.2.2.1, the Contract Sum shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person or entity (including those who are to furnish materials or equipment fabricated to a special design) for one previously selected if the Owner or Architect makes reasonable objection to such substitution.

§ 5.2.5 If requested by the Owner, the Contractor shall provide to the Owner copies of all subcontracts and supply agreements entered into by the Contractor for the Work.

§ 5.2.6 The Contractor shall comply with its obligations under Connecticut General Statutes §4b-93 and §4b-96 including, without limitation and as applicable, its obligation to contract with those Subcontractors identified in the Contractor's bid for the Project to perform the (1) masonry, (2) electrical, (3) plumbing, and (4) heating, ventilating and air conditioning (HVAC) components of the Work and to timely provide copies to the Owner of the executed subcontracts in accordance with the requirements of Connecticut General Statutes §4b-96.

§ 5.2.7 All subcontracts shall comply with the requirements of Connecticut General Statutes §4b-96 and shall be in the form provided by the Owner. The Contractor may supplement the terms and conditions set forth in the Owner supplied form of subcontract by attachment of additional terms and conditions thereto provided such supplemental terms and conditions are not inconsistent or in conflict with the requirements of CGS §4b-96. In the event of any such conflict or inconsistency, the provisions of the form of subcontract set forth in CGS §4b-96 shall prevail and control.

§ 5.3 Subcontractual Relations

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

the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

§ 5.4 Contingent Assignment of Subcontracts

- § 5.4.1** Each subcontract for a portion of the Work is assigned by the Contractor to the Owner, provided that
- .1 assignment is effective only after termination of the Contract by the Owner pursuant to Article 14 and only for those subcontracts that the Owner accepts by notifying the Subcontractor and Contractor; and
 - .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract, the Owner assumes the Contractor's rights and obligations under the subcontract but only to the extent arising subsequent to the effective date of the assignment and related to Work not yet performed. Contractor agrees to execute any and all other documents reasonably required to effect the assignment.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than sixty (60) days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity.

§ 5.4.4 The Contractor shall promptly, but in any event not later than ten (10) days after obtaining knowledge thereof, advise the Owner in writing of any claim or demand by a Subcontractor claiming that any amount is due to such Subcontractor or claiming any default by the Contractor in any of its obligations to such Subcontractor.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 Owner's Right to Perform Construction and to Award Separate Contracts

§ 6.1.1 The term "Separate Contractor(s)" shall mean other contractors retained by the Owner under separate agreements. The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

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

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each Separate Contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with any Separate Contractors and the Owner in reviewing their construction schedules and construction requirements. The Contractor shall make any revisions to its construction schedule deemed necessary after a joint review and mutual agreement between the Owner and Contractor. The construction schedules shall then constitute the schedules to be used by the Contractor, Separate Contractors, and the Owner until subsequently revised.

§ 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces or with Separate Contractors, the Owner or its Separate Contractors shall have the same obligations and rights that the Contractor has under these General Conditions, including, without excluding others, those stated in Article 3, this Article 6, and Articles 10, 11, and 12.

§ 6.2 Mutual Responsibility

§ 6.2.1 The Contractor shall afford the Owner and Separate Contractors reasonable opportunity for

introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a Separate Contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly notify the Architect of apparent discrepancies or defects in the construction or operations by the Owner or Separate Contractor that would render it unsuitable for proper execution and results of the Contractor's Work. Failure of the Contractor to notify the Architect of apparent discrepancies or defects prior to proceeding with the Work shall constitute an acknowledgment that the Owner's or Separate Contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work. The Contractor shall not be responsible for discrepancies or defects in the construction or operations by the Owner or Separate Contractor that are not apparent. If the performance of any part of a Contractor's Work depends on proper and timely execution or relies upon the interphasing or coordinating of the work of any Separate Contractor or the Owner, the Contractor shall allow for this interrelationship in the planning and performance of the Contractor's Work, without interference with the work of any Separate Contractor or the Owner.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a Separate Contractor because of the Contractor's delays, improperly timed activities or defective construction (collectively and individually, "Interference"). The Owner shall have the right to off-set such costs against any amounts owed to the Contractor by the Owner to the extent related to the Project. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a Separate Contractor's Interference but only as regards Interference by Separate Contractors whose work was not identified in the Contract Documents as work to be performed by Separate Contractors.

§ 6.2.4 The Contractor shall promptly remedy the damage that the Contractor wrongfully causes to completed or partially completed construction or to the property of the Owner or Separate Contractor as provided in Section 10.2.5.

§ 6.2.5 The Owner and each Separate Contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§6.2.6 Upon the Owner's request, the Contractor shall defend any proceedings brought against the Owner by any Separate Contractor on account of any damage alleged to have been caused by the Contractor which arises from the Contractor's failure to comply with the terms and conditions of this Section 6.2.

§ 6.3 Owner's Right to Clean Up

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

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 General

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor and Architect. A Construction Change Directive is a directive by the Owner that may or may not be agreed to by the Contractor. All changes to the Work shall be approved by the Owner. Except as permitted in Section 7.3, a change in the Contract Sum or the Contract Time shall be accomplished only by Change Order. Accordingly, no course of conduct or dealings between the parties, nor express or implied acceptance of alterations or additions to the Work, and no claim that the Owner has been unjustly enriched by any alterations or additions to the Work, whether or not there is, in fact, any unjust enrichment, shall be the basis for any claim for an increase in the Contract Sum, an extension of the Contract Time, or a change in any

time period provided for in the Contract Documents.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents. The Contractor shall proceed promptly with changes in the Work, unless otherwise provided in the Change Order, Construction Change Directive, or order for a minor change in the Work.

§ 7.2 Change Orders

§ 7.2.1 A Change Order is a written instrument prepared by the Owner or Architect and signed by the Owner, Contractor and Architect stating their agreement upon all of the following:

- .1 The change in the Work;
- .2 The amount of the adjustment, if any, in the Contract Sum; and
- .3 The extent of the adjustment, if any, in the Contract Time.

There shall be no extension in the Contract Time unless the Contractor can effectively demonstrate that the Work delayed is on the critical path of the approved construction schedule as provided in Division 1 of the Specifications and in Section 8.3 of these General Conditions.

The signature of the Architect on the Change Order signifies that the Architect has reviewed the proposed Change Order, with accompanied breakdowns and subcontractor's change proposals, for appropriate quantities and unit costs and recommends approval of the proposed Change Order. The Architect's signature is not necessary in order for the Change Order to constitute a modification to the Contract which binds the Owner and the Contractor if the Contractor and the Owner have both signed the Change Order.

§ 7.2.2 Change Order Cost Components

The Contractor's proposal for a Change Order shall be itemized completely, submitted in a detailed format acceptable to the Owner, and shall include the following itemized cost components, as applicable:

§ 7.2.2.1 Engineered Equipment and Materials:

Costs for Engineered Equipment and Materials included in any Change Order shall be considered all-inclusive of the purchase cost thereof including all freight costs, purchasing services, expediting, and inspections and shall be substantiated by manufacturer and supplier quotes subject to review and approval by the Owner. Engineered Equipment shall be defined as equipment to be incorporated into and become a permanent part of the completed installation specified in the Contract Documents. Materials shall be defined as construction materials that become incorporated into and become a permanent part of the completed installation.

§ 7.2.2.2 Direct Field Labor Hours:

Direct labor work hours included in any Change Order shall be itemized indicating the direct labor hours to be expended in the actual installation of Engineered Equipment and Materials. The quantity of hours shall be based upon the Contractor's estimate to complete the subject Work based upon actual field conditions and shall be subject to review and approval by the Owner.

§ 7.2.2.3 Direct Field Labor Costs:

Direct field labor costs are defined as the costs of the direct labor required for the actual installation of Engineered Equipment and Materials. Direct field labor costs shall be based on the Contractor's direct field labor rates, which rates are subject to review and approval by the Owner and which rates shall be substantiated by a detailed direct labor cost breakdown with associated back-up support in a form acceptable to the Owner. The Contractor's direct field labor rates may include hourly labor classifications for foremen, journeymen, apprentices, laborers, etc. Direct field labor rates may include the Contractor's direct labor payroll costs including social security, unemployment (federal and state), workers' compensation insurance, fringe benefits, and any other identified costs directly related to direct labor.

If the Project is subject to prevailing wage rates, no wage rate above the prevailing rate shall be allowed unless such wage rate is substantiated by documentation of actual wages paid in accordance with such wage rate except in the case where the Contractor's wage rates were submitted to and accepted by the Owner as a condition of the Contract.

§ 7.2.2.4 Construction Equipment and Tool Rental:

Costs associated with Contractor owned or rented construction equipment and major tools used in the performance of the Work may be included as part of the cost of a Change Order if it is demonstrated to the Owner's satisfaction that such costs are valid and related to the change in the Work which is the subject of the Change Order. Major tools shall be defined as non-hand-held tools. Pricing rates for construction equipment and major tools shall be subject to Owner's review and approval. Costs for specialized construction equipment not already on site shall be shown separately and shall require justification by the Contractor.

§ 7.2.2.5 Field Overheads (Indirects):

Field overhead (indirect) labor shall mean and include field (onsite) supervision (general foremen, field engineers). Costs for field overhead (indirect) labor shall be based on hourly rates which are subject to review and approval by the Owner. Such costs shall be allowed as part of the cost of a Change Order if it is demonstrated to the Owner's satisfaction that such costs are valid and arise as a direct result of the change in the Work which is the subject of the Change Order. All such costs shall be substantiated by supporting data submitted for review and approval by the Owner. Costs for specialized personnel or additional staff shall be shown separately and shall require justification by the Contractor.

Field Facilities shall mean and include the following:

1. Temporary offices (including office furniture, copiers, computers, printers, other office equipment, and supplies);
2. Temporary material storage (storage vans and containers, warehouse rental); and
3. Utilities (electricity, phones, data lines, restroom facilities).

Costs for Field Facilities, which are subject to the review and approval of the Owner, may only be included as part of the costs of a Change Order if (1) the Change Order includes an extension of the Contract Time which has been approved by the Owner in accordance with Section 8.3; or (2) the Contractor otherwise demonstrates to the Owner's satisfaction that such costs are valid and arise as a direct result of the change in Work which is the subject of the Change Order.

§ 7.2.2.6 As noted in Section 3.6, the Owner is a tax-exempt institution. The tax on materials or supplies exempted by the current regulations of the Department of Revenue Services shall not be included as a cost component of any Change Order or Change Order request/proposal.

§ 7.2.2.7 Subcontractors

Subcontractors shall adhere to the same contract requirements and shall utilize change order pricing methodology that is consistent with the Contract. The Contractor shall provide detailed Subcontractor cost proposals to substantiate all subcontractor pricing.

§ 7.2.2.8 General and Administrative Overhead (Home Office) Costs and Profit (Overhead and Profit)

Overhead and Profit shall cover the following:

1. All home office expenses;
2. Safety related items, including safety equipment, safety administration, and all related costs associated with the contractor's safety program;
3. Small tools, which are defined as construction tools with a value of up to \$500;
4. Consumable materials, which are normally used in the execution of the Work and as may be further defined in the general conditions section of the Specifications;
5. Indirect costs as related to field administrative personnel (project manager, field safety supervisor, planners, estimators, office manager, secretarial services, document control);
6. Indirect costs as related to support staff;
7. Commercial General, Automobile, Umbrella, Aircraft and Contractor's Pollution Liability Insurance as described in Section 11.1.1;
8. Parking;
9. Safety;
10. Commissioning Requirements;

11. Such other items as are commonly considered part of home office overhead;
12. Company vehicles, gas, mileage and travel time;
13. Union-related contributions and expenses;
14. Any training; and
15. Licenses.

§ 7.2.2.9 The amount to be included in a Change Order for Overhead and Profit shall be based on and limited to the markup percentages identified in the table below as applied to the total net increase in the direct costs of the Work which arises as a direct result of the change in the Work which is the subject of the Change Order.

Contractor/Subcontractor Combined Overhead and Profit Markup Table:	
Contractor markup on self-performed work	15%
Contractor markup on Subcontractor work.	5%
Subcontractor markup on self-performed work.	15%
Subcontractor markup on Work performed by Sub-subcontractors under contract with a Subcontractor.	5%
Markup on Work that is self-performed by a Sub-subcontractor under contract with a Subcontractor.	10%
Subcontractor markup on Sub-subcontractor work	0%
Sub-subcontractor markup on Work performed by lower tier Sub-subcontractors	0%

§ 7.2.2.10 Notwithstanding the foregoing, the aggregate markup for Overhead and Profit included in any Change Order shall not exceed twenty percent (20%) of the total net increase in the direct costs of the Work which arises as a direct result of the change in the Work which is the subject of the Change Order.

§ 7.2.2.11 Overtime, when specifically authorized by the Owner and not as an Extraordinary Measure (as defined in Section 8.2.3.2), shall be paid for by the Owner on the basis of premium payment only, plus the cost of insurance and taxes based on the premium payment period.

§ 7.2.2.12 For a change in the Work resulting in a net decrease in the direct cost of the Work, the Change Order will reflect a reduction in the Contract Sum of an amount equal to such net decrease as confirmed by the Owner. In the case where there are both increases and decreases in direct costs of the Work, Overhead and Profit included in the Change Order shall be figured on the basis of the net increase in costs, if any, with respect to that change.

§ 7.2.2.14 Bond Costs: Actual additional bond premiums assessed to the Contractor by the surety issuing the payment and performance bonds for the Project as a direct result of an increase in the Contract Sum reflected in the subject Change Order may be included as part of the costs of the Change Order only when supported by written documentation from the surety confirming that the Change Order requires an increase to the original payment and performance bonds. Any additional bond premiums to which Contractor would be entitled shall be addressed in a final Change Order with no additional fee or mark-up thereon.

§ 7.2.3 The Contractor shall submit proposals for Change Orders on the “Change Order Proposal Request Form” provided in Division 1 of the Specifications or on a form and in a format otherwise acceptable to the Owner. In order to facilitate the Owner’s review of quotations for extras or credits, all proposals, except those so minor that their propriety can be seen by inspection, shall be accompanied by a complete itemization of costs including labor, materials, unit prices, and Subcontracts. Subcontractor proposals shall be submitted in support of the Contractor’s Change Order proposal and shall be similarly itemized.

§ 7.2.4 Alternates awarded by Change Order after Contract execution are not subject to Contractor,

Subcontractor or Sub-subcontractor mark-up for Overhead and Profit.

§ 7.2.5 Agreement upon and execution of any Change Order shall constitute a final settlement of all matters relating to the change in the Work which is the subject of the Change Order, including, but not limited to, all direct and indirect costs associated with such change and any and all adjustments to the Contract Sum and the Contract Time. In the event a Change Order increases the Contract Sum, Contractor shall include the Work covered by such Change Orders in Applications for Payment as if such Work were originally part of the Contract Documents.

§ 7.2.6 Any percentage referred to hereafter for General Conditions, and/or Overhead and Profit included in the adjustment to the Contract Sum shall be applied to the costs of performing the Work attributable to the change as stated in 7.3.4.1 through 7.3.4.5. No markup shall be allowed for premiums on bonds and insurance.

§ 7.3 Construction Change Directives

§ 7.3.1 A Construction Change Directive is a written order prepared by the Owner or Architect and signed by the Owner and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and Contract Time being adjusted accordingly. The signature of the Architect signifies that he has reviewed and recommends the change. However, if the Owner has signed the Change Directive the Architect's signature is not necessary in order for the Change Directive to be valid.

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for a proposed adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee;
- .4 Time and materials subject to a not to exceed a stipulated price; or
- .5 As provided in Section 7.3.4.

§ 7.3.4 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the method for adjustment in the Contract Sum shall be determined in the sole discretion of the Owner, on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, a reasonable amount for overhead and profit in accordance with, and not to exceed the limitations set forth in, Section 7.2. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Owner may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs of performing the Work for the purposes of this Section 7.3.4 shall be limited to the following as described in Section 7.2:

- .1 Costs of labor, including applicable payroll taxes, fringe benefits required by agreement or custom, workers' compensation insurance, and other employee costs approved by the Architect;
- .2 Costs of materials, supplies and equipment, including the cost of transportation, whether incorporated or consumed;
- .3 Rental costs of machinery and equipment, exclusive of hand tools and any hand-held equipment, whether rented from the Contractor or others;
- .4 Costs of premiums for all bonds, permit fees, and sales, use or similar taxes directly related to the change; and
- .5 Costs of field overhead personnel directly attributable to the change based on supporting data.

§ 7.3.5 If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.

§ 7.3.6 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Owner of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

§ 7.3.7 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. The Contractor must proceed promptly regardless if the directive is signed by the Contractor.

§ 7.3.8 Not Used.

§ 7.3.9 Not Used.

§ 7.3.10 When the Owner and Contractor agree concerning the adjustments in the Contract Sum and/or Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and shall be recorded by preparation and execution of an appropriate Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.3.11 If the Contractor does not expeditiously proceed with the Work to be performed under a Construction Change Directive (regardless of whether or not such Work is in dispute), the Owner may, in its sole discretion, cause such Work to be performed by others, and deduct the actual costs incurred by the Owner in connection with such reassigned Work from the Contract Sum.

§ 7.4 Minor Changes in the Work

The Architect may, subject to approval of the Owner, order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The Contractor shall carry out such written orders promptly.

The Architect's order for minor changes shall be in writing. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the Architect and Owner and shall not proceed to implement the change in the Work. If the Contractor performs the Work set forth in the Architect's order for a minor change without prior notice to the Architect and Owner that such change will affect the Contract Sum or Contract Time, the Contractor waives any adjustment to the Contract Sum or extension of the Contract Time.

ARTICLE 8 TIME

§ 8.1 Definitions

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Notice to Proceed.

§ 8.1.3 The date of Substantial Completion is the date Substantial Completion is achieved in accordance with Section 9.8.

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

§ 8.2 Progress and Completion

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Contract, the Contractor confirms that the Contract Time is a reasonable period for performing the Work and that the Contractor is capable of completing the Work in accordance with the Contract Documents within the

Contract Time.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, commence the Work prior to the effective date of insurance required to be furnished by the Contractor and Owner.

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

§ 8.2.3.1 The Contractor shall monitor the progress of the Work for conformance with the requirements of the construction schedule and shall promptly advise the Owner of any delays or potential delays. The construction schedule shall be updated to reflect actual conditions (sometimes referred to as progress reports) as set forth in Section 3.10.1 of these General Conditions or as otherwise requested by the Owner. In the event any progress report indicates any delays or potential delays, the Contractor shall advise the Owner of its plan to recover the schedule, providing the Owner with a recovery schedule, and shall further take all steps necessary to correct the delay, including overtime and/or additional labor, if necessary. In no event shall any progress report or recovery schedule constitute an adjustment in the Contract Time or the Contract Sum unless any such adjustment is agreed to by the Owner and authorized pursuant to Change Order.

§ 8.2.3.2 In the event the Owner determines that the performance of the Work has not progressed or reached the level of completion required by the approved construction schedule for reasons within the responsibility of the Contractor, the Owner shall have the right to order the Contractor to take any and all corrective measures necessary to expedite the progress of construction, including, without limitation, (1) working additional shifts or overtime; (2) supplying additional manpower, equipment, and facilities; and (3) other similar measure (hereinafter referred to collectively as “Extraordinary Measures”). Such Extraordinary Measure shall continue until the progress of the Work complies with the stage of completion required by the approved construction schedule. The Owner’s right to require Extraordinary Measures is solely for the purpose of ensuring the Contractor’s compliance with the construction schedule.

§ 8.2.3.3 The Contractor shall not be entitled to any adjustment in the Contract Price in connection with Extraordinary Measures required by the Owner, if the Owner determines that the conditions creating the need for such Extraordinary Measures were within the responsibility of the Contractor.

§ 8.2.3.4 The Owner may exercise the rights furnished the Owner under or pursuant to this Section as frequently as the Owner deems necessary to ensure that the Contractor’s performance of the Work will comply with any approved construction schedule or completion date established in accordance with the Contract.

§ 8.2.4 Not Used.

§ 8.2.5 Except in the event of an emergency, no substantial field operations shall be performed outside of regular working hours without the prior approval of the Owner. The Contractor shall not be entitled to additional compensation for work performed outside of regular working hours. For the purposes of this Contract “regular working hours” shall mean and include the hours of 7:00 a.m. to 3:00 p.m. unless otherwise provided in the Contract Documents.

§ 8.3 Delays and Extensions of Time

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by (1) an act or neglect of the Owner or Architect, of an employee of either, or of a Separate Contractor; (2) by changes ordered in the Work; or (3) by labor disputes, fire, or unavoidable casualties beyond the Contractor's control, then the Contract Time may be extended by Change Order for such reasonable time periods as demonstrated through a Critical Path Analysis as described in and in conformance with Division 1 of the Specifications and accepted by the Owner.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.

§ 8.3.2.1 Claims of delay and requests for extensions of time shall set forth in detail the circumstances of such claim, the dates upon which the claimed delay began and ended, and the number of days' extension of time requested. The Contractor shall provide supporting documentation as the Architect and Owner may require, including a revised Construction Schedule indicating the effect of the circumstances which form the basis for the claim.

§ 8.3.2.2 The Contractor shall not be entitled to an extension of time for each and every one of a number of causes which have a concurrent and interrelated effect on the progress of the Work.

§ 8.3.2.3 Claims for extensions of time arising out of authorized changes in the Work shall be made in writing prior to or concurrent with the submission of the Contractor's proposal for such changes. No extension of time arising out of changes in the Work will be granted after the date upon which the Contractor is authorized to proceed with such changes unless specific provision for an extension of time has been incorporated in the Owner's authorization to proceed.

§ 8.3.2.4 No Damage for Delay. Notwithstanding anything to the contrary set forth in the Contract Documents, the Owner shall not be liable to the Contractor for Claims or damages of any nature caused by or arising out of delays. The sole remedy against the Owner for delays shall be the allowance of additional time for completion of the Work, the amount of which shall be subject to the procedures set forth in the Contract Documents. Except to the extent, if any, expressly prohibited by law, the Contractor expressly agrees not to make and hereby waives any Claim for damages for any delay, including, but not limited to, those resulting from increased labor or material costs; directions given or not given by the Owner or Architect, including scheduling and coordination of the Work; the Architect's preparation of drawings and specifications or review of shop drawings and requests for instruction(s); or, on account of any delay, obstruction or hindrance for any cause whatsoever by the Owner, Owner, Architect, or any Separate Contractor, whether or not foreseeable or anticipated. The Contractor agrees that its sole right and remedy therefore shall be an extension of the Contract Time, if appropriate.

§ 8.3.2.5 It is expressly understood that, notwithstanding anything to the contrary set forth in the Contract Documents, no Subcontractor or Sub-subcontractor shall be entitled to make any Claim for additional compensation, costs or damages against the Contractor (nor may the Contractor assert against Owner such Claims as pass-through claims of Subcontractor or otherwise) for delay. Unless agreed by Owner in writing, Contractor shall include in every Subcontract a 'No-Damage-For-Delay' provision in a form approved by the Owner.

§ 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by the Owner under other provisions of the Contract Documents.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 Contract Sum

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

§ 9.1.2 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed so that application of such unit prices to the actual quantities causes substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 9.2 Schedule of Values

§ 9.2.1 The Contractor shall submit a schedule of values to the Architect and Owner, as provided in Section 9.2.1.1 below, allocating the entire Contract Sum to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy, as the Owner may require. This schedule, unless objected to by the Architect or Owner, shall be used as a basis for reviewing

the Contractor's Applications for Payment for the Work. Any changes to the schedule of values shall be submitted to the Architect and Owner and supported by such data to substantiate its accuracy as the Architect or Owner may require, and, unless objected to by the Architect or Owner, shall be used as a basis for reviewing the Contractor's subsequent Applications for Payment.

§ 9.2.1.1 The Contractor shall submit its proposed schedule of values to the Owner and the Architect for review and approval before the earlier of (i) thirty (30) days after the execution of the Contract; and (ii) the submission by the Contractor of its first Application for Payment for the Work.

§ 9.2.1.2 The final schedule of values for the Work shall be submitted (typewritten) on an AIA Document G702 form and shall be broken down into a minimum of sixteen (16) divisions based on the Construction Specifications Institute (CSI) Guidelines and subdivided further by Materials and Labor.

§ 9.3 Applications for Payment

§ 9.3.1 By the twenty-fifth day of each month, the Contractor shall submit to the Owner and the Architect a draft Application for Payment for Work performed through the end of such month in the form of an AIA Document G702, Application and Certification for Payment, supported by AIA Document G703, Continuation Sheet. The latest edition issued by the AIA of each such document must be used.

The Owner and the Architect will within ten (10) days after receipt of the Contractor's draft Application for Payment notify the Contractor in writing of all necessary revisions.

The Contractor shall make all revisions to the Application for Payment as required by the Owner.

The Contractor shall then submit to the Owner and the Architect an Application for Payment for Work in the form of a notarized AIA Document G702, Application for Payment, supported by AIA Document G703, Continuation Sheet, free of any handwritten, marks, notes, annotations, etc. and an Affidavit of Payment and Release of Claims form (either partial release or final release as appropriate) in a form as provided by the Owner.

By submission of the Affidavit and the Application for Payment the Contractor certifies that, to the best of the Contractor's knowledge, information and belief, the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that the current payment requested and shown therein is now due.

§ 9.3.1.1 Each payment requisition submitted by the Contractor shall include a statement showing the status of all pending construction change orders, other pending change directives and approved changes to the original Contract or subcontract. Such statement shall identify the pending construction change orders and other pending change directives, and shall include the date such change orders and directives were initiated, the costs associated with their performance and a description of any work completed. As used in this subsection, "pending construction change order" or "other pending change directive", means an authorized directive for extra work that has been issued to the Contractor or a Subcontractor.

§ 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or material or equipment supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 9.3.1.3 Applications for Payment shall deduct, from the amount claimed due, the retainage and any other amounts to be withheld pursuant to Section 5.1.6 of the Agreement. The Contractor shall be prohibited from withholding more than the retainage withheld by the Owner pursuant to the Agreement from any payment which is otherwise due to any Subcontractor.

§ 9.3.1.4 Pursuant to the requirements of §4b-93 of the Connecticut General Statutes, whenever the Owner has designated a separate section for a class of work, the Contractor shall, when applicable, state as part of its application for partial payment that it considers the work required to be done under any such separate section

to be fully completed in accordance with the terms of the Contract. The Owner shall thereupon conduct an inspection of the work in such class, and if it finds that such work has been fully completed in accordance with the terms of the Contract, it shall issue a statement certifying that such work is accepted as fully completed, and shall pay the Contractor in full for such work.

§ 9.3.2 Unless otherwise specifically approved by the Owner, the Owner will pay only for materials and equipment delivered and incorporated in the Work as required by the Contract Documents. If approved in advance by the Owner, payment may be similarly made for materials and equipment suitably stored on site or off site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage and transportation to the site for such materials and equipment stored off the site.

§ 9.3.2.1 Payment for stored material or equipment either on site or off site will require Owner's prior approval. Approval will be dependent upon Contractor's demonstration of hardship due to extended time duration between required purchase and actual field installation or the critical nature of the commodity in relation to the critical path of the construction schedule. Additionally, the Contractor must provide secured storage, insurance coverage for the material or equipment during storage, transfer of ownership of the material or equipment to the Owner and the Contractor shall indemnify the Owner for all costs associated with any delay and the costs associated with or resulting from, the loss or damage of such material or equipment during such storage. Payment for such stored material or equipment will be limited to 80% of invoice verified cost to the Contractor. No payment will be considered for raw materials. Those items requiring fabrication must be complete so that identification and appropriate documentation can be obtained to ensure such items are part of the Work.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment, all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests, or encumbrances, in favor of the Contractor, Subcontractors, suppliers, or other persons or entities that provided labor, materials, and equipment relating to the Work.

§ 9.3.4 If payment for stored materials or equipment is approved, Contractor shall furnish with its Application for Payment which includes such stored materials or equipment a vendor invoice establishing the value of the material or equipment stored along with a statement of the amount to be paid to the vendor therefore.

§ 9.3.4.1 Such stored items are subject to prior approval for storage and to inspection by Architect and Owner before payment therefore will be approved.

§ 9.3.4.2 The Contractor shall give the Owner Certificates of Insurance in accordance with the Contract Documents covering the full value of the items stored. Such insurance shall be maintained until the items are incorporated in the Work.

§ 9.4 Certificates for Payment

§ 9.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either (1) issue to the Owner a Certificate for Payment in the full amount of the Application for Payment, with a copy to the Contractor; or (2) issue to the Owner a Certificate for Payment for such amount as the Architect determines is properly due, and notify the Contractor and Owner of the Architect's reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Application for Payment, and notify the Contractor and Owner of the Architect's reason for withholding certification in

whole as provided in Section 9.5.1.

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data in the Application for Payment, that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents and that the Contractor is entitled to payment in the amount certified. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to specific qualifications expressed by the Architect. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 Decisions to Withhold Certification

§ 9.5.1 The Architect, following consultation with the Owner, may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. The Architect, following consultation with the Owner, may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of:

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims unless full bond coverage, insurance or security acceptable to the Owner is provided by or demonstrated by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment in accordance with the provisions of this Contract;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 injury to persons or damage to the Work or property of the Owner, or a Separate Contractor, or others caused by the act of neglect of the Contractor or any Subcontractors;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance of the Contract Sum would not be adequate to cover actual or liquidated damages for the anticipated delay;
- .7 repeated failure to carry out the Work in accordance with the Contract Documents;
- .8 failure to submit Construction Schedules as outlined in Division 1 of the Specifications in the time prescribed;
- .9 failure to submit all documents necessary for compliance with CHRO requirements;
- .10 failure to submit all copies of all certified payrolls;
- .11 failure to provide copies of subcontractors contracts per statute;
- .12 failure to submit any other documentation requested by the Owner necessary for compliance with the requirements of any regulatory agency;
- .13 amounts previously paid to the Contractor in excess of amounts properly due the Contractor; or
- .14 failure of the Contractor to comply with any of the Contractor's indemnification obligations under the Contract Documents.

§ 9.5.2 When either party disputes the Architect's decision regarding a Certificate for Payment under Section 9.5.1, in whole or in part, that party may submit a Claim in accordance with Article 15.

§ 9.5.3 When the reasons for withholding certification are removed, certification will be made for amounts

previously withheld. The Owner shall not be deemed in default by reason of withholding payment while any of the above grounds remain uncured, nor shall any interest accrue or be payable with respect to any payments so withheld.

§ 9.5.4 If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or supplier to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Contractor shall reflect such payment on its next Application for Payment.

§ 9.5.5 The Owner shall have the right to apply any such amounts so withheld in such manner, as the Owner may deem proper to satisfy such claims or to secure such protection. Such application of such amounts shall constitute payments to the Contractor.

§ 9.6 Progress Payments

§ 9.6.1 After the Architect has certified an Application for Payment, the Owner shall make payment of the certified amount in the manner and within the time provided in the Contract Documents or shall so notify the Contractor of the Owner's intent to withhold payment to the extent reasonably necessary to protect the Owner from loss for which the Contractor is responsible, including, loss resulting from acts or omissions of Subcontractors due to causes set forth in Section 9.5.1.

§ 9.6.2 The Contractor shall pay any amounts due a Subcontractor or supplier, whether for labor performed or materials furnished, not later than seven (7) days after the date the Contractor receives payment from the Owner which encompasses labor performed or materials furnished by such Subcontractor or supplier. Retainage withheld by the Contractor from such payments shall not exceed amounts actually retained from payments to the Contractor on account of the Subcontractor's or supplier's portion of the Work. The Contractor shall include in all of its Subcontracts with its Subcontractors and suppliers a requirement that the Subcontractors and suppliers pay any amounts due any sub-subcontractors or suppliers no later than seven (7) days after the Subcontractor or supplier receives a payment from the Contractor which encompasses labor performed or materials furnished by such sub-subcontractor or supplier.

§ 9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and suppliers the amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors and suppliers to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law.

§ 9.6.5 The Contractor payments to suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

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

§ 9.6.7 Pursuant to Connecticut General Statutes Sections 10a-109a through 10a-109y:

- .1** No payments shall be made by the Owner on account of this Contract for this project until the bills or estimates presented for such payments shall have been duly certified to be correct by the Owner;
- .2** The obligations of the Owner or the State of Connecticut to make payments to the Contractor for services, labor, or materials provided on this project are limited to those amounts set forth in the Contract Documents and any agreed upon changes or amendments thereto. Neither the

Owner nor the State of Connecticut shall or may be liable to make payments in excess of such amount.

§ 9.6.8 Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor, Sub-subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.

§ 9.7 Failure of Payment

If the Architect does not issue a Certificate for Payment in accordance with the requirements of the Contract Documents, through no fault of the Contractor, within seven (7) days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven (7) days after the date established in the Contract Documents the amount certified by the Architect or awarded by binding dispute resolution, then the Contractor may, upon seven (7) additional days' notice to the Owner and Architect be entitled to the applicable statutory interest. Said provision does not apply where the Owner has submitted to the Contractor its intention to withhold payment in accordance with Section 9.6.1 or where the Architect has submitted to the Contractor its intention to withhold certification in accordance with Section 9.5.1.

§ 9.8 Substantial Completion

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize, without impact or interruptions the Work for its intended use.

The Work shall be considered to be "Substantially Complete(d)" or to have reached "Substantial Completion" on the date as determined by the Architect when (1) the entirety of the Work is sufficiently complete in accordance with the Contract Documents so that the Owner can utilize the Work for the use for which it is intended (subject only items on the Punch List, the completion of which can be accomplished within thirty (30) days without interfering with the actual use of the Work by the Owner or those claiming by, through or under the Owner); (2) the Contractor has obtained a temporary or permanent certificate of occupancy for the Work permitting the lawful occupancy of the entire Project and any other permits, approvals, licenses, and other documents from any governmental authority having jurisdiction thereof necessary for the beneficial occupancy thereof; and (3) the Architect has issued a Certificate of Substantial Completion for the entirety of the Work pursuant to Section 9.8.4 of these General Conditions and the Owner has issued written approval of the Certificate of Substantial Completion.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is Substantially Complete (with the exception of the issuance of the Architect's Certificate of Substantial Completion and the Owner's approval thereof), the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment (the "Punchlist"). Failure to include an item on the Punchlist does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the Contractor's Punchlist, the Architect will make an inspection to determine whether the Work or designated portion thereof is Substantially Complete (with the exception of the issuance of the Architect's Certificate of Substantial Completion and the Owner's approval thereof). If the Architect's inspection discloses any item, whether or not included on the Contractor's Punchlist, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

§ 9.8.4 When the Work or designated portion thereof is Substantially Complete, the Architect will prepare a

Certificate of Substantial Completion that shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the Punchlist accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate. The Certificate of Substantial Completion shall become valid upon the written approval thereof by the Owner.

§ 9.8.6 Certifications. The Contractor at completion of construction shall provide to the Owner a “Certificate of Substantial Compliance” bearing original signatures of an officer of the company stating: “This is to CERTIFY that, in my professional opinion the complete structure/renovations described above is in substantial compliance with the approved construction documents on file with the Owner. Minor deviations and special stipulations are noted below (if any)”.

§ 9.9 Partial Occupancy or Use

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by the decision of the Architect.

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

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

§ 9.10 Final Completion and Final Payment

§ 9.10.1 Upon receipt of the Contractor’s notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection. When the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect’s knowledge, information and belief, and on the basis of the Architect’s on-site visits and inspections, the Work has been completed in accordance with the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect’s final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor’s being entitled to final payment have been fulfilled.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner’s property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied; (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect; (3) a written statement that the Contractor knows of no reason that the insurance will not be renewable to cover the period required by the Contract Documents; (4) consent of surety, if any, to final

payment; (5) documentation of any special warranties, such as manufacturers' warranties or specific Subcontractor warranties; (6) if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts and releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner; (7) all documents necessary for compliance with CHRO requirements and as required to obtain the written statement of release from CHRO referenced in Section 5.1.6.2.6 of the Agreement; (8) copies of all certified payrolls, (9) certifies that all material installed does not contain asbestos; (10) the Certificate of Substantial Compliance referenced in Section 9.8.6; and (11) any other documentation requested by the Owner necessary for compliance with the requirements of any regulatory agency. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien, claim, security interest, or encumbrance. If a lien, claim, security interest, or encumbrance remains unsatisfied after payments are made, the Contractor shall promptly pay to the Owner all money that the Owner may be compelled to pay in discharging the lien, claim, security interest, or encumbrance, including all costs and reasonable attorneys' fees.

§ 9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor, the written approval of the Owner and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed, corrected, and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of the surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

§ 9.10.4 Not Used.

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

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 Safety Precautions and Programs

§ 10.1.1 The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract. Prior to and as a condition of mobilization on site, the Contractor shall submit a Safety Plan to Owner. To the extent the Owner provides safety manuals or other information, any such manuals and information shall be deemed minimum requirements for the Contractor's fulfillment of its safety obligations. Safety fines may be assessed based on Owner's safety plan and or Occupational Safety and Health Administration ("OSHA").

§10.1.1.1 Prior to the commencement of the Work, the Contractor shall submit proof to the Owner of compliance with the requirements of Connecticut General Statutes §31-53b.

§10.1.1.2 The Contractor shall remove all snow and ice as may be required for the proper protection and/or prosecution of the Work. The Contractor shall coordinate and cooperate with the Owner for such activities.

§ 10.1.2 Contractor's Safety Program: The Contractor hereby acknowledges that the job site safety will be of utmost importance. Contractor shall be responsible for initiating, maintaining and supervising safety and anti-substance abuse precautions and programs in connection with the Work. Contractor shall provide all protection to prevent injury to all persons involved in any way in the Work and all other persons, including, without limitation, the employees, agents, guests, visitors, invitees and licensees of the Owner who may visit or be affected thereby. These precautions shall include, but in no event be limited to: (1) those set forth in the most current provisions of the Owner's Contractor Environmental Health and Safety Manual, which is incorporated by reference as a Contract Document; (2) the posting of danger signs and personal notification to all affected persons of the existence of a hazard of whatever nature; (3) the furnishing and maintaining of

necessary traffic control barricades and flagger services; (4) the use, storage, removal and disposal of required explosives or other hazardous materials only under the supervision of qualified personnel and after first obtaining permission of all applicable governmental authorities; (5) and the maintenance of adequate quantities of both hose and operable fire extinguishers at the job site. The Contractor shall set forth in writing its own safety and anti-substance abuse precautions and programs in connection with the Work and if requested by the Owner submit the same to the Owner or its designee for review. The Owner may but shall not be obligated to make suggestions and recommendations to the Contractor with respect thereto.

- .1 **Compliance of Work, Equipment and Procedures with all Laws:** All Work, whether performed by the Contractor, Subcontractors or Sub-subcontractors, or anyone directly or indirectly employed by any of them, and all equipment, appliances, machinery, materials, tools and like items incorporated or used in the Work, shall be in compliance with and conform to: (a) all applicable laws, ordinances, rules, regulations and orders of any public, quasi-public or other governmental bodies relating to the safety of persons and their protection against injury, specifically including, but in no event limited to the Federal Occupational Safety and Health Act of 1970, as amended and all rules and regulations now or hereafter in effect pursuant to said Act and the OSH Act of the State of Connecticut, as amended and all rules and regulations now or hereafter in effect pursuant to said Act; and (b) all rules, regulations and requirements of the Owner and its insurance carriers relating thereto. In the event of conflicting provisions, the more stringent shall govern.
- .2 **Contractor's Designation of Safety Program Administrator:** The Contractor shall designate a qualified member of its organization at the job site in accordance with the requirements of the Owner's Contractor Environmental Health and Safety Manual, whose duties shall include enforcement of the Contractor's Safety Program to assure compliance with Article 10 and to prevent accidents. This position may be required to be a full-time position dedicated to this Project. This person's name, qualifications and the estimated number of man-hours of effort per week performing this function shall be submitted to the Owner in writing. His or her identity, qualifications and level of effort must be satisfactory to the Owner who shall have the sole discretion to approve or reject the same. Any reduction to this schedule must be submitted to the Owner for approval. The Contractor shall further cause each of its Subcontractors of any tier to designate a qualified safety representative to assist the Contractor's safety representative in the performance of his or her duties as described above and the names of such representative shall be given to the Owner.
- .3 **Suspension of Contractor's Work:** If in the opinion of the Owner or its designee the Contractor shall fail to provide a safe area for the performance of the Work or any portion thereof, the Owner or its designee shall have the right (but not the obligation) to suspend Work in the unsafe area. Contractor shall be liable for all costs incurred of any nature (including without limitation overtime pay, liquidated damages or other costs resulting from delays) resulting from the suspension.
- .4 **Right of Owner to have Contractor Send Worker Home:** The Contractor shall provide to each worker on the job site the proper safety equipment for the duties being performed by that worker and will not permit any worker on the job site who fails or refuses to use the same. The Owner shall have the right but not the obligation to order the Contractor to cause any worker to be sent home for the day or to otherwise temporarily or permanently remove him or her from the job site for his or her failure to comply with safe practices or anti-substance abuse policies. Contractor shall promptly comply with such orders from the Owner and shall be liable for any and all costs of whatsoever nature, including attorney's fees paid or incurred by the Owner.

§ 10.1.3 Protection of Work and Property; Responsibility for Loss The Contractor shall, throughout its performance of the Work, maintain adequate and continuous protection of all property of the Owner and third parties and of the Work and temporary facilities against loss or damage from whatever cause arising out of the performance of the Work and shall comply with the requirements of the Owner and its insurance carriers and with all applicable laws, codes, rules and regulations with respect to the prevention of loss or damage to property as a result of fire or other hazards.

§ 10.1.4 Emergencies In any emergency affecting the safety of persons or property, or in the event of a claimed violation of any federal or state safety or health law or regulation arising out of or in any way connected with the Work or its performance, the Contractor shall act immediately to prevent threatened damage, injury, or loss or to remedy said violation whichever is applicable, failing which the Owner or its designee may immediately take whatever action it deems necessary including, but not limited to, suspending the Work.

The Owner may offset any and all cost or expenses of whatever nature including attorneys' fees paid or incurred by the Owner in taking such action against any sums then or thereafter due to the Contractor. The Contractor shall defend, indemnify, and hold the Owner, and its officers, agents, employees, harmless against any and all costs, expenses or liability in accordance with Section 3.18. If the Contractor shall be entitled to any additional compensation or extension of time claimed on account of emergency work not due to the fault or neglect of the Contractor or its Subcontractors or Sub-subcontractors, it shall be handled as a request for a Change Order as provided in Section 7.2 of this Contract.

§ 10.2 Safety of Persons and Property

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

- .1 Employees on the Work and other persons who may be affected thereby;
- .2 The Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor; and
- .3 Other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

The Contractor shall provide and pay for whatever security measures the Contractor deems necessary to protect the Work until acceptance by the Owner through the issuance of a Certificate of Substantial Completion.

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

§ 10.2.3 At a minimum, the Contractor shall implement, erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities of the safeguards. Additionally, the Contractor shall maintain all passageways, guard fences, lights and other facilities for protection. The Contractor shall also be responsible for all measures necessary to protect any property adjacent to the Project and improvements thereon. Any damage to such property or improvements shall be promptly repaired by the Contractor at its sole cost and expense.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for the execution of the Work, the Contractor, at a minimum, shall exercise utmost care and carry on such activities under the supervision of properly qualified personnel. When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary, the Contractor shall give the Owner advance written notice of at least five (5) days prior to bringing to the site or utilizing such explosives, materials, equipment or methods.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 and indemnify and save the Owner harmless for all damage or injury to referenced persons and property caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3. The Contractor may make a Claim for the

cost to remedy the damage or loss to the extent such damage or loss is attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable in whole or in part to the fault or negligence of the Contractor a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

- .1 The Contractor shall repair or replace any such damage at no additional cost to the Owner. Such repair or replacement shall be completed within one week of the damage or as otherwise directed by the Owner . If the Contractor fails or refuses to repair the damage promptly, the Owner may have the repair or replacement performed and charge the cost to the Contractor by way of offset or direct payment as elected by the Owner.

§ 10.2.7 The Contractor shall not load or permit any part of the construction or site to be loaded so as to endanger the safety of persons or property or cause damage or create an unsafe condition.

§ 10.2.8 All materials furnished and all Work installed shall comply with the rules and recommendations of the National Board of Fire Underwriters; with all applicable State and local codes, laws, ordinances, rules and regulations; with all requirements of local utility companies and with the recommendations of the Insurance Rating Organization having jurisdiction.

§ 10.2.9 All apparatus, equipment and construction such as ladders, scaffolds, chutes, etc. shall comply with the recommendations of the manual of Accident Prevention in Construction published by the Associated General Contractors of America.

§ 10.3 Hazardous Materials and Substances

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents, including but not limited to the Owner's Contractor Environmental Health and Safety Manual, regarding any material, substance, chemical, waste, product, derivative, compound, mixture, solid, liquid, mineral or gas, whether naturally occurring or manmade, that is hazardous, toxic, or words of similar import or regulatory effect, and any petroleum or petroleum-derived products, radon, radioactive materials or wastes, asbestos in any form, lead or lead-containing materials, urea formaldehyde foam insulation, polychlorinated biphenyls and any other regulated materials identified by the U.S. Environmental Protection Agency (EPA), the U.S. Occupational Health and Safety Administration (OSHA), the U.S. Department of Transportation (DOT) and/or the Nuclear Regulatory Commission (collectively, "Hazardous Materials"). If the Contractor believes its Work will disturb or otherwise implicate any actual or suspected Hazardous Material or encounters a Hazardous Material not addressed in the Contract Documents, the Contractor shall not disturb any such Hazardous Material, immediately report the condition to the Owner and the Architect in writing and take all necessary precautions to prevent release of and exposure to the Hazardous Materials and foreseeable bodily injury or death to persons resulting from such Hazardous Material. If such reasonable precautions will be inadequate to prevent the release of and exposure to Hazardous Materials, or foreseeable bodily injury and death, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area.

§ 10.3.1.1 Upon request, the Owner will provide the Contractor with a written copy of the Hazard Communication Program and chemical inventory for areas in which the Work will be performed. The Owner, upon request, will make available to the Contractor an opportunity to review the Material Safety Data Sheets ("MSDS") on file for areas where hazardous chemicals are used and stored and in which the Work will be performed.

§ 10.3.2 Upon receipt of the Contractor's notice, pursuant to Section 10.3.1 the Owner shall obtain the services of a qualified consultant to assess the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless or otherwise abated. Upon written request, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform the assessments for the presence or absence of the material or substance or who are to perform the task of removal or safe

containment of the material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the Hazardous Material or substance has been rendered harmless or otherwise abated, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately (provided the Contractor has demonstrated to the Owner's satisfaction that delay to address the Hazardous Material impacted the critical path of the construction schedule) and the Contract Sum shall be increased by the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up.

§ 10.3.3 Not Used.

§ 10.3.4 In no event shall the Owner have any responsibility for any substance or material that is brought to the Project site by the Contractor, any Subcontractor, Sub-subcontractor, any materialman or supplier or any entity for whom any of them is responsible. The Contractor agrees not to use any fills or other materials to be incorporated into the Work, which are hazardous, toxic or comprised of any items that are hazardous or toxic. In the event it is determined that materials that are hazardous, toxic or comprised of items that are hazardous or toxic have been used as fills or incorporated into the Work, the Contractor, at its sole expense, shall be responsible for immediate removal, proper disposal, and replacement of materials of the Work and surrounding areas so affected.

§ 10.3.5 The Contractor shall reimburse the Owner for the cost and expense the Owner incurs (1) for remediation of hazardous materials or substances the Contractor brings to the site and negligently handles; or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.4 Emergencies

In an emergency affecting the safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7. The Contractor shall promptly notify insurers, as applicable, the Architect and the Owner of the nature of the emergency. Immediately thereafter, the Contractor shall submit to the Architect and the Owner a written report including a description of the circumstances of the emergency and details of actions taken.

§ 10.5 Lockout/Tagout Procedures Required by OSHA

§ 10.5.1 The Contractor shall abide by all OSHA and Owner regulations and procedures pertaining to lockout and tagout of machines or equipment to prevent injuries by ensuring that hazardous forms of energy are isolated. This includes electrical, mechanical, hydraulic, pneumatic, chemical, thermal or other energy sources.

§ 10.7 Confined Space Entry

§ 10.7.1 The Contractor shall abide by all OSHA and Owner regulations and procedures required to implement a confined space entry permit program.

§ 10.8 Excavation and Trenching

§ 10.8.1 Any Work carried out under this Contract that will require excavation or trenching shall be carried out in accordance with all applicable Federal, State and Local rules and regulations, including OSHA regulations, and the Owner's applicable policies and procedures included in the Contract Documents.

§ 10.8.3 At a minimum, the Contractor shall comply with the Owner's Contractor Environmental Health and Safety Manual, which is available for review upon request and constitutes a Contract Document.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 Contractor's Insurance and Bonds

§ 11.1.1 The Contractor shall purchase and maintain insurance of the types and limits of liability, containing

the endorsements, and subject to the terms and conditions, as described below, in the Agreement and, as applicable, elsewhere in the Contract Documents. The Contractor shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Owner, the State of Connecticut and their respective officers, officials, agents, employees, boards and commissions shall be named as additional insureds as provided in the Agreement and as otherwise required by the Contract Documents.

§ 11.1.2 The Contractor shall furnish to the Owner, and deliver at the time of the execution of the Contract, Performance and Labor and Material Payment Bonds (each, a “Bond” and collectively, the “Bonds”) pursuant to the requirements of Connecticut General Statutes §49-41, et seq. and the requirements of this Section 11.1. In all cases where the Contract Sum exceeds \$100,000, the Contractor shall furnish the Bonds, each of which shall be in compliance with the Owner’s required bond forms. The Bonds shall be provided by a Surety company licensed to do business in the State of Connecticut, that is acceptable to the Owner, and that is named in the current list of “Surety Companies Acceptable on Federal Bonds” as published in the “Treasury Department Circular 570”. The Surety company’s underwriting limitation, as further set forth in “Treasury Department Circular 570”, must not be less than the Contract Sum. The amount of each Bond shall be equal to the Contract Sum. The Bonds shall name the Owner as “Obligee”.

§ 11.1.3 In addition to the foregoing, each of the Bonds shall contain the following language: “In the event that the surety assumes the contract or obtains a bid or bids for completion of the Contract, the surety shall ensure that the contractor chosen to complete the Contract is prequalified pursuant to Section 4a-100 of the Connecticut General Statutes in the requisite classification and has the aggregate work capacity rating and single project limit necessary to complete the contract”.

§ 11.1.4 Upon the request of any person or entity appearing to be a potential beneficiary of the Bond covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of such Bond or shall authorize a copy to be furnished.

§ 11.1.5 Notice of Cancellation or Expiration of Contractor’s Required Insurance. Within three (3) business days after the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by the Contract Documents, the Contractor shall provide notice to the Owner of such impending or actual cancellation or expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage. In the event of suspension by the Owner due to the Contractor’s failure to maintain the required insurance, the Contractor shall be responsible for, and shall not receive an extension of the Contract Time in connection with, the delay in the Work arising from the suspension.

§ 11.2 Not Used.

§ 11.3 Waivers of Subrogation

§ 11.3.1 The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Architect and Architect’s consultants; and (3) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Architect, Architect’s consultants, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this Section 11.3.1 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

§ 11.3.2 Not Used.

