

UConn HEALTH

PROJECT SPECIFICATIONS

195 FARMINGTON AVE
ELEVATOR PIT UPGRADES
PROJECT NUMBER 18-604.04

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For:

Campus Planning, Design and Construction
UConn Health
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JUNE 14, 2019

EXHIBIT - B

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UNIVERSITY OF CONNECTICUT
HEALTH CENTER

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NOTICE AND INSTRUCTIONS TO BIDDERS

ARTICLE 1 GENERAL PROVISIONS

1.1 Contractor's Qualifications

1.1.0 Each Bidder shall submit a completed University of Connecticut Health Center (UCHC) Contractor Qualification Statement demonstrating that it satisfies the UCHC's objective criteria for evaluating qualifications. Additionally, for projects \$500,000 and over the Contractor must be Pre-Qualified by the Department of Administrative Services and the UCHC for the work of this project.

1.1.2 Each Bidder shall demonstrate, to the satisfaction of UCHC, that it is able to post surety bonds satisfactory for the project and required by the Contract and that it possesses the financial, managerial and technical ability, and the integrity necessary to faithfully and efficiently perform the work for which it submits a bid, without conflict of interest.

1.1.3 UCHC shall evaluate whether the bidder is qualified based upon the bidder's experience with projects similar to that for which the bid is submitted, the nature of UCHC's experience, if any, with the Bidder on prior or ongoing UCHC projects and upon the above-stated and following objective criteria:

.1 Previous Experience

.1 The Bidder must show or be able to demonstrate to the satisfaction of UCHC that it possesses the ability and capacity to successfully complete the project through the satisfactory past performance of work of a similar nature, size, scope, and comparable dollar value to that of the subject work/projects.

.2 The Bidder shall demonstrate that it has maintained a satisfactory level of performance on such similar work continuously over a 5-year period preceding the date of the Bid. If the Bidder is unable to do so, it must include in the Qualification Statement any and all information demonstrating its ability and capacity to perform the Work.

.3 The Bidder shall be able to furnish references from Owners, Architects, or Engineers indicating that it has completed satisfactorily and in a timely manner work similar to the project being bid. If delays occurred, evidence explaining and exonerating the Bidder shall also be provided.

.4 The Contractor shall be able to demonstrate expertise in the various types of major trades or work required on the work/projects listed by example of successfully completed similar projects.

.5 All Contractors and major subcontractors must possess, at the time the Bid is submitted, a valid license, registration or certification issued by the Department of Consumer Protection in accordance with Connecticut General Statutes Section 20-341(a). If a joint venture, all joint venture partners shall be so licensed, registered or certified.

.6 If a Bidder intends to perform the work of any trade(s) with its own forces, and a license, registration or certification is required by the State of Connecticut in order to perform that work, the Bidder shall hold a valid license or registration

to perform work at the time its Bid is submitted. If a joint venture, all joint venture partners shall be so licensed, registered or certified.

.2 Financial Ability/bonding Capacity

- .1 The Bidder shall demonstrate that it has sufficient bonding capacity to perform the work in question, is bonded through a surety or sureties possessing a history of responsibility, financial stability and resources satisfactory to UCHC, and is able to post surety bonds which may be required by any contract for which it submits a bid.
- .2 The Bidder shall demonstrate, through the materials submitted in its Qualification Statement or as requested, that it possesses sufficient financial resources and stability, and is otherwise financially responsible and able to satisfactorily perform and complete the work for which it submit a bid.

.3 Managerial Ability

- .1 The Bidder shall have on its payroll, or must be able to prove that it customarily employs managerial and supervisory personnel of the type qualified to perform the kind of work which may be called for on any project for which it submits a bid.
- .2 The Bidder shall demonstrate, through the information submitted in its Qualification Statement or as requested, that it possesses the managerial resources, capability and commitment necessary for and satisfactory to UCHC for the proper performance of the work for which it submits a bid.

.4 Technical Ability

- .1 The Bidder or its principals shall own or possess rented or leased equipment of the type customarily required by contractors in the performance of contract work and that such equipment, if needed, is available for the job bid on.
- .2 The Bidder or its principals shall have adequate physical facilities in which and from which the Work can be performed.
- .3 The Bidder shall demonstrate, through the information submitted in its Qualification Statement or as requested, that it possesses the technical capacity, resources, capability and commitment for the proper performance of the Work for which it submits a bid.

.5 Integrity

- .1 The Bidder shall have purchased materials over the past five years from suppliers who customarily sell same in quantity to contractors.
- .2 The Bidder shall have a record of harmonious, cooperative, non-adversarial and honest relationships with Owners, including UCHC and the State of Connecticut if the Bidder has performed work on prior UCHC or State projects, as well as, with Architects, Engineers, and Consultants, Subcontractors and Suppliers on prior State projects or other projects.
- .3 The Bidder shall demonstrate that it has not been cited for three or more willful or serious violations of any OSHA, or of any standard, order or regulation promulgated pursuant to such act, during the 5-year period preceding this bid,

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; which citations have been set aside following appeal to the appropriate agency or court having jurisdiction.