§ 11.4 Not Used.

§11.5 Adjustment and Settlement of Insured Loss

§ 11.5.1 A loss insured under the property insurance required by the Agreement shall be adjusted by the Owner and made payable to the Owner for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause. The Owner shall pay the Architect and Contractor their just shares of insurance proceeds received by the Owner, and, by appropriate agreements, the Architect and Contractor shall make payments to their consultants and Subcontractors in a similar manner.

§ 11.5.2 Not Used.

§ 11.5.3 If the Contractor or any of its Subcontractors is a non-resident contractor, the Contractor and/or subcontractor shall comply with the requirements of Connecticut General Statutes Section 12-430(7) (the “Statute”), to the extent applicable. If the Contractor is a verified contractor as defined in the Statute, the Contractor shall provide to the Owner written verification of that status from the State Commissioner of Revenue Services. If the Contractor is an unverified contractor as defined in the Statute, the Contractor shall provide to the Owner proof that the Contractor has posted with the Commissioner of Revenue Services a surety bond in an amount equal to five percent (5%) of the Contract Sum and which is otherwise in compliance with the requirements of the Statute.

§ 11.4.3 If the Contractor proposes to utilize a Subcontractor Default Insurance program in lieu of requiring Subcontractors to provide surety bonds for the Project, the Contractor must demonstrate actual cost savings to the Owner of no less than 18% between the cost of such program and the cost of traditional Subcontractor surety bonds.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 Uncovering of Work

§ 12.1.1 If a portion of the Work is covered contrary to the Architect’s request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, be uncovered for the Architect’s examination and be replaced at the Contractor’s expense without a change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Owner has not specifically requested to examine prior to its being covered, the Owner may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an equitable adjustment to the Contract Sum and Contract Time as may be appropriate. If such Work is not in accordance with the Contract Documents, the costs of uncovering the Work, and the cost of correction shall be at the Contractor’s expense and the Contractor shall not be entitled to an adjustment of the Contract Time.

§ 12.2 Correction of Work

§ 12.2.1 Before Substantial Completion

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

If prior to the date of Substantial Completion, the Contractor, a Subcontractor, a Sub-subcontractor or anyone for whom any of them is responsible uses or damages any portion of the Work, including, without limitation, mechanical, electrical, plumbing, and other building systems, machinery, equipment, or other mechanical device, the Contractor shall cause such item to be restored to “like new” condition at no expense to the Owner.

§ 12.2.2 After Substantial Completion

§ 12.2.2.1 In addition to the Contractor’s obligations under Section 3.5 and extended warranties required by

the Contract Documents, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.8.4, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly at Contractor's sole expense after receipt of notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor by the end of such one-year period and, thereafter, give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor. If the Contractor fails to correct nonconforming Work within a reasonable time after receipt of notice from the Owner or Architect not to exceed thirty (30) days, the Owner may correct it in accordance with Section 2.5 or take such other commercially reasonable measures to recompense the Owner for its expenses, losses and damages arising from such nonconforming work.

§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

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

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

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to modify the Contractor's obligations under Section 3.5 of these General Conditions or to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 Acceptance of Nonconforming Work

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

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 Governing Law

The Contract shall be governed by the law of the State of Connecticut, excluding that jurisdiction's choice of law rules.

§ 13.2 Successors and Assigns

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to the other party hereto and to partners, successors, assigns and legal representatives of such other party in respect to covenants, agreements and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without the consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate the assignment.

§ 13.3 Rights and Remedies

§ 13.3.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law.

§ 13.3.2 No action or failure to act by the Owner, Architect, or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed upon in writing.

§ 13.4 Tests and Inspections

§ 13.4.1 Tests, inspections and approvals of portions of the Work shall be made at an appropriate time as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules and regulations or lawful orders of public authorities having jurisdiction. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of tests, inspections or approvals that do not become requirements until after bids are received or negotiations concluded. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

§ 13.4.2 If the Architect, Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included under Section 13.4.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection, or approval, by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.4.3, shall be at the Owner's expense. If the inspections and tests conducted under Section 13.4.1 or this Section 13.4.2 reveal a failure in a portion of the Work, the Owner may order the inspection and testing at the Contractor's expense of any and all portions of the Work that are identical or similar to the failing portion.

§ 13.4.3 If procedures for testing, inspection, or approval under Sections 13.4.1 and 13.4.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure including those of repeated procedures and compensation for the Architect's and Owner services and expenses, shall be at the Contractor's expense.

§ 13.4.4 Required certificates of testing, inspection, or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

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

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

§ 13.5 Interest Not Used.

§ 13.6 Compliance with Owner Policies and Guidelines

At a minimum, the Contractor shall comply with established Owner policies and guidelines, which have been previously provided to bidders and/or are available for review upon request. These policies are hereby

incorporated by reference herein, including but not limited to: Policies on Lockout/Tagout; Confined Space Entry as referenced in the Contractor's Environmental Health and Safety Manual; Code of Conduct; Sexual Harassment; Racism and Acts of Intolerance; Smoking.

§ 13.7 Preference in Employment

§ 13.7.1 In the employment of labor to perform the work specified herein, preference shall be given to citizens of the United States, who are, and continuously for three months prior to the date hereof have been residents of the labor market areas, as established by the Labor Commissioner in which said work is to be done; and if no such qualified persons are available, then to citizens who have continuously resided in the county in which the work is to be performed for at least three months prior to the date hereof and then to citizens of the State who have continuously resided in the State at least three months prior to the date hereof. In no event shall said provisions be deemed to abrogate or supersede in any manner any provision regarding residence requirements contained in a Collective Bargaining Agreement to which the Contractor is a party.

§ 13.8 Minimum Wage Rates

§ 13.8.1 If the Project involves new construction of a building or other structure or improvement and the total cost of all Work to be performed by Contractors and Subcontractors is \$1,000,000 or more or if the project involves remodeling, refurbishing, rehabilitation, alteration or repair of a building or other structure or improvement and such total cost is \$100,000 or more then:

- .1 The wages paid on an hourly basis to any person performing the work of any mechanic, laborer or worker on the work herein contracted to be done and the amount of payment or contribution paid or payable on behalf of each such person to any employee welfare fund, as defined in subsection (i) of Section 31-53 of the Connecticut General Statutes, shall be at a rate equal to the rate customary or prevailing for the same work in the same trade or occupation in the town in which such public works project is being constructed. Any contractor who is not obligated by agreement to make payment or contribution on behalf of such persons to any such employee welfare fund shall pay to each mechanic, laborer or worker as part of such person's wages the amount of payment or contribution for such person's classification on each pay day.

§ 13.8.2 The State of Connecticut Labor Department Wage Schedule ("Wage Schedule")(where required) has been provided to the Contractor and the Contractor acknowledges receipt the Wage Schedule and agrees to accept the current prevailing wage scale as well as any annual adjustment to the prevailing wage scale as provided by the Connecticut Department of Labor. Wage Rates will be posted each July 1st on the Department of Labor's website: www.ctdol.state.ct.us. No such prevailing wage adjustment will be considered a basis for an amendment to this Contract. The Wage Schedule is deemed to reflect customary or prevailing wages for the Project and is hereby incorporated and made a part of the Contract Documents. Wage Rates shall be paid pursuant to Sections 31-53 and 31-54 of the Connecticut General Statutes and any regulations issued thereunder.

§ 13.9 Hours of Labor Permitted

§ 13.9.1 Pursuant to Section 31-57 of the Connecticut General Statutes, as applicable, no person shall be employed to work or be permitted to work more than eight hours in any day or more than forty hours in any week on any work provided for in the Contract. The operation of such limitation of hours of work may be suspended during an emergency upon the approval of the Owner.

§ 13.10 Examining and Copying Contractor's Records

§ 13.10.1 The Contractor shall permit the Owner or its duly authorized representative to examine and copy books and records of the Contractor relative to charges for extra work, alleged breaches of contract, settlement of claims, or any other matter involving the Contractor's demand for added compensation from the Owner. The Contractor shall also permit such examination and copying of its records as the Owner may deem necessary, excepting papers and records preceding the execution of the Contract that are not a matter of record with the Owner, in order to determine that the Contractor has complied with all laws and regulations pertaining to the Contract, such as but not limited to Labor Compliance, Affirmative Action Program and Equal Employment Opportunity.

§ 13.10.2 The Contractor further agrees that he shall keep all records relating to this Contract until the expiration of six (6) years after final payment under this Contract is made, or six (6) months after settlement of any disputes whichever may be later.

§ 13.10.3 The Contractor further agrees that Contractor and all Subcontractors shall permit the Owner, at its own expense, by its duly authorized representatives, to inspect and audit all their data, records and files pertaining to this Contract.

§ 13.11 System Layout Drawing

§ 13.11.1 System layouts indicated on the on the drawings are generally diagrammatic and locations and arrangements of items are approximate. Exact routing of conduit, wiring, location of fixtures, outlets, panels, piping, valves and all other equipment shall be governed by the structural conditions and obstructions. The entire layout shall be followed as closely as possible and the right is reserved by the Owner to reasonably change the locations to accommodate any conditions which may arise during the progress of the Work without additional compensation to the Contractor.

§ 13.12 Guaranty of Performance

§ 13.12.1 If the Contractor has submitted the financial statement of a parent or other affiliated entity in its Proposers Qualification Statement, or if pre-qualified, its application for pre-qualification and has also indicated in that submission that such parent or affiliate will guarantee the performance of the Contract, then the parent or affiliate shall execute, simultaneously, with the Contractor's execution of the Contract, a Guaranty in a form provided by and acceptable to the Owner.

§ 13.13 JOINT VENTURE

§ 13.13.1 If the Contractor is a joint venture, each joint venture partner shall be jointly, severally and individually responsible to the Owner for the performance of any and all obligations of the Contractor encompassed by the Contract Documents and as otherwise required by applicable law, and each joint venture partner shall be jointly, severally and individually liable to the Owner for any failures to perform such obligations in accordance with the Contract and such applicable law. In its dealings with the Owner, each joint venture partner shall have full authority to act in behalf of and bind the joint venture and any other joint venture partner. Each joint venture partner shall be considered to be the agent of the joint venture and of any other joint venture partner.

§13.14 Worker Geographic Distribution

§13.14.1 If the Project is a Covered Project (as defined hereinafter), the Contractor shall comply with the provisions of this Section 13.14.

§13.14.2 The Contractor shall submit to the Owner a plan for encouraging the hiring of Workers (as defined hereinafter) with Residence (as defined hereinafter) in the State of Connecticut.

§13.14.3 Following the close of each Quarter (as defined hereinafter), the Contractor shall submit a Worker Geographic Distribution Report (as defined hereinafter) to the Owner in a form satisfactory to the Owner. The "Worker Geographic Distribution Report" is a report that shall provide the following information for each Worker paid, during the most recently closed Quarter, for Work performed on the Project:

- .1 The numbers of hours of Work for which such Worker was paid during such Quarter.
- .2 The Wages (as defined hereinafter) paid to such Worker during such Quarter.
- .3 The Residence of such Worker as of the close of such Quarter.

§13.14.4 The Worker Geographic Distribution Report shall not contain any personally identifiable information about a Worker.

§13.14.5 The following terms shall have the meaning assigned below for the purposes of this Section 13.14.

- .1 “Covered Project” is a project that is both subject to Section 31-53(a) of the Connecticut General Statutes and for which the Contract Sum is \$1,000,000 or greater.
- .2 “Quarter” means a calendar quarter of each calendar year.
- .3 “Residence” is the state and town in which a Worker resides, as reflected in the payroll records of such Worker’s employer.
- .4 “Subcontractor” is any subcontractor or sub-subcontractor of the Contractor, which subcontractor or sub-subcontractor employs Workers on the Project.
- .5 “Wages” are the wages that are subject to Section 31-53(a) of the Connecticut General Statutes (including any amounts paid to an employee welfare fund).
- .6 “Worker” is an employee of the Contractor or a Subcontractor (as defined hereinabove), which employee is performing Work on the Project and whose wages for such Work is subject to Section 31-53(a) of the Connecticut General Statutes.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Termination by the Contractor

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of ninety (90) consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, for any of the following reasons:

- .1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped; or
- .2 An act of government, such as a declaration of national emergency that requires all Work to be stopped.

§ 14.1.2 Not Used.

§ 14.1.3 If one of the reasons described in Section 14.1.1 exists, the Contractor may, upon fourteen (14) days’ written notice to the Owner, the Initial Decision Maker and the Architect, terminate the Contract and recover from the Owner payment for Work executed in accordance with the Contract Documents and for proven loss with respect to materials, equipment, tools, and construction equipment and machinery which loss arises as a direct result of such termination.

§ 14.1.4 If the Work is stopped for a period of ninety (90) consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, or their agents or employees or any other persons or entities performing portions of the Work because the Owner has repeatedly failed to fulfill the Owner’s obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon fourteen (14) additional days’ notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

§ 14.2 Termination by the Owner for Cause

§ 14.2.1 The Owner may terminate, without prejudice and without waiving any other right or remedy the Owner may have, the Contract if the Contractor

- .1 refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
- .3 disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority;
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents;
- .5 Fails to furnish the Owner with assurances satisfactory to the Owner evidencing the Contractor’s ability to complete the Work in compliance with all requirements of the Contract Documents;
- .6 Refuses or fails to prosecute the Work or any separable part, with the diligence that will ensure its completion in accordance with the approved construction schedule for the Project as it may be adjusted in accordance with the Contract Documents; or
- .7 Fails to comply with laws, rules, regulations, or directives regarding job site safety; or to comply with the provisions of the Owner’s Contractor Environmental Health and Safety

Manual, or orders or directives regarding safety issued by the Owner pursuant to the Contract.

§ 14.2.2 When any of the reasons described in Section 14.2.1 exists and the Owner determines that sufficient cause exists to justify such action, the Owner may, without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven (7) days' notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

In lieu of terminating the employment of the Contract as regards the entirety of the Work, the Owner may elect to limit such termination to a portion of the Work and to require the Contractor to proceed with the balance of the Work in accordance with the Contract Documents.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be retained by the Owner. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Architect and Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

§ 14.3 Suspension by the Owner for Convenience

§ 14.3.1 The Owner may, without cause and without prejudice and without waiving any other right or remedy the Owner may have, order the Contractor in writing to suspend, delay or interrupt the Work in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay, or interruption under Section 14.3.1. Adjustment of the Contract Sum shall include profit as and to the extent provided in the Contract Documents. No adjustment shall be made to the extent

- .1 that performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of the Contract.

§ 14.4 Termination by the Owner for Convenience

§ 14.4.1 The Owner may, at any time, without prejudice and without waiving any other right or remedy the Owner may have, terminate the Contract in whole or in part for the Owner's convenience and without cause. Termination by the Owner under this Section shall be by a notice of termination delivered to the Contractor specifying the extent of termination and the effective date.

§ 14.4.2 Upon receipt of a notice of termination for convenience, the Contractor shall immediately and in accordance with instructions from the Owner, proceed with performance of the following duties (regardless of whether or not there is agreement between the Owner and the Contractor as to amounts due to the Contractor and remaining unpaid hereunder):

- .1 Cease operations as specified in the notice;
- .2 Place no further orders and enter into no further Subcontracts for materials, labor, services or facilities except as necessary to complete Work not terminated;
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

- .4 Proceed to complete the performance of Work not terminated; and
- .5 Take actions that may be necessary or that the Owner may direct for the protection and preservation of the terminated Work.

§ 14.4.3 Upon such termination for the Owner's convenience, the Contractor shall be entitled to recover as its sole remedy for such termination, payment for terminated Work performed in accordance with the Contract Documents prior to the effective date of termination, payment for items associated with the terminated Work that were properly and timely purchased or fabricated off the Project site, delivered and stored in accordance with the Owner's instructions and satisfactorily evidenced demobilization costs. The Contractor hereby waives and forfeits all other claims for payment and damages, including without limitation, anticipated profits.

§14.4.4 In calculating the amount payable to the Contractor by the Owner upon termination for the Owner's convenience, the Owner shall be credited for (1) payments previously made to the Contractor for the terminated portion of the Work; (2) claims which the Owner has against the Contractor under the Contract and (3) the value of the materials, supplies, equipment or other items that are to be disposed of by the Contractor that are part of the Contract Sum.

§14.4.5 The payment to the Contractor pursuant to this Section may not exceed the total Contract Sum as reduced by:

- .1 The amount of payments previously made by the Owner to the Contractor; and
- .2 The portion of the Contract Sum allocable to Work not terminated.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 Claims

§ 15.1.1 Definition

A Claim is a properly noticed demand or assertion by one of the parties seeking, as a matter of right, payment of money, a change in the Contract Time or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim. This Section 15.1.1 does not require the Owner to file a Claim in order to impose liquidated damages in accordance with the Contract Documents.

§ 15.1.2 Time Limits on Claims

To the extent permitted under applicable law, Claims by the Contractor against the Owner must be initiated within twenty-one (21) days after the occurrence of the event giving rise to such Claim or within fourteen (14) days after the Contractor first recognizes the condition giving rise to the Claim, whichever is later. Claims may also be reserved by the Contractor in writing within the time limits set forth in this Section 15.1.2. If a Claim is reserved, the Resolution of Claims and Disputes procedures described in this Article 15 shall not commence until a written notice from the Contractor in compliance with the requirements of Section 15.1.3 is received by the Owner. No such claim shall be valid unless so made. The Contractor waives all Claims and causes of action not commenced in accordance with this Section 15.1.

§ 15.1.3 Notice of Claims

§ 15.1.3.1 Claims by the Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the Owner and to the Initial Decision Maker with a copy sent to the Architect.

§ 15.1.3.2 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party and the Initial Decision Maker.

§ 15.1.3.3 All notices of Claims (whether before or after the period for correction of Work) must state the following in bold capital letters: "**THIS COMMUNICATION CONSTITUTES A NOTICE OF CLAIM**". Any communication that does not include such statement shall not constitute a Claim under the

Contract. As regards a notice of reservation of Claim, such notice must state the following in bold capital letters: **“THIS COMMUNICATION CONSTITUTES NOTICE OF RESERVATION OF A CLAIM”**. Any communication that does not include such statement shall not constitute a reservation of a Claim under the Contract. In addition, any notice of Claim or reservation of Claim must clearly identify the alleged cause and the nature of the Claim and include data and information then available to the Contractor to enable and to facilitate the Owner’s verification and evaluation of the Claim.

§ 15.1.4 Continuing Contract Performance

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

§ 15.1.4.2 The Contract Sum and Contract Time shall be adjusted in accordance with the Initial Decision Maker’s decision, subject to the right of either party to proceed in accordance with this Article 15. The Architect will issue Certificates for Payment in accordance with the decision of the Initial Decision Maker.

§ 15.1.5 Claims for Additional Cost

If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§15.1.5.2 If the Contractor believes that additional cost is involved for reasons including but not limited to (1) a written interpretation from the Architect; (2) an order by the Owner to stop the Work where the Contractor was not at fault; (3) a written order for a minor change in the Work issued by the Architect; (4) failure of payment by the Owner; (5) termination of the Contract by the Owner; (6) Owner’s suspension; or (7) other reasonable grounds, the Claim shall be made in accordance with the provisions of this Article 15.

§ 15.1.6 Claims for Additional Time

§ 15.1.6.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section 15.1.3 shall be given. The Contractor’s Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. No such claim shall be valid unless made in accordance with the provisions of this Article 15. In the case of a continuing delay, only one Claim is necessary.

§ 15.1.6.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on the scheduled construction.

§ 15.1.7 Waiver of Claims for Consequential Damages

Not Used.

§ 15.1.8 Injury or Damage to Person or Property. If the Contractor suffers injury or damage to person or property because of an act or omission of the Owner, or of others for whose acts such party is legally responsible, written notice of such injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding twenty-one (21) days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 15.1.9 Claims for Concealed or Unknown Conditions: If, upon or subsequent to the Contractor’s and its Subcontractors’ site visits pursuant to Section 3.2.1 and performance of the tests, examinations, and inspections required by Section 3.2.2, the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor will promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 5 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they

differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different in the respects noted above and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor in writing, stating the reasons. Any claim by the Contractor in opposition to such determination must be made within 21 days after the Architect has given notice of the recommendation. The Owner will have the final authority to accept or reject the Architect's recommendations, which decision by the Owner shall be subject to further proceedings pursuant to Article 15.

§ 15.2 Initial Decision

§ 15.2.1 Claims by the Contractor, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker for initial decision. The Owner will serve as the Initial Decision Maker, unless otherwise indicated in Section 6.1 of the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim arising prior to the date final payment is due, regardless of (1) whether such matters relate to execution and progress of the Work, or (2) the extent to which the Work has been completed. The decision by the Initial Decision Maker in response to a Claim shall not be a condition precedent to arbitration or litigation in the event (1) the position of Initial Decision Maker is vacant, (2) the Contractor has not provided substantiating evidence of its Claim; or (3) the Initial Decision Maker has failed to take action required under Section 15.2.2 within thirty (30) days after the Claim is made.

§ 15.2.2 The Initial Decision Maker will review Claims by the Contractor and within thirty (30) days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party; (2) reject the Claim in whole or in part; (3) approve the Claim; (4) suggest a compromise; or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims of the Contractor, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim of the Contractor or to furnish additional supporting data, such party shall respond, within ten (10) days after receipt of such request, and shall either (1) provide a response on the requested supporting data; (2) advise the Initial Decision Maker when the response or supporting data will be furnished; or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

§ 15.2.4.1 If a Claim of the Contractor has not been resolved after consideration of the foregoing, the Initial Decision Maker will render a written decision on the claim, including any change in the Contract Sum or Contract Time or both, which decision shall be final and binding but subject to meeting and mediation pursuant to Section 15.3 of this document and arbitration or litigation pursuant to Connecticut General Statutes Section 4-61 and Section 15.4 of this Contract to the extent applicable.

§ 15.2.5 Not Used.

§ 15.2.6 Not Used.

§ 15.2.6.1 Not Used.

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's

default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 Not Used.

§ 15.3 Mediation

§ 15.3.1 Claims of the Contractor except those waived as provided for in Section 9.10.5 shall be submitted to the meeting and mediation process described in the Sections which follow, prior to and as a precondition to the Contractor pursuing any other available remedy. Claims by the Owner, at the option of the Owner, may be submitted to such meeting process and/or mediation process, and, in such event, Contractor shall be required to submit to and participate in such a meeting and/or mediation. The meeting shall be between the parties and attended by individuals with decision-making authority regarding the dispute, to attempt in good faith to negotiate a resolution of the dispute.

§ 15.3.2 The meeting referenced in Section 15.3.1 shall be held promptly, but not less than fourteen (14) days after a party's request for the meeting. The Contractor shall not submit any claim to mediation in accordance with the provisions of Sections 15.3.1 through 15.3.6 until fourteen (14) days after the date of the meeting.

§ 15.3.3 In connection with any such mediation, a request for mediation shall be made in writing, delivered to the other party to the Contract.

§ 15.3.4 The parties will jointly appoint a mutually acceptable mediator, seeking assistance in such regard from a mutually agreed upon dispute resolution entity if they have been unable to agree upon such appointment within twenty (20) days from the submittal of the request for mediation.

§ 15.3.5 The parties agree to participate in good faith in the mediation and negotiations related thereto for a period of sixty (60) days from the date of submittal, or until the parties reach an impasse as evidenced by a letter from a party to the mediator, whichever first occurs. If the parties are not successful in resolving the dispute through mediation, then the parties may pursue other legal remedies available to them.

§ 15.3.6 Should the Owner request, the Contractor agrees to participate as a party in any mediation proceeding between the Owner and the Architect or other Consultant for the Project in which construction deficiencies, contract breaches, or other alleged wrongful acts by the Contractor are alleged.

§ 15.4 ARBITRATION OR LITIGATION OF CLAIMS

§ 15.4.1 Not Used.

§ 15.4.1.1 Not Used.

§ 15.4.2 Not Used.

§ 15.4.3 Not Used.

§ 15.4.4 Should the Owner have a claim against the Contractor, the parties agree that the Owner, whether or not it elects to proceed with the meeting process or mediation described in Section 15.3, shall have the option of prosecuting the claim against the Contractor in an appropriate court of general jurisdiction.

§ 15.4.5 Not Used.

§ 15.4.6 Consolidation or Joinder

§ 15.4.6.1 Not Used.

§ 15.4.6.2 Not Used.

§ 15.4.6.3 Not Used.

ARTICLE 16 OWNER POLICIES

§ 16.1 The Contractor shall, at no additional cost to the Owner, comply with all policies and procedures of the Owner. In the event the Owner establishes new policies or procedures following the execution of the Contract, or makes modifications to policies or procedures in existence at the time of Contract execution, the Contractor shall comply with such new or modified policies or procedures upon receipt of written notice of such new policies or procedures.

ARTICLE 17 SOVEREIGN IMMUNITY

§ 17.1 The parties acknowledge and agree that nothing in this Contract shall be construed as a waiver by the State of Connecticut or the Owner of any rights or defenses of sovereign immunity, which it may have had, now has, or will have with respect to all matters arising out of this Contract. To the extent that this provision conflicts with any other provision hereunder, this provision shall govern.

These General Conditions may be executed in counterparts, and each counterpart shall have the same force and effect as an original and, when taken together, shall constitute one and the same instrument and an effective binding agreement on the part of each of the undersigned. Execution of a facsimile or PDF copy shall have the same force and effect as execution of an original. Signed copies of this Agreement may be faxed and e-mailed with the same force and effect as if the originally executed General Conditions had been delivered.

Acknowledging agreement to these General Conditions as of _____, 20____.

OWNER *(Signature)*
Timothy J Coon
City Manager
Duly Authorized
(Printed name and title)

CONTRACTOR *(Signature)*
« Duly Authorized »« »
(Printed name and title)

Date: _____

Date: _____

CITY OF MERIDEN, CONNECTICUT

INSURANCE REQUIREMENTS

Contractor shall agree to maintain in force at all times during the contract the following minimum coverages and shall name the City of Meriden as an **Additional Insured on a primary and non-contributory basis** to all policies except Workers Compensation and Professional Liability. All policies should also include a Waiver of Subrogation. Umbrella/Excess shall state that it follows form over General Liability, Auto Liability and Workers Compensation. Insurance shall be written with Carriers approved in the State of Connecticut and with a minimum AM Best's rating of "A-"VIII. In addition, all Carriers are subject to approval by the City of Meriden.

		(Minimum Limits)
General Liability	Each Occurrence	\$1,000,000
	General Aggregate	\$2,000,000
	Products/Completed Operations Aggregate	\$2,000,000
Auto Liability	Combined Single Limit	
	Each Accident	\$1,000,000
Umbrella (Excess Liability)	Each Occurrence	\$3,000,000
	Aggregate	\$3,000,000
Workers' Compensation and Employers' Liability	WC Statutory Limits	
	EL Each Accident	\$1,000,000
	EL Disease Each Employee	\$1,000,000
	EL Disease Policy Limit	\$1,000,000
Professional Liability (Errors & Omissions)	Each Claim/Occurrence	\$2,000,000
		\$2,000,000

Original, completed Certificates of Insurance must be presented to the City of Meriden prior to contract issuance. Contractor agrees to provide replacement/renewal certificates at least 30 days prior to the expiration date of the policies. Should any of the above policies be cancelled, limits reduced or coverage altered, 30 days written notice must be given to the City.



Opportunity * Guidance * Support



THIS IS A PUBLIC WORKS PROJECT

Covered by the

PREVAILING WAGE LAW

CT General Statutes Section 31-53

**If you have QUESTIONS regarding your wages
CALL (860) 263-6790**

Section 31-55 of the CT State Statutes requires every contractor or subcontractor performing work for the state to post in a prominent place the prevailing wages as determined by the Labor Commissioner.

Sec. 31-53b. Construction safety and health course. New miner training program. Proof of completion required for mechanics, laborers and workers on public works projects. Enforcement. Regulations. Exceptions. (a) Each contract for a public works project entered into on or after July 1, 2009, by the state or any of its agents, or by any political subdivision of the state or any of its agents, described in subsection (g) of section 31-53, shall contain a provision requiring that each contractor furnish proof with the weekly certified payroll form for the first week each employee begins work on such project that any person performing the work of a mechanic, laborer or worker pursuant to the classifications of labor under section 31-53 on such public works project, pursuant to such contract, has completed a course of at least ten hours in duration in construction safety and health approved by the federal Occupational Safety and Health Administration or, has completed a new miner training program approved by the Federal Mine Safety and Health Administration in accordance with 30 CFR 48 or, in the case of telecommunications employees, has completed at least ten hours of training in accordance with 29 CFR 1910.268.

(b) Any person required to complete a course or program under subsection (a) of this section who has not completed the course or program shall be subject to removal from the worksite if the person does not provide documentation of having completed such course or program by the fifteenth day after the date the person is found to be in noncompliance. The Labor Commissioner or said commissioner's designee shall enforce this section.

(c) Not later than January 1, 2009, the Labor Commissioner shall adopt regulations, in accordance with the provisions of chapter 54, to implement the provisions of subsections (a) and (b) of this section. Such regulations shall require that the ten-hour construction safety and health courses required under subsection (a) of this section be conducted in accordance with federal Occupational Safety and Health Administration Training Institute standards, or in accordance with Federal Mine Safety and Health Administration Standards or in accordance with 29 CFR 1910.268, as appropriate. The Labor Commissioner shall accept as sufficient proof of compliance with the provisions of subsection (a) or (b) of this section a student course completion card issued by the federal Occupational Safety and Health Administration Training Institute, or such other proof of compliance said commissioner deems appropriate, dated no earlier than five years before the commencement date of such public works project.

(d) This section shall not apply to employees of public service companies, as defined in section 16-1, or drivers of commercial motor vehicles driving the vehicle on the public works project and delivering or picking up cargo from public works projects provided they perform no labor relating to the project other than the loading and unloading of their cargo.

(P.A. 06-175, S. 1; P.A. 08-83, S. 1.)

History: P.A. 08-83 amended Subsec. (a) by making provisions applicable to public works project contracts entered into on or after July 1, 2009, replacing provision re total cost of work with reference to Sec. 31-53(g), requiring proof in certified payroll form that new mechanic, laborer or worker has completed a 10-hour or more construction safety course and adding provision re new miner training program, amended Subsec. (b) by substituting "person" for "employee" and adding "or program", amended Subsec. (c) by adding "or in accordance with Federal Mine Safety and Health Administration Standards" and setting new deadline of January 1, 2009, deleted former Subsec. (d) re "public building", added new Subsec. (d) re exemptions for public service company employees and delivery drivers who perform no labor other than delivery and made conforming and technical changes, effective January 1, 2009.

Informational Bulletin

THE 10-HOUR OSHA CONSTRUCTION SAFETY AND HEALTH COURSE

(applicable to public building contracts entered into *on or after July 1, 2007*, where the total cost of all work to be performed is at least \$100,000)

- (1) This requirement was created by Public Act No. 06-175, which is codified in Section 31-53b of the Connecticut General Statutes (pertaining to the prevailing wage statutes);
- (2) The course is required for public building construction contracts (projects funded in whole or in part by the state or any political subdivision of the state) entered into on or after July 1, 2007;
- (3) It is required of private employees (not state or municipal employees) and apprentices who perform manual labor for a general contractor or subcontractor on a public building project where the total cost of all work to be performed is at least \$100,000;
- (4) The ten-hour construction course pertains to the ten-hour Outreach Course conducted in accordance with federal OSHA Training Institute standards, and, for telecommunications workers, a ten-hour training course conducted in accordance with federal OSHA standard, 29 CFR 1910.268;
- (5) The internet website for the federal OSHA Training Institute is http://www.osha.gov/fso/ote/training/edcenters/fact_sheet.html;
- (6) The statutory language leaves it to the contractor and its employees to determine who pays for the cost of the ten-hour Outreach Course;
- (7) Within 30 days of receiving a contract award, a general contractor must furnish proof to the Labor Commissioner that all employees and apprentices performing manual labor on the project will have completed such a course;
- (8) Proof of completion may be demonstrated through either: (a) the presentation of a *bona fide* student course completion card issued by the federal OSHA Training Institute; *or* (2) the presentation of documentation provided to an employee by a trainer certified by the Institute pending the actual issuance of the completion card;
- (9) Any card with an issuance date more than 5 years prior to the commencement date of the construction project shall not constitute proof of compliance;

- (10) Each employer shall affix a copy of the construction safety course completion card to the certified payroll submitted to the contracting agency in accordance with Conn. Gen. Stat. § 31-53(f) on which such employee's name first appears;
- (11) Any employee found to be in non-compliance shall be subject to removal from the worksite if such employee does not provide satisfactory proof of course completion to the Labor Commissioner by the fifteenth day after the date the employee is determined to be in noncompliance;
- (12) Any such employee who is determined to be in noncompliance may continue to work on a public building construction project for a maximum of fourteen consecutive calendar days while bringing his or her status into compliance;
- (13) The Labor Commissioner may make complaint to the prosecuting authorities regarding any employer or agent of the employer, or officer or agent of the corporation who files a false certified payroll with respect to the status of an employee who is performing manual labor on a public building construction project;
- (14) The statute provides the minimum standards required for the completion of a safety course by manual laborers on public construction contracts; any contractor can exceed these minimum requirements; and
- (15) Regulations clarifying the statute are currently in the regulatory process, and shall be posted on the CTDOL website as soon as they are adopted in final form.
- (16) Any questions regarding this statute may be directed to the Wage and Workplace Standards Division of the Connecticut Labor Department via the internet website of <http://www.ctdol.state.ct.us/wgwkstnd/wgemenu.htm>; or by telephone at (860)263-6790.

THE ABOVE INFORMATION IS PROVIDED EXCLUSIVELY AS AN EDUCATIONAL RESOURCE, AND IS NOT INTENDED AS A SUBSTITUTE FOR LEGAL INTERPRETATIONS WHICH MAY ULTIMATELY ARISE CONCERNING THE CONSTRUCTION OF THE STATUTE OR THE REGULATIONS.

November 29, 2006

Notice
To All Mason Contractors and Interested Parties
Regarding Construction Pursuant to Section 31-53 of the
Connecticut General Statutes (Prevailing Wage)

The Connecticut Labor Department Wage and Workplace Standards Division is empowered to enforce the prevailing wage rates on projects covered by the above referenced statute.

Over the past few years the Division has withheld enforcement of the rate in effect for workers who operate a forklift on a prevailing wage rate project due to a potential jurisdictional dispute.

The rate listed in the schedules and in our Occupational Bulletin (see enclosed) has been as follows:

Forklift Operator:

- **Laborers (Group 4) Mason Tenders** - operates forklift solely to assist a mason to a maximum height of nine feet only.
- **Power Equipment Operator (Group 9)** - operates forklift to assist any trade and to assist a mason to a height over nine feet.

The U.S. Labor Department conducted a survey of rates in Connecticut but it has not been published and the rate in effect remains as outlined in the above Occupational Bulletin.

Since this is a classification matter and not one of jurisdiction, effective January 1, 2007 the Connecticut Labor Department will enforce the rate on each schedule in accordance with our statutory authority.

Your cooperation in filing appropriate and accurate certified payrolls is appreciated.

STATUTE 31-55a

- SPECIAL NOTICE -

To: All State and Political Subdivisions, Their Agents, and Contractors

Connecticut General Statute 31-55a - Annual adjustments to wage rates by contractors doing state work.

Each contractor that is awarded a contract on or after October 1, 2002, for (1) the construction of a state highway or bridge that falls under the provisions of section 31-54 of the general statutes, or (2) the construction, remodeling, refinishing, refurbishing, rehabilitation, alteration or repair of any public works project that falls under the provisions of section 31-53 of the general statutes shall contact the Labor Commissioner on or before July first of each year, for the duration of such contract, to ascertain the prevailing rate of wages on an hourly basis and the amount of payment or contributions paid or payable on behalf of each mechanic, laborer or worker employed upon the work contracted to be done, and shall make any necessary adjustments to such prevailing rate of wages and such payment or contributions paid or payable on behalf of each such employee, effective each July first.

- The prevailing wage rates applicable to any contract or subcontract awarded on or after October 1, 2002 are subject to annual adjustments each July 1st for the duration of any project which was originally advertised for bids on or after October 1, 2002.
- Each contractor affected by the above requirement shall pay the annual adjusted prevailing wage rate that is in effect each July 1st, as posted by the Department of Labor.
- It is the **contractor's** responsibility to obtain the annual adjusted prevailing wage rate increases directly from the Department of Labor's Web Site. The annual adjustments will be posted on the Department of Labor Web page: www.ctdol.state.ct.us. For those without internet access, please contact the division listed below.
- The Department of Labor will continue to issue the initial prevailing wage rate schedule to the Contracting Agency for the project. All subsequent annual adjustments will be posted on our Web Site for contractor access.

Any questions should be directed to the Contract Compliance Unit, Wage and Workplace Standards Division, Connecticut Department of Labor, 200 Folly Brook Blvd., Wethersfield, CT 06109 at (860)263-6790.

NOTICE

TO ALL CONTRACTING AGENCIES

Please be advised that Connecticut General Statutes Section 31-53, requires the contracting agency to certify to the Department of Labor, the total dollar amount of work to be done in connection with such public works project, regardless of whether such project consists of one or more contracts.

Please find the attached “Contracting Agency Certification Form” to be completed and returned to the Department of Labor, Wage and Workplace Standards Division, Public Contract Compliance Unit.

Inquiries can be directed to 860.263.6790.



CONNECTICUT DEPARTMENT OF LABOR
WAGE AND WORKPLACE STANDARDS DIVISION

Contracting Agency Certification Form

I, _____, acting in my official capacity as _____,
Authorized Representative Title
for _____, located at _____,
Contracting Agency Address

do hereby certify that the total dollar amount of work to be done in connection with

_____, located at _____,
Project name and number Address

shall be \$_____, which includes all work, regardless of whether such project
contains of one or more contracts.

Contractor Information

Name: _____

Address: _____

Authorized Representative: _____

Approximate Starting Date: _____

Approximate Completion Date: _____

Signature

Date

Return to:

Connecticut Department of Labor
Wage & Workplace Standards Division
200 Folly Brook Blvd.
Wethersfield, CT 06109

Rate Schedule Issued (Date): _____

CONNECTICUT DEPARTMENT OF LABOR
WAGE AND WORKPLACE STANDARDS DIVISION

CONTRACTORS WAGE CERTIFICATION FORM
Construction Manager at Risk/General Contractor/Prime Contractor

I, _____ of _____
Officer, Owner, Authorized Rep. Company Name

do hereby certify that the _____
Company Name

Street

City

and all of its subcontractors will pay all workers on the

Project Name and Number

Street and City

the wages as listed in the schedule of prevailing rates required for such project (a copy of which is attached hereto).

Signed

Subscribed and sworn to before me this _____ day of _____, _____.

Notary Public

Return to:
Connecticut Department of Labor
Wage & Workplace Standards Division
200 Folly Brook Blvd.
Wethersfield, CT 06109

Rate Schedule Issued (Date): _____

[New] In accordance with Section 31-53b(a) of the C.G.S. each contractor shall provide a copy of the OSHA 10 Hour Construction Safety and Health Card for each employee, to be attached to the first certified payroll on the project.

PAYROLL CERTIFICATION FOR PUBLIC WORKS PROJECTS

WEEKLY PAYROLL

Connecticut Department of Labor
Wage and Workplace Standards Division
200 Folly Brook Blvd.
Wethersfield, CT 06109

In accordance with Connecticut General Statutes, 31-53 Certified Payrolls with a statement of compliance shall be submitted monthly to the contracting agency.

CONTRACTOR NAME AND ADDRESS:											SUBCONTRACTOR NAME & ADDRESS				WORKER'S COMPENSATION INSURANCE CARRIER						
PAYROLL NUMBER		Week-Ending Date	PROJECT NAME & ADDRESS										POLICY #	EFFECTIVE DATE:	EXPIRATION DATE:						
PERSON/WORKER, ADDRESS and SECTION	APPR RATE %	MALE/FEMALE AND RACE*	WORK CLASSIFICATION	DAY AND DATE						Total ST Hours	BASE HOURLY RATE	TYPE OF FRINGE BENEFITS Per Hour 1 through 6 (see back)	GROSS PAY FOR ALL WORK PERFORMED THIS WEEK	TOTAL DEDUCTIONS				GROSS PAY FOR THIS PREVAILING RATE JOB	CHECK # AND NET PAY		
				S	M	T	W	TH	F	S				Total O/T Hours	TOTAL FRINGE BENEFIT PLAN CASH	FICA	FEDERAL WITH-HOLDING			STATE WITH-HOLDING	LIST OTHER
			Trade License Type & Number - OSHA 10 Certification Number	HOURS WORKED EACH DAY																	

***FRINGE BENEFITS EXPLANATION (P):**

Bona fide benefits paid to approved plans, funds or programs, except those required by Federal or State Law (unemployment tax, worker’s compensation, income taxes, etc.).

Please specify the type of benefits provided:

- 1) Medical or hospital care _____ 4) Disability _____
- 2) Pension or retirement _____ 5) Vacation, holiday _____
- 3) Life Insurance _____ 6) Other (please specify) _____

CERTIFIED STATEMENT OF COMPLIANCE

For the week ending date of _____,

I, _____ of _____, (hereafter known as Employer) in my capacity as _____ (title) do hereby certify and state:

Section A:

1. All persons employed on said project have been paid the full weekly wages earned by them during the week in accordance with Connecticut General Statutes, section 31-53, as amended. Further, I hereby certify and state the following:

- a) The records submitted are true and accurate;
- b) The rate of wages paid to each mechanic, laborer or workman and the amount of payment or contributions paid or payable on behalf of each such person to any employee welfare fund, as defined in Connecticut General Statutes, section 31-53 (h), are not less than the prevailing rate of wages and the amount of payment or contributions paid or payable on behalf of each such person to any employee welfare fund, as determined by the Labor Commissioner pursuant to subsection Connecticut General Statutes, section 31-53 (d), and said wages and benefits are not less than those which may also be required by contract;
- c) The Employer has complied with all of the provisions in Connecticut General Statutes, section 31-53 (and Section 31-54 if applicable for state highway construction);
- d) Each such person is covered by a worker’s compensation insurance policy for the duration of his employment which proof of coverage has been provided to the contracting agency;
- e) The Employer does not receive kickbacks, which means any money, fee, commission, credit, gift, gratuity, thing of value, or compensation of any kind which is provided directly or indirectly, to any prime contractor, prime contractor employee, subcontractor, or subcontractor employee for the purpose of improperly obtaining or rewarding favorable treatment in connection with a prime contract or in connection with a prime contractor in connection with a subcontractor relating to a prime contractor; and
- f) The Employer is aware that filing a certified payroll which he knows to be false is a class D felony for which the employer may be fined up to five thousand dollars, imprisoned for up to five years or both.

2. OSHA~The employer shall affix a copy of the construction safety course, program or training completion document to the certified payroll required to be submitted to the contracting agency for this project on which such persons name first appears.

_____ (Signature) _____ (Title) _____ Submitted on (Date)

[New] In accordance with Section 31-53b(a) of the C.G.S. each contractor shall provide a copy of the OSHA 10 Hour Construction Safety and Health Card for each employee, to be attached to the first certified payroll on the project.

PAYROLL CERTIFICATION FOR PUBLIC WORKS PROJECTS											Connecticut Department of Labor Wage and Workplace Standards Division 200 Folly Brook Blvd. Wethersfield, CT 06109											
In accordance with Connecticut General Statutes, 31-53 Certified Payrolls with a statement of compliance shall be submitted monthly to the contracting agency.											WEEKLY PAYROLL											
CONTRACTOR NAME AND ADDRESS: Landon Corporation, 15 Connecticut Avenue, Northford, CT 06472											SUBCONTRACTOR NAME & ADDRESS XYZ Corporation 2 Main Street Yantic, CT 06389						WORKER'S COMPENSATION INSURANCE CARRIER Travelers Insurance Company POLICY # #BAC8888928 EFFECTIVE DATE: 1/1/09 EXPIRATION DATE: 12/31/09					
PAYROLL NUMBER	Week-Ending Date	PROJECT NAME & ADDRESS									Total ST Hours	BASE HOURLY RATE	TYPE OF FRINGE BENEFITS Per Hour 1 through 6 (see back)	GROSS PAY FOR ALL WORK PERFORMED THIS WEEK	TOTAL DEDUCTIONS				GROSS PAY FOR THIS PREVAILING RATE JOB	CHECK # AND NET PAY		
		DAY AND DATE							Total O/T Hours	TOTAL FRINGE BENEFIT PLAN CASH					FICA	FEDERAL WITH-HOLDING	STATE WITH-HOLDING	LIST OTHER				
PERSON/WORKER, ADDRESS and SECTION	APPR RATE %	MALE/FEMALE AND RACE*	WORK CLASSIFICATION	S	M	T	W	TH			F	S										
				Trade License Type & Number - OSHA 10 Certification Number							HOURS WORKED EACH DAY											
Robert Craft 81 Maple Street Willimantic, CT 06226		M/C	Electrical Lineman E-1 1234567 Owner OSHA 123456		8	8	8	8	8			S-TIME 40	\$ 30.75 Base Rate	1. \$ 5.80 2. \$ 3. \$ 2.01	\$1,582.80				P-xxxx	\$1,582.80	#123 \$ xxx.xx	
										O-TIME	\$ 8.82 Cash Fringe	4. \$ 5. \$ 6. \$										
Ronald Jones 212 Elm Street Norwich, CT 06360	65%	M/B	Electrical Apprentice OSHA 234567		8	8	8	8	8			S-TIME 40	\$ 19.99 Base Rate	1. \$ 2. \$ 3. \$	\$1,464.80	xx.xx	xxx.xx	xx.xx	G-xxx	\$1,464.80	#124 \$xxx.xx	
										O-TIME	\$ 16.63 Cash Fringe	4. \$ 5. \$ 6. \$										
Franklin T. Smith 234 Washington Rd. New London, CT 06320 SECTION B		M/H	Project Manager			8						S-TIME 8	\$ Base Rate	1. \$ 2. \$ 3. \$	\$1,500.00	xx.xx	xx.xx	xx.xx	M-xx.x		xxx.xx	
										O-TIME	\$ Cash Fringe	4. \$ 5. \$ 6. \$										
											S-TIME	\$ Base Rate	1. \$ 2. \$ 3. \$									
											O-TIME	\$ Cash Fringe	4. \$ 5. \$ 6. \$									

OSHA 10 ~ATTACH CARD TO 1ST CERTIFIED PAYROLL

***FRINGE BENEFITS EXPLANATION (P):**

Bona fide benefits paid to approved plans, funds or programs, except those required by Federal or State Law (unemployment tax, worker's compensation, income taxes, etc.).

Please specify the type of benefits provided:

- 1) Medical or hospital care Blue Cross 4) Disability _____
- 2) Pension or retirement _____ 5) Vacation, holiday _____
- 3) Life Insurance Utopia 6) Other (please specify) _____

CERTIFIED STATEMENT OF COMPLIANCE

For the week ending date of 9/26/09,

I, Robert Craft of XYZ Corporation, (hereafter known as

Employer) in my capacity as Owner (title) do hereby certify and state:

Section A:

1. All persons employed on said project have been paid the full weekly wages earned by them during the week in accordance with Connecticut General Statutes, section 31-53, as amended. Further, I hereby certify and state the following:

- a) The records submitted are true and accurate;
- b) The rate of wages paid to each mechanic, laborer or workman and the amount of payment or contributions paid or payable on behalf of each such employee to any employee welfare fund, as defined in Connecticut General Statutes, section 31-53 (h), are not less than the prevailing rate of wages and the amount of payment or contributions paid or payable on behalf of each such employee to any employee welfare fund, as determined by the Labor Commissioner pursuant to subsection Connecticut General Statutes, section 31-53 (d), and said wages and benefits are not less than those which may also be required by contract;
- c) The Employer has complied with all of the provisions in Connecticut General Statutes, section 31-53 (and Section 31-54 if applicable for state highway construction);
- d) Each such employee of the Employer is covered by a worker's compensation insurance policy for the duration of his employment which proof of coverage has been provided to the contracting agency;
- e) The Employer does not receive kickbacks, which means any money, fee, commission, credit, gift, gratuity, thing of value, or compensation of any kind which is provided directly or indirectly, to any prime contractor, prime contractor employee, subcontractor, or subcontractor employee for the purpose of improperly obtaining or rewarding favorable treatment in connection with a prime contract or in connection with a prime contractor in connection with a subcontractor relating to a prime contractor; and
- f) The Employer is aware that filing a certified payroll which he knows to be false is a class D felony for which the employer may be fined up to five thousand dollars, imprisoned for up to five years or both.

2. OSHA~The employer shall affix a copy of the construction safety course, program or training completion document to the certified payroll required to be submitted to the contracting agency for this project on which such employee's name first appears.

Robert Craft owner 10/2/09
 (Signature) (Title) Submitted on (Date)

Section B: Applies to CONNDOT Projects ONLY

That pursuant to CONNDOT contract requirements for reporting purposes only, all employees listed under Section B who performed work on this project are not covered under the prevailing wage requirements defined in Connecticut General Statutes Section 31-53.

Robert Craft owner 10/2/09
 (Signature) (Title) Submitted on (Date)

Note: CTDOL will assume all hours worked were performed under Section A unless clearly delineated as Section B WWS-CP1 as such. Should an employee perform work under both Section A and Section B, the hours worked and wages paid must be segregated for reporting purposes.

*****THIS IS A PUBLIC DOCUMENT***
 DO NOT INCLUDE SOCIAL SECURITY NUMBERS**

Information Bulletin ***Occupational Classifications***

The Connecticut Department of Labor has the responsibility to properly determine "job classification" on prevailing wage projects covered under C.G.S. Section 31-53(d).

Note: This information is intended to provide a sample of some occupational classifications for guidance purposes only. It is not an all-inclusive list of each occupation's duties. This list is being provided only to highlight some areas where a contractor may be unclear regarding the proper classification. If unsure, the employer should seek guidelines for CTDOL.

Below are additional clarifications of specific job duties performed for certain classifications:

- **ASBESTOS WORKERS**

Applies all insulating materials, protective coverings, coatings and finishes to all types of mechanical systems.

- **ASBESTOS INSULATOR**

Handle, install apply, fabricate, distribute, prepare, alter, repair, dismantle, heat and frost insulation, including penetration and fire stopping work on all penetration fire stop systems.

- **BOILERMAKERS**

Erects hydro plants, incomplete vessels, steel stacks, storage tanks for water, fuel, etc. Builds incomplete boilers, repairs heat exchanges and steam generators.

- **BRICKLAYERS, CEMENT MASONS, CEMENT FINISHERS, MARBLE MASONS, PLASTERERS, STONE MASONS, PLASTERERS. STONE MASONS, TERRAZZO WORKERS, TILE SETTERS**

Lays building materials such as brick, structural tile and concrete cinder, glass, gypsum, terra cotta block. Cuts, tools and sets marble, sets stone, finishes concrete, applies decorative steel, aluminum and plastic tile, applies cements, sand, pigment and marble chips to floors, stairways, etc.

- **CARPENTERS, MILLWRIGHTS. PILEDRIVERMEN. LATHERS. RESILEINT FLOOR LAYERS, DOCK BUILDERS, DIKERS, DIVER TENDERS**

Constructs, erects, installs and repairs structures and fixtures of wood, plywood and wallboard. Installs, assembles, dismantles, moves industrial machinery. Drives piling into ground to provide foundations for structures such as buildings and bridges, retaining walls for earth embankments, such as cofferdams. Fastens wooden, metal or rockboard lath to walls, ceilings and partitions of buildings, acoustical tile layer, concrete form builder. Applies firestopping materials on fire resistive joint systems only. Installation of curtain/window walls only where attached to wood or metal studs. Installation of insulated material of all types whether blown, nailed or attached in other ways to walls, ceilings and floors of buildings. Assembly and installation of modular furniture/furniture systems. Free-standing furniture is not covered. This includes free standing: student chairs, study top desks, book box desks, computer furniture, dictionary stand, atlas stand, wood shelving, two-position information access station, file cabinets, storage cabinets, tables, etc.

- **LABORER, CLEANING**

- The clean up of any construction debris and the general (heavy/light) cleaning, including sweeping, wash down, mopping, wiping of the construction facility and its furniture, washing, polishing, and dusting.

- **DELIVERY PERSONNEL**

- If delivery of supplies/building materials is to one common point and stockpiled there, prevailing wages are not required. If the delivery personnel are involved in the distribution of the material to multiple locations within the construction site then they would have to be paid prevailing wages for the type of work performed: laborer, equipment operator, electrician, ironworker, plumber, etc.

- An example of this would be where delivery of drywall is made to a building and the delivery personnel distribute the drywall from one "stockpile" location to further sub-locations on each floor. Distribution of material around a construction site is the job of a laborer or tradesman, and not a delivery personnel.

- **ELECTRICIANS**

Install, erect, maintenance, alteration or repair of any wire, cable, conduit, etc., which generates, transforms, transmits or uses electrical energy for light, heat, power or other purposes, including the Installation or maintenance of telecommunication, LAN wiring or computer equipment, and low voltage wiring. ****License required per Connecticut General Statutes: E-1,2 L-5,6 C-5,6 T-1,2 L-1,2 V-1,2,7,8,9.***

- **ELEVATOR CONSTRUCTORS**

Install, erect, maintenance and repair of all types of elevators, escalators, dumb waiters and moving walks. **License required by Connecticut General Statutes: R-1,2,5,6.*

- **FORK LIFT OPERATOR**

Laborers Group 4) Mason Tenders - operates forklift solely to assist a mason to a maximum height of nine (9) feet only.

Power Equipment Operator Group 9 - operates forklift to assist any trade, and to assist a mason to a height over nine (9) feet.

- **GLAZIERS**

Glazing wood and metal sash, doors, partitions, and 2 story aluminum storefronts. Installs glass windows, skylights, store fronts and display cases or surfaces such as building fronts, interior walls, ceilings and table tops and metal store fronts. Installation of aluminum window walls and curtain walls is the "joint" work of glaziers and ironworkers, which require equal composite workforce.

- **IRONWORKERS**

Erection, installation and placement of structural steel, precast concrete, miscellaneous iron, ornamental iron, metal curtain wall, rigging and reinforcing steel. Handling, sorting, and installation of reinforcing steel (rebar). Metal bridge rail (traffic), metal bridge handrail, and decorative security fence installation. Installation of aluminum window walls and curtain walls is the "joint" work of glaziers and ironworkers which require equal composite workforce.

- **INSULATOR**

- Installing fire stopping systems/materials for "Penetration Firestop Systems": transit to cables, electrical conduits, insulated pipes, sprinkler pipe penetrations, ductwork behind radiation, electrical cable trays, fire rated pipe penetrations, natural polypropylene, HVAC ducts, plumbing bare metal, telephone and communication wires, and boiler room ceilings.

- **LABORERS**

Acetylene burners, asphalt rakers, chain saw operators, concrete and power buggy operator, concrete saw operator, fence and guard rail erector (except metal bridge rail (traffic), decorative security fence (non-metal).

installation.), hand operated concrete vibrator operator, mason tenders, pipelayers (installation of storm drainage or sewage lines on the street only), pneumatic drill operator, pneumatic gas and electric drill operator, powermen and wagon drill operator, air track operator, block paver, curb setters, blasters, concrete spreaders.

- **PAINTERS**

Maintenance, preparation, cleaning, blasting (water and sand, etc.), painting or application of any protective coatings of every description on all bridges and appurtenances of highways, roadways, and railroads. Painting, decorating, hardwood finishing, paper hanging, sign writing, scenic art work and drywall hhg for any and all types of building and residential work.

- **LEAD PAINT REMOVAL**

- Painter's Rate

1. Removal of lead paint from bridges.
2. Removal of lead paint as preparation of any surface to be repainted.
3. Where removal is on a Demolition project prior to reconstruction.

- Laborer's Rate

1. Removal of lead paint from any surface NOT to be repainted.
2. Where removal is on a *TOTAL* Demolition project only.

- **PLUMBERS AND PIPEFITTERS**

Installation, repair, replacement, alteration or maintenance of all plumbing, heating, cooling and piping. ****License required per Connecticut General Statutes: P-1,2,6,7,8,9 J-1,2,3,4 SP-1,2 S-1,2,3,4,5,6,7,8 B-1,2,3,4 D-1,2,3,4.***

- **POWER EQUIPMENT OPERATORS**

Operates several types of power construction equipment such as compressors, pumps, hoists, derricks, cranes, shovels, tractors, scrapers or motor graders, etc. Repairs and maintains equipment. ****License required, crane operators only, per Connecticut General Statutes.***

- **ROOFERS**

Covers roofs with composition shingles or sheets, wood shingles, slate or asphalt and gravel to waterproof roofs, including preparation of surface. (demolition or removal of any type of roofing and or clean-up of any and all areas where a roof is to be relaid.)

- **SHEETMETAL WORKERS**

Fabricate, assembles, installs and repairs sheetmetal products and equipment in such areas as ventilation, air-conditioning, warm air heating, restaurant equipment, architectural sheet metal work, sheetmetal roofing, and aluminum gutters. Fabrication, handling, assembling, erecting, altering, repairing, etc. of coated metal material panels and composite metal material panels when used on building exteriors and interiors as soffits, fascia, louvers, partitions, canopies, cornice, column covers, awnings, beam covers, cladding, sun shades, lighting troughs, spires, ornamental roofing, metal ceilings, mansards, copings, ornamental and ventilation hoods, vertical and horizontal siding panels, trim, etc. The sheet metal classification also applies to the vast variety of coated metal material panels and composite metal material panels that have evolved over the years as an alternative to conventional ferrous and non-ferrous metals like steel, iron, tin, copper, brass, bronze, aluminum, etc. Fabrication, handling, assembling, erecting, altering, repairing, etc. of architectural metal roof, standing seam roof, composite metal roof, metal and composite bathroom/toilet partitions, aluminum gutters, metal and composite lockers and shelving, kitchen equipment, and walk-in coolers. To include testing and air –balancing ancillary to installation and construction.

- **SPRINKLER FITTERS**

Installation, alteration, maintenance and repair of fire protection sprinkler systems.

****License required per Connecticut General Statutes: F-1,2,3,4.***

- **TILE MARBLE AND TERRAZZO FINISHERS**

Assists and tends the tile setter, marble mason and terrazzo worker in the performance of their duties.

- **TRUCK DRIVERS**

~How to pay truck drivers delivering asphalt is under REVISION~

Truck Drivers are requires to be paid prevailing wage for time spent "working" directly on the site. These drivers remain covered by the prevailing wage for any time spent transporting between the actual construction location and facilities (such as fabrication, plants, mobile factories, batch plant, borrow pits, job headquarters, tool yards, etc.) dedicated exclusively, or nearly so, to performance of the contract or project, which are so located in proximity to the actual construction location that it is reasonable to include them. ****License required, drivers only, per Connecticut General Statutes.***

For example:

- Material men and deliverymen are not covered under prevailing wage as long as they are not directly involved in the construction process. If, they unload the material, they would then be covered by prevailing wage for the classification they are performing work in: laborer, equipment operator, etc.
- Hauling material off site is not covered provided they are not dumping it at a location outlined above.
- Driving a truck on site and moving equipment or materials on site would be considered covered work, as this is part of the construction process.

➤ *Any questions regarding the proper classification should be directed to:*
Public Contract Compliance Unit
Wage and Workplace Standards Division
Connecticut Department of Labor
200 Folly Brook Blvd, Wethersfield, CT 06109
(860) 263-6790.

**Connecticut Department of Labor
Wage and Workplace Standards Division
FOOTNOTES**

⇒ Please Note: If the “Benefits” listed on the schedule for the following occupations includes a letter(s) (+ a or + a+b for instance), refer to the information below.

Benefits to be paid at the appropriate prevailing wage rate for the listed occupation.

If the “Benefits” section for the occupation lists only a dollar amount, disregard the information below.

Bricklayers, Cement Masons, Cement Finishers, Concrete Finishers, Stone Masons
(Building Construction) and
(Residential- Hartford, Middlesex, New Haven, New London and Tolland Counties)

- a. Paid Holiday: Employees shall receive 4 hours for Christmas Eve holiday provided the employee works the regularly scheduled day before and after the holiday. Employers may schedule work on Christmas Eve and employees shall receive pay for actual hours worked in addition to holiday pay.

Elevator Constructors: Mechanics

- a. Paid Holidays: New Year’s Day, Memorial Day, Independence Day, Labor Day, Veterans’ Day, Thanksgiving Day, Christmas Day, plus the Friday after Thanksgiving.
- b. Vacation: Employer contributes 8% of basic hourly rate for 5 years or more of service or 6% of basic hourly rate for 6 months to 5 years of service as vacation pay credit.

Glaziers

- a. Paid Holidays: Labor Day and Christmas Day.

Power Equipment Operators
(Heavy and Highway Construction & Building Construction)

- a. Paid Holidays: New Year’s Day, Good Friday, Memorial day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day, provided the employee works 3 days during the week in which the holiday falls, if scheduled, and if scheduled, the working day before and the working day after the holiday. Holidays falling on Saturday may be observed on Saturday, or if the employer so elects, on the preceding Friday.

Ironworkers

- a. Paid Holiday: Labor Day provided employee has been on the payroll for the 5 consecutive work days prior to Labor Day.

Laborers (Tunnel Construction)

- a. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day. No employee shall be eligible for holiday pay when he fails, without cause, to work the regular work day preceding the holiday or the regular work day following the holiday.

Roofers

- a. Paid Holidays: July 4th, Labor Day, and Christmas Day provided the employee is employed 15 days prior to the holiday.

Sprinkler Fitters

- a. Paid Holidays: Memorial Day, July 4th, Labor Day, Thanksgiving Day and Christmas Day, provided the employee has been in the employment of a contractor 20 working days prior to any such paid holiday.

Truck Drivers

(Heavy and Highway Construction & Building Construction)

- a. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas day, and Good Friday, provided the employee has at least 31 calendar days of service and works the last scheduled day before and the first scheduled day after the holiday, unless excused.

Important Information:

Welders: Rate for craft to which welding is incidental.

*Note: Hazardous waste removal work receives additional \$1.25 per hour for truck drivers.

**Note: Hazardous waste premium \$3.00 per hour over classified rate

Crane with 150 ft. boom (including jib) - \$1.50 extra

Crane with 200 ft. boom (including jib) - \$2.50 extra

Crane with 250 ft. boom (including jib) - \$5.00 extra

Crane with 300 ft. boom (including jib) - \$7.00 extra

Crane with 400 ft. boom (including jib) - \$10.00 extra

All classifications that indicate a percentage of the fringe benefits must be calculated at the percentage rate times the "base hourly rate".

Apprentices duly registered under the Commissioner of Labor's regulations on "Work Training Standards for Apprenticeship and Training Programs" Section 31-51-d-1 to 12, are allowed to be paid the appropriate percentage of the prevailing journeymen hourly base and the full fringe benefit rate, providing the work site ratio shall not be less than one full-time journeyman instructing and supervising the work of each apprentice in a specific trade.

The Prevailing wage rates applicable to this project are subject to annual adjustments each July 1st for the duration of the project.

Each contractor shall pay the annual adjusted prevailing wage rate that is in effect each July 1st, as posted by the Department of Labor.

It is the contractor's responsibility to obtain the annual adjusted prevailing wage rate increases directly from the Department of Labor's website.

The annual adjustments will be posted on the Department of Labor's Web page: www.ct.gov/dol. For those without internet access, please contact the division listed below.

The Department of Labor will continue to issue the initial prevailing wage rate schedule to the Contracting Agency for the project.

All subsequent annual adjustments will be posted on our Web Site for contractor access.

Contracting Agencies are under no obligation pursuant to State labor law to pay any increase due to the annual adjustment provision.

Effective October 1, 2005 - Public Act 05-50: any person performing the work of any mechanic, laborer, or worker shall be paid prevailing wage

All Person who perform work ON SITE must be paid prevailing wage for the appropriate mechanic, laborer, or worker classification.

All certified payrolls must list the hours worked and wages paid to All Persons who perform work ON SITE regardless of their ownership i.e.: (Owners, Corporate Officers, LLC Members, Independent Contractors, et. al)

Reporting and payment of wages is required regardless of any contractual relationship alleged to exist between the contractor and such person.

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

Please direct any questions which you may have pertaining to classification of work and payment of prevailing wages to the Wage and Workplace Standards Division, telephone (860)263-6790.

**Minimum Rates and Classifications
for Building Construction**

ID#: 22-40465

**Connecticut Department of Labor
Wage and Workplace Standards**

By virtue of the authority vested in the Labor Commissioner under provisions of Section 31-53 of the General Statutes of Connecticut, as amended, the following are declared to be the prevailing rates and welfare payments and will apply only where the contract is advertised for bid within 20 days of the date on which the rates are established. Any contractor or subcontractor not obligated by agreement to pay to the welfare and pension fund shall pay this amount to each employee as part of his/her hourly wages.

Project Number: B023-18

Project Town: Meriden

State#:

FAP#:

Project: 53 Colony Street Roofing, Masonry & Cornice Repairs

CLASSIFICATION	Hourly Rate	Benefits
1b) Asbestos/Toxic Waste Removal Laborers: Asbestos removal and encapsulation (except its removal from mechanical systems which are not to be scrapped), toxic waste removers, blasters. **See Laborers Group 7**		
1c) Asbestos Worker/Heat and Frost Insulator	44.57	31.79
2) Boilermaker	44.46	28.51
3a) Bricklayer, Cement Mason, Concrete Finisher (including caulking), Stone Masons	37.75	34.62 + a
3b) Tile Setter	37.1	30.52
3c) Tile and Stone Finishers	30.0	25.30
3d) Marble & Terrazzo Finishers	31.07	24.23
3e) Plasterer	41.9	28.75

-----LABORERS-----

4) Group 1: Laborers (common or general), acetylene burners, concrete specialists, wrecking laborers, fire watchers.	32.0	24.40
4a) Group 2: Mortar mixers, plaster tender, power buggy operators, powdermen, fireproofers/mixer/nozzleman (Person running mixer and spraying fireproof only).	32.25	24.40
4b) Group 3: Jackhammer operators/pavement breaker, mason tender (brick), mason tender (cement/concrete), forklift operators and forklift operators (masonry).	32.5	24.40
4c) **Group 4: Pipelayers (Installation of water, storm drainage or sewage lines outside of the building line with P6, P7 license) (the pipelayer rate shall apply only to one or two employees of the total crew who primary task is to actually perform the mating of pipe sections) P6 and P7 rate is \$26.80.	33.0	24.40
4d) Group 5: Air track operator, sand blaster and hydraulic drills.	32.75	24.40
4e) Group 6: Blasters, nuclear and toxic waste removal.	35.0	24.40
4f) Group 7: Asbestos/lead removal and encapsulation (except it's removal from mechanical systems which are not to be scrapped).	33.0	24.40
4g) Group 8: Bottom men on open air caisson, cylindrical work and boring crew.	30.28	24.40
4h) Group 9: Top men on open air caisson, cylindrical work and boring crew.	29.74	24.40
4i) Group 10: Traffic Control Signalman	18.0	24.40
5) Carpenter, Acoustical Ceiling Installation, Soft Floor/Carpet Laying, Metal Stud Installation, Form Work and Scaffold Building, Drywall Hanging, Modular-Furniture Systems Installers, Lathers, Piledrivers, Resilient Floor Layers.	36.07	26.15
5a) Millwrights	36.32	26.81

6) Electrical Worker (including low voltage wiring) (Trade License required: E1,2 L-5,6 C-5,6 T-1,2 L-1,2 V-1,2,7,8,9)	40.6	32.21+3% of gross wage
7a) Elevator Mechanic (Trade License required: R-1,2,5,6)	58.9	36.885+a+b
-----LINE CONSTRUCTION-----		
Groundman	26.5	6.5% + 9.00
Linemen/Cable Splicer	48.19	6.5% + 22.00
8) Glazier (Trade License required: FG-1,2)	40.78	23.40 + a
9) Ironworker, Ornamental, Reinforcing, Structural, and Precast Concrete Erection	39.7	38.77 + a
-----OPERATORS-----		
Group 1: Crane Handling or Erecting Structural Steel or Stone; Hoisting Engineer (2 drums or over). (Trade License Required)	50.27	26.80 + a
Group 1a: Front End Loader (7 cubic yards or over); Work Boat 26 ft. and Over	46.07	26.80 + a
Group 2: Cranes (100 ton rate capacity and over); Bauer Drill/Caisson. (Trade License Required)	49.91	26.80 + a
Group 2a: Cranes (under 100 ton rated capacity).	49.06	26.80 + a
Group 2b: Excavator over 2 cubic yards; Pile Driver (\$3.00 premium when operator controls hammer)	45.71	26.80 + a
Group 3: Excavator; Gradall; Master Mechanic; Hoisting Engineer (all types of equipment where a drum and cable are used to hoist or drag material regardless of motive power of operation), Rubber Tire Excavator (Drott-1085 or similar); Grader Operator; Bulldozer Finegrade. (slopes, shaping, laser or GPS, etc.). (Trade License	44.86	26.80 + a

Required)

Group 4: Trenching Machines; Lighter Derrick; CMI Machine or Similar; Koehring Loader (Skooper); Goldhofer.	44.42	26.80 + a
Group 5: Specialty Railroad Equipment; Asphalt Spreader, Asphalt Reclaiming Machine; Line Grinder; Concrete Pumps; Drills with Self Contained Power Units; Boring Machine; Post Hole Digger; Auger; Pounder; Well Digger; Milling Machine (over 24 mandrel).	43.73	26.80 + a
Group 5 continued: Side Boom; Combination Hoe and Loader; Directional Driller.	43.73	26.80 + a
Group 6: Front End Loader (3 up to 7 cubic yards); Bulldozer (rough grade dozer).	43.38	26.80 + a
Group 7: Asphalt Roller; Concrete Saws and Cutters (ride on types); Vermeer Concrete Cutter; Stump Grinder; Scraper; Snooper; Skidder; Milling Machine (24" and under mandrel).	42.99	26.80 + a
Group 8: Mechanic; Grease Truck Operator; Hydroblaster; Barrier Mover; Power Stone Spreader; Welding; Work Boat Under 26 ft.; Transfer Machine; Rigger Foreman.	42.54	26.80 + a
Group 9: Front End Loader (under 3 cubic yards); Skid Steer Loader regardless of attachments; (Bobcat or Similar); Forklift, Power Chipper; Landscape Equipment (including Hydroseeder); Vacuum Excavation Truck and Hydrovac Excavation Truck (27 HG pressure or greater).	42.04	26.80 + a
Group 10: Vibratory hammer; ice machine; diesel and air, hammer, etc.	39.7	26.80 + a
Group 11: Conveyor, earth roller, power pavement breaker (whiphammer), robot demolition equipment.	39.7	26.80 + a
Group 12: Wellpoint Operator.	39.63	26.80 + a
Group 13: Compressor Battery Operator.	38.97	26.80 + a

Group 14: Elevator Operator; Tow Motor Operator (solid tire no rough terrain).	37.66	26.80 + a
Group 15: Generator Operator; Compressor Operator; Pump Operator; Welding Machine Operator; Heater Operator.	37.2	26.80 + a
Group 16: Maintenance Engineer.	36.46	26.80 + a
Group 17: Portable Asphalt Plant Operator; Portable Crusher Plant Operator; Portable Concrete Plant Operator; Portable Grout Plant Operator; Portable Water Filtration Plant Operator.	41.39	26.80 + a
Group 18: Power Safety Boat; Vacuum Truck; Zim Mixer; Sweeper; (Minimum for any job requiring a CDL license); Rigger; Signalman.	38.61	26.80 + a
-----PAINTERS (Including Drywall Finishing)-----		
10a) Brush and Roller	37.22	23.40
10b) Taping Only/Drywall Finishing	37.97	23.40
10c) Paperhanger and Red Label	37.72	23.40
10e) Blast and Spray	40.22	23.40
11) Plumber (excluding HVAC pipe installation) (Trade License required: P-1,2,6,7,8,9 J-1,2,3,4 SP-1,2)	47.03	34.05
12) Well Digger, Pile Testing Machine	37.26	24.05 + a
13) Roofer (composition)	40.1	23.40
14) Roofer (slate & tile)	40.6	23.40

15) Sheetmetal Worker (Trade License required for HVAC and Ductwork: SM-1,SM-2,SM-3,SM-4,SM-5,SM-6)	40.89	41.72
16) Pipefitter (Including HVAC work) (Trade License required: S-1,2,3,4,5,6,7,8 B-1,2,3,4 D-1,2,3,4, G-1, G-2, G-8 & G-9)	47.03	34.05
-----TRUCK DRIVERS-----		
17a) 2 Axle, Helpers	31.16	28.78 + a
17b) 3 Axle, 2 Axle Ready Mix	31.27	28.78 + a
17c) 3 Axle Ready Mix	31.33	28.78 + a
17d) 4 Axle	31.39	28.78 + a
17e) 4 Axle Ready Mix	31.44	28.78 + a
17f) Heavy Duty Trailer (40 Tons and Over)	33.66	28.78 + a
17g) Specialized Earth Moving Equipment (Other Than Conventional Type on-the-Road Trucks and Semi-Trailers, Including Euclids)	31.44	28.78 + a
17h) Heavy Duty Trailer up to 40 tons	32.39	28.78 + a
17i) Snorkle Truck	31.54	28.78 + a
18) Sprinkler Fitter (Trade License required: F-1,2,3,4)	47.55	28.96 + a
19) Theatrical Stage Journeyman	25.76	7.34

Welders: Rate for craft to which welding is incidental.

**Note: Hazardous waste removal work receives additional \$1.25 per hour for truck drivers.*

***Note: Hazardous waste premium \$3.00 per hour over classified rate*

Crane with 150 ft. boom (including jib) - \$1.50 extra

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The Prevailing wage rates applicable to this project are subject to annual adjustments each July 1st for the duration of the project.

Each contractor shall pay the annual adjusted prevailing wage rate that is in effect each July 1st, as posted by the Department of Labor.

It is the contractor's responsibility to obtain the annual adjusted prevailing wage rate increases directly from the Department of Labor's website.

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www.ct.gov/dol. For those without internet access, please contact the division listed below.

The Department of Labor will continue to issue the initial prevailing wage rate schedule to the Contracting Agency for the project.

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Contracting Agencies are under no obligation pursuant to State labor law to pay any increase due to the annual adjustment provision.

Effective October 1, 2005 - Public Act 05-50: any person performing the work of any mechanic, laborer, or worker shall be paid prevailing wage

All Person who perform work ON SITE must be paid prevailing wage for the appropriate mechanic, laborer, or worker classification.

All certified payrolls must list the hours worked and wages paid to All Persons who perform work ON SITE regardless of their ownership i.e.: (Owners, Corporate Officers, LLC Members, Independent Contractors, et. al)

Reporting and payment of wages is required regardless of any contractual relationship alleged to exist between the contractor and such person.

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

Please direct any questions which you may have pertaining to classification of work and payment of prevailing wages to the Wage and Workplace Standards Division, telephone (860)263-6790.

As of: October 13, 2022

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1. RELATED DOCUMENTS

- A. Drawings, general provisions of the Contract, including General and Supplementary Conditions and Division 01 General Requirements, are a part of this Section and shall be binding on all Contractors and Subcontractors who perform this work.

2. SUMMARY

- A. This Section includes the following:

1. Project information.
2. Work covered by Contract Documents.
3. Access to site.
4. Work restrictions.
5. Specification and drawing conventions.
6. Miscellaneous provisions.

- B. Related Sections include the following:

1. Division 01 Section "Construction Progress Documentation" for Construction Schedule
2. Division 01 Section "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

3. PROJECT INFORMATION

- A. Project Identification: Gallery 53 Roofing, Masonry and Cornice Repairs.

1. Project Location: 53 Colony Street, Meriden, CT 06451.

- B. Owner: Gallery 53 and 51 Colony LLC

- C. Architect: The Contract Documents were prepared for Project by DeCarlo & Doll, Meriden, CT.

4. WORK COVERED BY CONTRACT DOCUMENTS

- A. The Project consists renovations 53 1nd 51 Colony Street.

- B. The Work includes, but is not limited to the following:
1. Replacement of built-up roof.
 2. Installation of roof access hatches.
 3. Replacement of parapet wall caps and flashings.
 4. Replacement of vent pipes and flashings.
 5. Repairs and painting of fabricated sheet metal cornices.
 6. Repointing of brickwork.

5. TYPE OF CONTRACT

- A. Project will be constructed under a single contract.

6. SCHEDULE

- A. General: The Contractor shall prepare a detailed construction schedule, to be submitted to the Owner, Architect, and Owner's Representative for review and approval. The schedule must clearly demonstrate the proper sequencing of construction activities.

1. The Construction Schedule is critical to the project. All work is required to be Substantially Complete, with a Certificate of Occupancy obtained, and ready for occupancy by the Owner, on or before the date agreed upon in the Contractor/Owner Agreement.

- B. **SUBSTANTIAL COMPLETION:** The Contractor shall achieve Substantial Completion within **ONE HUNDRED EIGHTY (180)** calendar days from the date of Notice to Proceed.

7. WORK UNDER OTHER CONTRACTS

- A. General: Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract. Coordinate the Work of this Contract with work performed under separate contracts.

- B. The Owner reserves the right to contract separately work required to be performed as part of this project. The Owner and the Contractor shall work to coordinate and schedule said work as to not interfere with the normal sequence of project related activities. For this project such activities include;

1. Removal of hazardous materials, such as asbestos tile and mastic, by an approved hazardous materials removal specialist.

8. USE OF PREMISES

- A. General: Contractor shall have limited use of premises for construction operations as determined by the Owner.

1. Confine operations to areas within the contract limit lines. Portions of the site beyond areas in which construction operations are indicated are not to be disturbed.
2. Keep driveways and entrances serving the premises clear and available to the Owner and the Owner's employees at all times. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on site.
3. Areas for parking of contractor's personnel, material deliveries, and storage of materials are not available on site and must be obtained from the City of Meriden.

B. Use of Site: Limit use of premises to areas determined by the Owner. Do not disturb portions of Project site beyond areas in which the Work is indicated.

1. Construction parking is to be provide in public lots.
 - a. For information about public parking contact:
Denise Keating
Parking Manager
203-639-2855
dkeating@meridenct.gov
2. Owner Occupancy: Allow for Owner occupancy of Project site.
3. Entrances: Keep entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not block these areas with parking or storage of materials.

Sidewalk, road and parking areas on the agency's property shall be kept free from scrap or other materials due to construction operations; and any damages to their surfaces caused by the Contractor shall be repaired by him at his own expense to the satisfaction of the Agency.

- a. Schedule deliveries to minimize use of entrances.
 - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment.
4. Site Logistics Plan: The Contractor is to prepare a Site Logistics Plan.

C. Use of Existing Building: Repair damage caused by construction operations. Protect building and its occupants during construction period.

9. OWNER'S OCCUPANCY REQUIREMENTS

- A. During the life of this Contract, the Owner will continue to occupy and operate grounds and walkways everywhere on the Owner's property and all existing buildings. The work of this Contract shall be done, and such temporary facilities and phasing of activities provided, so as not to interfere with access to existing facilities or new work areas, so as to cause the least

possible interference with activities of the Owner, and to protect people and property from harm.

- B. The Contractor shall obtain approval from the Owner before starting work in any area and shall not begin work in any area until preparatory work by the Owner has been accomplished and all environmental control measures are in-place and accepted by the owner.
- C. Owner reserves the right to occupy and to place and install equipment in completed areas of building, before Substantial Completion, provided such occupancy does not interfere with completion of the Work. Such placement of equipment and partial occupancy shall not constitute acceptance of the total Work.
 - 1. Architect will prepare a Certificate of Substantial Completion for the Work or specific portions thereof.
 - 2. Obtain a Certificate of Occupancy from authorities having jurisdiction before Owner occupancy.
 - 3. Before issuance of Certificate of Substantial Completion, mechanical and electrical systems shall be fully operational, and required tests and inspections shall be successfully completed. On occupancy following Substantial Completion, Owner will operate and maintain mechanical and electrical systems serving occupied portions of building.
 - 4. Upon occupancy following Substantial Completion, Owner will assume responsibility for maintenance and custodial service for occupied portions of building.

10. WORK RESTRICTIONS

- A. Phasing
 - 1. Work is to be completed in phases to permit continuous occupancy of a portion of the space
 - 2. Contractor is to provide a Phasing Plan for review and approval by Owner.
 - 3. All building systems are to remain operational and code compliant. Unavoidable shut downs are to be coordinated with the Owner a minimum of 72 hours in advance.
 - 4. Minimum disruption of operation and use of adjacent facilities and access to those facilities is required. Cooperation with Owner to minimize inconvenience is essential.
 - 5. Construction Sequence: Elements of building, construction and renovation work shall be done so that work will be continuous and conform to the agreed scheduling. Trades scheduled for sequential work shall immediately begin work when work of the proceeding trade allows. The Owner shall be notified in advance when systems to be worked on are to be shut down and when they will be ready for testing. Testing by the Owner's agent may require an exception to the above requirement for continuous work.
- B. Work Restrictions, General: Comply with restrictions on construction operations.
 - 1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.
- C. On-Site Work Hours:

1. Work shall be generally performed during normal business working hours of 7:00 a.m. to 6:00 p.m., Monday through Friday, except otherwise indicated.
- D. Special Working Conditions
1. For access to specific areas, department, or any environmental service, the following procedures shall be followed:
 - a. 72-hour notice shall be given during normal working hours, Monday through Friday.
 - b. Contact Person: Contractor will receive from the Owner the name of a contact person or persons for normal hours and after hours, weekends, and holidays.
 - c. Information Required: Type of work (plumbing, heating, etc.), estimated time needed, number of workers involved, types of equipment to be in use, and noise level anticipated.
- E. Protection of Installed Work:
1. Provide temporary protection for installed products. Control traffic in immediate area to minimize damage.
 2. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings. Protect finished floors from traffic, movement of heavy objects, and storage.
 3. Maintain finished surfaces clean, unmarred, and suitably protected until accepted by the Owner.
- F. Contractor shall provide Owner with name and telephone number of contact person to be available at all times.
- G. Penetrations of existing concrete or masonry walls or floors shall be done by core drilling or sawing. No hammers or jack hammers shall be used. Contractor shall schedule this work for times approved by the Owner and shall employ such methods that may be required to limit the airborne and structure-borne noise to levels acceptable to the Owner.
- H. All torch work, internal combustion power equipment, etc. shall be kept to a minimum and shall be scheduled and coordinated with the UCHC Agent and the UCHC Fire Marshal.
- I. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Owner.
1. Notify Owner not less than two days in advance of proposed disruptive operations.
 2. Obtain Owner's written permission before proceeding with disruptive operations.
- J. Nonsmoking Building: Smoking is not permitted within the building or within 25 feet of entrances, operable windows, or outdoor air intakes.
- K. Controlled Substances: Use of tobacco products and other controlled substances within the existing building and on the Project site is not permitted.

- L. Employee Identification: Provide identification tags for Contractor personnel working on Project site. Require personnel to use identification tags at all times.
 - M. AGENCY REPRESENTATIVE
 - 1. The Agency is Gallery 53. The Agency representative for construction, once the contract has been awarded, is David Cooley, 203-494-5575 or his assigned designee.
11. SPECIFICATION FORMATS AND CONVENTIONS
- A. The Specifications and Drawings included in the Project Manual are intended to describe and illustrate all material, labor, and equipment necessary to complete the work.
 - B. Specification Format: The Specifications are organized into Divisions and Sections using the 48-division format and CSI/CSC's "MasterFormat" numbering system.
 - 1. Section Identification: The Specifications use Section numbers and titles to help cross-referencing in the Contract Documents. Sections in the Project Manual are in numeric sequence; however, the sequence is incomplete because all available Section numbers are not used. Consult the table of contents at the beginning of the Project Manual to determine numbers and names of Sections in the Contract Documents.
 - 2. Division 01: Sections in Division 01 govern the execution of the Work of all Sections in the Specifications.
 - C. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
 - 1. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.
 - 2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.
 - a. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
 - D. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:

1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
 2. Abbreviations: Materials and products are identified by abbreviations published as part of the U.S. National CAD Standard and scheduled on Drawings.
- E. The Specifications and Drawings are intended to describe and illustrate existing conditions in general.

Before submitting a bid, the Contractor shall perform his own inspection and become thoroughly familiar with the existing conditions under which the work will be performed.

It is not the intent of the Contract Documents to show all existing conditions, and it shall be the responsibility of the Contractor to verify all existing conditions applicable to this project, and to include in his bid all requirements necessary for the completion of the work, based on the existing conditions.

It is mutually agreed that work under each Section has included the cost of all required items for the accepted, satisfactory, functioning of the entire system without extra compensation.

The contractor will be held responsible for any assumptions, omissions or errors made as a result of failure to become familiar with the site and the contract documents.

- F. In general, the Specifications will describe the quality of the work and the Drawings will describe the extent of the work. The Specifications and Drawings are cooperative and supplementary; however, each item of the work is not necessarily mentioned in both the Specifications and the Drawings. All work necessary to complete the project, so described, is to be included in this Contract.

1. Comply with Division 01 Section "Product Requirements."

- G. In case of disagreement between the Specifications and Drawings, or within either document itself, the Architect shall interpret the Documents to require the better quality or greater quantity of work for the Owner that can reasonably be construed therefrom. Any work performed by the Contractor without consulting the Architect, when the same requires a decision, shall be performed at the Contractor's risk.

12. CODES, STANDARDS AND PERMITS

- A. All work under this contract shall conform to all codes and standards in effect as of the date of receipt of Bids which are applicable to this Project. All work shall also conform to specific requirements and interpretations of local authorities having jurisdiction over the Project. These Codes, standards, and authorities are referred to collectively as "the governing codes and authorities" and similar terms throughout the Specifications. Determination of applicable codes and standards and requirements of the authorities having jurisdiction shall be the responsibility of the Contractor; as shall be the analysis of all such codes and standards in regard to their applicability to the Project for the purposes of determining necessary construction to conform to such code requirements, for securing all approvals and permits necessary to proceed with

construction, and to obtain all permits necessary for the Owner to occupy the facility for its intended use. In the case of conflicts between the requirements of different codes and standards, the most restrictive or stringent requirements shall be met.

- B. The codes that were used in the design of this Project are as follows:
1. 2022 Connecticut State Building Code (CSBC) including:
 - a. 2021 International Building Code (IBC)
 - b. 2021 International Existing Building Code (IEBC)
 - c. 2021 International Mechanical Code (IMC)
 - d. 2021 International Plumbing Code (IPC)
 - e. 2021 International Energy Conservation Code (IECC)
 - f. 2020 NFPA 70 National Electrical Code (NEC).
 - g. 2017 ICC/ANSI A117.1 Accessible and Usable Buildings and Facilities
 2. 2022 Connecticut State Fire Safety Code (CSFSC) including:
 3.
 - a. 2021 NFPA Standard 101 – Life Safety Code.
 4. 2022 Connecticut State Fire Prevention Code (CSFPC) including:
 - a. 2021 NFPA 1 International Fire Code (IFC), including all referenced standards.
 5. Current Connecticut Public Health Code (2009).
 6. Current OSHA.
 7. Connecticut General Statutes.
- C. Code Enforcement and Approvals: Secure the general building permit for the work, and conform to all conditions and requirements of the permit and code enforcement authorities.
- D. The Contractor and each Subcontractor shall identify all permits required from authorities having jurisdiction over the Project for the construction and occupancy of the work. Prepare the necessary applications and submit required plans and documents to obtain such permits in a timely manner.
1. Display all permit cards as required by the authorities, and deliver legible photocopies of all permits to the Owner promptly upon their receipt.
 2. Arrange for all inspections, testing and approvals required for all permits. Notify the Owner, Owner's Representative and Architect at least three business days in advance, so they may arrange to observe.
 3. Comply with all conditions and provide all notices required by all permits.
 4. Perform and/or arrange for and pay for all testing and inspections required by the governing codes and authorities, other than those provided by the Owner, and notify the Owner, Owner's Representative and Architect of such inspections at least three business days in advance, so they may arrange to observe.

5. Where inspecting authorities require corrective work in conjunction with applicable codes and authorities, promptly comply with such requirements, except in cases where such requirements clearly exceed the requirements of the Contract Documents, in which case consult with the Architect before proceeding.

13. OCCUPATIONAL SAFETY AND HEALTH ACT

- A. The Contractor and all Subcontractors shall comply with the requirements of the Occupational Safety and Health Act of 1970 and the Construction Safety Act of 1969, including all standards and regulations which have been promulgated by the Governmental Authorities which administer such Acts. Said requirements, standards and regulations are incorporated herein by reference.
 1. In accordance with Connecticut General Statutes Sec. 31-53b, the project Superintendent must show proof of completing and maintaining the OSHA 10 hour certification requirements in accordance with federal OSHA Training Institute standards.
- B. The Contractor and all Subcontractors shall comply with said regulations, requirements and standards and require and be directly responsible for compliance therewith on the part of his agents, employees material men and Subcontractors; and shall directly receive and be responsible for all citations, assessments, fines or penalties which may be incurred by reason of his agents, employees, material men or Subcontractors failing to so comply.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

SECTION 012100 - ALLOWANCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contractor, Subcontractors, and/or suppliers providing goods or services referenced in or related to this Section shall also be bound by the Documents identified in Division 01 Section "Summary", Paragraph 1.1A, entitled "Related Documents."

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements governing allowances.
 - 1. Certain items are specified in the Contract Documents by allowances. Allowances have been established in lieu of additional requirements and to quantify certain items for the purposes of bidding. If necessary, additional requirements will be issued by Change Order.
- B. Types of allowances include the following:
 - 1. Unit-cost allowances.
- C. Related Sections include the following:
 - 1. Division 01 Section "Contract Modification Procedures" for procedures for submitting and handling Change Orders for allowances.
 - 2. Division 01 Section "Unit Prices" for procedures for using unit prices.
 - 3. Divisions 02 through 33 Sections for items of Work covered by allowances.

1.3 SELECTION AND PURCHASE

- A. At the earliest practical date after award of the Contract, advise Architect of the date when final selection and purchase of each product or system described by an allowance must be completed to avoid delaying the Work.
- B. At Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.

1.4 ACTION SUBMITTALS

- A. Submit proposals for purchase of products or systems included in allowances, in the form specified for Change Orders.

1.5 INFORMATIONAL SUBMITTALS

- A. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.
- B. Submit time sheets and other documentation to show labor time and cost for installation of allowance items that include installation as part of the allowance.
- C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.6 COORDINATION

- A. Coordinate allowance items with other portions of the Work. Furnish templates as required to coordinate installation.

1.7 QUANTITY ALLOWANCES

- A. Allowance shall include cost to Contractor of specific products and materials under allowance and shall include taxes, freight, and delivery to Project site.
- B. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials under allowance shall be included as part of the Contract Sum and not part of the allowance.
- C. For Brick Repointing, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials under allowance shall be included as part of the Allowance.

1.8 ADJUSTMENT OF ALLOWANCES

- A. Allowance Adjustment: To adjust allowance amounts, prepare a Change Order proposal based on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place where applicable. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, and similar margins.

- 1. Include installation costs in purchase amount only where indicated as part of the allowance.

2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other margins claimed.
 3. Submit substantiation of a change in scope of work, if any, claimed in Change Orders related to unit-cost allowances.
 4. Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.
- B. Submit claims for increased costs because of a change in scope or nature of the allowance described in the Contract Documents, whether for the purchase order amount or Contractor's handling, labor, installation, overhead, and profit.
1. Do not include Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of work has changed from what could have been foreseen from information in the Contract Documents.
 2. No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

- A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 SCHEDULE OF ALLOWANCES

- A. Allowance No. 1: Quantity Allowance: For Brick Repointing B1A, Pressed Brick: Remove Patched Repointing, Repoint. Allow for 50 SF of Repointing as shown on the Contract Documents. This allowance includes material cost, receiving, handling, and installation, and Contractor overhead and profit.
- B. Allowance No. 2: Quantity Allowance: For Brick Repointing B1B, Pressed Brick: Repoint. Allow for 40 SF of Repointing as shown on the Contract Documents. This allowance includes material cost, receiving, handling, and installation, and Contractor overhead and profit.

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- C. Allowance No. 3: Quantity Allowance: For Brick Repointing B2, Face Brick: Repoint. Allow for 80 SF of Repointing as shown on the Contract Documents. This allowance includes material cost, receiving, handling, and installation, and Contractor overhead and profit.
- D. Allowance No. 4: Quantity Allowance: For Replacement Pressed Brick. Allow for 10 Replacement Pressed Brick as specified in the Contract Documents. This allowance includes material cost, receiving, handling, and installation, and Contractor overhead and profit.
- E. Allowance No. 5: Quantity Allowance: For Replacement Face Brick. Allow for 24 Replacement Pressed Brick as specified in the Contract Documents. This allowance includes material cost, receiving, handling, and installation, and Contractor overhead and profit.

END OF SECTION 012100

SECTION 012200 - UNIT PRICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contractor, Subcontractors, and/or suppliers providing goods or services referenced in or related to this Section shall also be bound by the Documents identified in Division 01 Section "Summary", Paragraph 1.1A, entitled "Related Documents."

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for unit prices.
- B. Related Sections include the following:
 - Division 01 Section "Allowances" for procedures for using unit prices to adjust quantity allowances.
 - Division 01 Section "Contract Modification Procedures" for procedures for submitting and handling Change Orders.
 - Division 01 Section "Quality Requirements" for general testing and inspecting requirements.

1.3 DEFINITIONS

- A. Unit price is an amount incorporated in the Agreement, applicable during the duration of the Work as a price per unit of measurement for materials or services added to or deducted from the Contract Sum by appropriate modification, if estimated quantities of Work required by the Contract Documents are increased or decreased.

1.4 PROCEDURES

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.

Unit price amounts are net changes in the Contract Sum for additional work and include the Contractor's and any Subcontractor's amount for overhead and profit.
For deleted work, the net credit to the Contract Sum shall be 10% less.

- B. Measurement and Payment: Refer to individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.

- C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.
- D. List of Unit Prices: A list of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 LIST OF UNIT PRICES

- A. Unit Price No. 1: Brick Repointing B1A, Pressed Brick: Removed Patched Repointing, Repoint. Measurement is by SF of wall surface repointed. This allowance includes material cost, receiving, handling, and installation, and Contractor overhead and profit.
- B. Unit Price No. 2: Brick Repointing B1B, Pressed Brick: Repointing, Repoint. Measurement is by SF of wall surface repointed. This allowance includes material cost, receiving, handling, and installation, and Contractor overhead and profit.
- C. Unit Price No. 3: Brick Repointing B2, Face Brick: Repointing, Repoint. Measurement is by SF of wall surface repointed. This allowance includes material cost, receiving, handling, and installation, and Contractor overhead and profit.
- D. Unit Price No. 4: Replacement Pressed Brick. Measurement is per brick removed, replaced and repointed. This allowance includes material cost, receiving, handling, and installation, and Contractor overhead and profit.
- E. Unit Price No. 5: Replacement Face Brick. Measurement is per brick removed, replaced and repointed. This allowance includes material cost, receiving, handling, and installation, and Contractor overhead and profit.

END OF SECTION 012200

SECTION 01-2300 - ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for alternates.

1.3 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
 - 1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
 - 2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.4 PROCEDURES

- A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
 - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated revisions to alternates.
- C. Execute accepted alternates under the same conditions as other work of the Contract.

- D. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.
- E. Alternates shall be valid for the life of the contract and may be selected within 30 days from notice to proceed at no additional cost to the owner. Alternates may be negotiated as applicable, in the event the owner selects the alternate beyond the 30 day period from notice to proceed.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

- A. Alternate No. 1 Restoration of street front fabricated metal cornice and 3 finials.
 - 1. Base Bid: No work on these elements.
 - 2. Alternate: ADD work shown on drawings as ALTERNATE 1.
- B. Alternate No. 2 Restoration of rear (trackside) fabricated metal cornice.
 - 1. Base Bid: No work on this element.
 - 2. Alternate: ADD work shown on drawings as ALTERNATE 2.
- C. Alternate No. 3 Rebuilding of chimney on south wall.
 - 1. Base Bid: No work on this element.
 - 2. Alternate: ADD work shown on drawings as ALTERNATE 3.
- D. Alternate No. 4 Repointing of Pressed Brick on street front and returns.
 - 1. Base Bid: No work of this category.
 - 2. Alternate: ADD work shown on drawings as ALTERNATE 4 for the quantities and prices shown under Allowances including those for replacement brick.
- E. Alternate No. 5 Repointing of Face Brick on sides and rear facade.
 - 1. Base Bid: No work of this category.

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2. Alternate: ADD work shown on drawings as ALTERNATE 5 for the quantities and prices shown under Allowances including those for replacement brick.

END OF SECTION 012300

SECTION 012500 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contractor, Subcontractors, and/or suppliers providing goods or services referenced in or related to this Section shall also be bound by the Documents identified in Division 01 Section "Summary", Paragraph 1.1A, entitled "Related Documents."

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for substitutions.
- B. Related Requirements:
 - 1. Division 01 Section "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.

1.3 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
 - 1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
 - 2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantage to Contractor or Owner.

1.4 ACTION SUBMITTALS

- A. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - 1. Substitution Request Form: Use CSI Form 13.1A.
 - 2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:

- a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.
 - b. Coordination information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
 - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - e. Samples, where applicable or requested.
 - f. Certificates and qualification data, where applicable or requested.
 - g. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
 - h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - i. Research reports evidencing compliance with building code in effect for Project, from ICC-ES.
 - j. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
 - k. Cost information, including a proposal of change, if any, in the Contract Sum.
 - l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
 - m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within 7 days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.
- a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
 - b. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

1.5 QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.

1.6 PROCEDURES

- A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.

1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:

- a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
- b. Substitution request is fully documented and properly submitted.
- c. Requested substitution will not adversely affect Contractor's construction schedule.
- d. Requested substitution has received necessary approvals of authorities having jurisdiction.
- e. Requested substitution is compatible with other portions of the Work.
- f. Requested substitution has been coordinated with other portions of the Work.
- g. Requested substitution provides specified warranty.
- h. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

- B. Substitutions for Convenience: Not allowed.

PART 3 - EXECUTION (Not Used)

END OF SECTION 012500

SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contractor, Subcontractors, and/or suppliers providing goods or services referenced in or related to this Section shall also be bound by the Documents identified in Division 01 Section "Summary", Paragraph 1.1A, entitled "Related Documents."

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Sections include the following:
 - 1. Division 01 Section "Project Management and Coordination" for submitting Requests for Information (RFIs).
 - 2. Division 01 Section "Product Requirements" for administrative procedures for handling requests for substitutions made after Contract award.

1.3 MINOR CHANGES IN THE WORK

- A. Architect will issue supplemental instructions authorizing Minor Changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710, "Architect's Supplemental Instructions" or similar form prepared by Architect.

1.4 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Proposal Requests issued by Architect are for information only. Do not consider them instructions either to stop work in progress or to execute the proposed change.
 - 2. Within 10 days after receipt of Proposal Request, submit a quotation to the Architect, estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.

- b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include costs of labor and supervision directly attributable to the change.
 - d. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
- B. Contractor-Initiated Proposals: If latent or unforeseen conditions require modifications to the Contract, Contractor may propose changes by first submitting a "Request for Information" to the Architect. This request will be responded to by the Architect, wherein the Contractor may submit a Change Order Proposal.
- 1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
 - 2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - 4. Include costs of labor and supervision directly attributable to the change.
 - 5. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 - 6. Comply with requirements in Division 01 Section "Product Requirements" if the proposed change requires substitution of one product or system for product or system specified.

1.5 ADMINISTRATIVE CHANGE ORDERS

- A. Allowance Adjustment: See Division 01 Section "Allowances" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect actual costs of allowances.
- B. Unit-Price Adjustment: See Division 01 Section "Unit Prices" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect measured scope of unit-price work.

1.6 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Proposal Request, the Architect will issue a Change Order for signatures of Owner and Contractor on AIA Document G701 or similar form.

1.7 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Architect may issue a Construction Change Directive on AIA Document G714. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
 - 1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
 - 1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012600

SECTION 012900 – PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contractor, Subcontractors, and/or suppliers providing goods or services referenced in or related to this Section shall also be bound by the Documents identified in Division 01 Section “Summary”, Paragraph 1.1A, entitled “Related Documents.”

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Sections include the following:
 - 1. Division 01 Section "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
 - 2. Division 01 Section "Construction Progress Documentation" for administrative requirements governing preparation and submittal of Contractor's Construction Schedule and Submittals Schedule.

1.3 DEFINITIONS

- A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.4 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule.
 - 1. Correlate line items in the Schedule of Values with other required administrative forms and schedules, including the following:
 - a. Application for Payment forms with Continuation Sheets.
 - b. Submittals Schedule.
 - c. Contractor's Construction Schedule.
 - 2. Submit the Schedule of Values to the Architect at earliest possible date but no later than seven days before the date scheduled for submittal of initial Applications for Payment.

- B. Format and Content: Use the Project Manual table of contents as a guide to establish line items for the Schedule of Values. Provide at least one line item for each Specification Section. For major trades with line item values greater than \$10,000, provide a separate line item for units of work within each trade with a value not exceeding \$10,000.
1. Identification: Include the following Project identification on the Schedule of Values:
 - a. Project name and location.
 - b. Name of Architect.
 - c. Architect's project number.
 - d. Contractor's name and address.
 - e. Date of submittal.
 2. Submit draft of AIA Document G702 and AIA Document G703 Continuation Sheets.
 3. Arrange the Schedule of Values in tabular form with separate columns to indicate the following for each item listed:
 - a. Related Specification Section or Division.
 - b. Description of the Work.
 - c. Name of subcontractor.
 - d. Name of manufacturer or fabricator.
 - e. Name of supplier.
 - f. Change Orders (numbers) that affect value.
 - g. Dollar value.
 - 1) Percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.
 4. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Provide several line items for principal subcontract amounts, where appropriate. Include the following mandatory line items:
 - a. Mobilization.
 - b. Demobilization.
 - c. Builders Risk Insurance.
 - d. Bonds.
 - e. Coordination Drawings.
 - f. Scheduling.
 - g. Project record documents.
 - h. Operation and Maintenance manuals.
 - i. Field Engineering.
 - j. Daily Building Cleanup.
 - k. Safety Program.
 - l. Full-Time Project Manager.
 - m. Full-Time Project Superintendent.
 - n. Field Offices.
 - o. Dumpsters.

- p. Cold Weather Protection.
 - q. Temporary Heat.
 - r. General Contract O&P (not to be included in each line item).
5. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
6. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
- a. Differentiate between items stored on-site and items stored off-site. If specified, include evidence of insurance or bonded warehousing.
7. Provide separate line items in the Schedule of Values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
8. Each item in the Schedule of Values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
- a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values or distributed as general overhead expense, at Contractor's option.
9. Schedule Updating: Update and resubmit the Schedule of Values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.5 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.
- 1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.
- 1. At least ten days before the date established for each formal Application for Payment, the Contractor shall submit to the Architect an itemized preliminary application for payment for review and comment. The Contractor shall then revise the preliminary application and at least two days prior to the date established for formal application, shall submit to the Architect the revised preliminary application, to allow time for the Architect to prepare a written letter of explanation setting forth any objections and recommended changes to be forwarded along with the formal application to the owner.
- C. Payment Application Forms: Use AIA Document G702 and AIA Document G703 Continuation Sheets as form for Applications for Payment.

- D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.
1. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
 2. Include amounts of Change Orders executed before last day of construction period covered by application.
- E. Stored Materials: Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site.
1. Provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment, for stored materials.
 2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
 3. Provide summary documentation for stored materials indicating the following:
 - a. Value of materials previously stored and remaining stored as of date of previous Applications for Payment.
 - b. Value of previously stored materials put in place after date of previous Application for Payment and on or before date of current Application for Payment.
 - c. Value of materials stored since date of previous Application for Payment and remaining stored as of date of current Application for Payment.
- F. Transmittal: Submit THREE (3) signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.
- G. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from every entity who is lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.
1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
 2. When an application shows completion of an item, submit final or full waivers.
 3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
 4. Submit final Application for Payment with or preceded by conditional final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
 5. Waiver Forms: Submit waivers of lien on forms, executed in a manner acceptable to Owner.
- H. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:

1. List of subcontractors.
 2. Schedule of Values.
 3. Contractor's Construction Schedule (preliminary if not final).
 4. Products list.
 5. Schedule of allowances.
 6. Submittals Schedule (preliminary if not final).
 7. List of Contractor's staff assignments.
 8. List of Contractor's principal consultants.
 9. Copies of building permits.
 10. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
 11. Initial progress report.
 12. Report of preconstruction conference.
 13. Certificates of insurance and insurance policies.
 14. Performance and payment bonds.
 15. Data needed to acquire Owner's insurance.
- I. Application for Payment at Substantial Completion: After issuing the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
- J. Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
 5. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
 6. AIA Document G707, "Consent of Surety to Final Payment."
 7. Evidence that claims have been settled.
 8. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012900

SECTION 013100 – PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contractor, Subcontractors, and/or suppliers providing goods or services referenced in or related to this Section shall also be bound by the Documents identified in Division 01 Section “Summary”, Paragraph 1.1A, entitled “Related Documents.”

1.2 SUMMARY

- A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. General coordination procedures.
 - 2. Administrative and supervisory personnel.
 - 3. Project meetings.
 - 4. Requests for Information (RFIs).
- B. Related Sections include the following:
 - 1. Division 01 Section "Construction Progress Documentation" for preparing and submitting Contractor's Construction Schedule.
 - 2. Division 01 Section "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
 - 3. Division 01 Section "Closeout Procedures" for coordinating closeout of the Contract.

1.3 DEFINITIONS

- A. RFI: Request from Contractor seeking interpretation or clarification of the Contract Documents.

1.4 INFORMATIONAL SUBMITTALS

- A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
 - 1. Name, address, and telephone number of entity performing subcontract or supplying products.
 - 2. Number and title of related Specification Section(s) covered by subcontract.

3. Drawing number and detail references, as appropriate, covered by subcontract.
- B. Key Personnel Names: Within 10 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home and office telephone numbers. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.
1. Keep list current at all times, resubmit upon update.
 2. Include the following information, at a minimum:
 - a. Project Manager (on-site a minimum of half time).
 - b. Project Superintendent (on-site full time for the duration of the project).
 - c. Project Engineer.

1.5 GENERAL COORDINATION PROCEDURES

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections that depend on each other for proper installation, connection, and operation.
1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 2. Make adequate provisions to accommodate items scheduled for later installation.
 3. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components, including mechanical and electrical.
 4. No claim for additional compensation or extension of Contract Time will be permitted for conditions resulting from lack of coordination.
- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
1. Preparation of Contractor's Construction Schedule.

2. Preparation of the Schedule of Values.
3. Installation and removal of temporary facilities and controls.
4. Delivery and processing of submittals.
5. Preinstallation conferences.
6. Progress meetings.
7. Startup and adjustment of systems.
8. Project closeout activities.

1.6 ADMINISTRATIVE AND SUPERVISORY PERSONNEL

- A. General: In addition to Project superintendent, provide other administrative and supervisory personnel as required for proper performance of the Work.

1.7 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated.

1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner, Owner's Representative, and Architect of scheduled meeting dates and times.
2. Agenda: Prepare the meeting agenda and distribute the agenda to all invited attendees.
3. Minutes: Record significant discussions and agreements achieved and distribute the meeting minutes to everyone concerned, including Owner, Owner's Representative and Architect, within three days of the meeting.

- B. Preconstruction Conference: Arrange for attendance of subcontractors at Preconstruction Conference convened by Architect, together with any other persons necessary for full review of scheduling and coordination matters for the Project.

1. Attendees: Authorized representatives of Owner, Owner's Representative, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
2. Agenda: Include the following:
 - a. Tentative construction schedule.
 - b. Phasing.
 - c. Critical work sequencing and long-lead items.
 - d. Designation of key personnel and their duties.
 - e. Procedures for processing field decisions and Change Orders.
 - f. Procedures for RFIs.
 - g. Procedures for testing and inspecting.
 - h. Procedures for processing Applications for Payment.
 - i. Distribution of the Contract Documents.

- j. Submittal procedures.
 - k. Preparation of Record Documents.
 - l. Use of the premises.
 - m. Work restrictions.
 - n. Owner's occupancy requirements.
 - o. Responsibility for temporary facilities and controls.
 - p. Construction waste management and recycling.
 - q. Parking availability.
 - r. Office, work, and storage areas.
 - s. Equipment deliveries and priorities.
 - t. First aid.
 - u. Security.
 - v. Progress cleaning.
 - w. Working hours.
 - x. Owner-furnished and provided items.
 - y. Work performed under separate contracts.
3. Minutes: The Architect will record and distribute meeting minutes.
- C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.
- 1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect and Owner's Representative of scheduled meeting dates.
 - 2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
 - a. The Contract Documents.
 - b. Options.
 - c. Related RFIs.
 - d. Related Change Orders.
 - e. Purchases.
 - f. Deliveries.
 - g. Submittals.
 - h. Review of mockups.
 - i. Possible conflicts.
 - j. Compatibility problems.
 - k. Time schedules.
 - l. Weather limitations.
 - m. Manufacturer's written recommendations.
 - n. Warranty requirements.
 - o. Compatibility of materials.
 - p. Acceptability of substrates.
 - q. Temporary facilities and controls.
 - r. Space and access limitations.

- s. Regulations of authorities having jurisdiction.
 - t. Testing and inspecting requirements.
 - u. Installation procedures.
 - v. Coordination with other work.
 - w. Required performance results.
 - x. Protection of adjacent work.
 - y. Protection of construction and personnel.
3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
 4. Reporting: Distribute minutes of the meeting to each party present, the Owner, Architect and Owner's Representative, and to parties who should have been present.
 5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.
- D. Progress Meetings: Schedule weekly progress meetings. Coordinate dates of meetings with preparation of payment requests.
1. Attendees: In addition to representatives of Owner, Owner's Representative, and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 2. Agenda: Review minutes of previous progress meeting. Review other items of significance that could affect progress.
 - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - 1) Review schedule for next period.
 - b. Review present and future needs of each entity present, including the following:
 - 1) Interface requirements.
 - 2) Sequence of operations.
 - 3) Deliveries.
 - 4) Access.
 - 5) Site utilization.
 - 6) Temporary facilities and controls.
 - 7) Work hours.
 - 8) Hazards and risks.
 - 9) Progress cleaning.

- 10) Quality and work standards.
 - 11) Status of correction of deficient items.
 - 12) Field observations.
 - 13) RFIs.
 - 14) Status of proposal requests.
 - 15) Pending changes.
 - 16) Status of Change Orders.
 - 17) Status of Submissions.
 - 18) Off site fabrication.
 - 19) Pending claims and disputes.
 - 20) Documentation of information for payment requests.
3. Minutes: The Architect will record and distribute the meeting minutes.
 4. Reporting: The Architect will distribute minutes of the meeting to each party present.
 - a. Schedule Updating: Revise Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.
- E. Coordination Meetings: Schedule Project coordination meetings at weekly intervals. Project coordination meetings are in addition to specific meetings held for other purposes.
1. Attendees: In addition to representatives of the Contractor, each subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 2. Agenda: Review and correct or approve minutes of the previous coordination meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Combined Contractor's Construction Schedule: Review progress since the last coordination meeting. Determine whether each contract is on time, ahead of schedule, or behind schedule, in relation to Combined Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - b. Schedule Updating: Revise Combined Contractor's Construction Schedule after each coordination meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with report of each meeting.
 - c. Review present and future needs of each contractor present, including the following:
 - 1) Interface requirements.
 - 2) Sequence of operations.
 - 3) Deliveries.

- 4) Access.
 - 5) Site utilization.
 - 6) Temporary facilities and controls.
 - 7) Work hours.
 - 8) Hazards and risks.
 - 9) Progress cleaning.
 - 10) Quality and work standards.
 - 11) Change Orders.
3. Reporting: Record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

1.8 REQUESTS FOR INFORMATION (RFIs)

- A. Procedure: Immediately on discovery of the need for interpretation of the Contract Documents, and if not possible to request interpretation at Project meeting, prepare and submit an RFI, to the Architect, in the form specified.
1. RFIs shall originate with Contractor or Subcontractor. RFIs submitted by entities other than the Contractor will be returned with no response.
 2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
- B. Content of the RFI: Include a detailed, legible description of item needing interpretation and the following:
1. Project name.
 2. Date.
 3. Name of Contractor.
 4. Name of Architect.
 5. RFI Subject.
 6. RFI number, numbered sequentially.
 7. Specification Section number and title and related paragraphs, as appropriate.
 8. Drawing number and detail references, as appropriate.
 9. Field dimensions and conditions, as appropriate.
 10. Contractor's suggested solution(s). If Contractor's solution(s) impact the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
 11. Contractor's signature.
 12. Attachments: Include drawings, descriptions, measurements, photos, Product Data, Shop Drawings, and other information necessary to fully describe items needing interpretation.
 - a. Supplementary drawings prepared by Contractor shall include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments.
- C. Software-Generated RFIs:

1. Identify each page of attachments with the RFI number and sequential page number.
 2. RFI and attachments shall be electronic files in Adobe Acrobat PDF format.
- D. Architect's Action: Architect will review each RFI, determine action required, and return it. Allow five working days for Architect's response for each RFI. RFIs received after 1:00 p.m. will be considered as received the following working day.
1. The following RFIs will be returned without action:
 - a. Requests for approval of submittals.
 - b. Requests for approval of substitutions.
 - c. Requests for coordination information already indicated in the Contract Documents.
 - d. Requests for adjustments in the Contract Time or the Contract Sum.
 - e. Requests for interpretation of Architect's actions on submittals.
 - f. Incomplete RFIs or RFIs with numerous errors.
 - g. Requests for approval of Contractor's means and methods.
 2. Architect's action may include a request for additional information, in which case Architect's time for response will start again.
 3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Division 01 Section "Contract Modification Procedures."
 - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within 10 days of receipt of the RFI response.
- E. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within five days if Contractor disagrees with response.
- F. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log biweekly. Include the following:
1. Project name.
 2. Name and address of Contractor.
 3. Name and address of Architect.
 4. RFI number including RFIs that were dropped and not submitted.
 5. RFI description.
 6. Date the RFI was submitted.
 7. Date Architect's response was received.
 8. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.

GALLERY 53
53 COLONY STREET
ROOFING, MASONRY AND CORNICE REPAIRS
MERIDEN, CT
Project No. 51961.10

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100

SECTION 013200 – CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contractor, Subcontractors, and/or suppliers providing goods or services referenced in or related to this Section shall also be bound by the Documents identified in Division 01 Section “Summary”, Paragraph 1.1A, entitled “Related Documents.”

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
 - 1. Preliminary Construction Schedule.
 - 2. Contractor's Construction Schedule.
 - 3. Daily construction reports.
 - 4. Material location reports.
 - 5. Field condition reports.
 - 6. Special reports.
 - 7. Certified payroll records.
- B. Related Sections include the following:
 - 1. Division 01 Section "Payment Procedures" for submitting the Schedule of Values.
 - 2. Division 01 Section "Project Management and Coordination" for submitting and distributing meeting and conference minutes.
 - 3. Division 01 Section "Submittal Procedures" for submitting schedules and reports.
 - 4. Division 01 Section "Quality Requirements" for submitting a schedule of tests and inspections.

1.3 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
 - 1. Critical activities are activities on the critical path. They must start and finish on the planned early start and finish times.
 - 2. Predecessor Activity: An activity that precedes another activity in the network.
 - 3. Successor Activity: An activity that follows another activity in the network.

- B. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of Project.
- C. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.
- D. Event: The starting or ending point of an activity.
- E. Float: The measure of leeway in starting and completing an activity.
 - 1. Float time belongs to Owner.
 - 2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.
 - 3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.
- F. Fagnets: A partial or fragmentary network that breaks down activities into smaller activities for greater detail.
- G. Major Area: A story of construction, a separate building, or a similar significant construction element.
- H. Milestone: A key or critical point in time for reference or measurement.
- I. Network Diagram: A graphic diagram of a network schedule, showing activities and activity relationships.
- J. Resource Loading: The allocation of manpower and equipment necessary for the completion of an activity as scheduled.

1.4 INFORMATION SUBMITTALS

- A. Submittals, General: Submit schedules and reports electronically in accordance with Division 01 Section "Submittal Procedures."
- B. Contractor's Construction Schedule: Submit two opaque copies of initial schedule, large enough to show entire schedule for entire construction period.
 - 1. Submit an electronic copy of schedule, using software indicated, and labeled to comply with requirements for submittals. Include type of schedule (Initial or Updated) and date on label.
- C. Daily Construction Reports: Submit two copies at weekly intervals, to the Architect.
- D. Material Location Reports: Submit two copies at monthly intervals, to the Architect.

- E. Field Condition Reports: Submit two copies at time of discovery of differing conditions, to the Architect.
- F. Special Reports: Submit two copies at time of unusual event, to the Architect.
- G. Certified Payroll Records: Submit two copies at weekly intervals to Owner's Representative.

1.5 QUALITY ASSURANCE

- A. Review and approval by the Owner and Owner's Representative of the Contractor's Construction Schedule is advisory only and does not relieve the Contractor of the responsibility for completing the work within the Contract time.

1.6 COORDINATION

- A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.
- B. Coordinate Contractor's Construction Schedule with the Schedule of Values, list of subcontracts, Submittals Schedule, progress reports, payment requests, and other required schedules and reports.
 - 1. Secure time commitments for performing critical elements of the Work from parties involved.
 - 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.
- C. Calendar: Compile a project calendar for use in scheduling. Incorporate all limitations on working days and working hours, including the following:
 - 1. Legal Holidays.
 - 2. Other non-working days determined by the Contractor.
 - 3. Optional working days determined by the Contractor.

PART 2 - PRODUCTS

2.1 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Time Frame: Extend schedule from date established for commencement of the Work to date of Substantial Completion.
 - 1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.

- B. Activities: Treat each story or separate area as a separate numbered activity for each principal element of the Work. Comply with the following:
1. Activity Duration: Define activities so no activity is longer than 10 days, unless specifically allowed by Architect.
 2. Procurement Activities: Include procurement process activities for the following long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
 3. Submittal Review Time: Include review and resubmittal times indicated in Division 01 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with Submittals Schedule.
 4. Startup and Testing Time: Include not less than one day for startup and testing.
 5. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect's and Owner's Representative's administrative procedures necessary for certification of Substantial Completion.
- C. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
1. Work under More Than One Contract: Include a separate activity for each contract.
 2. Work by Owner: Include a separate activity for each portion of the Work performed by Owner.
 3. Work Restrictions: Show the effect of the following items on the schedule:
 - a. Partial occupancy before Substantial Completion.
 - b. Use of premises restrictions.
 - c. Provisions for future construction.
 - d. Seasonal variations.
 - e. Environmental control.
 4. Work Stages: Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:
 - a. Subcontract awards.
 - b. Submittals.
 - c. Purchases.
 - d. Mockups.
 - e. Fabrication.
 - f. Sample testing.
 - g. Deliveries.
 - h. Installation.
 - i. Tests and inspections.
 - j. Adjusting.
 - k. Curing.
 - l. Startup and placement into final use and operation.

5. Other Constraints: Include the following specific activities in each trade in each phase.
 - a. Interface between Contractor and Subcontractor.
 - b. Electrical connections to each piece of equipment.
 - c. Mechanical connections to each piece of equipment.
 - d. Concrete finishing.
 - e. Site work constraints on other activities.
 - D. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and Final Completion.
 - E. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using fragnets to demonstrate the effect of the proposed change on the overall project schedule.
 - F. Upcoming Work Summary: Prepare summary report indicating activities scheduled to occur or commence prior to submittal of next schedule update. Summarize the following issues:
 1. Unresolved issues.
 2. Unanswered Requests for Information.
 3. Rejected or unreturned submittals.
 4. Notations on returned submittals.
 5. Pending modifications affecting the Work and Contract Time.
 - G. Recovery Schedule: When periodic update indicates the Work is 14 or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule. Indicate changes to working hours, working days, crew sizes, and equipment required to achieve compliance, and date by which recovery will be accomplished.
 - H. Computer Software: Prepare schedules using a program that has been developed specifically to manage construction schedules.
- 2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE (CPM SCHEDULE)
- A. General: Prepare network diagrams using AON (activity-on-node) format.
 - B. Preliminary Network Diagram: Submit diagram within 14 days of date established for commencement of the Work. Outline significant construction activities for the first 60 days of construction. Include skeleton diagram for the remainder of the Work and a cash requirement prediction based on indicated activities.
 - C. CPM Schedule: Prepare Contractor's Construction Schedule using a computerized, time-scaled CPM network analysis diagram for the Work.

1. Develop network diagram in sufficient time to submit CPM schedule so it can be accepted for use no later than 30 days after date established for commencement of the Work.
 - a. Failure to include any work item required for performance of this Contract shall not excuse Contractor from completing all work within applicable completion dates, regardless of Architect's approval of the schedule.
 2. Establish procedures for monitoring and updating CPM schedule and for reporting progress. Coordinate procedures with progress meeting and payment request dates.
 3. Use "one workday" as the unit of time. Include list of nonworking days and holidays incorporated into the schedule.
- D. CPM Schedule Preparation: Prepare a list of all activities required to complete the Work. Using the preliminary network diagram, prepare a skeleton network to identify probable critical paths.
1. Activities: Indicate the estimated time duration, sequence requirements, and relationship of each activity in relation to other activities. Include estimated time frames for the following activities:
 - a. Preparation and processing of submittals.
 - b. Mobilization and demobilization.
 - c. Purchase of materials.
 - d. Delivery.
 - e. Fabrication.
 - f. Utility interruptions.
 - g. Installation.
 - h. Work by Owner that may affect or be affected by Contractor's activities.
 - i. Testing and commissioning.
 2. Critical Path Activities: Identify critical path activities, including those for interim completion dates. Scheduled start and completion dates shall be consistent with Contract milestone dates.
 3. Processing: Process data to produce output data on a computer-drawn, time-scaled network. Revise data, reorganize activity sequences, and reproduce as often as necessary to produce the CPM schedule within the limitations of the Contract Time.
 4. Format: Mark the critical path. Locate the critical path near center of network; locate paths with most float near the edges.
 - a. Subnetworks on separate sheets are permissible for activities clearly off the critical path.
- E. Initial Issue of Schedule: Prepare initial network diagram from a list of straight "early start-total float" sort. Identify critical activities. Prepare tabulated reports showing the following:
1. Contractor or subcontractor and the Work or activity.

2. Description of activity.
3. Principal events of activity.
4. Immediate preceding and succeeding activities.
5. Early and late start dates.
6. Early and late finish dates.
7. Activity duration in workdays.
8. Total float or slack time.
9. Average size of workforce.
10. Dollar value of activity (coordinated with the Schedule of Values).

F. Schedule Updating: Concurrent with making revisions to schedule, prepare tabulated reports showing the following:

1. Identification of activities that have changed.
2. Changes in early and late start dates.
3. Changes in early and late finish dates.
4. Changes in activity durations in workdays.
5. Changes in the critical path.
6. Changes in total float time.
7. Changes in the Contract Time.

2.3 REPORTS

A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:

1. List of subcontractors at Project site.
2. List of separate contractors at Project site.
3. Approximate count of personnel at Project site.
4. Equipment at Project site.
5. Material deliveries.
6. High and low temperatures and general weather conditions.
7. Accidents.
8. Meetings and significant decisions.
9. Unusual events (refer to special reports).
10. Stoppages, delays, shortages, and losses.
11. Meter readings and similar recordings.
12. Emergency procedures.
13. Orders and requests of authorities having jurisdiction.
14. Change Orders received and implemented.
15. Construction Change Directives received and implemented.
16. Services connected and disconnected.
17. Equipment or system tests and startups.
18. Partial Completions and occupancies.
19. Substantial Completions authorized.

- B. Material Location Reports: At monthly intervals, prepare and submit a comprehensive list of materials delivered to and stored at Project site. List shall be cumulative, showing materials previously reported plus items recently delivered. Include with list a statement of progress on and delivery dates for materials or items of equipment fabricated or stored away from Project site.
- C. Field Condition Reports: Immediately on discovery of a difference between field conditions and the Contract Documents, prepare and submit a detailed report. Submit with a request for interpretation. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

2.4 SPECIAL REPORTS

- A. General: Submit special reports directly to Owner within one day of an occurrence. Distribute copies of report to parties affected by the occurrence.
- B. Reporting Unusual Events: When an event of an unusual and significant nature occurs at Project site, whether or not related directly to the Work, prepare and submit a special report. List chain of events, persons participating, response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise Owner in advance when these events are known or predictable.

2.5 CERTIFIED PAYROLL RECORDS

- A. The Contractor and each Subcontractor are required to submit a certified payroll with a statement of compliance on a weekly basis.
- B. The Owner has the authority to verify payroll reports by checking employees' pay stubs and personal identification.
- C. The Owner may withhold a portion of the Application for Payment if payroll reports have not been submitted for a portion of the Work.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before submission of Application for Payment.
 - 1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.

GALLERY 53
53 COLONY STREET
ROOFING, MASONRY AND CORNICE REPAIRS
MERIDEN, CT
Project No. 51961.10

2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
 3. As the Work progresses, indicate Actual Completion percentage for each activity.
 4. Evaluate progress of the work jointly with the Owner and Owner's Representative at the end of each week to show progress and identify conflicts.
- B. Distribution: Distribute two copies each of approved schedule to Architect, Owner, Owner's Representative, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
1. Post copies in Project meeting rooms and temporary field offices.
 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION 013200

SECTION 01330 – SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contractor, Subcontractors, and/or suppliers providing goods or services referenced in or related to this Section shall also be bound by the Documents identified in Division 01 Section “Summary”, Paragraph 1.1A, entitled “Related Documents.”

1.2 SUMMARY

- A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. Related Sections include the following:
 - 1. Division 01 Section "Payment Procedures" for submitting Applications for Payment and the Schedule of Values.
 - 2. Division 01 Section "Project Management and Coordination" for submitting and distributing meeting and conference minutes and for submitting Coordination Drawings.
 - 3. Division 01 Section "Construction Progress Documentation" for submitting schedules and reports, including Contractor's Construction Schedule and the Submittals Schedule.
 - 4. Division 01 Section "Quality Requirements" for submitting test and inspection reports and for mockup requirements.
 - 5. Division 01 Section “Product Requirements” for product substitutions.
 - 6. Division 01 Section "Closeout Procedures" for submitting warranties.
 - 7. Division 01 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
 - 8. Division 01 Section "Operation and Maintenance Data" for submitting operation and maintenance manuals.
 - 9. Division 01 Section "Demonstration and Training" for submitting videotapes of demonstration of equipment and training of Owner's personnel.
 - 10. Divisions 02 through 34 Sections for specific requirements for submittals in those Sections.

1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information that requires Architect's responsive action.
- B. Informational Submittals: Written information that does not require Architect's responsive action. Submittals may be rejected for not complying with requirements.

- C. File Transfer Protocol (FTP): Communications protocol that enables transfer of files to and from another computer over a network and that serves as the basis for standard Internet protocols. An FTP site is a portion of a network located outside of network firewalls within which internal and external users are able to access files.
- D. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

1.4 ACTION SUBMITTALS

- A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and additional time for handling and reviewing submittals required by those corrections.
 - 1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
 - 2. Initial Submittal: Submit concurrently with startup construction schedule. Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
 - 3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's construction schedule.
 - a. Submit revised submittal schedule to reflect changes in current status and timing for submittals.
 - 4. Format: Arrange the following information in a tabular format:
 - a. Scheduled date for first submittal.
 - b. Specification Section number and title.
 - c. Submittal category: Action; informational.
 - d. Name of subcontractor.
 - e. Description of the Work covered.
 - f. Scheduled date for Architect's final release or approval.
 - g. Scheduled date of fabrication.
 - h. Scheduled dates for purchasing.
 - i. Scheduled dates for installation.
 - j. Activity or event number.

1.5 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. General: Electronic copies of CAD Drawings of the Contract Drawings will not be provided by Architect for Contractor's use in preparing submittals, except as permitted in Division 01 Section "Project Management and Coordination" for use in preparing coordination drawings.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
 3. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
1. Initial Review: Allow two weeks for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 3. Resubmittal Review: Allow two weeks for review of each resubmittal.
 - a. Resubmittals will be reviewed no more than two times at the Owner's expense. Resubmittals which fail to comply with Contract requirements will be reviewed at the Contractor's expense, based on an hourly rate of \$75 per hour, not to exceed \$600 for each subsequent submittal.
 - b. The Owner reserves the right to deduct said reimbursement from the Contractor's application for payment on a monthly basis.
 4. Concurrent Consultant Review: Submittals may be transmitted simultaneously to Architect and to Architect's consultants, as required. Allow two weeks for review of each submittal. Consultant will return submittal to Architect before being returned to Contractor.
- D. Identification: Place a permanent label or title block on each submittal for identification.
1. Indicate name of firm or entity that prepared each submittal on label or title block.

2. Provide a space approximately 6 by 8 inches on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
 3. Include the following information on label for processing and recording action taken:
 - a. Project name.
 - b. Date.
 - c. Name and address of Architect.
 - d. Name and address of Contractor.
 - e. Name and address of subcontractor.
 - f. Name and address of supplier.
 - g. Name of manufacturer.
 - h. Submittal number or other unique identifier, including revision identifier.
 - 1) Submittal number shall use Specification Section number followed by a decimal point and then a sequential number (e.g., 061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., 061000.01.A).
 - i. Number and title of appropriate Specification Section.
 - j. Drawing number and detail references, as appropriate.
 - k. Location(s) where product is to be installed, as appropriate.
 - l. Other necessary identification.
 - m. Each item submitted shall bear the Contractor's certification (stamp) that the information submitted is in **conformance** with the Contract Documents. Submittals received without such stamp shall be returned without action.
- E. Paper Submittals: Place a permanent label or title block on each submittal item for identification.
1. Indicate name of firm or entity that prepared each submittal on label or title block.
 2. Provide a space approximately 6 by 8 inches on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
 3. Include the following information for processing and recording action taken:
 - a. Project name.
 - b. Date.
 - c. Name of Architect.
 - d. Name of Contractor.
 - e. Name of subcontractor.
 - f. Name of supplier.
 - g. Name of manufacturer.
 - h. Submittal number or other unique identifier, including revision identifier.
 - 1) Submittal number shall use Specification Section number followed by a decimal point and then a sequential number (e.g., 061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., 061000.01.A).

- i. Number and title of appropriate Specification Section.
 - j. Drawing number and detail references, as appropriate.
 - k. Location(s) where product is to be installed, as appropriate.
 - l. Other necessary identification.
 4. Additional Paper Copies: Unless additional copies are required for final submittal, and unless Architect observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.
 - a. Submit one copy of submittal to concurrent reviewer in addition to specified number of copies to Architect.
 5. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will return submittals, without review, received from sources other than Contractor.
 - a. Transmittal Form: Provide locations on form for the following information:
 - 1) Revise list below to suit Project.
 - 2) Project name.
 - 3) Date.
 - 4) Destination (To:).
 - 5) Source (From:).
 - 6) Names of subcontractor, manufacturer, and supplier.
 - 7) Category and type of submittal.
 - 8) Submittal purpose and description.
 - 9) Specification Section number and title.
 - 10) Drawing number and detail references, as appropriate.
 - 11) Transmittal number, numbered consecutively.
 - 12) Submittal and transmittal distribution record.
 - 13) Remarks.
 - 14) Signature of transmitter.
 6. On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same label information as related submittal.
- F. Electronic Submittals: All submissions except material Samples for Initial Selection and Samples for Verification are to be submitted electronically. Identify and incorporate information in each electronic submittal file as follows:
 1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
 2. Name file with submittal number or other unique identifier, including revision identifier.

- a. File name shall use project identifier and Specification Section number followed by a decimal point and then a sequential number (e.g., G53-061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., G53-061000.01.A).
3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect.
 4. Transmittal Form for Electronic Submittals: Use electronic form acceptable to Owner, containing the following information:
 - a. Project name.
 - b. Date.
 - c. Name and address of Architect.
 - d. Name of Contractor.
 - e. Name of firm or entity that prepared submittal.
 - f. Names of subcontractor, manufacturer, and supplier.
 - g. Category and type of submittal.
 - h. Submittal purpose and description.
 - i. Specification Section number and title.
 - j. Specification paragraph number or drawing designation and generic name for each of multiple items.
 - k. Drawing number and detail references, as appropriate.
 - l. Location(s) where product is to be installed, as appropriate.
 - m. Related physical samples submitted directly.
 - n. Indication of full or partial submittal.
 - o. Transmittal number.
 - p. Submittal and transmittal distribution record.
 - q. Other necessary identification.
 - r. Remarks.
- G. Options: Identify options requiring selection by Architect.
- H. Deviations and Additional Information: On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same identification information as related submittal.
- I. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
1. Note date and content of previous submittal.
 2. Note date and content of revision in label or title block and clearly indicate extent of revision.
 3. Resubmit submittals until they are marked "No Exception Taken" or "Approved as Corrected."

- J. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- K. Use for Construction: Use only final submittals with mark indicating “No Exception Taken” or “Make Corrections Noted” taken by Architect.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

- A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
 - 1. Submit electronic submittals via email as PDF electronic files.
 - a. Architect will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
 - 1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
 - 2. Mark each copy of each submittal to show which products and options are applicable.
 - 3. Include the following information, as applicable:
 - a. Manufacturer's catalog cuts.
 - b. Manufacturer's product specifications.
 - c. Standard color charts.
 - d. Statement of compliance with specified referenced standards.
 - e. Testing by recognized testing agency.
 - f. Application of testing agency labels and seals.
 - g. Notation of coordination requirements.
 - h. Availability and delivery time information.
 - 4. For equipment, include the following in addition to the above, as applicable:
 - a. Wiring diagrams showing factory-installed wiring.
 - b. Printed performance curves.
 - c. Operational range diagrams.
 - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
 - 5. Submit Product Data before or concurrent with Samples.

6. Submit Product Data in one of the following formats:
 - a. PDF electronic file.
 - b. Five paper copies of Product Data, unless otherwise indicated. Architect will return four copies. Mark up and retain one returned copy as a Project Record Document.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
 1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Dimensions.
 - b. Identification of products.
 - c. Fabrication and installation drawings.
 - d. Roughing-in and setting diagrams.
 - e. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
 - f. Shopwork manufacturing instructions.
 - g. Templates and patterns.
 - h. Schedules.
 - i. Design calculations.
 - j. Compliance with specified standards.
 - k. Notation of coordination requirements.
 - l. Notation of dimensions established by field measurement.
 - m. Relationship to adjoining construction clearly indicated.
 - n. Seal and signature of professional engineer if specified.
 - o. Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.
 2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 30 by 42 inches.
 3. Number of Copies: Submit five paper copies of each submittal, unless copies are required for operation and maintenance manuals. Submit six copies where copies are required for operation and maintenance manuals. Architect will retain two copies; remainder will be returned. Mark up and retain one returned copy as a Project Record Drawing.
- D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
 1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
 2. Identification: Attach label on unexposed side of Samples that includes the following:

- a. Generic description of Sample.
 - b. Product name and name of manufacturer.
 - c. Sample source.
 - d. Number and title of appropriate Specification Section.
3. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
- a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
 - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
4. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
- a. Number of Samples: Submit two full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.
5. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
- a. Number of Samples: Submit three sets of Samples. Architect will retain two Sample sets; remainder will be returned. Mark up and retain one returned Sample set as a Project Record Sample.
 - 1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
 - 2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.
- E. Product Schedule or List: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
1. Type of product. Include unique identifier for each product.

2. Number and name of room or space.
 3. Location within room or space.
 4. Number of Copies: Submit five copies of product schedule or list, unless otherwise indicated. Architect will return four copies.
 - a. Mark up and retain one returned copy as a Project Record Document.
- F. Contractor's Construction Schedule: Comply with requirements specified in Division 01 Section "Construction Progress Documentation" for Architect's action.
- G. Application for Payment and Schedule of Values: Comply with requirements specified in Division 01 Section "Payment Procedures."
- H. Test and Inspection Reports and Schedule of Tests and Inspections Submittals: Comply with requirements specified in Division 01 Section "Quality Requirements."
- I. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Division 01 Section "Closeout Procedures."
- J. Maintenance Data: Comply with requirements specified in Division 01 Section "Operation and Maintenance Data."
- K. Coordination Drawings: Comply with requirements specified in Division 01 Section "Project Management and Coordination."
- L. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
- M. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification (WPS) and Procedure Qualification Record (PQR) on AWS forms. Include names of firms and personnel certified.
- N. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- O. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- P. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- Q. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.

- R. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- S. Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- T. Research/Evaluation Reports: Prepare written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
1. Name of evaluation organization.
 2. Date of evaluation.
 3. Time period when report is in effect.
 4. Product and manufacturers' names.
 5. Description of product.
 6. Test procedures and results.
 7. Limitations of use.
- U. Preconstruction Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
- V. Compatibility Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- W. Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- X. Design Data: Prepare written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.
- Y. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer. Include the following, as applicable:
1. Preparation of substrates.

2. Required substrate tolerances.
 3. Sequence of installation or erection.
 4. Required installation tolerances.
 5. Required adjustments.
 6. Recommendations for cleaning and protection.
- Z. Manufacturer's Field Reports: Prepare written information documenting factory-authorized service representative's tests and inspections. Include the following, as applicable:
1. Name, address, and telephone number of factory-authorized service representative making report.
 2. Statement on condition of substrates and their acceptability for installation of product.
 3. Statement that products at Project site comply with requirements.
 4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
 5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 6. Statement whether conditions, products, and installation will affect warranty.
 7. Other required items indicated in individual Specification Sections.
- AA. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.
- BB. Material Safety Data Sheets (MSDSs): Submit information as required by law.

2.2 DELEGATED DESIGN

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.
- B. Delegated-Design Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit five copies of a statement, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.
- B. Project Closeout and Maintenance Material Submittals: See requirements in Division 01 Section "Closeout Procedures."
- C. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ARCHITECT'S ACTION

- A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or modifications required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:
 - 1. "No Exception Taken": The portion of Work covered by the submittal may proceed provided it complies with the Contract Documents.
 - 2. "Approved as Corrected": The portion of Work covered by the submittal may proceed provided it complies with notations or corrections on the submittal, and with the Contract Documents.
 - 3. "Not Approved" or "Revise and Resubmit": Revise or prepare a new submittal in accordance with notations; resubmit. Do not proceed with that portion of the Work covered by the submittal.
- C. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- D. Incomplete or partial submittals are not acceptable, will be considered nonresponsive, and will be returned without review.
- E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

3.3 OWNER'S ACTION

- A. Except for submittals for record, information or similar purposes, where action and return is required or requested, the UCHC will review each submittal, mark to indicate action taken, and return promptly.

Compliance with specified characteristics is the Contractor's responsibility.

- B. Action Stamp: The UCHC will stamp each submittal with a uniform, self-explanatory action stamp. The stamp will be appropriately marked, as follows, to indicate the action taken:
1. Final Unrestricted Release: Where submittals are marked "No Exceptions Taken," that part of the Work covered by the submittal may proceed provided it complies with requirements of the Contract Documents; final acceptance will depend upon that compliance.
 2. Final-But-Restricted Release: When submittals are marked "Make Corrections Noted," that part of the Work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the Contract Documents; final acceptance will depend on that compliance.
 3. Returned for Resubmittal: When submittal is marked "Amend and Resubmit," or "Rejected," do not proceed with that part of the Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal in accordance with the notations; resubmit without delay. Repeat if necessary to obtain a different action mark.
 - a. Do not permit submittals marked "Amend and Resubmit," or "Rejected" to be used at the Project site, or elsewhere where Work is in progress.
 4. Other Action: Where a submittal is primarily for information or record purposes, special processing or other activity, the submittal will be returned, marked "Action Not Required"

END OF SECTION 013300

SECTION 014000 – QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contractor, Subcontractors, and/or suppliers providing goods or services referenced in or related to this Section shall also be bound by the Documents identified in Division 01 Section “Summary”, Paragraph 1.1A, entitled “Related Documents.”

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
 - 3. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner, Owner’s Representative, or authorities having jurisdiction are not limited by provisions of this Section.
- C. Related Sections include the following:
 - 1. Division 01 Section "Construction Progress Documentation" for developing a schedule of required tests and inspections.
 - 2. Division 01 Section "Cutting and Patching" for repair and restoration of construction disturbed by testing and inspecting activities.
 - 3. Divisions 02 through 34 Sections for specific test and inspection requirements.

1.3 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.

- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect or Owner's Representative.
- C. Mockups: Full-size, physical assemblies that are constructed on-site. Mockups are used to verify selections made under sample submittals, to demonstrate aesthetic effects and, where indicated, qualities of materials and execution, and to review construction, coordination, testing, or operation; they are not Samples.
1. Approved mockups establish the standard by which the Work will be judged.
 2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
 3. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.
- D. Preconstruction Testing: Tests and inspections that are performed specifically for the Project before products and materials are incorporated into the Work to verify performance or compliance with specified criteria.
- E. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with industry standards.
- F. Source Quality-Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.
- G. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- H. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- I. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
1. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.
- J. Experienced: When used with an entity, "experienced" means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.4 CONFLICTING REQUIREMENTS

- A. General: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Architect for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.5 SUBMITTALS

- A. Qualification Data: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- B. Schedule of Tests and Inspections: Prepare in tabular form and include the following:
 - 1. Specification Section number and title.
 - 2. Description of test and inspection.
 - 3. Identification of applicable standards.
 - 4. Identification of test and inspection methods.
 - 5. Number of tests and inspections required.
 - 6. Time schedule or time span for tests and inspections.
 - 7. Entity responsible for performing tests and inspections.
 - 8. Requirements for obtaining samples.
 - 9. Unique characteristics of each quality-control service.
- C. Reports: Prepare and submit certified written reports that include the following:
 - 1. Date of issue.
 - 2. Project title and number.
 - 3. Name, address, and telephone number of testing agency.
 - 4. Dates and locations of samples and tests or inspections.
 - 5. Names of individuals making tests and inspections.
 - 6. Description of the Work and test and inspection method.
 - 7. Identification of product and Specification Section.
 - 8. Complete test or inspection data.
 - 9. Test and inspection results and an interpretation of test results.
 - 10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
 - 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.

12. Name and signature of laboratory inspector.
13. Recommendations on retesting and reinspecting.

D. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.6 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this Article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- C. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in the State of Connecticut and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar to those indicated for this Project in material, design, and extent.
- F. Specialists: Certain sections of the Specifications require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
 1. Requirement for specialists shall not supersede building codes and regulations governing the Work.
- G. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 548; and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.
 1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
 2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.

- H. Manufacturer's Technical Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design and extent to those indicated on this project
- I. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- J. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:
1. Contractor responsibilities include the following:
 - a. Provide test specimens representative of proposed products and construction.
 - b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
 - c. Provide sizes and configurations of test assemblies, mockups, and laboratory mockups to adequately demonstrate capability of products to comply with performance requirements.
 - d. Build site-assembled test assemblies and mockups using installers who will perform same tasks for Project.
 - e. Build laboratory mockups at testing facility using personnel, products, and methods of construction indicated for the completed Work.
 - f. When testing is complete, remove test specimens, assemblies, mockups, and laboratory mockups; do not reuse products on Project.
 2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.
 3. Employ supervisory personnel who will oversee mock-up construction. Employ workers that will be employed during construction of project.
- K. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
1. Build mockups in location and of size indicated or, if not indicated, as directed by Architect.
 2. Notify Architect and Owner's Representative seven days in advance of dates and times when mockups will be constructed.
 3. Demonstrate the proposed range of aesthetic effects and workmanship.
 4. Obtain Architect's approval of mockups before starting work, fabrication, or construction.
 - a. Allow seven days for initial review and each re-review of each mockup.

5. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
6. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
7. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.
8. Demolish and remove mock-ups when directed unless otherwise indicated.

1.7 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
 2. Payment for these services will be made by the Owner.
 3. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.
- B. Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
 - a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
 2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
 3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 01 Section "Submittal Procedures."

- D. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
1. Retesting to be performed by the Inspection and Testing Agency that performed the original tests.
 2. Retest original failed test and perform two additional tests at new locations to be determined by Architect and Testing Agency.
 3. Continue retesting until compliance is achieved.
- E. Testing Agency Responsibilities: Cooperate with Architect, Owner's Representative, and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Architect, Owner's Representative, and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
 3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
 5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
 6. Do not perform any duties of Contractor.
 7. Do not permit the Contractor to deviate from the requirements of the Contract Documents.
- F. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 4. Facilities for storage and field curing of test samples.
 5. Delivery of samples to testing agencies.
 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 7. Security and protection for samples and for testing and inspecting equipment at Project site.
- G. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.

1. Schedule times for tests, inspections, obtaining samples, and similar activities.
2. Provide the Testing Agency with a complete set of Contract Documents.

H. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar quality-control services required by the Contract Documents. Submit schedule within 30 days of date established for commencement of the Work.

1. Distribution: Distribute schedule to Owner, Architect, Owner's Representative, testing agencies, and each party involved in performance of portions of the Work where tests and inspections are required.

1.8 SPECIAL TESTS AND INSPECTIONS

A. Special Tests and Inspections: Owner will engage a qualified testing agency and special inspector to conduct special tests and inspections required by the Connecticut State Building Code and by authorities having jurisdiction as the responsibility of Owner, and as follows:

1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviewing the completeness and adequacy of those procedures to perform the Work.
2. Notifying Architect, Owner's Representative, and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
3. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect with copy to Contractor and to authorities having jurisdiction.
4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
6. Retesting and reinspecting corrected work.

- a. Costs associated with retesting and reinspecting are the responsibility of the Contractor.

B. The Connecticut State Building Code, under which this project is designed and will be built, requires the structural engineer of record (SER) to provide a program of structural tests and inspections for this project. The SER is the structural engineer (an individual) who is in responsible charge of the preparation of the structural drawings and structural specifications for this project and whose State of Connecticut professional engineering seal appears on said structural drawings.

C. The SER will prepare a document entitled *Program of Structural Tests and Inspections*, which will be submitted to the building official who has jurisdiction over this project, with the application for a building permit.

D. The program of structural tests and inspections shall not relieve the Contractor or its subcontractors of their responsibilities and obligations for quality control of the Work, their other obligations for supervising the work, for any design work which is included in their scope of services, and for full compliance with the requirements of the Contract Documents.

Furthermore, the detection of, or failure to detect, deficiencies or defects in the Work during the testing and inspection conducted pursuant to the program shall not relieve the Contractor or its subcontractors of their responsibility to correct all deficiencies or defects, whether detected or undetected, in all parts of the Work, and to otherwise comply with all requirements of the Contract Documents.

- E. The program of structural tests and inspection does not apply to the Contractor's equipment, temporary structures used by the Contractor to construct the project, the Contractor's means, methods, and procedures, and job site safety.
- F. Where the document *Program of Structural Tests and Inspections* indicates that a structural component or system is subject to structural tests and inspections and that the SER for the project has not been retained to design said component or system or to prepare a performance specification for said component or system, and the Architect has not otherwise provided for the structural design of said component or system, the Contractor shall retain, or require others under his aegis to retain, a professional engineer registered in the State of Connecticut to design said component or system and to provide the required program of structural tests and inspections for said component or system.
- G. The Contractor shall provide free and safe access to the Work for the SER and all other individuals who are observing the Work or performing structural tests or inspections. The Contractor shall provide all ladders, scaffolding, staging, and up-to-date safety equipment, all in good and safe working order, and qualified personnel to handle and erect them, as may be required for safe access.
- H. The Contractor shall give reasonable notice to the SER, or to those performing inspections and tests under the SER's direction, of when the various parts of the Work will be ready for inspection. The Contractor shall obtain instructions from the SER as to what is reasonable notice for the various aspects of the work, and who is to be notified.
- I. The Owner reserves the right to back charge the Contractor for additional expense incurred by the Owner for the services of the SER or those under his direction when work is not reasonably ready for inspection in accordance with the notice provided by the Contractor.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

- A. Prepare a record of tests and inspections. Include the following:
 - 1. Date test or inspection was conducted.
 - 2. Description of the Work tested or inspected.
 - 3. Date test or inspection results were transmitted to Architect.

4. Identification of testing agency or special inspector conducting test or inspection.

B. Maintain log at Project site. Post changes and modifications as they occur. Provide access to test and inspection log for Architect's and Owner's Representative's reference during normal working hours.

3.2 REPAIR AND PROTECTION

A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.

1. Provide materials and comply with installation requirements specified in other Specification Sections. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible.

2. Comply with the Contract Document requirements for Division 01 Section "Cutting and Patching."

B. Protect construction exposed by or for quality-control service activities.

C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

SECTION 014200 – REFERENCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contractor, Subcontractors, and/or suppliers providing goods or services referenced in or related to this Section shall also be bound by the Documents identified in Division 01 Section “Summary”, Paragraph 1.1A, entitled “Related Documents.”

1.2 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."
- D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. "Provide": Furnish and install, complete and ready for the intended use.
- I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.3 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.
- C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
 - 1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.
- D. Abbreviations and Acronyms for Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the organizations responsible for the standards and regulations.

1.4 ABBREVIATIONS AND ACRONYMS

- A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Thomson Gale's "Encyclopedia of Associations" or in Columbia Books' "National Trade & Professional Associations of the U.S."

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 014200

SECTION 015000 – TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contractor, Subcontractors, and/or suppliers providing goods or services referenced in or related to this Section shall also be bound by the Documents identified in Division 01 Section “Summary”, Paragraph 1.1A, entitled “Related Documents.”

1.2 SUMMARY

- A. This Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
- B. Related Sections include the following:
 - 1. Division 01 Section "Summary" for limitations on utility interruptions and other work restrictions.
 - 2. Division 01 Section "Submittal Procedures" for procedures for submitting copies of implementation and termination schedule and utility reports.
 - 3. Division 01 Section “Indoor Air Quality Requirements.”
 - 4. Division 01 Section "Execution" for progress cleaning requirements.
 - 5. Divisions 02 through 33 Sections for temporary heat, ventilation, and humidity requirements for products in those Sections.

1.3 INFORMATION SUBMITTALS

- A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel. Area for such facilities will be coordinated with Owner.
- B. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire-prevention program.

1.4 QUALITY ASSURANCE

- A. General: Comply with industry standards and applicable laws and regulations of authorities having jurisdiction, including but not limited to the following:
 - 1. Connecticut State Building Code and referenced standards.
 - 2. Health and safety regulations.

3. Utility company regulations.
 4. City of Meriden regulations
 5. Police and Fire Department rules and regulations.
 6. Environmental Protection Agency regulations.
- B. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- C. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

1.5 PROJECT CONDITIONS

- A. Temporary Use of Permanent Facilities: Installer of each permanent service shall assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

PART 2 - PRODUCTS

2.1 TEMPORARY FACILITIES

- A. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.
1. Store combustible materials apart from building.
 2. No lay down, staging or storage area is available on site. The Contractor is expected to obtain and maintain curbside parking areas for these functions. The Contractor is to obtain a dumpster permit from the Engineering Department, from the City of Meriden.

2.2 EQUIPMENT

- A. Provide new equipment; if acceptable to the Owner, undamaged, previously used equipment in serviceable condition may be used. Provide equipment suitable for use intended.
- B. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
- C. Electrical Outlets: Provide properly configured NEMA polarized outlets to prevent insertion of 110-120 volt plugs into higher voltage outlets. Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button and pilot light, for connection of power tools and equipment.

- D. Electrical Power Cords: Provide grounded extension cords; use "hard-service" cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords, if single lengths will not reach areas where construction activities are in progress.
- E. First Aid Supplies: Comply with governing regulations.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work while maintaining user access to the building. Relocate and modify facilities as required by progress of the Work.
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

- A. Water Service: Use of the Owner's water service facilities is permitted. Clean and maintain water service facilities in a condition acceptable to Owner.
- B. Sanitary Facilities: Use of the Owners sanitary facilities is permitted.
- C. Heating and Cooling: Use of the Owner's heating and cooling system is permitted.
- D. Ventilation and Humidity Control: Provide temporary ventilation required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce ambient condition required and minimize energy consumption.
- E. Electric Power Service: Connect to Owner's existing electric power service. Maintain equipment in a condition acceptable to Owner.
- F. Lighting: Provide temporary lighting with local switching that provides adequate illumination for observations, inspections, and traffic conditions.
 - 1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.
 - 2. In addition to security lighting, provide all temporary lighting and power required during the normal working day, including a minimum of 1/2 hour before and after normal working hours, for a total of 10 hours per day for the duration of the project.

3.3 SUPPORT FACILITIES INSTALLATION

A. General: Comply with the following:

1. Provide incombustible construction for offices, shops, and sheds located within construction area or within 30 feet of building lines. Comply with NFPA 241.
2. Maintain support facilities until near Substantial Completion. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.

B. Traffic Controls: Comply with requirements of authorities having jurisdiction.

1. Protect existing site improvements to remain including curbs, pavement, and utilities.
2. Maintain access for fire-fighting equipment.

C. Parking: Obtain parking from that available to the public.

D. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.

1. Project Identification Sign: Provide sign graphics indicated on sketch following this Section. Final design to be determined by Owner and Architect.

- a. Provide project identification sign for the duration of the project, 4' x 8' in size, visible from the primary roadway adjoining the site. Locate sign as directed by the Architect and Owner's Representative.
- b. Fabricate sign from 3/4-inch thick, exterior grade MDO plywood. Support with two 4x4 pressure treated wood posts set a minimum of 4' below grade. Set with top of sign at 8'-0" above finish grade.

2. Temporary Signs: Provide other signs as indicated and as required to inform public and individuals seeking entrance to Project.

- a. Provide temporary, directional signs for construction personnel and visitors.

3. Maintain and touchup signs so they are legible at all times.

E. Collection and Disposal of Waste: Collect waste from construction areas and elsewhere daily. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly. Do not hold materials more than 7 days during normal weather or 3 days when the temperature is expected to rise above 80 deg F (27 deg C). Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly.

1. Comply with Division 01 Section "Execution" for progress cleaning requirements.
2. Provide sufficient quantity of dumpsters at strategic locations within the Contract limit lines for collection of waste from the work of all subcontractors on site.

3. Do not pass materials through open windows, or through window openings when any portion of the window remains in the opening.
- F. Temporary Lifts and Hoists: The Contractor shall provide, operate and maintain in safe operating order facilities for hoisting materials, rubbish, employees and to otherwise carry out the Work. Truck cranes, fork lifts, man lifts and similar devices required for the performance of the Work by the Contractor and all Subcontractors shall be provided by Contractor.
1. Provide temporary lifts and hoists that comply in all respects with the most stringent of all applicable Federal (including OSHA), state and local laws, rules, regulations, codes and ordinances, and provisions of Division 01 of this Specification.
 2. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.
- G. Staging and Scaffolding: Where staging and scaffolding is required, the Contractor shall provide the entire installation.
1. Staging shall be of approved design, erected and removed by experienced stage builders and shall have all accident prevention devices required by State and local laws.
- H. Existing Stair Usage: Use of Owner's existing stairs will be permitted, as long as stairs are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore stairs to condition existing before initial use.
1. Provide protective coverings, barriers, devices, signs, or other procedures to protect stairs and to maintain means of egress. If, despite such protection, stairs become damaged, restore damaged areas so no evidence remains of correction work.
- I. Fire Protection: The Contractor shall, during the progress of the work, assume all responsibility for loss or damage by fire to the work included in his contract until completion of the work. No flammable materials shall be stored in the structures in excess of amounts allowed by authorities having jurisdiction. No gasoline shall be stored in or near the work at any time, and none shall be left on site outside of working hours.
- J. Barricades and Warning Signs: Provide barricades and Warning Signs for the duration of the construction activity. UCHC approved warning Signs shall be located in public areas outside of the work area. Barricades shall be located to impede pedestrian traffic from accessing the work area. Comply with standards and code requirements for erection of structurally adequate barricades. Paint with appropriate colors, graphics and warning signs to inform personnel and the public of the hazard being protected against.
- K. Storage: Where materials and equipment must be stored, and are of value or attractive for theft, provide a secure lockup. Enforce discipline in connection with the installation and release of material to minimize the opportunity for theft and vandalism.
- L. Environmental Protection: Provide 1HR fire rated dust barriers and approved track mats at all work area access points for the duration of the demolition and construction activity. Track mats shall be cleaned and/or replaced as required to maintain their effectiveness.

- M. Avoid use of tools and equipment which produce harmful noise. Restrict use of noise making tools and equipment to hours that will minimize complaints from persons or firms near the site.
- N. Protection: the Contractor shall provide and maintain items required for the protection of existing building structure and finishes such as:
 - 1. Floor Materials
 - 2. Wall surfaces
 - 3. Door openings and thresholds

Damage incurred shall be rectified by the Contractor at no expense to UCHC.

- O. Supervision: Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.
- P. Termination and Removal: Unless the Owner requests that it be maintained longer, remove each temporary facility when the need has ended, or when replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with the temporary facility. Repair damaged Work, clean exposed surfaces and replace construction that cannot be satisfactorily repaired.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
 - 1. Comply with work restrictions specified in Division 01 Section "Summary."
- B. Security Enclosure and Lockup: Install substantial temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security.
- C. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- D. Protection: Protect the Work at all times from damages:
 - 1. Protect the building and the site from damage, loss or liability due to theft or vandalism when the work is not in progress at night, weekends, or holidays.
 - 2. Exercise precaution for the protection of persons and property at all times. Observe the provisions of applicable laws and construction codes. Take additional safety and health measures, or cause such measures to be taken as reasonably necessary. Maintain guards

on machinery, equipment and other hazards as set forth in the safety provisions of the Manual of Accident Prevention in Construction, published by the Associated General Contractors of America, to the extent that such provisions are not in contravention of applicable laws.

3. Protect and preserve in operating conditions all utilities traversing the work area. Repair all damages to any utility due to work performed under this Contract, the satisfaction of the Architect at no additional cost to the Owner.
- E. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241.
1. Prohibit smoking in construction areas.
 2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
 3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.

3.5 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
- C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
- D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
1. Materials and facilities that constitute temporary facilities are property of Contractor.
 2. At Substantial Completion, clean and renovate permanent facilities used during construction period. Comply with final cleaning requirements specified in Division 01 Section "Closeout Procedures."

END OF SECTION 015000

SECTION 016000 – PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contractor, Subcontractors, and/or suppliers providing goods or services referenced in or related to this Section shall also be bound by the Documents identified in Division 01 Section “Summary”, Paragraph 1.1A, entitled “Related Documents.”

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.
- B. Related Sections include the following:
 - 1. Division 01 Section "Substitution Procedures" for requests for substitutions.
 - 2. Division 01 Section "References" for applicable industry standards for products specified.
 - 3. Division 01 Section "Closeout Procedures" for submitting warranties for Contract closeout.
 - 4. Divisions 02 through 33 Sections for specific requirements for warranties on products and installations specified to be warranted.

1.3 DEFINITIONS

- A. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
 - 2. New Products: Items that have not previously been incorporated into another project or facility, except that products consisting of recycled-content materials are allowed, unless explicitly stated otherwise. Products salvaged or recycled from other projects are not considered new products.
 - a. Products salvaged or recycled from other projects are not considered new products.
 - b. Products manufactured and stored for more than one year prior to the start date of this project are not considered new products.

3. Comparable Product: Product that is demonstrated and approved through submittal process, or where indicated as a product substitution, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Basis-of-Design Product Specification: Where a specific manufacturer's product is named and accompanied by the words "basis of design," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of other named manufacturers.

1.4 ACTION SUBMITTALS

- A. Comparable Product Requests: Submit request for consideration of each comparable product. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
1. Include data to indicate compliance with the requirements specified in "Comparable Products" Article.
 2. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within one week of receipt of a comparable product request. Architect will notify Contractor of approval or rejection of proposed comparable product request within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
 - a. Form of Approval: As specified in Division 01 Section "Submittal Procedures."
 - b. Use product specified if Architect does not issue a decision on use of a comparable product request within time allocated.
- B. Basis-of-Design Product Specification Submittal: Comply with requirements in Division 01 Section "Submittal Procedures." Show compliance with requirements.

1.5 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.
1. The Contractor is responsible for providing products and construction methods compatible with products and construction methods of other contractors.
 2. If a dispute arises between contractors over concurrently selectable but incompatible products, Architect will determine which products shall be used.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.
- B. Delivery and Handling:
1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 4. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
- C. Storage:
1. Store products to allow for inspection and measurement of quantity or counting of units.
 2. Store materials in a manner that will not endanger Project structure.
 3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
 4. Store cementitious products and materials on elevated platforms.
 5. Store foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
 6. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
 7. Protect stored products from damage and liquids from freezing.
 8. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.

1.7 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
1. Manufacturer's Warranty: Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
 2. Special Warranty: Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for Owner.

- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution. Submit a draft for approval before final execution.
1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
 2. Specified Form: When specified forms are included with the Specifications, prepare a written document using appropriate form properly executed.
 3. Refer to Divisions 02 through 34 Sections for specific content requirements and particular requirements for submitting special warranties.
- C. List of Warranties: Provide warranties for products and installations as specified, including but not limited to the following:
1. Sealant: Division 07 Section "Joint Sealants."
 2. Roof Hatches: Division 07 "Roof Accessories"
- D. Submittal Time: Comply with requirements in Division 01 Section "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, that are new at time of installation.
1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
 4. Where products are accompanied by the term "as selected," Architect will make selection.
 5. Where products are accompanied by the term "match sample," sample to be matched is Architect's.
 6. Descriptive, performance, and reference standard requirements in the Specifications establish "salient characteristics" of products.
 7. Or Equal: Where products are specified by name and accompanied by the term "or equal" or "or approved equal" or "or approved," comply with provisions in Part 2 "Comparable Products" Article to obtain approval for use of an unnamed product.
- B. Product Selection Procedures: Product selection is governed by the Contract Documents and governing regulations and not by previous Project experience. Procedures governing product selection include the following:

1. Proprietary Specification Requirements: Where Specifications name only a single manufacturer and product, provide the named product that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
2. Semiproprietary Specification Requirements: Where Specifications name three or more products or manufacturers, provide one of the products indicated. Comparable products or substitutions for Contractor's convenience will not be considered.
 - a. Where products or manufacturers are specified by name, accompanied by the term "or equal," or "or approved equal" comply with the provisions concerning "substitutions" to obtain approval for use of an unnamed product.
3. Non-Proprietary Specifications: When the Specifications list products or manufacturers that are available and may be incorporated in the Work, but do not restrict the Contractor to use of these products only, the Contractor may propose any available product that complies with Contract requirements. Comply with provisions concerning "substitutions" to obtain approval for use of an unnamed product.
4. Descriptive Specification Requirements: Where Specifications describe a product or assembly, listing exact characteristics required, with or without use of a brand or trade name, provide a product or assembly that provides the characteristics and otherwise complies with Contract requirements.
5. Performance Specification Requirements: Where Specifications require compliance with performance requirements, provide products that comply with these requirements, and are recommended by the manufacturer for the application indicated. General overall performance of a product is implied where the product is specified for a specific application.
 - a. Manufacture's recommendations may be contained in published product literature, or by the manufacturer's certification of performance.
6. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one of the other named manufacturers.
7. Visual Matching Specification: Where Specifications require "match Architect's sample", provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.
 - a. If no product available within specified category matches and complies with other specified requirements, comply with requirements in Division 01 Section "Substitution Procedures" for proposal of product.

8. Visual Selection Specification: Where Specifications include the phrase "as selected by Architect from manufacturer's colors, patterns, textures" or similar phrase, select a product that complies with the specified requirements.
 - a. Standard Range: Where Specifications include the phrase "standard range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, density, texture and gloss from manufacturer's product line that does not include premium items.
 - b. Full Range: Where the Specifications includes the phrase "full range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, density, texture and gloss from manufacturer's product line that includes both standard and premium items.
9. Allowances: Refer to individual Specification Sections and provisions in Division 01 Section "Allowances", for allowances that control product selection, and for procedures required for processing such selections.

2.2 COMPARABLE PRODUCTS

- A. Conditions for Consideration: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with these requirements:
 1. Evidence that the proposed product does not require revisions to the Contract Documents that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
 2. Proposed changes are in keeping with the intent of Contract Documents.
 3. The request is timely, fully documented and properly submitted.
 4. The request is directly related to an "or equal" clause or similar language in the Contract Documents.
 5. The specified product or method of construction cannot be provided within the Contract Time.
 - a. The request will not be considered if the product or method cannot be provided as a result of failure to pursue the Work promptly or coordinate activities properly.
 6. The specified product or method of construction cannot receive necessary approval by a governing authority, and the requested substitution can be approved.
 7. A substantial advantage is offered the Owner, in terms of cost, time, energy conservation or other considerations of merit, after deduction offsetting responsibilities the Owner may be required to bear.
 - a. Additional responsibilities for the Owner may include additional compensation to the Architect for redesign and evaluation services, increased cost of other construction by the Owner or separate Contractors, and similar considerations.

8. The specified product or method of construction cannot be provided in a manner that is compatible with other material, and where the Contractor certifies that the substitution will overcome the incompatibility.
 9. The specified product or method of construction cannot be coordinated with other materials, and where the Contractor certifies that the proposed substitution can be coordinated.
 10. The specified product or method of construction cannot provide a warranty required by the Contract Documents and where the Contractor certifies that the proposed substitution provide the required warranty.
 11. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
 12. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
 13. Samples, if requested.
- B. The Contractor's submittal and Architect's acceptance of Shop Drawings, Product Data or Samples that relate to construction activities not complying with the Contract Documents does not constitute an acceptable or valid request for substitution, nor does it constitute approval.

PART 3 - EXECUTION

3.1 INSTALLATION OF PRODUCTS:

- A. Comply with manufacturer's instructions and recommendations for installation of products in the applications indicated. Anchor each product securely in place, accurately located and aligned with other work.
1. Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

END OF SECTION 016000

SECTION 017300 – EXECUTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contractor, Subcontractors, and/or suppliers providing goods or services referenced in or related to this Section shall also be bound by the Documents identified in Division 01 Section “Summary”, Paragraph 1.1A, entitled “Related Documents.”

1.2 SUMMARY

- A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:
1. General installation of products.
 2. Progress cleaning.
 3. Starting and adjusting.
 4. Protection of installed construction.
 5. Correction of the Work.
- B. Related Sections include the following:
1. Division 01 Section "Project Management and Coordination" for procedures for coordinating field engineering with other construction activities.
 2. Division 01 Section "Cutting and Patching" for procedural requirements for cutting and patching necessary for the installation or performance of other components of the Work.
 3. Division 01 Section "Closeout Procedures" for final cleaning.
 4. Division 02 Section “Selective Demolition” for demolition and removal of selected portions of the building.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Existing Conditions: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work.

1. Before construction, verify the location and points of connection of utility services.
- B. Existing Utilities: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction affecting the Work.
1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; and underground electrical services.
 2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
- C. Acceptance of Conditions: Examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
1. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
 - a. Description of the Work.
 - b. List of detrimental conditions, including substrates.
 - c. List of unacceptable installation tolerances.
 - d. Recommended corrections.
 2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 3. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
 4. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
 5. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Existing Utility Information: Furnish information to Owner that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Architect. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents.

3.3 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
 - 1. Make vertical work plumb and make horizontal work level.
 - 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 - 3. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.
 - 4. Mount ductwork and other suspended equipment tight to deck, unless otherwise indicated.
 - a. Maintain minimum headroom clearance of 7'-6" in spaces without a suspended ceiling.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- F. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- G. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.
 - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
 - 2. Allow for building movement, including thermal expansion and contraction.
 - 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and

items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

- H. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- I. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.4 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 - 2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F.
 - 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
 - 1. Remove liquid spills promptly.
 - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.5 STARTING AND ADJUSTING

- A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- B. Adjust operating components for proper operation without binding. Adjust equipment for proper operation.
- C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- D. Manufacturer's Field Service: If a factory-authorized service representative is required to inspect field-assembled components and equipment installation, comply with qualification requirements in Division 01 Section "Quality Requirements."

3.6 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Comply with manufacturer's written instructions for temperature and relative humidity.

3.7 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes. Comply with requirements in Division 01 Section "Cutting and Patching."
 - 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Restore permanent facilities used during construction to their specified condition.
- C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.

GALLERY 53
53 COLONY STREET
ROOFING, MASONRY AND CORNICE REPAIRS
MERIDEN, CT
Project No. 51961.10

- E. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION 017300

SECTION 017329 – CUTTING AND PATCHING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contractor, Subcontractors, and/or suppliers providing goods or services referenced in or related to this Section shall also be bound by the Documents identified in Division 01 Section “Summary”, Paragraph 1.1A, entitled “Related Documents.”

1.2 SUMMARY

- A. This Section includes procedural requirements for cutting and patching.

1.3 DEFINITIONS

- A. Cutting: Penetration of in-place construction necessary to permit installation or performance of other Work, including the removal of debris.
- B. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.

1.4 INFORMATION SUBMITTALS

- A. Cutting and Patching Proposal: Submit a proposal describing procedures at least 10 days before the time cutting and patching will be performed, requesting approval to proceed. Include the following information:
 1. Extent: Describe cutting and patching, show how they will be performed, and indicate why they cannot be avoided.
 2. Changes to In-Place Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building's appearance and other significant visual elements.
 3. Products: List products to be used and firms or entities that will perform the Work.
 4. Dates: Indicate when cutting and patching will be performed.
 5. Utility Services and Mechanical/Electrical Systems: List services/systems that cutting and patching procedures will disturb or affect. List services/systems that will be relocated and those that will be temporarily out of service. Indicate how long services/systems will be disrupted.
 6. Structural Elements: Where cutting and patching involve adding reinforcement to structural elements, submit details and engineering calculations showing integration of reinforcement with original structure.

7. Architect's Approval: Obtain approval of cutting and patching proposal before cutting and patching. Approval does not waive Architect's right to later require removal and replacement of unsatisfactory work.

1.5 QUALITY ASSURANCE

- A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio. Structural elements include, but are not limited to the following:
 1. Concrete foundation construction.
 2. Bearing and retaining walls, including architectural precast panels.
 3. Lintels.
 4. Structural steel frame.
 5. Structural decking.
 6. Miscellaneous structural metals.
 7. Interior and/or exterior load bearing masonry wall construction.
- B. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operating elements include the following:
 1. Primary operational systems and equipment.
 2. Air or smoke barriers.
 3. Mechanical systems piping and ducts.
 4. Control systems.
 5. Communication systems.
 6. Electrical wiring systems.
- C. Miscellaneous Elements: Do not cut and patch miscellaneous elements or related components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety. Miscellaneous elements include the following:
 1. Water, moisture, or vapor barriers.
 2. Membranes and flashings.
 3. Piping, ductwork, vessels, and equipment.
 4. Noise- and vibration-control elements and systems.
 5. Roofing systems.
- D. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

- E. Cutting and Patching Conference: Before proceeding, meet at Project site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.
- B. In-Place Materials: Use materials identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
 - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of in-place materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.
 - 1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with in-place finishes or primers.
 - 2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Temporary Support: Provide temporary support of Work to be cut.
- B. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- D. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to minimize interruption to occupied areas.

3.3 PERFORMANCE

- A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 4. Excavating and Backfilling: Comply with requirements in applicable Division 2 Sections where required by cutting and patching operations.
 5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
 6. Proceed with patching after construction operations requiring cutting are complete.
- C. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.
1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
 2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
 - a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
 - b. Restore damaged pipe covering to its original condition.
 3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall

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coverings and replace with new materials, if necessary, to achieve uniform color and appearance.

- a. Where patching occurs in a painted surface, apply primer and intermediate paint coats over the patch and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.
4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
 5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.
- D. Cleaning: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials. . Thoroughly clean piping, conduit and similar features before painting or other finishing is applied. Restore damaged pipe covering to its original condition.

END OF SECTION 017329

SECTION – 017400 WARRANTIES AND BONDS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This Section specifies general administrative and procedural requirements for warranties and bonds required by the Contract Documents, including manufacturers standard warranties on products and special warranties.

Refer to the General Conditions for terms of the Contractor's special warranty of workmanship and materials.

General closeout requirements are included in Section "Project Closeout."

Specific requirements for warranties for all work, products and installations performed shall be for a minimum period of (1) year unless specified otherwise in the individual Sections of Divisions 2 through 16.

Warranty period shall commence at time of Owner final acceptance.

Certifications and other commitments and agreements for continuing services to UCHC are specified elsewhere in the Contract Documents.

- B. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products, nor does it relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.

1.03 DEFINITIONS

- A. Standard Product Warranties are preprinted written warranties published by individual manufacturers for particular products and are specifically endorsed by the manufacturer to the UCHC.
- B. Special Warranties are written warranties required by or incorporated in the Contract Documents, either to extend time limits provided by standard warranties or to provide greater rights for the UCHC.

1.04 WARRANTY REQUIREMENTS

- A. Related Damages and Losses: When correcting warranted Work that has failed, remove and replace other Work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted Work.
- B. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.
- C. Replacement Cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner has benefited from use of the Work through a portion of its anticipated useful service life.
- D. Owner's Recourse: Written warranties made to the Owner are in addition to implied warranties, and shall not limit the duties, obligations, rights and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which the UCHC can enforce such other duties, obligations, rights, or remedies.
- E. Rejection of Warranties: The Owner reserves the right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.

The Owner reserves the right to refuse to accept Work for the Project where a special warranty, certification, or similar commitment is required on such Work or part of the Work, until evidence is presented that entities required to countersign such commitments are willing to do so.

1.05 SUBMITTALS

- A. Submit written warranties to the Owner prior to the date certified for Substantial Completion. If the Owner's Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the Work, or a designated portion of the Work, submit written warranties upon request of the Owner.

When a special warranty is required to be executed by the Contractor, or the Contractor and a subcontractor, supplier or manufacturer, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the Owner for approval prior to final execution.

Refer to individual Sections of Divisions-2 through -16 for specific content requirements, and particular requirements for submittal of special warranties.

- B. Form of Submittal: At Final Completion compile two copies of each required warranty and bond properly executed by the Contractor, or by the Contractor, subcontractor, supplier, or

manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual.

When operating and maintenance manuals are required for warranted construction, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

PART 2 - PRODUCTS

(Not applicable).

PART 3 - EXECUTION

(Not applicable).

END OF SECTION 017400

SECTION 017700 – CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contractor, Subcontractors, and/or suppliers providing goods or services referenced in or related to this Section shall also be bound by the Documents identified in Division 01 Section “Summary”, Paragraph 1.1A, entitled “Related Documents.”

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Substantial Completion procedures.
 - 2. Final completion procedures.
 - 3. Warranties.
 - 4. Area Cleaning
 - 5. Final Cleaning.
 - 6. Final Acceptance
 - 7. Repair of the Work.
- B. Related Sections include the following:
 - 1. Division 01 Section "Payment Procedures" for requirements for Applications for Payment for Substantial and Final Completion.
 - 2. Division 01 Section "Execution" for progress cleaning of Project site.
 - 3. Division 01 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
 - 4. Division 01 Section "Operation and Maintenance Data" for operation and maintenance manual requirements.
 - 5. Division 01 Section "Demonstration and Training" for requirements for instructing Owner's personnel.
 - 6. Divisions 02 through 34 Sections for specific closeout and special cleaning requirements for the Work in those Sections.

1.3 ACTION SUBMITTALS

- A. Product Data: For cleaning agents.
- B. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.

- C. Certified List of Incomplete Items: Final submittal at Final Completion.

1.4 CLOSEOUT SUBMITTALS

- A. Certificates of Release: From authorities having jurisdiction.
- B. Certificate of Insurance: For continuing coverage.

1.5 MAINTENANCE MATERIAL SUBMITTALS

- A. Schedule of Maintenance Material Items: For maintenance material submittal items specified in other Sections.

1.6 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete.
- B. Submittals Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
 - 1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 2. Submit closeout submittals specified in other Division 01 Sections, including project record documents, operation and maintenance manuals, final completion construction photographic documentation, damage or settlement surveys, property surveys, and similar final record information.
 - 3. Submit closeout submittals specified in individual Divisions 02 through 33 Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 - 4. Submit maintenance material submittals specified in individual Divisions 02 through 33 Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Architect. Label with manufacturer's name and model number where applicable.
 - a. Schedule of Maintenance Material Items: Prepare and submit schedule of maintenance material submittal items, including name and quantity of each item and name and number of related Specification Section. Obtain Architect's signature for receipt of submittals.
 - 5. Submit test/adjust/balance records.

6. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
- C. Procedures Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
1. Advise Owner of pending insurance changeover requirements.
 2. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
 3. Complete startup and testing of systems and equipment.
 4. Perform preventive maintenance on equipment used prior to Substantial Completion.
 5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training video recordings specified in Division 01 Section "Demonstration and Training."
 6. Advise Owner of changeover in heat and other utilities.
 7. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
 8. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 9. Complete final cleaning requirements, including touchup painting.
 10. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.
1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
 2. Results of completed inspection will form the basis of requirements for Final Completion.

1.7 FINAL COMPLETION PROCEDURES

- A. Submittals Prior to Final Completion: Before requesting final inspection for determining final completion, complete the following:
1. Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
 2. Submit evidence of final, continuing insurance coverage complying with insurance requirements.

3. Submit lien waivers and/or certificate of payment received, as required by Owner, from all subcontractors.
 4. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.
- B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.8 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Preparation: Submit three copies of list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
1. Organize list of spaces in sequential order.
 2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
 3. Include the following information at the top of each page:
 - a. Project name.
 - b. Date.
 - c. Name of Architect.
 - d. Name of Owner's Representative.
 - e. Name of Contractor.
 - f. Page number.

1.9 FINAL ACCEPTANCE

- A. Preliminary Procedures: Before requesting final inspection for certification of final acceptance and final payment, complete the following. List exceptions in the request.

Submit the final payment request with releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.

Submit an updated final statement, accounting for final additional changes to the Contract Sum.

Submit a certified copy of the Owner's final inspection list of items to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance, and the list has been endorsed and dated by the Owner.

Submit consent of surety to final payment, and final lean releases from all suppliers and subcontractors.

Submit evidence of final, continuing insurance coverage complying with insurance requirements.

- B. Reinspection Procedure: The Owner will reinspect the Work upon receipt of notice that the Work, including inspection list items from earlier inspections, has been completed, except items whose completion has been delayed because of circumstances acceptable to the Owner.

Upon completion of reinspection, the Owner will prepare a certificate of final acceptance, or advise the Contractor of Work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.

If necessary, reinspection will be repeated.

1.10 SUBMITTAL OF PROJECT WARRANTIES

- A. Submittal Time: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.
- B. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.
1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
- C. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION

3.1 AREA CLEANING / ACTION REQUIREMENTS: (should any exist within the project area)

A. GENERALIZED CLEANING

1. Use cloths and/or washing tools and squeegees with an all purpose cleaner to damp wipe and clean (streak free) all surfaces of walls, partitions, doors, handrails, ledges, shelving, counters, cabinets (interior and exterior), woodwork, windows, sinks, faucets and fixtures. Clean area furnishings including but not limited to:
 - a. Desks, Chairs, File Cabinets, Tables, Credenzas, Light Fixtures, Countertops and Cabinets, inside and out, Shelves, Soap and Towel Dispensers, Mirrors, Writing Boards, Telephones and Clocks

3.2 FINAL CLEANING

A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.

1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
 - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Remove snow and ice to provide safe access to building.
 - f. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - g. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
 - h. Sweep concrete floors broom clean in unoccupied spaces.

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- i. Vacuum carpet and similar soft surfaces, removing debris and excess nap; shampoo if visible soil or stains remain.
 - j. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
 - k. Remove labels that are not permanent.
 - l. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
 - 1) Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
 - m. Wipe surfaces of mechanical and electrical equipment and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
 - n. Replace parts subject to unusual operating conditions.
 - o. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
 - p. The HVAC Subcontractor shall replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
 - q. The HVAC Subcontractor shall clean ducts, blowers, and coils if units were operated without filters during construction.
 - r. The Contractor shall clean light fixtures, lamps, globes, and reflectors to function with full efficiency. The Electrical Subcontractor shall replace burned-out bulbs, and those noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures that have been provided by the Electrical Subcontractor.
 - s. Leave Project clean and ready for occupancy.
2. Before requesting final inspection for determining date of Final Completion, complete cleaning operations listed above as required following Substantial Completion and completion of all punch list items.
- C. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION 017700

SECTION 017823 – OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contractor, Subcontractors, and/or suppliers providing goods or services referenced in or related to this Section shall also be bound by the Documents identified in Division 01 Section “Summary”, Paragraph 1.1A, entitled “Related Documents.”

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
 - 1. Operation and maintenance documentation directory.
 - 2. Operation manuals for systems, subsystems, and equipment.
 - 3. Product maintenance manuals.
 - 4. Systems and equipment maintenance manuals.
- B. Related Sections include the following:
 - 1. Division 01 Section "Submittal Procedures" for submitting copies of submittals for operation and maintenance manuals.
 - 2. Division 01 Section "Closeout Procedures" for submitting operation and maintenance manuals.
 - 3. Division 01 Section "Project Record Documents" for preparing Record Drawings for operation and maintenance manuals.
 - 4. Divisions 02 through 34 Sections for specific operation and maintenance manual requirements for the Work in those Sections.

1.3 DEFINITIONS

- A. System: An organized collection of parts, equipment, or subsystems united by regular interaction.
- B. Subsystem: A portion of a system with characteristics similar to a system.

1.4 CLOSEOUT SUBMITTALS

- A. Manual Content: Operations and maintenance manual content is specified in individual Specification Sections to be reviewed at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.
1. Architect will comment on whether content of operations and maintenance submittals are acceptable.
 2. Where applicable, clarify and update reviewed manual content to correspond to revisions and field conditions.
- B. Format: Submit operations and maintenance manuals in the following format:
1. Three paper copies. Include a complete operation and maintenance directory. Enclose title pages and directories in clear plastic sleeves. Architect will return two copies.
 2. PDF electronic file. Assemble each manual into a composite electronically indexed file. Submit on digital media acceptable to Architect.
 - a. Name each indexed document file in composite electronic index with applicable item name. Include a complete electronically linked operation and maintenance directory.
 - b. Enable inserted reviewer comments on draft submittals.
- C. Initial Manual Submittal: Submit draft copy of each manual at least 30 days before commencing demonstration and training. Architect will comment on whether general scope and content of manual are acceptable.
- D. Final Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least 15 days before commencing demonstration and training. Architect will return copy with comments.
1. Correct or revise each manual to comply with Architect's comments. Submit copies of each corrected manual within 15 days of receipt of Architect's comments and prior to commencing demonstration and training.

1.5 COORDINATION

- A. Where operation and maintenance documentation includes information on installations by more than one factory-authorized service representative, assemble and coordinate information furnished by representatives and prepare manuals.

PART 2 - PRODUCTS

2.1 OPERATION AND MAINTENANCE DOCUMENTATION DIRECTORY

- A. Organization: Prepare a single, comprehensive directory of emergency, operation, and maintenance data and materials, listing items and their location to facilitate ready access to desired information.
- B. Include a section in the directory for each of the following:
 - 1. List of documents.
 - 2. List of systems.
 - 3. List of equipment.
 - 4. Table of contents.
- C. List of Systems and Subsystems: List systems alphabetically. Include references to operation and maintenance manuals that contain information about each system.
- D. List of Equipment: List equipment for each system, organized alphabetically by system. For pieces of equipment not part of system, list alphabetically in separate list.
- E. Tables of Contents: Include a table of contents for each emergency, operation, and maintenance manual.
- F. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the Contract Documents. If no designation exists, assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."

2.2 REQUIREMENTS FOR EMERGENCY, OPERATION, AND MAINTENANCE MANUALS

- A. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:
 - 1. Title page.
 - 2. Table of contents.
 - 3. Manual contents.
- B. Title Page: Include the following information:
 - 1. Subject matter included in manual.
 - 2. Name and address of Project.
 - 3. Name and address of Owner.
 - 4. Date of submittal.

5. Name and contact information for Contractor.
 6. Name and contact information for Architect.
 7. Names and contact information for major consultants to the Architect that designed the systems contained in the manuals.
 8. Cross-reference to related systems in other operation and maintenance manuals.
- C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
1. If operation or maintenance documentation requires more than one volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.
- D. Manual, Paper Copy: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.
1. Binders: Heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
 - a. If two or more binders are necessary to accommodate data of a system, organize data in each binder into groupings by subsystem and related components. Cross-reference other binders if necessary to provide essential information for proper operation or maintenance of equipment or system.
 - b. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents. Indicate volume number for multiple-volume sets.
 2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual.
 3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software diskettes for computerized electronic equipment.
 4. Supplementary Text: Prepared on 8-1/2-by-11-inch white bond paper.
 5. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
 - a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
 - b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

- D. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual type required.
1. Electronic Files: Use electronic files prepared by manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.
 2. File Names and Bookmarks: Enable bookmarking of individual documents based on file names. Name document files to correspond to system, subsystem, and equipment names used in manual directory and table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create composite manual, so that resulting bookmarks reflect the system, subsystem, and equipment names in a readily navigated file tree. Configure electronic manual to display bookmark panel on opening file.

2.3 OPERATION MANUALS

- A. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:
1. System, subsystem, and equipment descriptions.
 2. Performance and design criteria if Contractor is delegated design responsibility.
 3. Operating standards.
 4. Operating procedures.
 5. Operating logs.
 6. Wiring diagrams.
 7. Control diagrams.
 8. Piped system diagrams.
 9. Precautions against improper use.
 10. License requirements including inspection and renewal dates.
- B. Descriptions: Include the following:
1. Product name and model number.
 2. Manufacturer's name.
 3. Equipment identification with serial number of each component.
 4. Equipment function.
 5. Operating characteristics.
 6. Limiting conditions.
 7. Performance curves.
 8. Engineering data and tests.
 9. Complete nomenclature and number of replacement parts.
- C. Operating Procedures: Include the following, as applicable:
1. Startup procedures.
 2. Equipment or system break-in procedures.

3. Routine and normal operating instructions.
4. Regulation and control procedures.
5. Instructions on stopping.
6. Normal shutdown instructions.
7. Seasonal and weekend operating instructions.
8. Required sequences for electric or electronic systems.
9. Special operating instructions and procedures.

- D. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.
- E. Piped Systems: Diagram piping as installed, and identify color-coding where required for identification.

2.4 PRODUCT MAINTENANCE MANUAL

- A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.
- B. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.
- C. Product Information: Include the following, as applicable:
1. Product name and model number.
 2. Manufacturer's name.
 3. Color, pattern, and texture.
 4. Material and chemical composition.
 5. Reordering information for specially manufactured products.
- D. Maintenance Procedures: Include manufacturer's written recommendations and the following:
1. Inspection procedures.
 2. Types of cleaning agents to be used and methods of cleaning.
 3. List of cleaning agents and methods of cleaning detrimental to product.
 4. Schedule for routine cleaning and maintenance.
 5. Repair instructions.
- E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
- F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

1. Include procedures to follow and required notifications for warranty claims.

2.5 SYSTEMS AND EQUIPMENT MAINTENANCE MANUAL

- A. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.
- B. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.
- C. Manufacturers' Maintenance Documentation: Manufacturers' maintenance documentation including the following information for each component part or piece of equipment:
 1. Standard printed maintenance instructions and bulletins.
 2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
 3. Identification and nomenclature of parts and components.
 4. List of items recommended to be stocked as spare parts.
- D. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:
 1. Test and inspection instructions.
 2. Troubleshooting guide.
 3. Precautions against improper maintenance.
 4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
 5. Aligning, adjusting, and checking instructions.
 6. Demonstration and training videotape, if available.
- E. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
 1. Scheduled Maintenance and Service: Tabulate actions for daily, weekly, monthly, quarterly, semiannual, and annual frequencies.
 2. Maintenance and Service Record: Include manufacturers' forms for recording maintenance.
- F. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.

- G. Maintenance Service Contracts: Include copies of maintenance agreements with name and telephone number of service agent.
- H. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
 - 1. Include procedures to follow and required notifications for warranty claims.

PART 3 - EXECUTION

3.1 MANUAL PREPARATION

- A. Operation and Maintenance Documentation Directory: Prepare a separate manual that provides an organized reference to emergency, operation, and maintenance manuals.
- B. Emergency Manual: Assemble a complete set of emergency information indicating procedures for use by emergency personnel and by Owner's operating personnel for types of emergencies indicated.
- C. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
- D. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.
 - 1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
 - 2. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.
- E. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
 - 1. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.
- F. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in Record Drawings to ensure correct illustration of completed installation.

GALLERY 53
53 COLONY STREET
ROOFING, MASONRY AND CORNICE REPAIRS
MERIDEN, CT
Project No. 51961.10

1. Do not use original Project Record Documents as part of operation and maintenance manuals.
 2. Comply with requirements of newly prepared record Drawings in Division 01 Section "Project Record Documents."
- G. Comply with Division 01 Section "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

END OF SECTION 017823

SECTION 017839 – PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contractor, Subcontractors, and/or suppliers providing goods or services referenced in or related to this Section shall also be bound by the Documents identified in Division 01 Section “Summary”, Paragraph 1.1A, entitled “Related Documents.”

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for Project Record Documents, including the following:
1. Record Drawings.
 2. Record Specifications.
 3. Record Product Data.
 4. Miscellaneous record submittals.
- B. Related Sections include the following:
1. Division 01 Section "Closeout Procedures" for general closeout procedures.
 2. Division 01 Section "Operation and Maintenance Data" for operation and maintenance manual requirements.
 3. Divisions 02 through 34 Sections for specific requirements for Project Record Documents of the Work in those Sections.

1.3 CLOSEOUT SUBMITTALS

- A. Record Drawings: Comply with the following:
1. Number of Copies: Submit one set of marked-up Record Prints.
 2. Number of Copies: Submit copies of record Drawings as follows:
 - a. Initial Submittal:
 - 1) Submit one paper-copy set of marked-up record prints.
 - 2) Submit PDF electronic files of scanned record prints and one of file prints.
 - 3) Submit record digital data files and one set of plots.
 - 4) Architect will indicate whether general scope of changes, additional information recorded, and quality of drafting are acceptable.

- b. Final Submittal:
 - 1) Submit three paper-copy sets of marked-up record prints.
 - 2) Submit PDF electronic files of scanned record prints and three sets of prints.
 - 3) Print each drawing, whether or not changes and additional information were recorded.
- B. Record Specifications: Submit one copy of Project's Specifications, including addenda and contract modifications.
- C. Record Product Data: Submit one copy of each Product Data submittal.
 - 1. Where Record Product Data is required as part of operation and maintenance manuals, submit marked-up Product Data as an insert in manual instead of submittal as Record Product Data.

PART 2 - PRODUCTS

2.1 RECORD DRAWINGS

- A. Record Prints: Maintain one set of black-line white prints of the Contract Drawings and Shop Drawings.
 - 1. Preparation: Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.
 - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
 - b. Accurately record information in an understandable drawing technique.
 - c. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
 - 2. Content: Types of items requiring marking include, but are not limited to, the following:
 - a. Dimensional changes to Drawings.
 - b. Revisions to details shown on Drawings.
 - c. Depths of foundations below first floor.
 - d. Locations and depths of underground utilities.
 - e. Revisions to routing of piping and conduits.
 - f. Revisions to electrical circuitry.
 - g. Actual equipment locations.
 - h. Duct size and routing.
 - i. Locations of concealed internal utilities.
 - j. Changes made by Change Order or Construction Change Directive.

- k. Changes made following Architect's written orders.
 - l. Details not on the original Contract Drawings.
 - m. Field records for variable and concealed conditions.
 - n. Record information on the Work that is shown only schematically.
3. Mark the Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. If Shop Drawings are marked, show cross-reference on the Contract Drawings.
 4. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
 5. Mark important additional information that was either shown schematically or omitted from original Drawings.
 6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.
- B. Newly Prepared Record Drawings: Prepare new Drawings instead of preparing record Drawings where Architect determines that neither the original Contract Drawings nor Shop Drawings are suitable to show actual installation.
1. New Drawings may be required when a Change Order is issued as a result of accepting an alternate, substitution, or other modification.
 2. Consult Architect for proper scale and scope of detailing and notations required to record the actual physical installation and its relation to other construction. Integrate newly prepared record Drawings into record Drawing sets; comply with procedures for formatting, organizing, copying, binding, and submitting.
- C. Format: Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
1. Record Prints: Organize Record Prints into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
 2. Identification: As follows:
 - a. Project name.
 - b. Date.
 - c. Designation "PROJECT RECORD DRAWINGS."
 - d. Name of Architect.

2.2 RECORD SPECIFICATIONS

- A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.

3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
4. For each principal product, indicate whether Record Product Data has been submitted in operation and maintenance manuals instead of submitted as Record Product Data.
5. Note related Change Orders, Record Product Data, and Record Drawings where applicable.

2.3 RECORD PRODUCT DATA

- A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
 3. Note related Change Orders, Record Specifications, and Record Drawings where applicable.

2.4 MISCELLANEOUS RECORD SUBMITTALS

- A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

- A. Recording: Maintain one copy of each submittal during the construction period for Project Record Document purposes. Post changes and modifications to Project Record Documents as they occur; do not wait until the end of Project.
- B. Maintenance of Record Documents and Samples: Store Record Documents and Samples in the field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to Project Record Documents for Architect's reference during normal working hours.

END OF SECTION 017839

SECTION 017900 – DEMONSTRATION AND TRAINING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contractor, Subcontractors, and/or suppliers providing goods or services referenced in or related to this Section shall also be bound by the Documents identified in Division 01 Section “Summary”, Paragraph 1.1A, entitled “Related Documents.”

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for instructing Owner's personnel, including the following:
 - 1. Demonstration of operation of systems, subsystems, and equipment.
 - 2. Training in operation and maintenance of systems, subsystems, and equipment.
 - 3. Demonstration and training video recordings.
- B. Related Sections include the following:
 - 1. Division 01 Section "Project Management and Coordination" for requirements for preinstruction conferences.
 - 2. Divisions 02 through 34 Sections for specific requirements for demonstration and training for products in those Sections.

1.3 INFORMATION SUBMITTALS

- A. Instruction Program: Submit two copies of outline of instructional program for demonstration and training, including a schedule of proposed dates, times, length of instruction time, and instructors' names for each training module. Include learning objective and outline for each training module.
 - 1. At completion of training, submit one complete training manual(s) for Owner's use.
- B. Qualification Data: For instructors and videographer.
- C. Attendance Record: For each training module, submit list of participants and length of instruction time.
- D. Evaluations: For each participant and for each training module, submit results and documentation of performance-based test.

1.4 CLOSEOUT SUBMITTALS

- A. Demonstration and Training Videotapes: Submit two copies within seven days of end of each training module.
1. Identification: On each copy, provide an applied label with the following information:
 - a. Name of Project.
 - b. Name and address of videographer.
 - c. Name of Architect.
 - d. Name of Contractor.
 - e. Date of video recording.
 2. Transcript: Prepared and bound in format matching operation and maintenance manuals. Mark appropriate identification on front and spine of each binder. Include a cover sheet with same label information as the corresponding video recording. Include name of Project and date of video recording on each page.
 3. At completion of training, submit complete training manual(s) for Owner's use prepared and bound in format matching operation and maintenance manuals.

1.5 QUALITY ASSURANCE

- A. Facilitator Qualifications: A firm or individual experienced in training or educating maintenance personnel in a training program similar in content and extent to that indicated for this Project, and whose work has resulted in training or education with a record of successful learning performance.
- B. Instructor Qualifications: A factory-authorized service representative, complying with requirements in Division 01 Section "Quality Requirements," experienced in operation and maintenance procedures and training.
- C. Videographer Qualifications: A professional videographer who is experienced photographing demonstration and training events similar to those required.
- D. Preinstruction Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination." Review methods and procedures related to demonstration and training including, but not limited to, the following:
1. Inspect and discuss locations and other facilities required for instruction.
 2. Review and finalize instruction schedule and verify availability of educational materials, instructors' personnel, audiovisual equipment, and facilities needed to avoid delays.
 3. Review required content of instruction.
 4. For instruction that must occur outside, review weather and forecasted weather conditions and procedures to follow if conditions are unfavorable.

1.6 COORDINATION

- A. Coordinate instruction schedule with Owner's operations. Adjust schedule as required to minimize disrupting Owner's operations.
- B. Coordinate instructors, including providing notification of dates, times, length of instruction time, and course content.
- C. Coordinate content of training modules with content of approved emergency, operation, and maintenance manuals. Do not submit instruction program until operation and maintenance data has been reviewed and approved by Architect.

PART 2 - PRODUCTS

2.1 INSTRUCTION PROGRAM

- A. Program Structure: Develop an instruction program that includes individual training modules for each system and equipment not part of a system, as required by individual Specification Sections, and as follows:
 - 1. Motorized doors including overhead sectional doors.
 - 2. Equipment including projection screens and residential appliances.
 - 3. Fire-protection systems, including fire alarm, fire pumps and fire-extinguishing systems.
 - 4. Intrusion detection systems.
 - 5. Heat generation, including boilers, feedwater equipment, pumps, and water distribution piping.
 - 6. Refrigeration systems, including chillers, cooling towers, condensers, pumps, and distribution piping.
 - 7. HVAC systems, including air-handling equipment, air distribution systems, and terminal equipment and devices.
 - 8. HVAC instrumentation and controls.
 - 9. Electrical service and distribution, including transformers, switchboards, panelboards, uninterruptible power supplies, and motor controls.
 - 10. Packaged engine generators, including transfer switches.
 - 11. Lighting equipment and controls.
 - 12. Communication systems, including intercommunication, voice and data equipment.
 - 13. Security system.
- B. Training Modules: Develop a learning objective and teaching outline for each module. Include a description of specific skills and knowledge that participant is expected to master. For each module, include instruction for the following:
 - 1. Basis of System Design, Operational Requirements, and Criteria: Include the following:
 - a. System, subsystem, and equipment descriptions.
 - b. Performance and design criteria if Contractor is delegated design responsibility.

- c. Operating standards.
 - d. Regulatory requirements.
 - e. Equipment function.
 - f. Operating characteristics.
 - g. Limiting conditions.
 - h. Performance curves.
2. Documentation: Review the following items in detail:
- a. Emergency manuals.
 - b. Operations manuals.
 - c. Maintenance manuals.
 - d. Project Record Documents.
 - e. Identification systems.
 - f. Warranties and bonds.
 - g. Maintenance service agreements and similar continuing commitments.
3. Emergencies: Include the following, as applicable:
- a. Instructions on meaning of warnings, trouble indications, and error messages.
 - b. Instructions on stopping.
 - c. Shutdown instructions for each type of emergency.
 - d. Operating instructions for conditions outside of normal operating limits.
 - e. Sequences for electric or electronic systems.
 - f. Special operating instructions and procedures.
4. Operations: Include the following, as applicable:
- a. Startup procedures.
 - b. Equipment or system break-in procedures.
 - c. Routine and normal operating instructions.
 - d. Regulation and control procedures.
 - e. Control sequences.
 - f. Safety procedures.
 - g. Instructions on stopping.
 - h. Normal shutdown instructions.
 - i. Operating procedures for emergencies.
 - j. Operating procedures for system, subsystem, or equipment failure.
 - k. Seasonal and weekend operating instructions.
 - l. Required sequences for electric or electronic systems.
 - m. Special operating instructions and procedures.
5. Adjustments: Include the following:
- a. Alignments.
 - b. Checking adjustments.
 - c. Noise and vibration adjustments.
 - d. Economy and efficiency adjustments.

6. Troubleshooting: Include the following:
 - a. Diagnostic instructions.
 - b. Test and inspection procedures.
7. Maintenance: Include the following:
 - a. Inspection procedures.
 - b. Types of cleaning agents to be used and methods of cleaning.
 - c. List of cleaning agents and methods of cleaning detrimental to product.
 - d. Procedures for routine cleaning
 - e. Procedures for preventive maintenance.
 - f. Procedures for routine maintenance.
 - g. Instruction on use of special tools.
8. Repairs: Include the following:
 - a. Diagnosis instructions.
 - b. Repair instructions.
 - c. Disassembly; component removal, repair, and replacement; and reassembly instructions.
 - d. Instructions for identifying parts and components.
 - e. Review of spare parts needed for operation and maintenance.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Assemble educational materials necessary for instruction, including documentation and training module. Assemble training modules into a combined training manual.
- B. Set up instructional equipment at instruction location.

3.2 INSTRUCTION

- A. Engage qualified instructors to instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.
 1. Owner will furnish Contractor with names and positions of participants.
- B. Scheduling: Provide instruction at mutually agreed on times. For equipment that requires seasonal operation, provide similar instruction at start of each season.

1. Schedule training with Owner, through Construction Manager, with at least seven days' advance notice.
- C. Evaluation: At conclusion of each training module, assess and document each participant's mastery of module by use of a demonstration performance-based test.
- D. Cleanup: Collect used and leftover educational materials and give to Owner. Remove instructional equipment. Restore systems and equipment to condition existing before initial training use.

3.3 DEMONSTRATION AND TRAINING VIDEO RECORDINGS

- A. General: Engage a qualified commercial videographer to record demonstration and training video recordings. Record each training module separately. Include classroom instructions and demonstrations, board diagrams, and other visual aids, but not student practice.
 1. At beginning of each training module, record each chart containing learning objective and lesson outline.
- B. Video: Provide minimum 640 x 480 video resolution converted to format file type acceptable to Owner, on electronic media.
 1. Electronic Media: Read-only format compact disc acceptable to Owner, with commercial-grade graphic label.
 2. File Hierarchy: Organize folder structure and file locations according to project manual table of contents. Provide complete screen-based menu.
 3. File Names: Utilize file names based upon name of equipment generally described in video segment, as identified in Project specifications.
 4. Contractor and Installer Contact File: Using appropriate software, create a file for inclusion on the Equipment Demonstration and Training DVD that describes the following for each Contractor involved on the Project, arranged according to Project table of contents:
 - a. Name of Contractor/Installer.
 - b. Business address.
 - c. Business phone number.
 - d. Point of contact.
 - e. E-mail address.
- C. Recording: Mount camera on tripod before starting recording, unless otherwise necessary to adequately cover area of demonstration and training. Display continuous running time.
 1. Film training session(s) in segments not to exceed 15 minutes.
 - a. Produce segments to present a single significant piece of equipment per segment.
 - b. Organize segments with multiple pieces of equipment to follow order of Project Manual table of contents.

- c. Where a training session on a particular piece of equipment exceeds 15 minutes, stop filming and pause training session. Begin training session again upon commencement of new filming segment.
- D. Light Levels: Verify light levels are adequate to properly light equipment. Verify equipment markings are clearly visible prior to recording.
 - 1. Furnish additional portable lighting as required.
- E. Narration: Describe scenes on video recording by audio narration by microphone while, or dubbing audio narration off-site after video recording is recorded. Include description of items being viewed.
- F. Transcript: Provide a transcript of the narration. Display images and running time captured from videotape opposite the corresponding narration segment.
- G. Preproduced Video Recordings: Provide video recordings used as a component of training modules in same format as recordings of live training.

END OF SECTION 017900

SECTION 020600
ROOF TEST CUTS

PART 1 GENERAL

1.01 ROOF TEST CUTS

- A. Listed below is the Test Cut information for Gallery 53, 51-53 Colony Street, Meriden, CT.
- B. Test Cut information is only at the point of the Test Cut and may vary in other locations:

TEST CUT NO.	INFORMATION
1	
a.	2 ply smooth surfaced modified bitumen
b.	Six (6) layers asphalt base flashings
c.	Tin flashing
d.	Brick parapet
e.	Tin roof
f.	Wood roof deck
2	
a.	2 ply smooth surfaced modified bitumen
b.	Two (2) 4 ply built-up asphalt roofs
c.	Tin roof
d.	Wood roof deck
3	
a.	2 ply smooth surfaced modified bitumen
b.	1/2" fiberboard insulation
c.	Two (2) 4 ply built-up asphalt roofs
d.	Tin roof
e.	Wood roof deck

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- a. 2 ply modified bitumen base flashing
- b. Two (2) layers 3 ply asphalt felt flashing
- c. Tin flashings over parapet

END OF SECTION

SECTION 020700
ROOF DEMOLITION

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. The General Conditions, the Supplementary General Conditions, and any Special Requirements are hereby made a part of this Section.
- B. This Contractor shall provide all labor, equipment, and materials required to perform the work called for in this Section. This Contractor shall coordinate his work with other trades and work in other Sections.
- C. Work of this Section includes, but is not limited to, the following:
 - 1. Removal of all tin and bituminous roofing materials, insulation, base flashings, fascia, edging, vent stacks, etc., down to surface of wood deck.
 - a. Felts have been tested and they have been found to contain asbestos. Remove and dispose of this material in compliance with Federal, State, and Local regulations.
 - 2. Removal of all parapet flashings and metal copings.
 - 3. Cutting of reglets for new counterflashing.
 - 4. Removal of one (1) existing capped curb and closing of the opening.
 - 5. Removal of unused items on the roof.
- D. Related Work Specified Elsewhere Includes:
 - 061100 Carpentry
 - 075310 Modified Bitumen Roofing

1.02 QUALITY ASSURANCE

- A. All work of this Section shall be carried out in accordance with the State Demolition Code.

PART 2 MATERIAL

- 2.01 Poly Tarps.
- 2.02 Roof Cement.

PART 3 EXECUTION

- 3.01 Prior to commencing any work called for in this Section, carefully examine the substrata and conditions under which the work is to be performed and notify the Consultant in writing of any unsatisfactory conditions. Do not proceed with the

- work until unsatisfactory conditions have been corrected. Start of work shall indicate acceptance of conditions.
- 3.02 Contractor at no time shall uncover more roof area than can be covered with new roofing and made watertight by the end of the working day or in case of a sudden storm. Contractor shall have on hand sufficient quantities of temporary covers in case of a sudden rainstorm to dry-in the area. At the end of each day, install a temporary patch between new roofing and existing roofing to completely seal against moisture penetration.
 - 3.03 Remove roofing, and miscellaneous flashings from roof area, taking care not to damage existing roof deck.
 - 3.04 Contractor shall not drop materials from the roof or remove materials or equipment in such a manner as to cause unnecessary noise or dust. All debris to be trash chuted into covered containers. No debris shall be visible on the grounds at the end of each workday.
 - 3.05 All debris resulting from the work performed under this Section shall be cleaned up daily, loaded in proper containers, and removed from the site and disposed of by the Contractor.
 - 3.06 Deck surface shall be left broom clean, dry, and dust free, ready for application of new roofing materials.
 - 3.07 Reinstall all items, which were disturbed after other work is complete. Restore to original condition.
 - 3.08 Reglets shall be cut at the locations shown on drawings. Reglet shall be minimum 1-1/4" depth by 3/8" width. Take care to cut square corners. Clean out debris and leave ready for counterflashing installation.
 - 3.09 Remove all bituminous products from parapets and walls.
 - 3.10 Those items, which are not to be incorporated into the new roofing, are to be removed and properly disposed of.
 - 3.11 Broom clean wood roof deck. Refasten any loose boards and renail any loose raised nails.

END OF SECTION

SECTION 024119 - SELECTIVE DEMOLITION

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. The Contractor, Subcontractors, and/or suppliers providing goods or services referenced in or related to this Section shall also be bound by the Documents identified in Division 01 Section “Summary”, Paragraph 1.1A, entitled “Related Documents.”

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Demolition and removal of selected portions of floor framing, roof curbs and hatches for installation of new hatch covers and access ladders..
- B. Related Sections include the following:
 - 1. Division 01 Section "Summary" for use of premises and Owner-occupancy requirements.
 - 2. Division 01 Section "Temporary Facilities and Controls" for temporary construction and environmental-protection measures for selective demolition operations.
 - 3. Division 01 Section "Cutting and Patching" for cutting and patching procedures.
 - 4. Division 26 for electrical demolition.
 - 5. Division 31 Section "Site Clearing" for site clearing and removal of above- and below grade improvements.

1.3 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.
- B. Remove and Salvage: Detach items from existing construction and deliver them to Owner.
- C. Remove and Reinstall: Detach items from existing construction, prepare them for reuse, and reinstall them where indicated.
- D. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.4 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.

- B. Historic items, relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be encountered during selective demolition remain Owner's property.
- C. Carefully remove and salvage each item or object in a manner to prevent damage and deliver promptly to Owner.

1.5 PREINSTALLATION MEETINGS

- A. Predemolition Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination." Review methods and procedures related to selective demolition including, but not limited to, the following:
 - 1. Inspect and discuss condition of construction to be selectively demolished.
 - 2. Review structural load limitations of existing structure.
 - 3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
 - 4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
 - 5. Review areas where existing construction is to remain and requires protection.

1.6 INFORMATIONAL SUBMITTALS

- A. Proposed Protection Measures: Submit report, including drawings, that indicates the measures proposed for protecting individuals and property for environmental protection, for dust control and for noise control. Indicate proposed locations and construction of barriers.
- B. Schedule of Selective Demolition Activities: Indicate the following:
 - 1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's on-site operations are uninterrupted.
 - 2. Interruption of utility services. Indicate how long utility services will be interrupted.
 - 3. Coordination for shutoff, capping, and continuation of utility services.
 - 4. Locations of proposed dust- and noise-control temporary partitions and means of egress.
 - 5. Coordination of Owner's continuing occupancy of portions of existing building.
 - 6. Means of protection for items to remain and items in path of waste removal from building.
- C. Predemolition Photographs or Video: Submit before Work begins.
- D. Warranties: Documentation indicated that existing warranties are still in effect after completion of selective demolition.

1.7 CLOSEOUT SUBMITTALS

- A. Inventory: After selective demolition is complete, submit a list of items that have been removed and salvaged.
- B. Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

1.8 QUALITY ASSURANCE

- A. Demolition Firm Qualifications: An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project.
- B. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- C. Standards: Comply with ANSI A10.6 and NFPA 241.

1.9 PROJECT CONDITIONS

- A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
 - 1. Comply with requirements specified in Division 01 Section "Summary."
- B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- D. Storage or sale of removed items or materials on-site is not permitted.
- E. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
 - 1. Maintain fire-protection facilities in service during selective demolition operations.

PART 2 – PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ANSI/ASSE A10.6 and NFPA 241.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped.
- B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- C. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.
- D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.
- E. Engage a professional engineer to survey condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective demolition operations.
- F. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs.
 - 1. Comply with requirements specified in Division 01 Section "Photographic Documentation."
 - 2. Inventory and record the condition of items to be removed and salvaged. Provide photographs of conditions that might be misconstrued as damage caused by salvage operations.
 - 3. Before selective demolition or removal of existing building elements that will be reproduced or duplicated in final Work, make permanent record of measurements, materials, and construction details required to make exact reproduction.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems: Maintain services/systems indicated to remain and protect them against damage during selective demolition operations.
 - 1. Comply with requirements for existing services/systems interruptions specified in Division 01 Section "Summary."
- B. Service/System Requirements: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
 - 1. Owner will arrange to shut off indicated services/systems when requested by Contractor.
 - 2. If services/systems are required to be removed, relocated, or abandoned, before proceeding with selective demolition provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.

3.3 PREPARATION

- A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 - 1. Comply with requirements for access and protection specified in Division 01 Section "Temporary Facilities and Controls."

- B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
 - 1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
 - 2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
 - 3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
 - 4. Cover and protect furniture, furnishings, and equipment that have not been removed.
 - 5. Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Division 01 Section "Temporary Facilities and Controls."
 - 6. Comply with indoor air quality requirements specified in Division 01 Section "Indoor Air Quality Construction Plan."

- C. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
 - 1. Strengthen or add new supports when required during progress of selective demolition.

3.4 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
 - 1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
 - 2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
 - 3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.

4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
 5. Maintain adequate ventilation when using cutting torches.
 6. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
 7. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
 8. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 9. Dispose of demolished items and materials promptly. Comply with requirements in Division 01 Section "Construction Waste Management and Disposal."
- B. Removed and Salvaged Items:
1. Clean salvaged items.
 2. Pack or crate items after cleaning. Identify contents of containers.
 3. Store items in a secure area until delivery to Owner.
 4. Transport items to Owner's storage area designated by Owner.
 5. Protect items from damage during transport and storage.
- C. Removed and Reinstalled Items:
1. Clean and repair items to functional condition adequate for intended reuse. Paint equipment to match new equipment.
 2. Pack or crate items after cleaning and repairing. Identify contents of containers.
 3. Protect items from damage during transport and storage.
 4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.
- D. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and reinstalled in their original locations after selective demolition operations are complete.

3.5 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

- A. Concrete: Demolish in small sections. Cut concrete to a depth of at least 3/4 inch at junctures with construction to remain, using power-driven saw. Dislodge concrete from reinforcement at perimeter of areas being demolished, cut reinforcement, and then remove remainder of concrete indicated for selective demolition. Neatly trim openings to dimensions indicated.
- B. Masonry: Demolish in small sections. Cut masonry at junctures with construction to remain, using power-driven saw, then remove masonry between saw cuts.

3.6 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Except for items or materials indicated to be recycled, reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them.
 - 1. Do not allow demolished materials to accumulate on-site.
 - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
 - 3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
 - 4. Comply with requirements specified in Division 01 Section "Construction Waste Management and Disposal."

- B. Burning: Do not burn demolished materials.

- C. Disposal: Transport demolished materials off Owner's property.
 - 1. Include cost of all transportation and disposal.
 - 2. Provide verification of all disposal trips.
 - 3. Hazardous materials are to be handled and disposed of in accordance with all State, Local, and Federal regulations.

3.7 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 024119

SECTION 040120.51 - -MASONRY REPOINTING

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. The Contractor and each Subcontractor and/or supplier providing goods or services referenced in or related to this Section shall also be bound by the Documents identified in Division 01 Section “Summary”, Paragraph 1.1A, entitled “Related Documents.”

1.2 SUMMARY

- A. The Work of this section consists of providing all labor, materials, equipment and services to complete the following brickwork repairs:
1. Rake out and point all cracked and open joints in the brick building facades. Note location on the graphics. Areas shown on contract Documents are approximate and are for illustrating the general quantity of work anticipated. Actual areas approved and completed and unit costs will determine the actual contract amount.
 2. If workers are approved by the Architect, horizontal joints may be cut with a mechanical grinder.
 3. Remove all caulk from joints with hand tools. If there is any mortar left at the surface, remove this with hand tools.
 4. Repoint with new masonry mortar to match the original in color, texture, and profile.
 5. Cracks in the brick are to be patched with a patching mix that matches the color of the brick.

B. Related Sections

1. SECTION 040120.52 - -MASONRY CLEANING
2. SECTION 040120.91 – MASONRY RESTORATION
3. SECTION 042000 – UNIT MASONRY
4. SECTION 076200 – SHEET METAL FLASHING AND TRIM

1.3 QUALITY ASSURANCE

- A. Mechanics shall be highly skilled in the art and craft of repointing and patching, with the work of this section to the highest standard for such work. No allowances will be made for the lack of skill of mechanics.

- C. The Masonry Contractor shall submit resume demonstrating a minimum of five (5) years of experience working on historic masonry including marble repointing and will be required to provide at least three (3) references for work of similar size and materials. Mechanics shall have skill and experience of sufficient level to accomplish the work described. Workers shall be carefully supervised to ensure that the work is accomplished to meet or exceed the highest standards of the trade. In acceptance or rejection of the work of this section, no allowance will be made for lack of skill on the part of mechanics.
- D. The Contractor shall provide one crew of mechanics for the duration of the project. Substitutions and additions of work force shall be permitted with Architect's consent, so long as there is no adverse effect on quality of performance of work.

1.4 REFERENCES

- A. ANSI A41.1 Building Code Requirements for Masonry (ANSI)
- B. American Society for Testing & Materials (ASTM)
- C. Portland Cement Association (PCA)
- D. Manufacturers' printed recommendations.

1.5 SUBMITTALS

- A. Product Literature: The Contractor shall submit copies of the manufacturer's technical data for each product including their recommendations for installation and use. Include test reports and certificates that verify the products' compliance with the specification's requirements.
- B. Mock-ups:
 - 1. At an area of the site where approved by the Architect, Contractor shall provide a minimum of one sample for each brick type for raking and repointing.
 - 2. Using utility knives or similar tools, remove the caulk in the mortar joints. Where necessary use abrasive pad to remove the caulk residues in the joint.
 - 3. A sample of brick patching for crack repair related to pointing of the brickwork.
 - 4. Mock-ups may be part of the Work, and may be incorporated into the finished work when so approved by the Conservator.
 - 5. Revise sample panels as necessary to secure this approval.
 - 6. Mock-ups will serve as a standard for the acceptance or rejection for the work of this contract.

C. Program of Work: Submit a written program of work for this Section. Include schedule, method of protection of surrounding materials on the building and site during operations, as well as proposed methods and procedures for protection of personnel, the public, and adjacent buildings.

D. No mechanical grinders may be used to cut pressed brick joints.

E. If mechanical grinders are to be used to cut the face brick joints, the Contractor shall submit a satisfactory written quality control program. Quality control program will include provisions for supervising performance and preventing damage due to worker fatigue. **If masonry damage is caused by power tools, only chisels and mallets will be permitted for the remainder of the project.**

1. Each worker scheduled to mechanically cut the horizontal marble joints shall perform a joint cutting test in the presence of the Architect to demonstrate the ability of the operators to use tools without damaging the masonry. The test area shall measure approximately two (2) feet high by six (6) feet wide. Vertical joints shall be hand cut. Any worker that damages the masonry will not be permitted to cut joints. Only those workers approved by the Architect may use hand-held grinders to cut joints at the job site.
2. For each material being pointed, the Contractor shall submit a pointing mockup measuring approximately two (2) feet high by six (6) feet wide, demonstrating quality of materials and workmanship expected in pointing mortar joints. Color, appearance, size, and tooling of the joint shall match the original.

F. Mortar Analyses: Obtain Type C mortar analysis for pressed brick mortar from U.S. Heritage Group, Inc., 2900 N. Kearsarge Ave, Chicago IL 6064, P. 773-286-2100, info@usheritage.com.

1. Pressed Brick Pointing Mortar

- a. Send two representative samples of existing pointing mortar for analysis, one representing surface mortar as exposed to the elements and the other representing mortar unaffected by surface pollution.
- b. Submit mortar analysis and samples of matching pointing mortar .

2. Samples:

- a. Provide cured samples of each pointing mortar in the form of 6 inch long by 1/2 inch wide sample strips of mortar set in aluminum or plastic channels.
- b. Provide a sample (minimum 50 grams) of each aggregate to be used in each pointing mortar.

- G. If alternate methods and materials to those specified are proposed for any phase of the restoration work, provide written description. Provide evidence of successful use on comparable projects and demonstrate its effectiveness for use on this project.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to site in manufacturer's original and unopened containers and packaging, bearing labels as to type and name of product and manufacturer.
- B. Store and handle in strict compliance with manufacturer's instructions and recommendations. Protect from moisture damage.
- C. Arrangement shall be made with the Owner to store equipment and materials in designated areas. The Owner shall not be responsible for damaged or stolen materials or equipment left on the premises by the Contractor.

1.7 JOB CONDITIONS

- A. The Contractor shall take extreme care in protecting the surrounding materials, buildings, vehicles, and pedestrians. It is the Contractor's responsibility to ensure that protective measures are in place and are adequate for the work being performed.
- B. Contractor shall maintain access to entrances, exits, and egress paths at all times. Disruption of building use and service, including blocking entrances, sidewalks, etc., shall not be permitted without prior arrangement with the Owner.
- C. Any damage made to the building elements by the scaffold(s) or other access equipment will be repaired by the Contractor to the satisfaction of Architect at no cost to the Owner.
- D. Provide temporary weather protection to ensure a water tight building envelope at all times and to prevent damage to structure and building interiors.
- E. Protection: Prevent mortar from staining faces of masonry that are to be left exposed. Protect all adjacent surfaces, buildings, ledges, and projections from mortar droppings.
- F. Pointing work may only be performed as long as the temperature remains above 40° Fahrenheit. If in any given 24 hour period the temperature drops or is expected to drop below 40° Fahrenheit, all pointing work must stop. In the event that the temperature drops below 40° Fahrenheit at any time, work will not recommence until a constant temperature of 40° Fahrenheit or higher is projected for a minimum period of 72 hours. Once stopped for reason of temperature, work will recommence only upon approval of the Architect.
- G. Materials shall be used only at the Manufacturers' recommended temperature tolerances.

- H. Pointing shall be protected during hot weather from premature drying or rapid curing by the use of dampened fabric coverings or controlled misting with water.

PART 2 – PRODUCTS

2.1 TOOLS

- A. Use of rotary grinders, power saws, power chisels, or any other power tools will be permitted *only* with prior written approval of tool types, locations, and mechanics by the Architect (see 1.5D &E). If mechanical grinders are approved by the Architect for cutting the horizontal joints of the marble, the blade must be no larger than four (4) inches in diameter.
- B. Chisels shall be narrower than the joints in which they are used.
- C. Brushes for cleaning areas to be replaced shall be stiff, natural bristle brushes.
- D. Utility knives or approved equal for removal of caulk.
- E. Abrasive pad with or without solvent for removal of caulk residue in joints.

2.2 POINTING MORTAR MIX – GENERAL

- A. Match color, texture, joint size, and type of original mortar as closely as possible. Mortar is to be approved by Architect prior to installation.
- B. For face brick (other than pressed brick) repointing, Contractor shall use one of the following:
 - 1. Commercial pre-mixed mortar that matches the original in appearance. *The pre-mixed mortar must be a Portland cement/Lime Type N mix. No Masonry Cement is allowed*
 - 2. Custom Mortar mix defined by Architect
- C. Use the following proportions as the basis for achieving an ASTM Type N mix:
 - 1. Cement: 1 part by volume, Type I Portland.
 - 2. Lime: 1 part by volume.
 - 3. Sand: six parts by volume. Provide aggregates to match existing in terms of color, angularity, and gradation.
 - 4. Dry pigment: If needed, add small amount to dry mortar mix in such proportion as determined to achieve the desired color match, not to exceed 10% weight of binder. Mix thoroughly to disperse pigment before addition of water. Use only alkali-stable inorganic

pigments with proven record of satisfactory performance. Mortar colors are to be approved by Architect before installation.

5. Water: As required to achieve a workable mix.
- D. Measure cement, lime, and aggregate materials in a dry condition by volume. Do not measure by shovel, use known volume measure. Mix materials in a clean dry mechanical batch mixer.
- E. Produce mortar of colors required to match existing historic mortars. Do not adjust mix proportions after obtaining Architect's approval.
- F. Do not use admixtures of any kind in mortar.

PART 3 – EXECUTION

3.1 INSPECTION

- A. The Contractor shall examine substrates, supports, and conditions under which this work is to be performed and notify the Architect, in writing, of conditions detrimental to the proper completion of the work. Do not proceed with work until unsatisfactory conditions are corrected. Beginning work signifies installer's acceptance of substrates and conditions.
- B. Review the amount and extent of work to be accomplished and review area with Architect prior to the execution of the work.
- C. Quantity and Location: The Contractor and Architect shall review all of the areas mentioned to confirm quantities and locations of repointing.

3.2 JOINT RAKING AND PREPARATION FOR BRICK

- A. Carefully document joint profile and width prior to all raking activities.
- B. Rake out mortar from joints to depths equal to 2 1/2 times their widths, but not less than 1/2 inch, to expose sound, unweathered mortar. Remove mortar to provide reveals with square backs and to expose masonry for contact with pointing mortar. Brush, vacuum, or flush joints to remove all dirt and loose debris.
- C. Cut out old mortar by hand with chisel and mallet. Power operated, rotary hand held saws and grinders will be permitted, with the approval of the Architect, for use on the horizontal joints if the Contractor can demonstrate the ability of the operators to use tools without damaging the masonry (see 1.5D &E). **If masonry damage is caused by power tools, only chisels and mallets will be permitted for the remainder of the project.**

- D. Do not break or mar edges of masonry units or widen joints. Replace in kind all masonry units which become damaged.

3.3 POINTING

- A. Rinse masonry joint surfaces with fresh water to remove all dust and loose mortar particles. Time application of rinsing so that, at time of pointing, excess water has evaporated or run off, and joint surfaces are damp, but free of standing water.
- B. Apply first layer of pointing mortar to areas where existing mortar was removed to depths greater than surrounding areas. Apply in layers not greater than 3/8 inch. Compact each layer thoroughly and allow to become thumbprint-hard before applying next layer.
- C. After joints have been filled to a uniform depth, place pointing mortar in three steps. Each of the first and second steps should fill approximately 2/5 of joint depth and the third step the remaining 1/5. Fully compact mortar at each step and allow to become thumbprint-hard before applying next step. Take care not to spread mortar over edges onto exposed masonry surfaces, or to feather edge mortar.
- D. When mortar is thumbprint-hard, tool joints to match original appearance of joints and approved mock-ups. Remove excess mortar from edges of joints by brushing.
- E. Cure mortar by maintaining in a damp condition for not less than 72 hours.

3.4 SITE CLEAN UP

- A. After mortar has fully hardened, thoroughly clean exposed masonry surfaces of excess mortar and foreign matter using stiff nylon or Tampico bristle brushes and clean water spray applied at low pressure.
- B. The use of metal scrapers or brushes will not be permitted.

END OF SECTION 040120.51 - -MASONRY REPOINTING

SECTION 040120.52 – MASONRY CLEANING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contractor and each Subcontractor and/or supplier providing goods or services referenced in or related to this Section shall also be bound by the Documents identified in Division 01 Section “Summary”, Paragraph 1.1A, entitled “Related Documents.”

1.2 SUMMARY

- A. The work of this section consists of the cleaning of the brick on the façades which may include cleaning atmospheric soiling, efflorescence, and biological growth. Cleaning is intended to remove the majority of surface dirt and other deposits from the masonry and return the brick to a more uniform color. Surfaces shall be evenly cleaned with no evidence of streaking, bleaching or unnatural color variations. Brick pores shall be left free of any residual chemical cleaner and pH neutral.
- B. Related Sections:
 - 1. SECTION 040120.51 - -MASONRY REPOINTING
 - 2. SECTION 040120.91 – MASONRY RESTORATION

1.3 QUALITY ASSURANCE

- A. Skill: Foreperson shall submit resume demonstrating a minimum of five (5) years of experience cleaning historic masonry. Mechanics shall have skill and experience of sufficient level to accomplish the work described. Mechanics shall be carefully supervised to ensure that the work is accomplished to meet or exceed the highest standards of the trade. In acceptance or rejection of cleaning, no allowance will be made for lack of skill on the part of the mechanics.
- B. All environmental restrictions (city, state and Federal), health, and safety code requirements regarding items in this section will be observed. This includes complying with all environmental regulations (City, State and Federal) regarding VOC and effluent collection and disposal. Do not allow run off from the cleaning process to enter storm and sanitary drains, catch basins, and sewer system, contaminate water supplies, or to enter natural bodies of water. Dispose of effluent in a safe and legal manner.

1.4 REFERENCES

- A. American Society for Testing and Materials (ASTM). ASTM 100 Barr Harbor Drive, West Conshohocken, PA 19428. (610) 832-9500.

- B. Comply with the cleaning recommendations of the National Park Service Technical Preservation Services Division as outlined in: Keeping it Clean: Removing Exterior Dirt, Paint, Stains and Graffiti from Historic Masonry Buildings, Preservation Assistance Division (1988), except as modified by these Specifications.

1.5 SUBMITTALS

- A. Submit to the Architect and Architect's Representative written description of methods and materials to be used for general cleaning.
- B. Submit a plan to the Architect for the protection of all surrounding landscaping and the general public.
- C. Submit a shop drawing that shows how the effluent will be collected, contained, and disposed according to federal and local regulations.
- D. Submit to the Architect all manufacturers' literature for cleaning materials to be used including product data, use limitations, and MSDS.
- E. Submit to the Architect samples of each cleaning agent to be tested in their original unopened containers.
- F. Submit to Architect Manufacturer's technical product literature for all specified stain removal and cleaning products.
- G. Submit sample of agent proposed for protection of all metal and polycarbonate materials from acids and alkaline cleaning agents.
- H. Submit sample of solvent-resistant polyethylene sheeting for protection from acid and alkaline cleaning agents.
- I. Cleaning Test Mock-Ups
 - 1. For each type of masonry material provide one (1) test panel per each soiling type (i.e. general soiling, efflorescence, and biological growth), measuring four (4) square feet (2' x 2'), that is representative of the effect of cleaning materials and methods on the most heavily soiled areas.
 - 2. Repeat cleaning tests as required until desired results are reached and approval of materials and methods are obtained. Do not proceed with cleaning until Architect and Architect's Representative have given written approval.
 - 3. Approved samples will serve as the standard for judging completed work and shall remain in place for the duration of the Work.

1.6 DELIVERY STORAGE AND HANDLING

- A. All materials are to be delivered to the job site in original unopened containers bearing manufacturer name and label. Store and handle materials in strict compliance with manufacturer's instructions. Do not store on the ground.
- B. Protect materials from tampering, acts of vandalism, possible injury to workers, the general public, intrusion of foreign materials and moisture. All vessels shall have tight fitting covers. At no time shall vessels containing chemicals be carried to working levels when vessels are open.

1.7 JOB CONDITIONS

- A. Prevent chemical cleaning agents from spilling or dripping down surfaces, on to adjacent materials, or on to the ground. Remove any spilled or dripped materials immediately and rinse well.
- B. Provide adequate protection from chemical cleaning agents and rinse water for all glass, metal, and polycarbonate surfaces around and beneath the surfaces being worked on and any adjacent surfaces not included in this work. Apply masking agent to comply with manufacturer's recommendations. Do not apply liquid masking agent to painted or porous surfaces.
- C. Cleaning shall not begin until average daily temperatures remain above 40°F (4°C). Do not clean during adverse weather conditions, except to wash down any cleaning agent already applied. The Historic Stone Mason Contractor shall alter cleaning procedures if considered necessary because of temperature changes.
- D. Cold weather protection: Do not clean if the temperature of air or masonry drops below 40°F (4°C). Do not clean within seven days of anticipated freezing temperatures.
- E. Hot weather protection: If temperatures rise above 85°F (29°C), protect areas being worked on with tarps or other shading devices to reduce heat from direct sun. Do not allow chemicals to dry on masonry.
- F. Protection from wind: Do not spray-apply chemicals on windy days. Protect all surrounding areas and the general public from wind carried chemicals.
- G. Surrounding areas shall be protected from contact with chemical cleaning agents and rinse water. Surrounding areas shall include, but shall not be limited to, adjacent surfaces and structures, private property including automobiles, vegetation, and all other surfaces that would be adversely affected if placed in contact with the cleaning agents. Contractor vehicle parking, and deliveries must be coordinated accordingly.
- H. Do not allow run off from the cleaning process to enter storm sewer system, contaminate water supplies or to enter natural bodies of water. Dispose of effluent in safe and legal way as outlined in the approved shop drawings.

- I. The Contractor shall take all necessary precautions for the protection of property and public safety from cleaning agents, rinse water, and wind-drifting chemical cleaners and water.
- J. The Contractor will use all necessary precautions to protect persons performing the work and others from harmful effects of the cleaning agents and rinse water. Workers shall be required to wear protective clothing, goggles, face shields, gloves, and other clothing or equipment in compliance with MSDS, governing Federal, State, and local safety codes and regulations.
- K. Avoid exposing pedestrians to fumes.
- L. The Contractor shall provide, erect, and maintain barricades, danger signals, and warning signs as needed.

1.8 COORDINATION

- A. General Cleaning shall not be performed within 30 days of composite patching, pointing or masonry repair to allow for repairs to fully cure.

PART 2 – MATERIALS

2.1 EQUIPMENT

- A. Brushes shall be stiff natural bristle brushes, soft-fibered masonry washing brushes, never metal.
- B. Spray Applicator: For chemical cleaning compounds use acid-resistant airless low pressure sprayers with soft, densely fibered synthetic brushes.
- C. Pressure Washer: The normal operating pressure range for the fan-shaped spray-tipped pressure washer at an angle of 45° is 50-500 psi. However, the maximum operating pressure shall be 500 psi and capable of providing a flow rate of 6 gallons per minute for this marble cleaning operation.
 - 1. The wand nozzle is to be kept at minimum 1 foot away from the masonry surface. A dowel may be taped to the wand that projects 1 foot beyond the nozzle to ensure that the nozzle remains at minimum 1 foot way from the surface.
- D. No metal fittings that can corrode or deposit corrosive materials on the masonry are to be used.
- E. A PVC spray bar equipped with stainless steel or brass fittings should be for water misting of marble. The sprayer should be equipped with misting nozzles and may be fitted with a timing device.
- F. Backer Rod: Use non-staining closed-cell polyethylene foam backer rod stock for placing in open joints. Diameter of backer rod shall be 25% greater than joint width.

- G. Masking: If required acceptable products: Diedrich Acid Guard, manufactured by Diedrich Chemicals, Sure Klean Acid Stop, manufactured by ProSoCo, or approved equal.

2.2 CLEANING AGENTS FOR BRICK

- A. All products listed in this section are to be carefully tested prior to use. They can damage the masonry in a variety of ways including bleaching that is not reversible. Test in locations that are the least visible.

B. Atmospheric Soiling

1. 101 G Restoration Cleaner diluted at minimum, 1:3, manufactured by Diedrich Technologies, 7373 South 6th Street, Oak Creek, WI 53154
2. Sure Klean Restoration Cleaner diluted at minimum 1:3, manufactured by ProSoCo 3741 Greenway Circle, Lawrence, KS 66046
3. Light Duty Restoration Cleaner, manufactured by ProSoCo, 3741 Greenway Circle, Lawrence, KS 66046.
4. Light Duty Masonry Cleaner, manufactured by Shorebest, 2917 Spruce Way, Pittsburgh, PA 15201
5. Or approved equal.

C. Biological Growth

1. D/2 Architectural Antimicrobial, distributed by Cathedral Stone, Inc., Hanover, Maryland; for the removal of biological growth, or approved equal.
2. EnviroKlean BioWash manufactured by ProSoCo, Inc., 3741 Greenway Circle, Lawrence, KS 66046

D. Efflorescence Removal: Chemical agents that can be tested for use.

1. Muriatic Acid
2. Brick Cleaning Products listed above.

E. pH Strips: Strips must range from 0-14.

1. pH strips may be obtained from Talas, talasonline.com, 20 W 20th St # 5, New York, NY 1001, (212) 219-0770
2. Or approved equal.

PART 3 – EXECUTION

3.1 INSPECTION

- A. Before starting any work of this section, the Contractor shall make a complete inspection of all facades and associated elements to confirm all surfaces to be cleaned and all areas that will require special care in cleaning. Review the Contract Drawings describing existing conditions of concern (e.g. open joints) and carefully inspect these areas on the facades. Do not proceed until such discrepancies are resolved.
- B. Prior to cleaning, determine degree of cleaning to be carried out and review areas requiring additional treatment with the Architect. Approved cleaning test panels will serve as the standard for cleaning marble and brick.

3.2 SAMPLE OF CLEANING AGENTS AND METHODS

- A. Purpose of testing: To determine appropriate cleaning agent, strength and dwell time of cleaning agent, method of application, method and duration of rinsing, and to ensure that cleaned masonry surfaces can be obtained with no detrimental effect to masonry or other materials on or adjacent to the facades. The lowest strength cleaning agent bringing the desired degree of cleaning shall be used.
- B. Execution of testing: Apply materials as specified to at least two (2) designated areas, each approximately two (2) feet by two (2) feet for each soiling and staining type (i.e. general soiling, gypsum crusts, iron stains, copper stains, and biological growth) and each type of masonry. Modify dwell time as needed to achieve satisfactory results. Rinse until pH of wet marble and brick is equal to that of clean water from tap.
- C. Follow all product manufacturers' application instructions unless otherwise noted in this Specification.

3.3 EVALUATION OF CLEANING SAMPLES

- A. Samples shall be evaluated by the Architect.
- B. Cleaning method, agent, concentration, and dwell time shall be selected by the Architect.
- C. Items to be evaluated:
 - 1. Cleanliness of the test area.
 - 2. Evenness of surface appearance of cleaned area.

3. Any discoloration.
 4. Alteration to texture of marble or loss of material.
 5. Duration of water rinse and pressure.
- D. After receiving approval of cleaning materials and cleaning methods, the Contractor shall clean one (1) sample of 2 square feet. The approved samples shall serve as the standards of quality for the rest of the cleaning.

3.4 PREPARATION FOR CLEANING

- A. Open Joints:
1. Remove deteriorated mortar carefully from joints. Follow procedures outlined in SECTION 040120.51 - MASONRY REPOINTING.
 2. Flush all debris and residual mortar dust from joints with water.
 3. When joints are dry, point or install backer rod to depth equal to one-half the joint width. Mortar should be thoroughly cured before cleaning begins. Maintain strict tolerance throughout installation.
- B. Dry brush any areas with loose dirt or soil, or extreme dirt build-up, to remove as much material as possible, prior to wet cleaning.

3.5 CHEMICAL CLEANING

- A. Cleaning with chemicals shall begin at the bottom of the walls and progress slowly and continuously upward.
- B. Thoroughly wet surfaces prior to application of cleaning agent. Wet surfaces with low pressure water spray. Surfaces shall not be allowed to dry prior to application of cleaning agents.
- C. To avoid streaking, all surfaces immediately below the area being cleaned shall be kept wet and rinsed free of dripping cleaning agent.
- D. Procedure for chemical cleaning:
1. Thoroughly pre-wet the area to be cleaned and that surrounding and below it. Take pH reading of masonry prior to the application of cleaning chemicals. A pressure water spray not to exceed 200 p.s.i. shall be used for pre wetting and 500 p.s.i. for rinsing of masonry surfaces. Sprayer shall be equipped with fan tipped nozzle (45 degrees) and be capable of providing a minimum flow rate of 5 gallons per minute.
 2. Apply approved product for in approved dilution for approved dwell time.

3. Rinse, making sure to wash each portion of the masonry surface with concentrated water pressure spray. Pressure rinse from the bottom of cleaned area upward and then down again covering each section of the surface. Take great care to ensure that all chemical is rinsed from masonry.
4. Rinsing treated areas: Application of the rinse water is extremely important. As much water pressure as possible, 500 psi maximum (without damaging the surface) shall be used to apply the rinse water so all traces of the chemical cleaning agents are completely removed.
5. Use pH strips to test the masonry surface to ensure that the wall surface pH matches that of the rinse water. If it does not, re-rinse the wall or re-neutralize the surface and then rinse. Repeat pH testing of the wall. Repeat process as necessary until wall pH equals that of the rinse water.
6. Reapply chemical cleaners as necessary until masonry is clean to the satisfaction of the Architect.
7. After rinsing cleaned areas, and areas below and surrounding cleaned areas, allow them to thoroughly dry.

3.6 BIOLOGICAL GROWTH REMOVAL PROCEDURES

- A. If biological growth remains after chemical cleaning procedures, apply biological growth removers.
- B. Take pH reading of masonry prior to the application of cleaning chemicals.
- C. Apply in strict accordance with Manufacturer's written instructions, unless modified by Architect.
 1. Brush or spray apply in an even coating, and in the concentration recommended and by the method recommended by the Manufacturer, to the pre-wet surface.
 2. Dwell time: Dwell time shall be determined through cleaning tests and in strict accordance with Manufacturer's written instructions. Under normal weather conditions (71° F/40% humidity) 2 to 10 minutes is long enough standing time to clean soiled masonry surfaces. Do not allow cleaner to dry on masonry surface. If surface shows signs of drying, rinse and reapply as needed.
- D. Rinsing: Rinse with as much water pressure (without exceeding 500 psi) as possible without damaging the surface so all traces of the cleaning agents are completely removed. Thoroughly rinse from the bottom of the treated area to the top, and down again covering each section of the surface. Take great care to ensure that all chemical is rinsed from masonry.

1. Rinse until the wet masonry surface is of the same pH as the rinse water. Surfaces shall be tested with pH strips.
- E. Reapply as necessary until the biological growth has been removed to the satisfaction of the Architect. It is expected that that three applications could be required.

3.7 EFFLORESCENCE REMOVAL

- A. If the salts are water soluble, the best removal method is with a dry brush or rinsing with water.
- B. If using chemical agent, presoak to saturate the wall, apply chemical agent according to the manufacturer's directions. Thoroughly rinse.
 1. If using muriatic acid, dilute one part acid to 12 parts water.
- C. Rinsing: Rinse with as much water pressure (without exceeding 500 psi) as possible without damaging the surface so all traces of the cleaning agents are completely removed. Thoroughly rinse from the bottom of the treated area to the top, and down again covering each section of the surface. Take great care to ensure that all chemical is rinsed from masonry.
 1. Rinse until the wet masonry surface is of the same pH as the rinse water. Surfaces shall be tested with pH strips.

3.8 COMPLETION

- A. Clean and water wash adjacent areas, including plaza or ground areas and remove any debris or accumulated matter.
- B. Properly and legally dispose of all refuse and remove all materials from the work site.

END OF SECTION 040120.52 - -MASONRY CLEAN

SECTION 040120.91 – MASONRY RESTORATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contractor and each Subcontractor and/or supplier providing goods or services referenced in or related to this Section shall also be bound by the Documents identified in Division 01 Section “Summary”, Paragraph 1.1A, entitled “Related Documents.”

1.2 SUMMARY

- A. Provide masonry restoration work as specified herein, as shown on the Contract Drawings, and as needed for a complete and proper installation. The Work of this Section includes but is not limited to the following items:
1. Patch all losses where noted on the drawings.
 2. Pointing in accordance with Specification Section 040120.51 Masonry Repointing.
 3. Brick repairs including removal of abandoned anchors and patching the resultant holes, and patching of previous holes. Patching material shall match the existing brick in color, surface texture, and reflectivity.
 4. Every effort should be made to keep the brick on the principal facades. These brick should be patched unless repairs are not possible.
 5. Remove previous, incompatible repairs and replace with new repair material that matches the original in color, texture and profile.
 6. Rebuild brick parapet walls in locations noted on the drawings.
 7. Clean masonry in accordance with SECTION 040120.52 Masonry Cleaning.
- B. Related Sections:
1. Specification Section 040120.51 Masonry Repointing.
 2. Specification Section 040120.52 Masonry Cleaning.
 3. Specification Section 042000 Unit Masonry for replacement brick.

1.3 QUALITY ASSURANCE

- A. All masonry restoration shall be done by a qualified Restoration Contractor (heretofore referred to as “Contractor”) with experience working with historic masonry. The Contractor must have a minimum of five (5) years of experience. Contractor must demonstrate three (3) projects similar in scope and type to the required work in the Connecticut metropolitan region involving facilities designated as Landmarks by local governments, or buildings listed on the National or State Register of Historic Places.
- B. Contractor shall maintain a steady work crew consisting of skilled mechanics who are experienced with the materials and methods specified, and are familiar with the design requirements. Contractor shall maintain a full-time Foreman who fluently speaks, reads, and writes English. Contractor shall confirm that all workers understand the job’s requirements. Mechanics shall be fully supervised to ensure that the work is accomplished to meet or exceed the highest standards of the trade.
- C. Architect shall be given regular access to the Contractor’s scaffolding or work site so that he/she may observe work being performed.
- D. Contractor shall replace at no additional expense to the Owner all broken, lost, or damaged materials resulting from the masonry restoration.
- E. Work is to be performed on a daily basis without interruption unless directed otherwise by the Architect.
- F. Obtain materials for masonry restoration from a single source for each type of material required to ensure a match in quality, color, texture, and pattern.
- G. In acceptance or rejection of the work of this Section, no allowances shall be made for lack of skill on the part of the mechanics.
- H. Materials shall be used only at the manufacturer's recommended temperature tolerances.

1.4 REFERENCES

- A. Materials and methods shall conform to the "Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings", 1995.

1.5 SUBMITTALS

- A. Submit qualification data and references for firms and persons specified in Section 1.3 “Quality Assurance” to demonstrate their capabilities and experience.
- B. Contractor shall submit a work plan including detailed description of how the work of this Section will be accomplished. This should include products to be used, methods, and equipment for masonry restoration, etc. In addition, a quality control program shall be

- submitted which will include provisions for supervising performance when cutting horizontal joints with a mechanical grinder and preventing damage due to worker fatigue.
- C. Provide written descriptions, drawings, and diagrams outlining proposed methods and procedures for protection of personnel, the public, and the existing construction during the work of this Section.
- D. Contractor shall submit copies of the manufacturer's technical data for each product indicated or proposed for use, including recommendations for their application and use. Include test reports and certificates that verify the product's compliance with the specification's requirements. One complete set of product literature and MSDS shall be placed in a 3-ring, loose-leaf binder and shall be present on the job site at all times for the reference of the Architect.
- E. Samples: Submit, for verification purposes, prior to mockup erection, samples of the following:
1. Provide three (3) composite patching samples, matching the existing brick.
 2. All masonry pins and anchoring devices.
 3. Brick to match existing.
- F. If alternate methods and materials to those specified are proposed for any phase of the work, provide written description. Provide evidence of successful use on comparable projects and demonstrate its effectiveness for use on this project.
- G. Mock-ups
1. Prior to executing work, provide in-place mockups for the Architect's approval. Resubmit panels until the Architect is fully satisfied. Mockups shall be prepared by the Contractor using the same workmen, methods, and materials that will be employed for the remainder of the work. Upon approval, the mockups will remain the standard throughout the job. The approved mockups shall be retained, undisturbed and suitably marked, throughout construction. Mock-ups may be incorporated into the finished work, when so approved by the Architect.
 2. No mock-ups shall be made until the written repair methods to be implemented and mockup locations are approved by the Architect.
 3. Architect will be present during the creation of all mockups. Do not proceed with the work unless the Architect is present. Notify the Architect not less than forty-eight (48) hours in advance of masonry restoration mockup.
 4. Provide protection for adjacent surfaces during the mockup phase.
 5. The mockups are as follows:

1. Pressed brick repointing, minimum of 2 feet square.
2. Face brick repointing, minimum of 2 feet square

1.6 DELIVERY, STORAGE, AND HANDLING

- A. All materials shall be delivered to the job site in factory-sealed containers clearly labeled as to product, manufacturer, color, and other pertinent characteristics.
- B. All materials for use in the work of this Section shall be stored under environmental conditions recommended by the manufacturer. Materials shall be kept dry (includes liquid moisture and water vapor), well-ventilated, and free of foreign matter.
- C. Arrangement shall be made with the Owner's Representative to store equipment and materials in designated areas. The Owner shall not be responsible for damaged or stolen materials or equipment left on the premises by the Contractor.

1.7 JOB CONDITIONS

- A. Construction Requirements: Salt or other chemicals or admixtures for lowering the freezing temperature of the mortar shall not be used.
- B. Cold Weather Requirements:
 1. Air temperature 40° F to 32° F: Heat mixing water or sand to minimum of 70° F and to maximum of 160° F. Protect masonry from rain or snow for 24 hours.
 2. Air temperature 32° F to 25° F: Heat mixing water and sand to minimum of 70° F and to maximum of 160° F. Provide heat source to maintain a minimum air temperature of 32° F on each side of masonry construction for a period of at least 72 hours after the bricks have been laid.
 3. Air temperature 25° F to 20° F: Heat mixing water and sand to minimum of 70° F and to maximum of 160° F. Provide heat source to maintain a minimum air temperature of 32° F on each side of the masonry construction for a period of at least 72 hours after the bricks have been laid. Provide wind breaks for wind in excess of 15 miles per hour.
 4. Air temperature 20° F and below: Heat mixing water and sand to a minimum of 70° F and to maximum of 160° F. Provide enclosures and heat source to maintain a minimum air temperature of 32° F on each side of masonry construction during construction and for a period of at least 72 hours afterwards. Keep temperature of masonry units at a minimum of 30° F when laid.
- C. Wetting of Masonry Units in Cold Weather

3. If surface temperatures are above 32° F, use water heated to about 70° F.
 4. If surface temperatures are below 32° F, use water heated to about 120° F.
- D. During cold weather, do not use wet masonry units or frozen masonry units.
- E. Do not use frozen materials or lay masonry on frozen materials; remove frozen materials from wall.
- F. Protection from rain: Protect all newly replaced brick with heavy waterproof sheeting from any direct attack by rain or other precipitation for at least 24 hours after mortar has been applied.

1.8 COORDINATION

- A. At least three weeks prior to commencing the work of this Section, a meeting must be scheduled at the jobsite to discuss conformance with the requirements of specifications and job site conditions. Representatives of the Contractor, Architect, and other parties involved in the scope of this work shall attend the meeting.
- B. The Contractor shall coordinate his or her work with that of all other trades related to the successful completion of the work of this Section.

1.9 PROTECTION

- A. Protect all adjacent areas from damage during the work of this Section using approved means of physical protection.
- B. While working on areas, cover all new work from the weather until this work has set, dried, and been completed.
- C. Protect all sills, ledges, faces of masonry units, other surfaces and projections from all dropping mortar, patching, and coating materials. Use canvas or polyethylene covers if necessary, and remove all unwanted material that comes in contact with masonry immediately so as not to cause staining.

PART 2 – MATERIALS

2.1 TOOLS

- A. Hand tools shall be used unless there is prior written approval of tool types, locations and mechanics by the Architect.

2.2 NEW BRICK

- A. Comply with Division 04 Section “Unit Masonry” for new brick.

2.3 BRICK PATCHING

- A. Jahn M100 Brick Repair Mortar in the color approved by the Architect (as manufactured by Cathedral Stone Products, Inc., 7266 Park Circle Drive, Hanover, Maryland 21076). Only Certified Installers may install Jahn M100 Brick Repair Mortar, or approved equal composite patching mix.
- B. Water shall be clean, potable Connecticut water free of injurious materials.

2.4 ISOLATION FOAM

- A. Closed cell urethane backer rod: ½-inch thickness, or sized to fit the joint width.

2.5 RUST INHIBITOR

- A. Apply a rust-inhibitive paint, such as Tenemec, IronClad Retardo Rust Inhibitive Paint (Benjamin Moore), or Steeltec Universal Primer (Pratt & Lambert), or equal, to all abandoned anchors exposed during this restoration.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Before starting any work of this section, the Contractor shall make a complete inspection of all facades and associated elements to confirm all repairs. Review the Contract Drawings describing existing conditions of concern (e.g. losses, pinning, grouting) and carefully inspect these areas on the facades. Do not proceed until any discrepancies are resolved.

3.2 PROTECTION

- A. Protect sills, ledges, windows and all adjacent masonry from mortar and adhesive drippings or other damage. Immediately remove misplaced mortar or adhesive.

3.3 COMPOSITE PATCHING MATERIAL

- A. Preparing void: Remove existing mortar completely. Using a toothed chisel, even up sides and back of void, creating a minimum depth of 1/4 inch below the surface. Dovetail walls of void to form key for patching.
- B. Cleaning void: Remove all loose particles, with water and brush, from void. If necessary, use a vacuum cleaner to produce a dust-free surface.

- C. Moisten well with water. Do not allow water to pool in voids.
- D. Apply patching material in layers to fill deep voids, as per manufacturer's instructions.
- E. Follow manufacturer's instructions for curing, moistening, and tooling.

3.4 ADHESIVE REPAIR

- A. Reattach small stone fragments which have spalled or cracked with a two part, epoxy-based stone adhesive. Adhesive must remain at minimum ¼ inch below the surface of the repair.
 - 1. Stone surfaces must be dry, free of dust and grease. Surface of stone may be roughened prior to bonding.
 - 2. Apply adhesive evenly to both surfaces with wooden spatula. Press together and apply pressure.
 - 3. Remove excess adhesive with solvent as recommended by adhesive manufacturer.
 - 4. Allow minimum 4 hours of cure time before cutting, tooling or dressing newly adhered areas.
- B. Patch surface of the repair after the adhesive has cured. The patch shall match the adjacent stone in color, texture and profile.

3.9 CRACK REPAIR

- A. Cracks narrower than 1/8" shall be filled with injectable grout, introduced through ports which should measure 1/4" in diameter and be spaced as required. Entry ports and crack surface should be subsequently patched with composite patch material to match the color, texture and level of surrounding clean masonry.
- B. Cracks wider equal to or wider than 1/8" shall be routed and filled with grout and subsequently patched with approved composite patch material to match the color, texture and level of surrounding clean masonry.
- C. Previously filled but non-matching repairs shall be removed without damaging the masonry.
- D. Grout Injection:

1. Preparation:

- a. Transverse Cracks across the faces of masonry units, drill a series of injection ports in the center of the crack. The ports should be drilled in a downward direction. Between the ports the crack should be sealed with removable non-staining clay.
- b. Lateral Cracks shall have a series of injection ports drilled in a square configuration (90 degree angles) to create a drill frame. Ports should be drilled in a downward direction.

2. Mixing:

- a. Precautions should be taken while mixing grouting materials. Safety goggles, dust mask and gloves should be worn.
- b. No more material than can be used in 30 minutes shall be mixed at any one time. Material that has exceeded its pot life shall be discarded.
- c. Follow manufacturer's specification for proportions. Mix for a minimum of three (3) minutes.

3. Injection Procedure:

- a. Moisten the interior of the crack immediately prior to injection by flushing with clean water. Repeat this step if the surface becomes dry before grout is injected.
- b. Transverse cracks: inject grout into lowest port and continue to fill until it flows freely from this port and other ports at the same level. Seal ports as indicated until the crack is filled. Clean up overflow immediately.
- c. Lateral Cracks should be filled from the lower left port continuing until it flows freely from this port and other ports on this level. Tap to remove voids or air pockets. Seal ports using non-staining clay. Inject grout into the lower right port and proceed in the same fashion. The order of injection is lower left, lower right, upper left then upper right. Clean up overflow immediately.

E. Routing and filling of cracks:

1. Cracks and fractures of masonry surfaces shall be filled with grout mortar. The crack shall be cut to a depth of 3/4 inch and a width of 1/8 inch. The crack shall be thoroughly cleaned, brushed with mortar slurry coat and filled with a grout mortar. The surface shall be finished with approved composite patching mortar matching the profile, color and texture of the adjacent cleaned masonry.

- F. The repaired crack shall be flush with the face of the masonry work. All entry ports and crack surfaces shall be subsequently patched with approved composite patching mortar to match the color, texture and level of surrounding clean masonry.

3.11 BRICK COMPOSITE MORTAR PATCHING

- A. Surfaces to receive patching mix must be sound and free of all dust, dirt, grease, laitance and/or any other coating or foreign substance which may prevent proper adhesion. Remove all loose and deteriorated masonry from the repair area using manual or pneumatic cutting tools approved by the Architect.
- B. Areas to be repaired should be cut to provide a minimum of ¼-inch depth. Do not install repairs that have a feathered edge, incorrect installation will cause repairs to fail prematurely. Wash the prepared surface with clean water and a bristle brush to remove dust from the pores.
- C. Moisten the substrate using clean water. The patching mix should be applied to a glistening wet surface on vertical applications and a well dampened surface (with no pooling water) on horizontal applications. If the surface is allowed to dry out before applying the patching mix, this step must be repeated.
- D. The patching mix should be mixed with water to the consistency of wet putty. Apply the first coat to the glistening wet substrate approximately 1/8-inch thick.
- E. Large repairs may require successive applications in order to avoid material slump. If this is necessary, be sure to remove the shiny cement skin that sometimes forms on the surface by scraping away 1/16-inch of material. This will open the pores before an additional layer of material is applied. Dampen surface and continue application.
- E. Build up material beyond the surface of the substrate. The waiting period before finishing will vary, depending upon wind, temperature, and humidity. After achieving initial set, scrape away excess mortar until the desired profile is reached.
- F. Periodically mist the patching mix repairs using clean water for at least a 72 hour period. The timing for initial misting will vary with ambient conditions. Hot, dry conditions may require misting in 30 to 60 minutes. Cooler, damp conditions may require waiting several hours before beginning the curing process. Mist several times a day. Should access to the repairs be impossible over a period of time, plastic may be used to cover them temporarily. The application of plastic, however, does not remove the need for normal curing techniques. H. The restored areas shall match the color, finish, tooling and texture of the cleaned original brick as closely as possible.

3.12 BRICK REMOVAL

- A. Protect and structurally support existing masonry to remain which surrounds or contacts to removal areas.
 - 1. The contractor shall be responsible for the design of temporary structures, temporary supports, and for the temporary use of incomplete structures, unless indicated in the contract documents.
 - 2. Supporting calculations shall be submitted to the Engineer-of Record if requested.
- B. Loose and damaged masonry units are to be carefully removed by hand. No power tools shall be used. Damaged masonry and residual mortar shall be removed with a chisel.
- C. Cut out full brick units from joint to joint in a manner that will permit replacement with full sized units.

3.13 SETTING BRICK

- A. New brick units should be installed to replace removed units. They shall be reset in a solid and evenly filled bed of mortar, with bed, head, and collar joints filled.
- B. Brick are to be set true and level, matching exactly the existing bond pattern and coursing throughout by “tooth in”. Where joining into existing work that is not true or level, incrementally adjust brick to compensate and to provide a smooth visual transition between new and existing work. Where brick is not being “toothed in” the new units should be laid to match their original orientation.
- C. Brick should be adequately pre-wetted (nearly saturated but surface dried when laid) prior to installation.
- D. Brick ties: All ties are to be approved by the Architect prior to installation.

3.14 REPAIR OF CRACKS IN BRICK MASONRY

- A. Cracked joints should be cut and repointed as per Specification Section 040120.51.
- B. Cracked bricks, where the cracks are less than 1/8-inch in width, should be patched with composite patch material to match the color, texture and level of surrounding clean brick masonry.
- C. Cracked brick where the crack exceeds 1/8-inch in width should be removed and replaced with new brick to match the original.

3.15 CLEANING

- A. Prior to cleaning, examine exposed masonry work and cut out defective joints, damaged areas and holes and pointing.
- B. As work progresses, dry-clean laid up masonry using soft-wood paddles or scrapers to remove excess mortar, mortar smears and drippings.
- C. At completion of masonry work, clean exposed masonry work with clean water and stiff bristle brushes.
- D. If care is taken during laying unit masonry and dry-cleaning masonry is acceptable to the Architect, the Architect may, at his option, delete the water cleaning requirement.

3.16 SITE CLEAN UP

- A. Upon completion of work, clean all surfaces of any debris, mortar droppings, construction materials, etc. and dispose of according to local, state and federal regulations.

END OF SECTION 040120.91 – MASONRY RESTORATION

SECTION 042000 - UNIT MASONRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contractor and each Subcontractor and/or supplier providing goods or services referenced in or related to this Section shall also be bound by the Documents identified in Division 01 Section "Summary", Paragraph 1.1A, entitled "Related Documents."

1.2 SUMMARY

- A. This Section includes unit masonry assemblies consisting of the following:
 - 1. Pressed Brick
 - 2. Face brick
 - 3. Mortar and grout.
 - 4. All hoisting and scaffolding for completion of masonry work.
 - 5. Masonry waste disposal.
- B. Related Sections include the following:
 - 1. Division 04 Sections for masonry cleaning, repointing and restoration.
 - 2. Division 07 Section "Penetration Firestopping" for firestopping at openings in masonry walls.
 - 3. Division 07 Section "Joint Sealants" for sealing control and expansion joints in unit masonry.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples for Initial Selection: For the following:
 - 1. Face brick, in the form of straps of five or more bricks.
 - 2. Pressed Brick
 - 3. Mortar.
- C. Samples for Verification: For each type and color of the following:
 - 1. Face brick, in the form of straps of five or more bricks.
 - 2. Pressed Brick
 - 3. Aggregate mortar. Make Samples using same sand and mortar ingredients to be used on Project. Label Samples to indicate types and amounts of components used.
- D. Mix Designs: For each type of mortar and grout. Include description of type and proportions of ingredients.

1. Include test reports, per ASTM C 780, for mortar mixes required to comply with property specification.
- E. Cold-Weather Procedures: Detailed description of methods, materials, and equipment to be used to comply with cold-weather requirements in ACI 530.1.
- F. Hot-Weather Procedures: Detailed description of methods, materials, and equipment to be used to comply with hot-weather requirements in ACI 530.1.

1.4 QUALITY ASSURANCE

- A. Testing Agency Qualifications: An independent agency qualified according to ASTM C 1093 for testing indicated, as documented according to ASTM E 548.
- B. Source Limitations for Masonry Units: Obtain exposed masonry units of a uniform texture and color, or a uniform blend within the ranges accepted for these characteristics, through one source from a single manufacturer for each product required.
- C. Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color for exposed masonry, from a single manufacturer for each cementitious component and from one source or producer for each aggregate.
- D. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination."

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store masonry units on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied. If units become wet, do not install until they are dry.
- B. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.
- C. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.
- D. Deliver preblended, dry mortar mix in moisture-resistant containers designed for lifting and emptying into dispensing silo. Store preblended, dry mortar mix in delivery containers on elevated platforms, under cover, and in a dry location or in a metal dispensing silo with weatherproof cover.
- E. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.

1.6 PROJECT CONDITIONS

- A. Protection of Masonry: During construction, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.
1. Extend cover a minimum of 24 inches down both sides and hold cover securely in place.
 2. Where 1 wythe of multiwythe masonry walls is completed in advance of other wythes, secure cover a minimum of 24 inches down face next to unconstructed wythe and hold cover in place.
- B. Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry to be left exposed or painted. Immediately remove grout, mortar, and soil that come in contact with such masonry.
1. Protect base of walls from rain-splashed mud and from mortar splatter by spreading coverings on ground and over wall surface.
 2. Protect sills, ledges, and projections from mortar droppings.
 3. Protect surfaces of window and door frames, as well as similar products with painted and integral finishes, from mortar droppings.
 4. Turn scaffold boards near the wall on edge at the end of each day to prevent rain from splashing mortar and dirt onto completed masonry.
- C. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602/1.8C whenever the following conditions exist:
1. The ambient temperature falls below 40 deg F.
 2. The temperature of masonry units is below 40 deg F.
 3. Implement the following minimum procedures:
 - a. The temperature of masonry units shall not be less than 20 deg F when laid in the masonry. Remove visible ice on masonry units prior to installation.
 - b. Heat the mortar sand or mixing water to produce mortar temperatures between 40 deg F and 120 deg F at the time of mixing. Maintain mortar above 32 deg F until used in masonry.

- c. Use heat sources where ambient temperatures are between 20 deg F and 25 deg F on both sides of the masonry under construction. Install wind breaks when wind velocity is in excess of 15 mph.
 - d. Where ambient temperature is below 20 deg F, provide an enclosure for the masonry under construction and use heat sources to maintain temperature above 32 deg F within the enclosure.
 - e. Where mean daily temperatures are between 32 deg F and 40 deg F, protect completed masonry from rain and snow by covering with a weather resistive membrane for 24 hours after construction.
 - f. Where mean daily temperatures are between 25 deg F and 32 deg F, completely cover completed masonry with a weather resistive membrane for 24 hours after construction.
 - g. Where mean daily temperatures are between 20 deg F and 25 deg F, completely cover completed masonry with insulating blankets, or equal protection, for 24 hours after construction.
 - h. Where mean daily temperatures are below 20 deg F, maintain masonry temperature above 32 deg F for 24 hours after construction by enclosure with supplementary heat, by electric blankets, by infrared heat lamps, or other acceptable methods.
4. Do not lay masonry units that are wet or frozen.
 5. Remove masonry damaged by freezing conditions.
 6. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 deg F and above and will remain so until masonry has dried, but not less than 7 days after completing cleaning.
- D. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602/1.8D, whenever the ambient air temperature exceeds the following:
1. 100 deg F, or 90 deg F with a wind velocity greater than 8 mph.
 2. Implement hot weather protection in accordance with Article 2.1.2.1(d).
 3. Do not spread mortar beds more than 4 feet ahead of masonry. Set masonry units within one minute of spreading mortar.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
1. Products: Subject to compliance with requirements, provide one of the products specified.
 2. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

2.2 MASONRY UNITS, GENERAL

- A. Defective Units: Referenced masonry unit standards may allow a certain percentage of units to exceed tolerances and to contain chips, cracks, or other defects exceeding limits stated in the standard. Do not use units where such defects, including dimensions that vary from specified dimensions by more than stated tolerances, will be exposed in the completed Work or will impair the quality of completed masonry.

2.3 BRICK

- A. General: Provide shapes indicated and as follows:
1. For ends of sills and caps and for similar applications that would otherwise expose unfinished brick surfaces, provide units without cores or frogs and with exposed surfaces finished.
 2. Provide special shapes for applications where stretcher units cannot accommodate special conditions, including those at corners, movement joints, bond beams, sashes, and lintels.
 3. Provide special shapes for applications requiring brick of size, form, color, and texture on exposed surfaces that cannot be produced by sawing.
 4. Provide special shapes for applications where shapes produced by sawing would result in sawed surfaces being exposed to view.
 5. Provide factory molded arch units for new Stair D door, window and blank panel.
- B. Face Brick: Match existing.
- C. Pressed Brick: Match existing.

2.4 MORTAR AND GROUT MATERIALS

- A. Pointing Mortar Face Brick
 - a. Type O, ASTM C1489
- B. Water: Potable.

2.5 MASONRY CLEANERS

- A. Proprietary Acidic Cleaner: Manufacturer's standard-strength cleaner designed for removing mortar/grout stains, efflorescence, and other new construction stains from new masonry without discoloring or damaging masonry surfaces. Use product expressly approved for intended use by cleaner manufacturer and manufacturer of masonry units being cleaned.
 - 1. Manufacturers:
 - a. Diedrich Technologies, Inc.
 - b. ProSoCo, Inc

2.6 MORTAR AND GROUT MIXES

- A. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures, unless otherwise indicated.
 - 1. Do not use calcium chloride in mortar or grout.
 - 2. Limit cementitious materials in mortar to portland cement and lime.
- B. Preblended, Dry Mortar Mix: Furnish dry mortar ingredients in form of a preblended mix. Measure quantities by weight to ensure accurate proportions, and thoroughly blend ingredients before delivering to Project site.
- C. Colored-Aggregate Mortar: Produce required mortar color by using colored aggregates and natural color or white cement as necessary to produce required mortar color.
 - 1. Mix to match existing.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine conditions, for compliance with conditions affecting performance of work.
- B. Proceed only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

- A. Matching Existing Masonry: Match coursing, bonding, color, and texture of existing masonry.
- B. Wetting of Brick: Wet brick before laying if initial rate of absorption exceeds 30 g/30 sq. in. per minute when tested per ASTM C 67. Allow units to absorb water so they are damp but not wet at time of laying.

3.2 MORTAR JOINTING

- A. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness, unless otherwise indicated.

3.3 REPAIRING, POINTING, AND CLEANING

- A. Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Install new units to match adjoining units; install in fresh mortar, pointed to eliminate evidence of replacement.
- B. Pointing: During the tooling of joints, enlarge voids and holes, except weep holes, and completely fill with mortar. Point up joints, including corners, openings, and adjacent construction, to provide a neat, uniform appearance. Prepare joints for sealant application, where indicated.
- C. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.
- D. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:
 - 1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
 - 2. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes. Obtain Architect's approval of sample cleaning before proceeding with cleaning of masonry.
 - 3. Protect adjacent stone and non-masonry surfaces from contact with cleaner by covering them with liquid strippable masking agent or polyethylene film and waterproof masking tape.
 - 4. Wet wall surfaces with water before applying cleaners; remove cleaners promptly by rinsing surfaces thoroughly with clear water.

5. Clean brick by bucket-and-brush hand-cleaning method described in BIA Technical Notes 20.
6. Clean masonry with a proprietary acidic cleaner applied according to manufacturer's written instructions.

3.4 MASONRY WASTE DISPOSAL

- A. Salvageable Materials: Unless otherwise indicated, excess masonry materials are Contractor's property. At completion of unit masonry work, remove from Project site.

END OF SECTION 042000

SECTION 055150
ALUMINUM LADDER

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. The General Conditions, the Supplementary General Conditions, and any Special Requirements are hereby made a part of this Section.
- B. This Contractor shall provide all labor, equipment, and materials to perform the work called for in this Section. This Contractor shall coordinate his work with other trades and work in other Sections.

1.02 WORK OF THIS SECTION INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING:

- A. Two (2) fixed access interior aluminum ladder from third floor to attic and attic to roof hatch.
 - 1. Coordinate ladder location with Owner's Representative.

1.03 RELATED WORK SPECIFIED ELSEWHERE INCLUDES:

061100 Carpentry

1.04 QUALITY ASSURANCE

- A. Take field measurements prior to preparation of shop drawings and fabrication. Allow for trimming and fitting when taking field measurements.
- B. Furnish inserts and anchoring devices to be set into stud wall or floor and wood header for installation of new ladders. Provide setting drawings, templates, instructions and directions for installation of anchorage devices. Coordinate delivery with other work to avoid delay.

1.05 SUBMITTALS

- A. Shop Drawings: Submit shop drawings for fabrication and erection of new ladder. Show anchorage and accessory items. Provide templates for anchor and bolt installation by others.

1.06 JOB CONDITIONS

- A. Installer must examine the interior conditions under which this work is to be performed and notify the Contractor in writing of any conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to the Installer.

- B. Commencement of work indicates acceptance of substrate and any unsatisfactory conditions are now the responsibility of this Contractor.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Metals:
 - 1. Aluminum Castings: ASTM B26, Alloy G4A, Condition F.
 - 2. Stainless Steel: AISI 302/304, tubing ASTM A 269, plate ASTM A 167, bar stock ASTM A 276.

2.02 ALUMINUM FIXED INTERIOR ACCESS WALL LADDER

- A. Ladder shall be equal to O’Keeffe’s, Inc. Model No. 500 access return, or Alaco Ladders.
- B. Ladder shall be 22” wide and permanently attached top and bottom with aluminum brackets.
- C. Stringers: 2-1/4” serrated aluminum treads (6005-T5).
- D. Side Rails: 2-1/2” aluminum channels (6005-T5), Model No. 501 heavy-duty tubular rail by O’Keeffe’s, Inc., or equal.
- E. Hand Rails: 1-1/4” square aluminum tubing.
- F. Safety Caps: 1/8” polyurethane.
- G. Finish: Mill finish aluminum.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Provide anchorage devices and fasteners where necessary for securing ladder in-place construction with threaded fasteners.

END OF SECTION

SECTION 059000 – METAL RESTORATION AND CLEANING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contractor and each Subcontractor and/or supplier providing goods or services referenced in or related to this Section shall also be bound by the Documents identified in Division 1 Section “Summary”, Paragraph 1.1A, entitled “Related Documents.”

1.2 SUMMARY

- A. This Section includes the following types of treatment of manufactured or handmade historic ornamental metalwork:
1. Stabilizing and protecting existing metal.
 2. Removing coatings and corrosion.
 3. Replacing damaged and missing elements with new metal elements.
 4. Refinishing metal in place.
 5. Cleaning of metal.
- B. This Section applies to the following ornamental metal items:
1. Sheet metal cornices.
- C. Related Sections include the following:
1. Division 3 Section "Selective Demolition" for handling of historic items being selectively removed from historic property or items found during work.
 2. Division 6 Section “Miscellaneous Rough Carpentry” for wood blocking.
 3. Division 7 Section "Sheet Metal Flashing and Trim" for new metal flashing installed in or on restored ornamental metal.
 4. Division 7 Section "Joint Sealants" for sealing joints in restored ornamental metal.
 5. Division 9 Section “Lead Paint Abatement for Historic Work” for removal of lead paint from cornices.
 6. Division 9 Section “Painting” for painting restored metal cornice.
- D. Unit Prices: Unit prices for historic treatment of ornamental metal are specified in Division 1 Section "Unit Prices."

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated. Include recommendations for application and use.
- B. Replacement Ornamental Metal Shop Drawings: Show fabrication and installation of replacement ornamental metal. Indicate materials and profiles of each duplicated ornamental metal member including fittings, joinery, finishes, fasteners, anchorages, and accessory items.
 - 1. Include templates and directions for installing anchor bolts and other anchorages.
 - 2. Submit patterns, models, or plaster castings made from existing ornamental metal for each replacement casting required.
- C. Samples for Verification: For the following items:
 - 1. New ornamental metal material to be used for duplicating and replacing existing materials. Include in each set of Samples the full range of colors and textures to be expected in the completed Work.
 - 2. In-place Samples, showing in-place treatment of existing materials. Prepare Samples so they are either inconspicuous or reversible.
 - 3. Include metal Samples with each type of coating for recoating cleaned ornamental metal.
- D. Product Certificates: For each type of product, submit certification that materials comply with referenced standards; signed by product manufacturer.
- E. Qualification Data: For restoration specialist.
- F. Historic Treatment Program: Include protection of surrounding materials on the building and Project site during operations. Describe in detail the materials, methods, equipment, and sequence of operations to be used for each phase of the historic treatment work.
 - 1. If alternative materials and methods to those indicated are proposed for any phase of historic treatment work, provide a written description, including evidence of successful use on other comparable projects, and a testing program to demonstrate their effectiveness for this Project.
 - 2. Sequencing and Scheduling: Submit sequence and scheduling of ornamental metal work.
- G. Cleaning Program: Indicate cleaning process, including protection of surrounding materials on building and Project site, and control of runoff during operations. Describe in detail the materials, methods, and equipment to be used.
 - 1. Comply with requirements in Division 9 Section "Lead Paint Abatement for Historic Work."
 - 2. If materials and methods other than those indicated are proposed for cleaning work, provide a written description, including evidence of successful use on other comparable projects, and a testing program to demonstrate their effectiveness for this Project.

1.4 QUALITY ASSURANCE

- A. Historic Treatment Specialist Qualifications: A firm or individual experienced in the historic treatment of ornamental metal similar in material, design, and extent to that indicated for this Project, whose work has resulted in historic treatment of ornamental metal with a record of successful in-service performance.
1. The Contractor shall demonstrate that within the last five (5) consecutive years, he has successfully performed and completed in a timely manner at least three (3) projects similar and scope and type of that specified, involving facilities designated as Landmarks by the Landmarks Preservation Committee of the State of Connecticut or buildings listed on the National or State Register of Historic Places.
 - a. Subcontracting of any work included in this Section is not permitted.
 2. Field Supervision: Require that an experienced full-time supervisor be on Project site during times that historic treatment of ornamental metal is in progress.
 - a. Maintain a steady work crew consisting of qualified craftsmen who are experienced with the materials and methods specified, and who are familiar with the design requirements.
 - b. All mechanics shall be directly supervised by a foreman with the same or more experience set forth above.
 - c. At least one person who is able to communicate in English is required to be on site at all times.
- B. Mockups: Prepare ornamental metal items to serve as mockups to demonstrate historic treatment methods and cleaning procedures with respect to aesthetic effects and qualities of materials and execution. Prepare mockups so they are inconspicuous or reversible.
1. Locate mockups on the building where directed by Architect.
 2. Prepare mockups under same weather conditions as are expected during Project work.
 3. Ornamental Metal Repair: Prepare mockups of ornamental metal units of size indicated for each type of material indicated to be patched or replaced.
 4. Cleaning Mockups: Prepare mockups approximately 4 sq. ft. in area.
 - a. Test cleaners and methods on samples of adjacent materials for possible adverse reactions, unless cleaners and methods are known to have a deleterious effect.
 - b. Allow a waiting period of not less than seven days after completion of mockups to permit a study of mockups for adverse reactions.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Items Designated for Removal and Reinstallation: Pack, handle, and ship ornamental units and accessories that are indicated for removal and reinstallation. Pack in suitable packs or in heavy-duty cartons. Store items in dry storage facility until ready for treatment and reinstallation.
- B. Items Designated for Removal and Salvage: Pack, handle, and ship ornamental units and accessories that are indicated for removal and salvage. Pack in suitable packs or in heavy-duty cartons. Store items in storage facility identified by Owner. Mark salvaged items with identification, including date of removal.
- C. Replacement Items for Installation: Pack, handle, and ship replacement ornamental units and accessories packed in suitable packs or in heavy-duty cartons.
- D. Deliver other materials, including repair, cleaning, and finishing materials, to Project site in manufacturers' original and unopened containers, labeled with description of contents and names of manufacturers.
- E. Comply with manufacturer's written instructions for minimum and maximum temperature requirements for storage of patching and cleaning materials.

1.6 PROJECT CONDITIONS

- A. Cold- or Hot-Weather Requirements: Comply with cleaning material manufacturer's written procedures for ornamental metal cleaning.
- B. Concealed and undocumented historic items, relics, and similar objects encountered during historic treatment remain Owner's property.
 - 1. Coordinate with Owner's historic treatment consultant, who will establish special procedures for treatment of concealed historic items encountered during Project work.

1.7 SEQUENCING AND SCHEDULING

- A. Order replacement materials required to duplicate existing materials at the earliest possible date, to avoid delaying the Work.
- B. Perform historic treatment of ornamental metal work as indicated on Drawings, and as follows:
 - 1. Stabilize existing deteriorating ornamental metal. Provide temporary protection for items to be repaired at a later date during construction.
 - 2. Clean ornamental metal surfaces.
 - 3. Remove deteriorated paint.
 - 4. Remove or treat corrosion.

5. Repair existing ornamental metal, including patching, splicing, and reinforcing. Retain as much original material as possible.
6. Replace existing ornamental metal with new materials.

PART 2 - PRODUCTS

2.1 METAL MATERIALS

- A. Metals: Provide ornamental metalwork composed of metals of the forms and types that comply with requirements of referenced standards and which match existing metals for alloy and finish. Exposed-to-view surfaces exhibiting imperfections that are not consistent with the original materials are not acceptable.
- B. Steel: Provide steel in form indicated to comply with the following requirements:
 1. Steel Sheet: Cold-rolled commercial steel sheet, complying with ASTM A 1008/A 1008M; matte finish; suitable for exposed applications.
 - a. Thickness: Minimum 0.050 inch to match existing.

2.2 PAINT REMOVAL MATERIALS

- A. Comply with requirements in Division 9 Section "Lead Paint Abatement for Historic Work."

2.3 MISCELLANEOUS MATERIALS

- A. Welding Electrodes and Filler Metal: Type and alloy of filler metal and electrodes as recommended by producer of metal to be welded or filled, complying with applicable AWS specifications, and as required for color match, strength, and compatibility in fabricated items.
 1. Filler metal shall match as closely as possible existing metal to be filled.
- B. Fasteners: Use fasteners of same basic metal as fastened metal, unless otherwise indicated. Do not use metals that are corrosive or incompatible with materials joined.
 1. Provide fasteners to match existing fasteners, in material and type of fastener.
- C. Anchors: Anchors of type indicated below, fabricated from corrosion-resistant materials with capability to sustain, without failure, a load equal to six times the load imposed when installed in unit masonry and equal to four times the load imposed when installed in concrete as determined by testing according to ASTM E 488 conducted by a qualified independent testing agency.

1. Chemical anchors.
 2. Expansion anchors.
- D. Galvanizing Repair Paint: High-zinc-dust-content paint for regalvanizing existing ferrous metals that were previously galvanized and for galvanized materials that were repaired with new materials, complying with SSPC-Paint 20.
- E. Sandpaper for Ferrous Metal Mechanical Cleaning: Aluminum oxide paper, emery paper, or fine steel wool.

2.4 FABRICATION, GENERAL

- A. Form ornamental metal to match existing shapes and sizes, with true curves, lines, and angles. Provide components in sizes and profiles indicated to match existing ornamental metal.
- B. Provide rebates, lugs, and brackets necessary to assemble units and to attach to existing work. Drill and tap for required fasteners. Use concealed fasteners where possible; use exposed fasteners to match existing work.
- C. Comply with AWS for recommended practices in welding and brazing. Provide welds and brazes behind finished surfaces without distorting or discoloring exposed side. Clean exposed welded and brazed joints of flux, and dress exposed and contact surfaces.
- D. Mill joints to a tight, hairline fit. Cope or miter corner joints. Form joints exposed to weather to resist water penetration.
- E. Finish exposed surfaces to smooth, sharp, well-defined lines and as required to match existing work.

2.5 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

2.6 STEEL FINISHES

- A. Galvanizing: Hot-dip galvanize items as indicated to comply with applicable standard listed below:
1. ASTM A 123/A 123M, for galvanizing steel and iron products.
 2. ASTM A 153/A 153M, for galvanizing steel and iron hardware.

PART 3 - EXECUTION

3.1 HISTORIC TREATMENT PROCEDURES, GENERAL

- A. General: Treatment of historic items shall be based on minimal disturbance. Stabilize existing ornamental metal to reestablish weather resistance and structural integrity while maintaining the existing form of each item of ornamental metal. Stop the progress of deterioration and corrosion by removing deteriorated coatings and corrosion and reapplication of protective coatings. Repair items where stabilization is not sufficient to stop progress of deterioration. Repair items in place and retain as much original material as possible. Duplication and replacement of historic items shall be used only where indicated or scheduled.
1. Patching, repairs, replacements, and additions to existing materials shall be reversible whenever possible.
 2. Install temporary protective measures to stabilize existing ornamental metal that is scheduled to be completed later.
- B. Chemical Paint Removal: Apply chemical paint remover where indicated.
1. Comply with requirements in Division 9 Section "Lead Paint Abatement for Historic Work."
- C. Corrosion: Remove and stabilize existing deteriorating corrosion. Use mechanical methods including scraping, wire brushing, or sanding. Use manual methods, including hand power tools, for corrosion removal.
1. Chemical Removal of Corrosion: Apply chemical corrosion remover where corroded spots are not accessible to mechanical methods.
- D. Reapply Protective Coatings. Reapply protective coatings to prepared ornamental metal in compliance with Division 9 Section "Painting."
- E. Repair Ornamental Metal Items: Match existing materials and features and repair existing work in place, retaining as much original material as possible to complete the repair.

1. Unless otherwise indicated, repair ornamental metals by patching, piecing-in, splicing, or otherwise reinforcing metals with new metal to match existing metal.
 2. Where indicated, repair ornamental metal by limited replacement in kind.
- F. Replace: Where indicated, duplicate and replace items with new material in kind.
1. Replace heavily deteriorated or missing parts or features of ornamental metal with compatible materials, using surviving prototypes to create patterns or molds for duplicate replacements.
 2. Substitute materials are not allowed, unless otherwise indicated.
 3. Replacement with compatible substitute materials is allowed where indicated.

3.2 PAINT REMOVAL AND CLEANING

- A. Comply with requirements in Division 9 Section "Lead Paint Abatement for Historic Work."

3.3 REMOVAL, REPAIR, AND REINSTALLATION

- A. Removal, General: Carefully detach items indicated to be removed from existing construction.
1. Tag and record location of each item removed and indicated to be salvaged or reinstalled.
 2. Store ornamental metal indicated to be salvaged or reinstalled in a secure location.
- B. Items Indicated "Remove and Salvage": Carefully remove and deliver them to Owner for storage.
- C. Items Indicated "Remove and Reinstall": Carefully remove, repair, and clean items for reuse as indicated, and reinstall where indicated.
- D. Items Indicated "Existing to Remain": Do not remove. Protect existing items to remain in place.

END OF SECTION 059000

SECTION 061100
ROUGH CARPENTRY

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. The General Conditions, the Supplementary General Conditions, and any Special Requirements are hereby made a part of this Section.
- B. This Contractor shall provide all labor, equipment, and materials to perform the work called for in this Section. This Contractor shall coordinate his work with other trades and work in other Sections.

1.02 WORK OF THIS SECTION INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING

- A. All items required to complete carpentry, including curbs; wood blocking; nailing strips; furring; anchoring; shoring; bracing; nailers; plywood; and miscellaneous closures for all work, including electrical and mechanical work requiring such work as described elsewhere in the specifications and plans.
- B. All rough hardware required for fabrication and installation of the work, including bolts, spikes, anchors, nails, screws, braces, insulation, and similar items.
- C. Temporary enclosures as required for protection of work, equipment, and materials.
- D. Provide new pressure treated blocking at parapets as shown on the Drawings.
- E. Provide new 1/2" pressure treated plywood at walls and parapets as shown on the Drawings.
- F. Cutting of existing floor joists and installing new headers for installation of new ladder to access third floor to attic. Remove flooring in attic as required.
- G. Replace 50 LF of deteriorated 2x8 blocking included in Base Bid.
- H. Replace 150 square feet of deteriorated wood board decking with new 3/4" plywood included in Base Bid.

1.03 RELATED WORK SPECIFIED ELSEWHERE INCLUDES:

- 020700 Roof Demolition
- 072210 Roof Insulation
- 075310 Modified Bitumen Roofing
- 076000 Flashing and Sheet Metal

1.04 SUBMITTALS

- A. Submit sample of new wood blocking.
- B. Submit certification of pressure treatment and kiln drying.
- C. Sample of all fasteners.
- D. Certification of fastener corrosion resistance.

1.05 QUALITY ASSURANCE

- A. National Forest Products Association (NFPA):
NFPA-1977 “National Design Specification for Wood Construction”
- B. Southern Forest Products Association (SFPA):
SFPA-1977 “Grading Rules”
- C. Western Wood Products Association (WWPA):
WWPA-1977 “Grading Rules for Western Lumber”
- D. National Lumber Grades Authority (NLGA):
NLGA-1978 “Standard Grading Rules”
- E. American Wood Preserver’s Bureau (AWPB):
C1, C2, C9 “Above Ground Use, Pressure Treated with
Water-Borne Preservatives”
- F. American Plywood Association (APA):
(WB50) “Design Construction Guide” - APA Panel Roof Sheathing

1.06 Keep materials dry during delivery and storage. Protect against exposure to weather and contact with damp or wet surfaces. Stack lumber and plywood off the ground and away from ponding areas, and provide air circulation within the stacks.

1.07 All lumber materials shall bear the factory-mark on each piece of lumber and plywood with type, grade, mill and grading agency identification and submit mill certificate that material has been inspected and graded in accordance with requirements.

PART 2 PRODUCTS

2.01 LUMBER

- A. Lumber for blocking, nailing and similar concealed work shall be graded and marked by the Manufacturer’s Association recognized as responsible for the

grading rules of the species involved. All rough lumber shall be air-seasoned or kiln dried to a moisture content not to exceed 19%.

- B. All lumber shall be surfaced four sides and dressed to mill sizes.
 - C. Lumber species for blocking, nailing strips, and the like shall be Douglas Fir-Larch or Southern Pine No. 2 or better.
 - D. All lumber including plywood shall be pressure treated with water-borne, salt-treated preservative in accordance with American Wood Preservers Association (AWPA) Standards C1, C2, or C9 (.25 retention) Wood preservative shall be Celcure, Wolman Salts, Chemonite, or approved equal. Oil based preservatives, such as creosote, will not be used. Cuprinol coatings are not acceptable. All pressure treated materials shall be kiln dried after treatment. Treater shall stamp KDAT on all pieces.
- 2.02 FASTENERS:** Fasteners shall be corrosion resistant and suitable for the intended use, unless shown otherwise.
- A. Wood to wood, use double hot dip galvanized nails. ASTM A123.
 - B. Screw fasteners shall be hi performance fluorocarbon coated #12 or larger. They shall meet the requirements of FM document 4470 as it relates to corrosion, as manufactured by Olympic, Buildex, or Dekfast.
 - C. Concrete or masonry fasteners shall be hot dip galvanized such as Gripcon or fluorocarbon coated such as Tapcon, or approved equal.
- 2.03 PLYWOOD:** Plywood shall be span rated APA grade stamped conforming to product standard PS-1-83 Exposure #1, group 1. Thickness as shown or required on the Drawings.

PART 3 EXECUTION

3.01 WORKMANSHIP

- A. Measurements required to ensure proper fitting of all work will be obtained or verified at the building.
 - 1. Fastening shall be as recommended by State Building Code Anchor and Nail schedule.
- B. Crooked, warped, bowed, or cracked materials shall not be employed. Where found, they shall be replaced.

3.02 BLOCKING, ETC.

- A. All necessary underlayment for various roofs, nailing strips, cant strips, and blocking, shall be installed to fulfill the purposes for which they are to be used and as detailed. Top of blocking shall finish flush with top of insulation.

- B. Attach to substrates as required to support applied loading. Countersink bolts and nuts flush with surfaces, unless otherwise shown.

3.03 PLYWOOD WALL COVERING

- A. Place 1/2" plywood on all parapet surfaces to be covered. Break joints in plywood the maximum distance between rows. Secure with masonry anchors, of proper length, spaced 6" on center at 4' ends, 12" on center in rows, and 24" on center in field. Provide 1/8" space between adjacent sheets. Properly fastened plywood shall have a minimum of 33 fasteners per 4x8 sheet.
- B. Protect installed plywood from wetting by covering with flashings. Any wet materials shall be replaced.
- C. Install metal wall/fascia covering as soon as possible.

3.04 ROUGH HARDWARE

- A. All rough hardware and metal fastenings specified herein, or required for proper installation of carpentry, shall be provided and installed. Nails, screws, bolts, anchors, and similar items shall be galvanized, sized, and of types shown or of approved size and types required to secure members rigidly in place.
- B. Furnish and install pressure treated lumber for all roof nailers, stripping, fillers, blocking and nailing for all sheet metal work. Coat or paint all cuts and holes required with a concentrated solution of the preservative, in accordance with AWPA Standard M-4.

3.05 TEMPORARY PROTECTION

- A. Provide temporary protection such as wood doors, wood railings, protection on stairs, at floor openings and the like; maintain in good condition and satisfactory repair during life of the Contract.

3.06 JOB CONDITIONS

- A. Prior to commencing any work called for in this Section, carefully examine the substrata and conditions under which the work is to be performed and notify the Architect/Consultant in writing of any unsatisfactory conditions. Do not proceed with the work until unsatisfactory conditions have been corrected. Start of work shall indicate acceptance of conditions.

3.07 METHOD OF MEASUREMENT AND PAYMENT

- A. The Project Representative shall be notified of all areas to be repaired.
- B. The quantities of each allowance item shall be documented by digital photos and signed for by both the Contractor's representative and the Owners representative.

END OF SECTION

SECTION 071940
VAPOR RETARDER

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. The General Conditions, the Supplementary General Conditions, and any Special Requirements are hereby made a part of this Section.
- B. This Contractor shall provide all labor, equipment, and materials to perform the work called for in this Section. This Contractor shall coordinate his work with other trades and work in other Sections.

1.02 WORK OF THIS SECTION INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING:

- A. Provide vapor retarder complete, in place, as shown on the Drawings, specified herein, or needed for a complete and proper installation.

1.03 RELATED WORK SPECIFIED ELSEWHERE INCLUDES:

020700 Roof Demolition
061100 Carpentry
072210 Roof Insulation

1.04 SUBMITTALS

- A. Manufacturer's specifications and other data required demonstrating compliance with specified documents.

1.05 PRODUCT HANDLING, DELIVERY, AND STORAGE

- A. Deliver all purchased materials to the job site in their original unopened containers with all labels intact and legible at the time of inspection.
- B. Deliver materials in sufficient quantity to allow continuity of work.
- C. Handle rolled goods so as to prevent damage to edge or ends. Store rolled goods on end.
- D. Protect all materials from ground or construction moisture and weather. Store materials off the ground on wood pallets and cover with tarpaulins.
- E. Select and operate material handling equipment so as not to damage existing construction or applied vapor retarder.
- F. Provide continuous protection for materials against wetting and moisture absorption.

- G. Protect materials against damage by construction traffic.
- H. Remove wet materials from project site.
- I. Carefully inspect all materials from suppliers when unloading and reject and remove from site immediately any damaged or unsuitable materials.
- J. Construction Loading: Exercise caution to prevent damage to existing structure and new work by excessive or eccentric construction loading.

1.06 JOB CONDITIONS

- A. Environmental Requirements: All work to be performed on dry days only. No work to be installed on damp or wet surfaces. Do not apply vapor retarder when ambient temperature is below 40°F.

1.07 PROTECTION

- A. Provide special protection or avoid traffic on completed work. Restore to original condition or replace vapor retarder damaged during handling of insulation, and roofing materials.

PART 2 PRODUCTS

2.01 GENERAL

- A. Vapor retarder system over the existing wood deck shall be a self-adhering modified bitumen as provided by the primary roofing manufacturer, complete with primers.

2.02 MATERIALS

- A. Self-adhering modified bitumen vapor retarder system by primary roofing manufacturer.
- B. Primer as supplied by the manufacturer if required.
- C. Compatible mastic as supplied by the manufacturer.
- D. Glass fabric ASTM D1668.

2.03 OTHER MATERIALS

- A. All other materials, not specifically described, but required, for a complete and proper installation of the work of this Section shall be as selected by the Contractor and subject to the approval of the roof membrane manufacturer and Consultant.

PART 3 EXECUTION

3.01 INSPECTION

- A. Examine the areas and conditions under which work of this Section will be installed. Correct conditions detrimental to the proper and timely completion.
- B. Proceed with work only after preparation of substrate and penetrating work has been completed.

3.02 SURFACE CONDITIONS

- A. Proceed with work only when weather conditions are in compliance with roofing materials manufacturer's recommendations and limitations. Do no work when the temperature is below 40°F or in wet weather.
- B. Surface shall be clean, smooth, dry, rigid and free of debris, projections and foreign substances detrimental to the satisfactory performance of the work called for in this Section.
- C. All vertical surfaces to receive vapor retarder must be free of dirt, gravel, or other loose material. All surfaces must be smooth and dry.

3.03 INTALLATION OF SELF-ADHERED VAPOR RETARDER

- A. Provide one-ply of self-adhering modified bitumen to surface of the wood deck with minimum 3" side laps and 6" end laps.
 - 1. All laps shall be rolled and sealed.
- B. No more vapor retarder shall be installed in one (1) day than can be properly covered and roofed that same day.
- C. Extend up and adhere the vapor retarder at perimeters and penetrations for 4" up and around all penetrations and curbs. Seal all edges with two-ply glass fabric and compatible mastic.

END OF SECTION

SECTION 072210
ROOF INSULATION

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. The General Conditions, the Supplementary General Conditions, and any Special Requirements are hereby made a part of this Section.
- B. This Contractor shall provide all labor, equipment, and materials to perform the work called for in this Section. This Contractor shall coordinate his work with other trades and work in other Sections.

1.02 WORK OF THIS SECTION INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING:

- A. Insulation shall be two (2) layers of 2.6" insulation.
- B. Cover board of 1/2" Hi Density DensDeck Prime.

1.03 RELATED WORK SPECIFIED ELSEWHERE INCLUDES:

061100 Carpentry
075310 Modified Bitumen Roofing

1.04 REFERENCE STANDARDS: LATEST EDITIONS

- A. ASTM
C1289, Type II, Class 1 Grade 3 Plastic Foam Insulation, 20 PSI.

1.05 SUBMITTALS

- A. Submit product data and samples of all materials.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in manufacturer's original containers, in sufficient quantity to allow continuity of work. Store on clean, raised platforms with approved weather protection when stored outdoors. Insulation shall be completely protected while in storage and during application to keep it dry at all times. Insulation shrink-wrap will not be considered adequate protection.

1.07 JOB CONDITIONS

- A. Proceed with work only when weather conditions comply with manufacturer's recommendations. Do not work when temperature is 40oF and falling or in wet weather.

PART 2 PRODUCTS

2.01 FLAT INSULATION

- A. C1289, Type II, Class 1, Grade 3 Plastic Foam Insulation, size 4' x 4' x 2.6", minimum compressive strength of 20 PSI, supplied and/or approved by the roofing manufacturer for usage under their roofing system. Facers to be fiberglass.

2.02 OVERLAY BOARD

- A. DensDeck Prime.

2.03 CANTS: Preformed fiberboard meeting ASTM C208. To be 4" typical.

2.04 FASTENERS

- A. Screw type #14 corrosion resistant fasteners of appropriate length to penetrate through deck a minimum of 1". Plate shall be a minimum of 3" diameter supplied by membrane manufacturer for fastening down their insulation.

2.05 ADHESIVES

- A. Use low rise foam to install coverboard over mechanically attached insulation.

PART 3 EXECUTION

3.01 INSPECTION

- A. Verify that substrate is clean, dry, and proper for application of insulation. All work of other trades penetrating the roof deck must be complete. Verify that wood blocking is installed. Do not proceed until all defects are corrected.
 1. Contractor shall investigate underside of deck for items which may become penetrated by mechanical fasteners. Contractor shall exercise caution to avoid damaging items below the deck. Contractor shall repair, at his cost, any items damaged by mechanical fasteners.

3.02 INSULATION ATTACHMENT

- A. Isocyanurate:
 1. Install all layers of insulation with staggered end and long joints. Lay with long dimension joints continuous from existing insulation. Break all joints the maximum possible with a minimum 12" row-to-row and layer-to-layer.
 2. Cut boards neatly to fit all penetrations and projections. Set units with tight but not forced joints. Trim or discard units with broken corners or similar defects. Provide tapered edge around drains as indicated to provide sump area.
 3. Fill all voids in lower layers greater than 1/4" in width with like insulation.

- B. Mechanically attached insulation over wood roof deck shall be attached with FM approved plates and fasteners, one (1) per square feet for an 8'-0" wide perimeter at fascia and at gutter and one (1) per two (2) square feet in field.

3.03 COVER BOARDS: Set in adhesive over isocyanurate insulation. Weigh down to ensure adhesion.

3.04 PROTECTION: Do not install more insulation at one time than will be protected from wetting or other damage by installation of roofing membrane on the same day or prior to rain or dew. Remove installed insulation that has become wet and replace with dry material. Protect installed insulation at all times against damage by roof traffic.

- A. Insulation shall be staggered and roofed over at the end of each day.
 - 1. All insulation shall be staggered from day to day. No straight joints will be accepted at start/stop areas. Leave ½ board out for start of new work.
- B. Provide positive water stops at the end of each day to prevent moisture from entering into the building or the finished roofing system.

END OF SECTION

SECTION 075310
MODIFIED BITUMEN ROOFING

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. The General Conditions, the Supplementary General Conditions, and any Special Requirements are hereby made a part of this Section.
- B. This Contractor shall provide all labor, equipment, and materials required to perform the work called for in this Section. This Contractor shall coordinate his work with other trades and work in other Sections.
- C. Work of this Section includes, but is not limited to, the following:
 - 1. Two-ply Modified bitumen roofing adhered in cold adhesive to nailed base sheet over rosin felt.
- D. Related Work Specified Elsewhere Includes:
 - 061100 Carpentry
 - 076000 Flashing and Sheet Metal

1.02 QUALITY ASSURANCE

- A. NRCA Manual.

1.03 PRODUCT DATA

- A. Submit copy(ies) of all modified bitumen products. Data to include: Spec-Data, Specification, and appropriate component data sheets.
- B. Samples: Submit the following for approval:
 - 1. 12" x 12" samples of modified bitumen membrane, flashing.
 - 2. 12" x 12" samples of base ply.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in manufacturer's original, unopened packing with all labels intact.
- B. When stored at the job site, materials shall be protected from the weather by the proper use of raised platforms and waterproof coverings. Pallets of membrane shall not be double-stacked on the job site. Consult detailed precaution statements on product label before use.

1.05 JOB CONDITIONS

A. Environmental Requirements:

1. All modified bitumen roofing must be applied at surface and ambient temperatures of 40oF or above with dry weather conditions.
2. For applications below 40oF, consult manufacturer's representative for written instructions on procedures required.

1.06 INSPECTION

- ### **A. Before installation, the Roofing Contractor shall inspect the surface to receive modified bitumen and assure that the surface is clean, dry, sound, and smooth.**

1.07 TEMPORARY WATER CUT-OFFS

- ### **A. At the end of each working day, water cut-offs must be installed. Temporary water cut-offs must be cleanly removed before work is resumed.**

1.08 WARRANTY

- ### **A. Roofing Contractor five (5) years in accordance with the General Conditions.**
- ### **B. Roofing System Manufacturer:**
1. 20 year unlimited warranty.

PART 2 PRODUCTS

2.01 MODIFIED BITUMEN SYSTEM (BASED ON Siplast Paradiene 20/30)

- ### **A. Modified Bitumen Roof Membrane: Siplast Paradiene 20/30 System set in cold adhesive. Material to have granule surfacing. Color from manufacturer's standard color chart.**
1. Alternate Manufacturers:
 - a. Soprema.
 - b. Polyglass

2.02 DESCRIPTION OF SYSTEMS

- ### **A. Roofing Membrane Assembly: A roof membrane assembly consisting of two plies of a prefabricated, reinforced, homogeneous Styrene-Butadiene-Styrene (SBS) block copolymer modified asphalt membrane, applied over a prepared substrate. Reinforcement mats shall be impregnated/saturated and coated each side with SBS modified bitumen blend. The cross sectional area of the sheet material shall contain no oxidized or non-SBS modified bitumen. The roof system shall pass 500 cycles of ASTM D 5849 Resistance to Cyclic Joint Displacement (fatigue) at 14°F (-10°C). Passing results shall show no signs of membrane cracking or interply delamination after 500 cycles. The roof system shall pass 200**

cycles of ASTM D 5849 after heat conditioning performed in accordance with ASTM D 5147. The assembly shall possess waterproofing capability, such that a phased roof application, with only the modified bitumen base ply in place, can be achieved for prolonged periods without detriment to the watertight integrity of the entire roof system.

B. Siplast Paradiene 20/30 FR Roof System:

1. Modified Bitumen Base and Stripping Ply Siplast Paradiene 20.
 - a. Thickness (avg): 91 mils (2.3 mm) (ASTM D 5147).
 - b. Thickness (min): 87 mils (2.2 mm) (ASTM D 5147)
 - c. Weight (min per 100 ft² of coverage): 62 lb. (3.0 kg/m²)
 - d. Peak filler content in elastomeric blend - 35% by weight
 - e. Low temperature flexibility @ -15°F (-26°C): PASS (ASTM D 5147)
 - f. Peak Load (avg) @ 73°F (23°C): 30 lbf/inch (5.3 kN/m) (ASTM D 5147)
 - g. Peak Load (avg) @ 0°F (-18°C): 70 lbf/inch (12.3 kN/m) (ASTM D 5147)
 - h. Ultimate Elongation (avg.) @ 73°F (23°C): 50% (ASTM D 5147)
 - i. Compound Stability (max): 0.1% (ASTM D 5147)
 - j. High Temperature Stability (min): 250°F (121°C) (ASTM D 5147)
 - k. Approvals: UL Class listed, FM Approved (products shall bear seals of approval)
 - l. Reinforcement: fiberglass mat or other meeting the performance and Compound stability criteria
2. Modified Bitumen Finish Ply Siplast Paradiene 30 FR:
 - a. Thickness (avg): 130 mils (3.3 mm) (ASTM D 5147)
 - b. Thickness at selvage (coating thickness) (avg): 98 mils (2.5 mm) (ASTM D 5147)
 - c. Thickness at selvage (coating thickness) (min): 94 mils (2.4 mm) (ASTM D 5147)
 - d. Weight (min per 100 ft² of coverage): 90 lb. (4.4 kg/m²)
 - e. Peak filler content in elastomeric blend: 35% by weight
 - f. Low temperature flexibility @ -15° F (-26° C): PASS (ASTM D 5147)
 - g. Peak Load (avg) @ 73°F (23°C): 30 lbf/inch (5.3 kN/m) (ASTM D 5147)
 - h. Peak Load (avg) @ 0°F (-18°C): 75 lbf/inch (13.2 kN/m) (ASTM D 5147)

- i. Ultimate Elongation (avg.) @ 73°F (23°C): 55% (ASTM D 5147)
 - j. Compound Stability (max): 0.1% (ASTM D 5147)
 - k. High Temperature Stability (min): 250°F (121° C) (ASTM D 5147)
 - l. Granule Embedment (max loss): 2.0 grams per sample (ASTM D 5147)
 - m. Approvals: UL Class listed, FM Approved (products shall bear seals of approval)
 - n. Reinforcement: fiberglass mat or other meeting the performance and Compound stability criteria
 - o. Surfacing: ceramic granules
- 2.03 **BASE SHEET:** Siplast Paradiene 20 PR. A polyester reinforced, specially modified asphalt coated sheet, having a minimum weight of 60 lb. /sq.
- 2.04 **MEMBRANE COLD ADHESIVE:** An asphalt, solvent blend conforming to ASTM D 4479, Type II requirements. Siplast PA-311 Adhesive
- 2.05 **PRIMER:** ASTM D41.
- 2.06 **SEALANT:** A moisture-curing, non-slump elastomeric sealant designed for roofing applications. The sealant shall be approved by the roof membrane manufacturer for use in conjunction with the roof membrane materials. Acceptable types are as follows: Siplast PS-304 Elastomeric Sealant
- 2.07 **ROOF CEMENT:** ASTM D4586 – Asbestos Free.
- 2.08 **CANT STRIPS:** Cants 4” face.
- 2.09 **PMMA FLASHING:** Parpro with fleece reinforcement. Finish color to be selected by Architect.

PART 3 EXECUTION

3.01 INSPECTION – ROOFING CONTRACTOR

- A. Examine all surfaces to receive roofing and flashing for non-uniform surface, debris, inadequate attachment of deck components, moisture, and all other conditions, which would reduce the performance of the roofing system (all components).
- B. Do not proceed with application until all defects are repaired to comply with the Specifications of roof component manufacturers.

3.02 PREPARATION

- A. All surfaces to receive membrane shall be dry, smooth, rigid, clean, frost-free, and free of voids, sharp protrusions, or other contaminants.

- B. Install modified bitumen smooth ply perpendicular to slope in full bedding of cold adhesive. All rolls to be broomed in to ensure complete adhesion. Install with 4” side laps and minimum 6” end laps. Back nail to wood deck as required by membrane manufacturer.
- C. Install modified bitumen finish ply perpendicular to slope with minimum 4” side laps and 6” end laps. Install in full bedding of cold adhesive over previously installed smooth ply. Voids will not be acceptable. Offset laps in finish ply from laps in smooth ply. All rolls to be broomed in to ensure complete adhesion. Back nail to wood deck as required by membrane manufacturer.
 - 1. Contractor shall exercise care so that excessive quantity of cold adhesive does not extrude out of the lap. It is imperative that the aesthetic appearance be maintained.
 - 2. Contractor may hot air weld laps to maintain aesthetics and quality.
- D. Stagger end laps of modified bitumen the maximum possible.
- E. Back nail membrane if required by the manufacturer.
- F. Membrane shall extend a minimum of 2” above top of cant strip.

3.03 BASE FLASHING

- A. Base flashing shall extend to the top of the parapets measured from the plane of the roof. Lap base flashing onto field sheet a minimum of 6”. Adjacent sheets shall be lapped a minimum of 6” and solidly fused together.
 - 1. Strip all vertical joints with a minimum 4” strip of PMMA flashing and fleece.
 - 2. Strip all corners with PMMA flashing and fleece
- B. Fasten top edge of flashing with 1/8” x 1” aluminum term bar fastened at 6” on center.

3.04 FIELD QUALITY CONTROL

- A. Manufacturer shall provide on-the-job inspections, technical assistance, and membrane application guidance as may be necessary to complete the roofing membrane application.

3.05 JOB COMPLETION

- A. The Roofing Contractor shall inspect the completed roofing system and correct all defects.
- B. The Manufacturer’s representative shall inspect the completed roofing system and notify the Contractor of any defects in the application.
- C. Clean up all debris, excess materials, and equipment, and remove from site.
- D. Any drippage or spills of coating, sealant, mastic, or primers shall be cleaned.

GALLERY 53
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- E. The General Contractor shall restrict construction traffic and equipment movement on the completed roofing to only essential related trades. For trades continuing work on completed roofs, appropriate protection shall be provided.

END OF SECTION

SECTION 076000
FLASHING AND SHEET METAL

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. The General Conditions, the Supplementary General Conditions, and any Special Requirements are hereby made a part of this Section.
- B. This Contractor shall provide all labor, equipment, and materials to perform the work called for in this Section. This Contractor shall coordinate his work with other trades and work in other Sections.

1.02 WORK OF THIS SECTION INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING:

- A. Furnish all labor, materials, tools, appliances, equipment, hoist, ladders, scaffolding, work platforms, etc., all as may be required to complete the work.
- B. New .040" painted aluminum fascia extenders.
- C. New 20 oz. lead-coated copper wall counterflashings where noted on the details.
- D. New prefabricated ANSI ES-1 .040" fascia system with extruded bar, as supplied by the primary roofing manufacturer. Size as noted on the Drawings.

1.03 RELATED WORK SPECIFIED ELSEWHERE INCLUDES:

061100 Carpentry

075310 Modified Bitumen Roofing

1.04 QUALITY ASSURANCE

- A. Preconstruction Conference: Review all proposed materials and procedures with the Owner prior to starting work. All work will be inspected and complete approval must be obtained before final acceptance by the Owner.
- B. Comply with all applicable codes and regulations and all pertinent recommendations contained in "Architectural Sheet Metal Manual", latest edition, published by the Sheet Metal and Air Conditioning Contractors Association.
- C. Comply with all pertinent recommendations of the National Roofing Contractors Association as contained in the Association Manual of Roofing Practice.
- D. High performance roof edge system shall be CERTIFIED by the manufacturer to comply with ANSI/SPRI Standard ES-1. Roof edge shall meet performance design criteria according to the following test standards:
 - 1. ANSI/SPRI ES-1 Test Method RE-1 Test for Roof Edge Termination of Single-Ply Roofing Membranes: The fascia system shall be tested to secure

the membrane to minimum of 100 lbs/ft in accord with the ANSI/SPRI ES-1 Test Method RE-1. Use the current edition of ANSI/SPRI ES-1 Wind Design Standard for Edge Systems Used with Low Slope Roofing Systems.

1.05 REFERENCE STANDARDS: LATEST EDITIONS

- A. American Society for Testing & Materials (ASTM):
 - B32 Solder Metals
 - B370 Copper Sheet and Strip for Building Construction
 - B101 Lead-Coated Copper Sheets
 - A167 Stainless Steel
 - B209 Aluminum alloy sheet and plate.

1.06 SUBMITTALS

- A. Submit samples and product data on all materials.
- B. Submit shop drawings of flashing details as may be requested by the Owners.
- C. Submit two (2) copies of warranty to the Owners.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle materials in manner to prevent damage and deterioration. Provide packaging as required for protection. Schedule delivery of materials to coincide with use on job. Store materials indoors protected from weather until installed.

1.08 JOB CONDITIONS

- A. Install materials in dry weather on dry, smooth surfaces only.
- B. If, when installing roofing, insulation, etc., it is disclosed that repairs must be made to the structure before roofing work may continue, it shall be immediately called to the attention of the Consultant for their examination, documentation and solution. A price for such repairs or replacement as may be deemed necessary shall be presented to the Owners for their approval and authorization to issue a change order. Unless otherwise ordered the Roofing Contractor shall employ such tradesmen as may be required to perform corrective work.
- C. The Roofing Contractor shall during his operations and at all times protect workmen of all trades, building personnel, general public and the structure against injury or damage. Provide roof top/edge protection for workmen as required by O.S.H.A.

1.09 WARRANTY

- A. Prior to start of work, furnish sample of Contractor's written warranty for five (5) years for the Owner's approval.

PART 2 PRODUCTS

2.01 STAINLESS STEEL: Stainless Steel ASTM A167, type 302, 304, .018" thickness unless otherwise shown.

2.02 FLUX: Rosin, muriatic acid neutralized with zinc chloride acid for stainless steel.

2.03 NAILS: Stainless steel or hardware bronze of stronghold type with a large flat head. Not smaller than #12 gauge with length sufficient to penetrate roof deck/blocking not less than 7/8". Match material being fastened or use stainless steel.

2.04 MASONRY FASTENERS

- A. Zamac expansion anchors with stainless steel pin equal to Nail-In by Rawl for securement of flashings.

2.05 SCREWS, BOLTS, AND RIVETS: Copper, bronze or brass for fastening copper. Rivets shall be 1/8" diameter, stainless steel pop-type. Pop rivet shall have non-ferrous mandrels.

2.06 EXPANSION INSERTS: Lead, bronze, nylon or plastic as approved.

2.07 SEALANT: Approved type of silicone meeting requirements of FS-TT-S- 00230C, Type II, Class A.

2.08 Perimeter metal edge system complying with ANSI ES-1. .040" Kynar Aluminum Fascia Metal. Color by Owner from Manufacturer's standard color chart.

2.09 Painted Aluminum to match fascia for fascia extenders. .040" thickness with hemmed edge.

PART 3 EXECUTION

3.01 Sheet metal work of every description shall be performed by expert tradesmen thoroughly familiar with and normally engaged in this type of roofing.

3.02 The Roofing Contractor shall place a sheet metal foreman who has been engaged in the type of work required of this specification for not less than five (5) years. He shall upon demand (prior to executing a contract) show evidence of work he has performed of similar scope of this caliber and magnitude.

3.03 SURFACES: Surfaces to be covered with sheet metal shall be smooth and free from defects of every description. All such surfaces shall be cleaned of dirt,

- rubbish and other foreign materials before sheet metal work is started. All projecting nails shall be driven flush with roof boarding.
- A. Protect all work against breakage, staining or damage of any character. All such damage shall be repaired or replaced as ordered by the Consultant to his complete satisfaction and at the roofer's full expense.
 - B. The Roofing Contractor shall remove by mechanical or other means (including hand chipping) all products found on the structure, which will interfere with the proper installation of new work or in its performance after installation. Solvents will not be permitted except for unusual conditions and then only at the express approval of the Owner.
- 3.04 TINNING:** Edges of all sheets to be soldered whether lead coated or not shall be tinned with solder on both sides for a width of not less than 2 inches. Lead coated materials shall be thoroughly wire brushed to produce a bright finish prior to tinning.
- A. The Contractor shall protect tinned metals from becoming soiled.
- 3.05 SOLDERING:** All soldering shall be done slowly with well-heated coppers -to heat sheet thoroughly and to sweat solder completely through full width of seam. Ample solder shall be used and seam shall show at least one full inch of evenly flowed solder. Wherever possible, all soldering shall be done in flat position. Seams on slope steeper than 45 degrees shall be soldered second time. When soldering lead coated metals, liberal amount of flux shall be brushed into seams. Solder all seams in solder metals. All soldering shall be done within the tinned area.
- 3.06 SOLDERING COPPER:** Soldering shall be done with heavy soldering copper of blunt design, properly tinned before using. They shall weigh not less than 10 pounds per pair -except, when gas heated soldering torch is used, copper itself shall weigh not less than 3 pounds.
- 3.07** Open flame equipment shall be carefully placed and utilized to protect against promotion of accidental fire. Fire extinguishers and fireproof blankets shall be employed and/or be readily available for use. Extinguishers shall be within "arm's reach" of any workmen employing an open-flame device.
- 3.08** Set all flanged items in bedding of sealant before nailing down. Nail flanged items 3" on center staggered. Stripping supplied in EPDM roofing section 07541.
- 3.09** If a particular piece of work has been inadvertently omitted from these specifications or not shown on the drawings the design principle and techniques carried in "The Application of Copper and Common Sense" as published by Revere shall govern.

3.10 MASONRY FLASHINGS

- A. Counterflashing: Counterflashing shall be 20 oz. lead coated copper with sealed and riveted seams. Counterflashings shall be installed as shown on the Drawings. Fasten receiver into reglet with lead wedges 1' on center maximum. Provide a bead of water cut off mastic in reglet prior to installing counterflashing.

3.11 COORDINATION

- A. The Roofing Contractor shall be responsible for directing and coordinating all trades engaged in performing work in each section of specifications, properly schedule their operations to keep the overall work flowing smoothly with minimum interruption.
- B. If, in the judgment of the Consultant, the Roofing Contractor and/or his Subcontractor can better serve the progress and general quality of the project as a whole by redirecting their efforts, they shall comply with such directive forthwith; said compliance shall be without recourse.
- C. The Roofing Contractor shall delegate a job superintendent to attend all job meetings and make all manner of decisions which shall, once made, be as binding as though they were made by the Principal of the company.
- D. The Roofing Contractor shall be required to fully cooperate with and coordinate his and his Subcontractor's work with the contracting persons or project managers selected and designated by the Owners.

END OF SECTION

SECTION 071100

ROOF AND INTERIOR ACCESSORIES

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. The General Conditions, the Supplementary General Conditions, and any Special Requirements are hereby made a part of this Section.
- B. This Contractor shall provide all labor, equipment, and materials required to perform the work called for in this Section. This Contractor shall coordinate his work with other trades and work in other Sections.
- C. Work of this Section includes, but is not limited to, the following:
 - 1. New floor access door.
 - 2. New roof hatch.
- D. Related Work Specified Elsewhere Includes:
 - 061100 Carpentry
 - 075310 Modified Bitumen Roofing
 - 076000 Flashing and Sheet Metal

1.02 SUBMITTALS

- A. Submit Shop Drawings and product data.
- B. Indicate on Shop Drawings, configuration and dimension of components, adjacent construction, required clearances and tolerances, and other affected work.
- C. Provide product data on shape of components, materials and finishes, anchor types and locations.
- D. Submit manufacturer's installation instructions.
- E. Submit manufacturer's five (5) year warranty.

PART 2 MATERIAL

- 2.01 ROOF HATCH:** Bilco Type "S", size 36" x 30", or by Babcock Davis.
- 2.02 ROOF HATCH GUARD RAIL:** To be Bil-Guard Hatch Rail System by Bilco, with gate; Hatch Safety Railing by Grainger; or Roof Safety Railing by RTA. Rail to meet OSHA Standards, Title 29 CFR 1910.23 and 1910.27. Two (2) required, one (1) exterior and one (1) for interior at floor access in attic.
- 2.03 FLOOR ACCESS HATCH:** Floor access hatch to be Bilco Type TER with release handle on both sides of the hatch.

2.04 LADDER: Provide ladder up post at both roof hatch and attic access hatch.

PART 3 EXECUTION

3.01 INSPECTION

- A. Beginning of installation means acceptance of existing conditions.
- B. Contractor shall field measure all existing curbs and match the existing sizes to the new replacement curbs. This is for all rooftop units and exhaust fans.

3.02 INSTALLATION

- A. Install components in accordance with manufacturer's instructions.
- B. Coordinate roofing membrane and base flashings with installation of components of this Section.

END OF SECTION

SECTION 078420 - FIRE-RESISTIVE JOINT SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contractor and each Subcontractor and/or supplier providing goods or services referenced in or related to this Section shall also be bound by the Documents identified in Division 1 Section "Summary", Paragraph 1.1A, entitled "Related Documents."

1.2 SUMMARY

- A. This Section includes fire-resistive joint systems for the following:
 - 1. Head-of-wall joints.
- B. Related Sections include the following:
 - 1. Division 7 Section "Through-Penetration Firestop Systems" for systems installed in openings in walls and floors with and without penetrating items.
 - 2. Division 7 Section "Joint Sealants" for non-fire-resistive joint sealants.

1.3 PERFORMANCE REQUIREMENTS

- A. General: Provide fire-resistive joint systems that are produced and installed to resist spread of fire according to requirements indicated, resist passage of smoke and other gases, and maintain original fire-resistance rating of assembly in which fire-resistive joint systems are installed.
- B. Joint Systems in and between Fire-Resistance-Rated Constructions: Provide systems with assembly ratings equaling or exceeding the fire-resistance ratings of construction that they join, and with movement capabilities indicated as determined by UL 2079.
 - 1. Load-bearing capabilities as determined by evaluation during the time of test.
- C. For fire-resistive systems exposed to view, provide products with flame-spread and smoke-developed indexes of less than 25 and 450, respectively, as determined per ASTM E 84.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated.

- B. Shop Drawings: For each fire-resistive joint system, show each kind of construction condition in which joints are installed; also show relationships to adjoining construction. Include fire-resistive joint system design designation of testing and inspecting agency acceptable to authorities having jurisdiction that demonstrates compliance with requirements for each condition indicated.
 - 1. Submit documentation, including illustrations, from a qualified testing and inspecting agency that is applicable to each fire-resistive joint system configuration for construction and penetrating items.
- C. Product Certificates: For each type of fire-resistive joint system, signed by product manufacturer.
- D. Qualification Data: For Installer.
- E. Field quality-control test reports.
- F. Evaluation Reports: Evidence of fire-resistive joint systems' compliance with ICBO ES AC30, from the ICBO Evaluation Service.
- G. Research/Evaluation Reports: For each type of fire-resistive joint system.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: A firm that has been approved by FMG according to FMG 4991, "Approval of Firestop Contractors."
- B. Installation Responsibility: Assign installation of through-penetration firestop systems and fire-resistive joint systems in Project to a single qualified installer.
- C. Source Limitations: Obtain fire-resistive joint systems, for each kind of joint and construction condition indicated, through one source from a single manufacturer.
- D. Fire-Test-Response Characteristics: Provide fire-resistive joint systems that comply with the following requirements and those specified in Part 1 "Performance Requirements" Article:
 - 1. Fire-resistance tests are performed by a qualified testing and inspecting agency. A qualified testing and inspecting agency is UL or another agency performing testing and follow-up inspection services for fire-resistive joint systems acceptable to authorities having jurisdiction.
 - 2. Fire-resistive joint systems are identical to those tested per methods indicated in Part 1 "Performance Requirements" Article and comply with the following:

- a. Fire-resistive joint system products bear classification marking of qualified testing and inspecting agency.
- b. Fire-resistive joint systems correspond to those indicated by referencing system designations of the qualified testing and inspecting agency.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver fire-resistive joint system products to Project site in original, unopened containers or packages with qualified testing and inspecting agency's classification marking applicable to Project and with intact and legible manufacturers' labels identifying product and manufacturer, date of manufacture, lot number, shelf life, curing time, and mixing instructions for multicomponent materials.
- B. Store and handle materials for fire-resistive joint systems to prevent their deterioration or damage due to moisture, temperature changes, contaminants, or other causes.

1.7 PROJECT CONDITIONS

- A. Environmental Limitations: Do not install fire-resistive joint systems when ambient or substrate temperatures are outside limits permitted by fire-resistive joint system manufacturers or when substrates are wet due to rain, frost, condensation, or other causes.
- B. Ventilate fire-resistive joint systems per manufacturer's written instructions by natural means or, if this is inadequate, forced-air circulation.

1.8 COORDINATION

- A. Coordinate construction of joints to ensure that fire-resistive joint systems are installed according to specified requirements.
- B. Coordinate sizing of joints to accommodate fire-resistive joint systems.
- C. Notify Owner's inspecting agency at least seven days in advance of fire-resistive joint system installations; confirm dates and times on days preceding each series of installations.
- D. Do not cover up fire-resistive joint system installations that will become concealed behind other construction until Owner's inspecting agency and building inspector of authorities having jurisdiction have examined each installation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Products: Subject to compliance with requirements, provide one of the following fire-resistive joint systems indicated for each application in the Fire-Resistive Joint System Schedule at the end of Part 3:
1. Hilti, Inc.; CP 672 Speed Spray.
 2. 3M; Fire Protection Products Division; FireDam™ Spray 100.
 3. Tremco; Fire Protection Systems Group; Tremstop Acrylic.

2.2 FIRE-RESISTIVE JOINT SYSTEMS

- A. Compatibility: Provide fire-resistive joint systems that are compatible with joint substrates, under conditions of service and application, as demonstrated by fire-resistive joint system manufacturer based on testing and field experience.
- B. Accessories: Provide components of fire-resistive joint systems, including primers and forming materials, that are needed to install fill materials and to comply with Part 1 "Performance Requirements" Article. Use only components specified by fire-resistive joint system manufacturer and approved by the qualified testing and inspecting agency for systems indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Installer present, for compliance with requirements for joint configurations, substrates, and other conditions affecting performance of work.
1. Proceed with installation only after unsatisfactory conditions have been corrected. Commencement of work indicates acceptance of substrates.

3.2 PREPARATION

- A. Surface Cleaning: Clean joints immediately before installing fire-resistive joint systems to comply with fire-resistive joint system manufacturer's written instructions and the following requirements:
1. Remove from surfaces of joint substrates foreign materials that could interfere with adhesion of fill materials.

2. Clean joint substrates to produce clean, sound surfaces capable of developing optimum bond with fill materials. Remove loose particles remaining from cleaning operation.
 3. Remove laitance and form-release agents from concrete.
- B. Priming: Prime substrates where recommended in writing by fire-resistive joint system manufacturer using that manufacturer's recommended products and methods. Confine primers to areas of bond; do not allow spillage and migration onto exposed surfaces.
- C. Masking Tape: Use masking tape to prevent fill materials of fire-resistive joint system from contacting adjoining surfaces that will remain exposed on completion of Work and that would otherwise be permanently stained or damaged by such contact or by cleaning methods used to remove smears from fire-resistive joint system materials. Remove tape as soon as possible without disturbing fire-resistive joint system's seal with substrates or damaging adjoining surfaces.

3.3 INSTALLATION

- A. General: Install fire-resistive joint systems to comply with Part 1 "Performance Requirements" Article and fire-resistive joint system manufacturer's written installation instructions for products and applications indicated.
- B. Install forming/packing/backing materials and other accessories of types required to support fill materials during their application and in position needed to produce cross-sectional shapes and depths required to achieve fire ratings indicated.
- C. Install fill materials for fire-resistive joint systems by proven techniques to produce the following results:
1. Fill voids and cavities formed by openings and forming/packing/backing materials as required to achieve fire-resistance ratings indicated.
 2. Apply fill materials so they contact and adhere to substrates formed by joints.
 3. For fill materials that will remain exposed after completing Work, finish to produce smooth, uniform surfaces that are flush with adjoining finishes.

3.4 FIELD QUALITY CONTROL

- A. Inspecting Agency: Owner will engage a qualified independent inspecting agency to inspect fire-resistive joint systems and prepare inspection reports.
- B. Testing Services: Inspecting of completed installations of fire-resistive joint systems shall take place in successive stages as installation of fire-resistive joint systems proceeds. Do not proceed with installation of joint systems for the next area until inspecting agency determines completed work shows compliance with requirements.

1. Inspecting agency shall state in each report whether inspected fire-resistive joint systems comply with or deviate from requirements.
- C. Remove and replace fire-resistive joint systems where inspections indicate that they do not comply with specified requirements.
- D. Additional inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
- E. Proceed with enclosing fire-resistive joint systems with other construction only after inspection reports are issued and fire-resistive joint systems comply with requirements.

3.5 CLEANING AND PROTECTING

- A. Clean off excess fill materials adjacent to joints as Work progresses by methods and with cleaning materials that are approved in writing by fire-resistive joint system manufacturers and that do not damage materials in which openings occur.
- B. Provide final protection and maintain conditions during and after installation that ensure fire-resistive joint systems are without damage or deterioration at time of Substantial Completion. If damage or deterioration occurs despite such protection, cut out and remove damaged or deteriorated fire-resistive joint systems immediately and install new materials to produce fire-resistive joint systems complying with specified requirements.

3.6 FIRE-RESISTIVE JOINT SYSTEM SCHEDULE

- A. Designation System for Joints in or between Fire-Resistance-Rated Constructions: Alphanumeric systems listed in UL's "Fire Resistance Directory" under Product Category XHBN.
- B. Through-Penetration Firestop Systems:
 1. Available UL-Classified Systems: XHEZ CAJ 0001-9999.
 2. Assembly Rating: As indicated.
 3. Movement Capabilities: Class II – 25 percent compression or extension.

END OF SECTION 078420

SECTION 079000
JOINT SEALANTS

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. The General Conditions, the Supplementary General Conditions, and any Special Requirements are hereby made a part of this Section.
- B. This Contractor shall provide all labor, equipment, and materials to perform the work called for in this Section. This Contractor shall coordinate his work with other trades and work in other Sections.

1.02 WORK INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING:

- A. Caulking of exterior joints; masonry and metal; metal and metal; and joints between dissimilar materials.

1.03 RELATED WORK SPECIFIED ELSEWHERE INCLUDES:

076000 Flashing and Sheet Metal

1.04 SUBMITTALS

- A. Submit product data and samples of all materials.
- B. Submit warranties at completion of work.

PART 2 PRODUCTS

2.01 GENERAL: Sealants equal to products listed by Pecora Corporation, Harleysville, PA 19438.

- A. Equals by Tremco or Sika.

2.02 SEALANTS: Colors as selected by the Owners.

- A. One-part Silicone, (Non-Sag): TT-S-001543A, Type II: #864 Architectural Silicone Sealant.
- B. One-part Polysulfide, (Non-Sag): TT-S-00230C, Type II: #GC-9 Synthacalk Sealant.

2.03 FOAM BACK-UP: Polyethylene rod equal to Denverfoam by Pecora or bond breaker tape.

2.04 SURFACE PRIMERS: As recommended by sealant manufacturer.

PART 3 EXECUTION

3.01 INSPECTION: Verify that joints to receive sealants are proper depth, clean, dry, frost-free, and appropriate for application of sealants.

3.02 PREPARATION

- A. Prime required surfaces with proper materials in accordance with manufacturer's instructions.
- B. Mask edges of joints to be caulked with tape to produce straight lines.

3.03 APPLICATION: For joints up to 1/2" width, sealant depth shall equal width. Sealant joints over 1/2" width shall have depth equal one-half width. Fill excessive depth with back-up material. Fill joint with sealant to required depth using filler to obtain concave shape. Do not caulk when temperature is below 40o F. Leave surfaces neat, smooth, clean and watertight. Exterior joints to have foam back-up material as indicated. Apply sealant with hand gun, tooling if necessary to obtain concave surface within ten minutes.

3.04 SCHEDULE

Exterior Masonry:	One-part Polysulfide
Exterior Dissimilar Materials:	One-part Polysulfide
Flashing and Sheet Metal:	One-part Silicone

3.05 GUARANTEE: Furnish written guarantee stating that the Contractor at his own expense will repair or replace all caulking work which becomes defective due to faulty materials or workmanship within a period of five (5) years from the date of acceptance of the work.

END OF SECTION

SECTION 098000 – LEAD PAINT ABATEMENT FOR HISTORIC WORK

1.0 – GENERAL

1.0 Related Documents

- A. The Contractor and each Subcontractor and/or supplier providing goods or services referenced in or related to this Section shall also be bound by the Documents identified in Division 1 Section “Summary”, Paragraph 1.1A, entitled “Related Documents.”

1.1 Description of Work

- A. This section includes all labor, materials, equipment, and services necessary to complete the work of paint removal/lead abatement of all lead-based paint from historic elements. Abatement work will include, but is not limited to:
1. Removal of paint and coatings from existing surfaces using chemical paint remover, neutralizer (if required) to provide the surface with a neutral pH in preparation for repainting.
 2. Items to be stripped include all metal cornices.
 3. Great care and caution are to be taken in the paint removal from historic items to ensure that historic material is not damaged and that the surface pH is not raised or lowered as this will prevent finishes such as varnishes or paints from adhering.

1.2 Quality Assurance

- A. All work that disturbs lead-based paint surfaces, including the handling, stripping, transport and disposal of all lead-containing paint and residue must be performed in accordance with all applicable federal, state and local laws and regulations for identification, removal, labeling, handling, containerization, transportation, and disposal of lead-based materials including, but not limited to:
1. U.S. Department of Labor OSHA Regulations: Including, but not limited to: Title 29, Code of Federal Regulations (CFR) Section 1926.62: “Lead Exposure in Construction” and Title 29, CFR Section 1910.1200: “Hazard Communication Standard.”
 2. U.S. Environmental Protection Agency (USEPA) Regulations: Including but not limited to: Title 40 CFR Part 262: “Standards Applicable to Generators of Hazardous Waste;” Part 263: “Standards Applicable to Transporters of Hazardous Waste” and Part 745: “Requirements for Lead-Based Paint Activities in Target Housing and Child-Occupied Facilities, Final Rule.”

3. The Connecticut State Department of Health Rules & Regulations and the Connecticut State Department of Environmental Conservation Regulations.
 4. In addition, all other applicable federal, state and local codes, rules and regulations must be adhered to by the Contractor.
- B. Contractor performing work in this section must demonstrate at least (2) years successful experience in comparable projects that require OSHA 29 CFR Section 1926.62 compliance and employ a steady crew who have received lead hazard awareness training from either an accredited lead paint training center or recognized environmental training center specializing in lead hazard awareness training.
- C. The Contractor shall maintain a steady work crew made up of qualified workers and a full time foreman who speaks and reads fluent English.
- D. The Contractor shall supply all equipment and materials necessary to perform the work. All electrical power (including Ground Fault Circuit Interrupters for the HEPA vacuums, temporary lighting and any other electrical needs) shall be the Contractor's responsibility.
- 1.3 Applicable Codes and Standards
- A. ASTM – American Society for Testing and Materials
 - B. MSDS – Material Safety Data Sheets
- 1.4 Submittal Requirements
- A. Contractor Resume: Contractor shall submit resume and at least three (3) references demonstrating at least two (2) years successful experience in comparable projects that require OSHA 29 CFR Section 1926.62 compliance and employ a steady crew who have received lead hazard awareness training from either an accredited lead paint training center or recognized environmental training center specializing in lead hazard awareness training.
 - B. The Contractor shall submit proof of a Medical Surveillance Program for all employees who may be exposed to lead during the course of the work. This program shall comply with 29 CFR Part 1926.62. This includes copies of medical records and blood test results of workers to be utilized on the project, as performed by an occupational physician or medical doctor, and appropriate laboratory.
 - C. Product Literature: The Contractor shall submit copies of the manufacturer's technical data and MSDS (Material Safety Data Sheet) for each product used for the project, including their recommendations for application and use. Include manufacturer's instructions for handling, storage and application of products in addition to test reports and certificates that verify the product's compliance with the specification's requirements.

- D. On Site Copy of Product Literature: One complete set of product literature and MSDS shall be placed in a 3-ring, loose-leaf binder and shall be present on the job site at all times for the reference of the Contractor/Architect/Engineer.
- E. Work Description: The Contractor shall submit detailed written program describing equipment, materials, and procedures proposed for use in accomplishing all work of this Section. Include the following information and all other information required to evaluate the proposed work:
1. Methods of protection including, but not limited to: adjacent surfaces, workers, pedestrian and automobile traffic, nearby property and materials
 2. Plans and equipment specifications for containment system of hazardous materials, including, but not limited to paint stripper and rinse water
 3. Procedure for chemical paint removal
 4. Cleaning and Waste Disposal Program
- F. Field-Construction Mock-ups: Prior to commencing paint removal operations, prepare test samples on two areas, one a window casing and the second a door casing.
1. Execute one test panel for each recommended product.
 2. Each test panel is to measure not less than 2 feet by 2 feet square.
 3. Prepare additional samples as required by the Engineer until satisfactory appearance and/or techniques are established.
 4. Do not proceed with work of this section until sample, materials and techniques are approved by the Engineer.
 5. Approved sample will serve as the standard for judging completed work and shall remain in place for the duration of the Work.

1.5 Delivery, Storage and Handling

- A. Deliver and store all materials in manufacturer's original sealed containers bearing the manufacturer's label indicating product name, grade, type, color, etc. Unlabeled materials will be rejected.
- B. Store all materials according to manufacturer's written instructions.
- C. Place used paint removal tools, waste or other materials that constitute a safety hazard

in air-tight plastic containers. Keep containers closed when not in use. Remove all such hazardous waste materials from the site at the close of each workday.

- D. Empty containers contain product residue and, therefore, all safety and label warnings must be followed after container is emptied.

1.6 Project Conditions

- A. Protection of Persons: Protect all persons, whether or not they are involved with work of this Section, from harm caused by work of this Section.

1. Ensure adequate ventilation at all times during work of this section.
2. Prevent all persons except properly trained and protected workers from coming in contact with chemicals, chemical solutions, dust and particles, stripping residue, and other products used for or generated by work of this Section.
3. Properly train workers and provide all appropriate protective clothing and accessories for paint removal methods used.
4. Ensure proper barriers around the work areas with warning labels and signs to prevent unlawful entry. Signs must clearly state:

WARNING
LEAD WORK AREA
POISON
NO SMOKING, EATING OR DRINKING

- B. Protection of Building: Protect building elements and finishes from damage or deterioration caused by work of this Section using all means necessary. Repair any damage to materials or finishes to Architect's satisfaction at no additional cost.

1. Take all necessary precautions to prevent fire and spread of fire.
2. Do not use torches, heat guns, or any other heat generating equipment to remove paint.

- C. Protection of Site and Environment: Protect site, site features, walkways, streets, and all other adjacent elements, as well as all facilities adjacent to building where work of this Section is performed, from damage or deterioration resulting from work of this Section. Prevent chemicals, cleaning residue, rinse water, and all other materials

generated by work of this Section from contaminating site, other sites, the air, bodies of water, or the water table.

- D. Contractor shall post warning signs at all approaches to work areas clearly stating:

CAUTION
LEAD HAZARD WORK AREA
KEEP OUT
DO NOT ENTER UNLESS AUTHORIZED
NO EATING, DRINKING OR SMOKING IN THE WORK AREA

- E. Protection of Prepared Surfaces: Protect all surfaces prepared for painting to prevent surface deterioration or contamination that might adversely affect optimum adhesion, cure, and performance of paint following application.
- F. Do not proceed with chemical paint removal during inappropriate weather conditions including but not limited to: above or below the manufacturer's recommended temperature; wind speeds that are greater than 20 miles per hour.
- G. Work area shall be cleaned before commencing paint removal operations.

1.7 Environmental Requirements

- A. Chemical Paint Strippers: Follow manufacturer's recommendations for environmental requirements for use of paint stripper selected following testing.

2.0 – MATERIALS

2.1 Chemical Paint Removers and Neutralizers

- A. Peel Away 1 (Dumond Chemicals)
1. Peel Away Neutralizer (Dumond Chemicals)
- B. Peel Away 7 (Dumond Chemicals)
- C. Safety Peel 1 (ProSoCo, Inc.)
- D. Safety Peel 3 (ProSoCo, Inc.)
- E. Smartstrip (Dumond Chemicals)
- F. or approved equal

2.2 Containment System

- A. 55 Gallon Drums
- B. 6 millimeter thick polyethylene sheeting
- C. Anchoring system and tape
- D. or approved equal

2.3 Cleaning Equipment

- A. Vacuum with HEPA filters
- B. Low-pressure sprayers for rinsing
- C. Non-corroding nozzles (bronze or plastic)

2.4 Miscellaneous Materials and Tools

- A. Including, but not limited to: soft cloths, steel wool, plastic sheeting and duct tape to cover paint stripper, putty knives and scrapers, steel or brass wire brushes, fiber bristle brushes

3.0 – EXECUTION

3.1 Examination

- A. Examine the areas and conditions under which work of this section will be performed. Inform the Architect of any problems found. Correct conditions detrimental to the timely and proper completion of the work. Do not proceed until unsatisfactory conditions are corrected.

3.2 Protection

- A. Chemical paint stripping procedures shall comply with all federal, state, and local regulations for containment and disposal of paint stripper, paint, and rinsing solvents.
- B. Work Area Protection:
 - 1. Use polyethylene sheeting and waterproof masking tape or drop cloths to protect all surfaces not requiring paint removal. Ensure that all surrounding areas are protected. Surrounding areas shall include, but not be limited to,

adjacent surfaces and structures, private property including automobiles, vegetation, and all other surfaces that would be adversely affected if placed in contact with the paint strippers.

2. Maintain all wrappings or protection furnished with items provided by other trades and installed in areas where paint removal is required. If protection is displaced or removed, replace for duration of paint removal work.
3. All air conditioning vents and air intakes in the vicinity of the paint removal should be covered throughout the removal process. Avoid breathing fumes and maintain adequate ventilation when working on interior surfaces.
4. Install Containment System.
 - a. Ground Cover. The ground surrounding the area where active stripping is taking place shall be covered with a minimum of one layer of 6-millimeter thick polyethylene sheeting. The sheeting shall extend a minimum of 10 feet beyond the work areas.
 - b. All surfaces shall be protected by a 6-millimeter thick polyethylene sheet secured to the side of the building with tape or other anchoring system.
 - c. The Contractor shall ensure that all water run off from washing or rinsing during lead paint abatement will be captured and collected into 55 gallon drums. The water shall be filtered through a five micron filter or approved equal, to remove pieces of lead paint and debris. Water shall be recycled, if possible.
 - d. If containment of run off is on scaffolding, EPDM waterproofing membrane or approved equal can be applied with edges raised and adhered to scaffold walls.
 - e. All windows within twenty (20) feet of working surfaces shall be kept closed, including windows of adjacent structures.
 - f. Two layers of plastic sheeting shall be taped to the interior wall of all windows.
 - g. Debris and plastic sheeting for containment system shall not be left out overnight.
5. All waste materials shall be properly disposed off at the end of each work day.

6. Work area shall be sealed to prevent spread of debris and dust beyond the work area.
7. If vacuums are used to clean, machines need to be equipped with HEPA (High Efficiency Particulate Air) filters to ensure that all lead dust has been contained and removed.

C. Personal Protection

1. Equip workers with proper protective clothing, equipment, and training in accordance with all applicable regulations.
2. Prior to commencing all work, all workers shall be instructed in all aspects of personnel protection, work procedures, emergency evacuation procedures and use of equipment.
3. Abatement Subcontractor shall provide appropriate respiratory protection equipment, including, but not limited to respirators, HEPA filter elements or other necessary filter elements and spare parts on site for each worker and ensure usage during potential lead exposure.
4. Respiratory protection shall meet the requirements of OSHA as presented in 29 CFR 1910.134 titled "Respiratory Protection" and 29 CFR 1926.62 titled "Lead in Construction." The protection factors shown in 29 CFR 1926.62 shall be used for this project.
5. Eye protection to personnel engaged in lead operations shall be furnished when the use of a full face respirator is not required. Goggles with side shields or a specified protective eye wear by a product's MSDS shall be worn.
6. A portable eyewash station shall be provided inside all work areas. At least one station needs to provide a flow of water for at least fifteen minutes in a clean area.
7. A hand/wash station must be located in close proximity to the work area for workers and other authorized personnel.
8. All protective clothing shall be HEPA vacuumed/cleaned, removed at the end of each work day, and stored in 55-gallon drums designated for protective clothing.

3.3 Materials Preparation

A. General:

1. Follow manufacturer's instructions regarding preparation of surfaces, mixing, applying, drying, etc. In case of conflict with this specification, the manufacturer's specifications govern.
2. All products are to be used full-strength.
3. When materials are not in use, store in tightly covered containers.
4. Store unused paint remover containers safely and store application tools of paint remover in a clean condition, free from foreign materials and residue.

3.4 Surface Preparation

- A. Prior to start of wet chemical paint stripping, Contractor shall vacuum surfaces to remove loose and flaking paint to the greatest extent possible. Use vacuums equipped with HEPA filters only.
- B. Ensure all surfaces are dry.

3.5 Paint Remover Application

- A. Apply paint remover to dry surface in accordance with manufacturer's directions. Use methods best suited for the type of material being applied.
- B. Allow paint remover to remain on the surface for the recommended dwell time or until paint is dissolved, whichever is less. Do not leave strippers on surface longer than the maximum dwell time recommended by the manufacturer. If the surface is left unattended, prevent pedestrians from coming into contact with the stripper.
- C. Do not allow paint strippers to dry on surfaces. If strippers dry on the surface, mist the surface with water and allow stripper to remain on wall another 15 minutes until softened. If leaving on the surface for several hours, a light polyethylene film or other moisture resistant material can be used to cover the stripper on the walls. Press the polyethylene film against the stripper so that it adheres. Tape or seal the edges of the polyethylene film.
- D. Carefully remove the stripper and dissolved paint coatings by lifting, making sure the surface is not scraped or gouged. A metal scraper and wire brushes may be used only on metal surfaces. Any wood or stone surfaces should be scraped only with a plastic scraper. Remove by hand as much residue from the surface as possible.

- E. If small amounts of residue or paint remain following the manufacturer's instructions, application process shall be repeated.
- F. Use the paint stripper's recommended product and manufacturers instructions to neutralize the surface.
- G. Rinsing is to be done by carefully rinsing with minimal pressure.
- H. Using pH papers with a 1-14 scale, check the treated surfaces to ensure that neutralization has been achieved. If surface pH is above 9, repeat step F until the desired 7-9 pH is achieved.
- I. Allow treated surfaces to thoroughly dry. If applying a new surface coating, check the cleaned surface again with pH strips that have a range from 1-14 to ensure the surface is neutralized.

3.6 Cleaning

- A. Clean-up: Properly contain paint particles, corrosion, paint strippers, and paint residue generated by paint and corrosion removal operations. Remove and dispose of all materials used and generated by work of this Section off site in a legal manner.
- B. Daily Cleaning
 - 1. All spills or stains shall be immediately removed on adjacent surfaces.
 - 2. The lead work area must be cleaned of all debris prior to the end of each work day. All lead paint abatement work for the day must cease prior to cleaning.
 - 3. All waste materials generated during the daily cleanup shall be disposed of as hazardous waste.
 - 4. All equipment and tools shall be cleaned by HEPA vacuuming and high-phosphate (or equivalent) washing.
- C. Clean-up Upon Completion of Abatement
 - 1. All contaminated materials, equipment or debris shall be removed. The drop clothes/sheeting shall be first misted with water for dust control, debris removed and folded in upon itself. Sheet removal shall begin from the upper levels and make its way down.
 - 2. Surfaces of small debris shall first be sprayed with water then picked up, collected and placed into plastic bags at least six (6) millimeters thick for appropriate disposal. Dry sweeping is not permitted in the work area.

3. Once sheeting and removable debris is eliminated, HEPA vacuuming of all exterior surfaces shall be performed. After the TSP washing, a second HEPA vacuuming shall occur.
4. After first HEPA vacuuming, surfaces shall be washed down with a tri-sodium phosphate (TSP) detergent solution (five percent) or other equally effective cleaning agent and allowed to dry. The second HEPA vacuuming shall occur.
5. At the completion of the work of this section, remove all staging, scaffolding.

3.7 Waste Disposal

- A. The Contractor must consult and comply with all current Federal, State, and Local regulations regarding containment, transportation, and disposal of hazardous wastes. Solid, liquid or semi-solid wastes generated through the use of paint removers may be defined for Federal Standards under EPA's Resource Conservation and Recovery Act (RCRA) of 1976 as "solid waste". The waste is classified "hazardous" if it is determined to be corrosive, toxic or both.
- B. All waste material shall be placed in properly labeled and dated drums to be stored in a secured location on site for no longer than forty five (45) days. The Contractor shall conduct Toxicity Characteristic Leaching Procedure (TCLP) testing on all waste generated during abatement to determine waste classification. If the TCLP reports indicate that the contaminated materials are non-hazardous, they will be disposed of as general construction waste. All paint debris and rinsing water is considered hazardous waste and shall be disposed of accordingly. A hazardous waste manifest shall be signed by the project consultant and all drums removed from the work area will be transported by a licensed hauler.

END OF SECTION 098000

SECTION 099000 - PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contractor and each Subcontractor and/or supplier providing goods or services referenced in or related to this Section shall also be bound by the Documents identified in Division 1 Section “Summary”, Paragraph 1.1A, entitled “Related Documents.”

1.2 SUMMARY

- A. This Section includes surface preparation and the application of paint systems on the following substrates:
 - 1. Steel.
 - 2. Galvanized metal.
- B. Paint exposed surfaces, except where these Specifications indicate that the surface or material is not to be painted or is to remain natural. If an item or a surface is not specifically mentioned, paint the item or surface the same as similar adjacent materials or surfaces. If a color of finish is not indicated, Architect will select from standard colors and finishes available.
- C. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels.
 - 1. Prefinished items include the following factory-finished components:
 - a. Finished mechanical and electrical equipment.
 - b. Light fixtures and wiring devices.
 - c. Switchgear.
 - d. Distribution cabinets in closets or equipment rooms.
 - 2. Concealed surfaces include walls or ceilings in the following generally inaccessible spaces:
 - a. Foundation spaces.
 - b. Furred areas.
 - c. Ceiling plenums.
 - d. Utility tunnels.
 - e. Pipe spaces.

- f. Duct shafts.
- 3. Finished metal surfaces include the following:
 - a. Anodized or coated aluminum.
 - b. Stainless steel.
 - c. Chromium plate.
 - d. Copper and copper alloys.
 - e. Bronze and brass.
- 4. Operating parts include moving parts of operating equipment and the following:
 - a. Valve and damper operators.
 - b. Linkages.
 - c. Sensing devices.
 - d. Motor and fan shafts.
- 5. Labels: Do not paint over UL, FMG, or other code-required labels or equipment name, identification, performance rating, or nomenclature plates.
- D. Related Sections include the following:
 - 1. Division 5 Section "Structural Steel" for shop priming structural steel.
 - 2. Division 5 Section "Metal Restoration and Cleaning" for sheet metal cornice to be painted.

1.3 DEFINITIONS

- A. General: Standard coating terms defined in ASTM D 16 apply to this Section.
 - 1. Flat refers to a lusterless or matte finish with a gloss range below 15 when measured at an 85-degree meter.
 - 2. Eggshell refers to low-sheen finish with a gloss range between 20 and 35 when measured at a 60-degree meter.
 - 3. Semigloss refers to medium-sheen finish with a gloss range between 35 and 70 when measured at a 60-degree meter.
 - 4. Full gloss refers to high-sheen finish with a gloss range more than 70 when measured at a 60-degree meter.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated.

1. **Material List:** An inclusive list of required coating materials. Indicate each material and cross-reference specific coating, finish system, and application. Identify each material by manufacturer's catalog number and general classification.
 2. **Manufacturer's Information:** Manufacturer's technical information, including label analysis and instructions for handling, storing, and applying each coating material.
 3. **Certification** by the manufacturer that products supplied comply with federal regulations controlling use of volatile organic compounds (VOCs).
- B. **Samples for Verification:** For each type of paint system and in each color and gloss of topcoat indicated.
1. **Submit Samples** on rigid backing, 8 inches square.
 2. **Step coats** on Samples to show each coat required for system.
 3. **Label** each coat of each Sample.
 4. **Label** each Sample for location and application area.
- C. **Qualification Data:** For firms and persons specified in the "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of Architects and Owners, and other information specified.

1.5 QUALITY ASSURANCE

- A. **Applicator Qualifications:** A firm or individual experienced in applying paints and coatings similar in material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance.
- B. **Mockups:** Apply benchmark samples of each paint system indicated and each color and finish selected to verify preliminary selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
1. Architect will select one surface to represent surfaces and conditions for application of each paint system specified in Part 3.
 2. Apply benchmark samples after permanent lighting and other environmental services have been activated.
 3. Final approval of color selections will be based on benchmark samples.
 - a. If preliminary color selections are not approved, apply additional benchmark samples of additional colors selected by Architect at no added cost to Owner.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F.
 - 1. Maintain containers in clean condition, free of foreign materials and residue.
 - 2. Remove rags and waste from storage areas daily.

1.7 PROJECT CONDITIONS

- A. Temporary Support Facilities: Furnish and install all temporary lifts, hoists, staging, scaffolding, rigging, labor and materials, and temporary support to perform all operations in connection with the installation of this Work. Remove all temporary support facilities when no longer required.
- B. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F.
- C. Do not apply paints in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.
- D. Do not apply paints when relative humidity exceeds 85 percent; at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.

1.8 EXTRA MATERIALS

- A. Furnish extra materials described below that are from same production run (batch mix) as materials applied and that are packaged for storage and identified with labels describing contents.
 - 1. Quantity: Furnish an additional 1 gal. of each material and color applied.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Benjamin Moore & Co.
 - 2. ICI Paints, ICI Dulux Paints.
 - 3. PPG Architectural Finishes, Inc.; Pittsburgh Paints.

4. Sherwin-Williams Co.

2.2 PAINT, GENERAL

A. Material Compatibility:

1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.

B. VOC Content of Field-Applied Interior Paints and Coatings: Provide products that comply with the following limits for VOC content, exclusive of colorants added to a tint base, when calculated according to 40 CFR 59, Subpart D (EPA Method 24); these requirements do not apply to paints and coatings that are applied in a fabrication or finishing shop:

1. Flat Paints, Coatings, and Primers: VOC content of not more than 50 g/L.
2. Nonflat Paints, Coatings, and Primers: VOC content of not more than 150 g/L.
3. Anti-Corrosive and Anti-Rust Paints Applied to Ferrous Metals: VOC not more than 250 g/L.
4. Floor Coatings: VOC not more than 100 g/L.
5. Dry-Fog Coatings: VOC content of not more than 400 g/L.
6. Zinc-Rich Industrial Maintenance Primers: VOC content of not more than 340 g/L.

C. Colors: As selected by Architect from manufacturer's full range.

2.3 EXTERIOR PRIMERS

A. Exterior Galvanized Metal Primer: Factory-formulated galvanized metal primer for exterior application.

1. Benjamin Moore; Moore's IMC Acrylic Metal Primer No. M04: Applied at a dry film thickness of not less than 2.0 mils.
2. ICI Dulux Paints; 4160-XXXX Devguard Multi-Purpose Tank & Structural Primer: Applied at a dry film thickness of not less than 2.0 mils.
3. Pittsburgh Paints; 90-709 Pitt-Tech One Pack Interior/Exterior Primer/Finish DTM Industrial Enamel: Applied at a dry film thickness of not less than 3.0 mils.
4. Sherwin-Williams; Galvite HS Paint B50WZ3: Applied at a dry film thickness of not less than 2.0 mils.

2.4 PRIMERS/SEALERS

- A. Interior Ferrous-Metal Primer: Factory-formulated quick-drying rust-inhibitive alkyd-based metal primer.
1. Benjamin Moore; IMC Alkyd Metal Primer No. M06: Applied at a dry film thickness of not less than 2.0 mils.
 2. ICI Dulux Paints; 4160-6130 Devguard Multi-Purpose Tank & Structural Primer: Applied at a dry film thickness of not less than 2.0 mils.
 3. Pittsburgh Paints; 90-709 Pitt-Tech One Pack Interior/Exterior Primer/Finish DTM Industrial Enamel: Applied at a dry film thickness of not less than 1.5 mils.
 4. Sherwin-Williams; Kem Kromik Universal Metal Primer B50NZ6/B50WZ1: Applied at a dry film thickness of not less than 3.0 mils.
- B. Interior Zinc-Coated Metal Primer: Factory-formulated galvanized metal primer.
1. Benjamin Moore; IMC Acrylic Metal Primer No. M04: Applied at a dry film thickness of not less than 2.0 mils.
 2. ICI Dulux Paints; 4160-6130 Devguard Multi-Purpose Tank & Structural Primer: Applied at a dry film thickness of not less than 2.0 mils.
 3. Pittsburgh Paints; 90-709 Pitt-Tech One Pack Interior/Exterior Primer/Finish DTM Industrial Enamel: Applied at a dry film thickness of not less than 3.0 mils.
 4. Sherwin-Williams; Galvite HS B50WZ30: Applied at a dry film thickness of not less than 3.0 mils.

2.5 EXTERIOR FINISH COATS

- A. Exterior Full-Gloss Alkyd Enamel for Metal: Factory-formulated full-gloss alkyd enamel for exterior application.
1. Benjamin Moore; Urethane Alkyd Gloss Enamel No. M22.
 2. ICI Dulux Paints; 4308-XXXX Devguard Alkyd Industrial Gloss Enamel: Applied at a dry film thickness of not less than 2.0 mils.
 3. Pittsburgh Paints; 7-814 Pittsburgh Paints Industrial Gloss-Oil Interior/Exterior Enamel: Applied at a dry film thickness of not less than 1.5 mils.
 4. Sherwin-Williams; Industrial Enamel B-54 Series: Applied at a dry film thickness of not less than 2.0 mils.

2.6 INTERIOR FINISH COATS

- A. Interior Full-Gloss Alkyd Enamel for Metal Surfaces: Factory-formulated full-gloss alkyd interior enamel.

1. Benjamin Moore; Moore's IMC Urethane Alkyd Enamel No. M22: Applied at a dry film thickness of not less than 2.0 mils.
2. ICI Dulux Paints; 4308-XXXX Devguard Alkyd Industrial Gloss Enamel: Applied at a dry film thickness of not less than 2.0 mils.
3. Pittsburgh Paints; 7-814 Series Pittsburgh Paints Industrial Gloss-Oil Interior/Exterior Enamel: Applied at a dry film thickness of not less than 1.5 mils.
4. Sherwin-Williams; ProMar 200 Alkyd Gloss Enamel B35W200 Series: Applied at a dry film thickness of not less than 1.6 mils.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of work.
- B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
 1. Wood: 15 percent.
 2. Masonry (Clay and CMU): 12 percent.
 3. Gypsum Board: 12 percent.
- C. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
- D. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers.
 1. Notify Architect about anticipated problems when using the materials specified over substrates primed by others.
- E. Begin coating application only after unsatisfactory conditions have been corrected and surfaces are dry.
 1. Beginning coating application constitutes Contractor's acceptance of substrates and conditions.

3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates indicated.
- B. Remove plates, machined surfaces, and similar items already in place that are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
 - 1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
 - 2. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
- C. Clean substrates of substances that could impair bond of paints, including dirt, oil, grease, and incompatible paints and encapsulants.
 - 1. Remove incompatible primers and reprime substrate with compatible primers as required to produce paint systems indicated.
- D. Steel Substrates: Remove rust and loose mill scale. Clean using methods recommended in writing by paint manufacturer.
- E. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal fabricated from coil stock by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.

3.3 APPLICATION

- A. Apply paints according to manufacturer's written instructions.
 - 1. Use applicators and techniques suited for paint and substrate indicated.
 - 2. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
 - 3. Paint front and backsides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces.
- B. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Tint undercoats to match color of topcoat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.
- C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.

- D. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

3.4 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
- B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.5 EXTERIOR PAINT SCHEDULE

- A. Zinc-Coated Metal: Provide the following finish systems over exterior zinc-coated metal surfaces:
 - 1. Full-Gloss Acrylic-Enamel Finish: Two finish coats over a galvanized metal primer.
 - a. Primer: Exterior galvanized metal primer.
 - b. Finish Coats: Exterior full-gloss acrylic enamel.
 - 2. Primer.
 - a. Primer: Interior wood primer for acrylic-enamel finishes.
 - b. Finish Coats: Interior acrylic enamel for wood surfaces.
- B. Ferrous Metal: Provide the following finish systems over ferrous metal:
 - 1. Full-Gloss Alkyd-Enamel Finish: Two finish coats over a primer.
 - a. Primer: Interior ferrous-metal primer (by others.)
 - b. Finish Coats: Interior full-gloss alkyd enamel for wood and metal surfaces.
- C. Zinc-Coated Metal: Provide the following finish systems over interior zinc-coated metal surfaces:

1. Full-Gloss Alkyd-Enamel Finish: Two finish coats over a primer.
 - a. Primer: Interior zinc-coated metal primer.
 - b. Finish Coats: Interior full-gloss alkyd enamel for metal surfaces.

END OF SECTION 09900