- .4 The Bidder shall not have received one or more criminal convictions related to the injury or death of any employee in the 5-year period preceding this bid.
 - .5 The Bidder shall not have appeared on any list published by the Connecticut State Labor Commission of persons or firms that have been found in violation of the National Labor Relations Act, 29 U.S.C. 151 et seq., by the National Labor Relations Board and by a final decision rendered by a federal court or that have been found in contempt of court by a final decision of a federal court for failure to correct a violation of said National Labor Relations Act on three or more occasions involving different violations during the five preceding calendar years, if the first day of July following publication of said list has occurred less than three years prior to the Award of any Contract to the Bidder.
 - .6 The Bidder, or any entity in which the Applicant has an interest, shall not have appeared on any list published by the Connecticut State Labor Commission of persons or firms whom he has found to have disregarded their obligations under Connecticut General Statutes Section 31-53 and 31-76c to employees and subcontractors on public works projects or to have been barred from federal government contracts in accordance with the provisions of the Davis Bacon Act, 40 U.S.C. 276a-2, if said list has been published less than three years prior to the Award of any Contract to the Bidder.
 - .7 The Bidder or its principals shall not have been convicted of, nor entered any plea of guilty, or nolo contendere, or otherwise have been found civilly liable for any criminal offense or civil action involving embezzlement; forgery; bribery; falsification or destruction of records; receipt of stolen property; collusion, antitrust, conspiracy or other offenses arising out of the submission of bids or proposals on public works project or contracts.
 - .8 The Bidder shall not be the subject of any order in effect which has been issued by the Commission of Human Rights and Opportunities, pursuant to Connecticut General Statutes 46a-56 or any regulation, prohibiting any contracting agency of the State of Connecticut from entering into contracts with the Bidder. The Bidder shall also not be listed in any current list compiled by the Commission of contractors whom it has found to be in non-compliance with anti-discrimination or contract compliance statutes, nor shall the Bidder be the subject of any unabated or un-expired Notice of Non-Compliance issued by the Commissioner.
 - .9 The Bidder shall demonstrate, through the information submitted in its Qualification Statement, that, by its past and present actions and conduct, and that of its principals and principal employees, it possesses the integrity necessary for, and satisfactory to UCHC, for the proper performance of the Work for which it submits a bid.
- .6 Conflict of Interest
- .1 The Bidder shall disclose and identify to UCHC, with its Qualification Statement, any relationships which may constitute a potential conflict of interest with the Office of Facility Contracts & Leases, Facilities Development

and Operations, Purchasing Services, or any other UCHC organizations or department; or architect, engineer, consultant, or designer of the proposed project(s) for the purpose of determining whether a conflict of interest exists. All such disclosures require acceptance/approval action on the part of UCHC, which shall determine whether an impermissible conflict exists.

- .7 UCHC also reserves the right to find any Bidder to be non-responsible or non-qualified with respect to a specific project, notwithstanding the fact that it may have previously been selected for previous projects for UCHC.

1.2 Schedule

- 1.2.1 It is important to UCHC, in order to maintain the integrity of its ongoing activities, that its rules and regulations and the requirements of the Contract Documents, regarding noise control, traffic control etc. and other matters which may affect its operations be strictly adhered to, and that its schedule be maintained. Therefore, all Bidders shall familiarize themselves with and comply with the schedule of UCHC, and its regulations regarding noise, traffic, etc. which are available from Facilities Development and Operations. No noise generating work shall be allowed where the noise will impact UCHC functions. Examples of noise generating work include, but are not limited to, sawing, drilling, and hammering/jack hammering. The Contractor shall keep UCHC Representative informed as to the location of its operations to enable necessary precautions or co-ordination to be implemented.

1.3 Non-Discrimination and Affirmative Action Provisions

- 1.3.1 This Section is inserted in connection with Subsection (a) of Sections 4a-60, and 4a-60a of the General Statutes of Connecticut, as revised.
- 1.3.2 The Contractor agrees and warrants that in the performance of the Contract such Contractor will not discriminate or permit discrimination against any person or group of persons on the grounds of race, color, religious creed, age, marital status, national origin, ancestry, sex, mental retardation or physical disability including, but not limited to, blindness, unless it is shown by such Contractor that such disability prevents performance of the work involved, in any manner prohibited by the laws of the United States or of the State of Connecticut. The Contractor further agrees to take affirmative action to insure that applicants with job-related qualifications are employed and that employees are treated when employed without regard to their race, color, religious creed, age, marital status, national origin, ancestry, sex, mental retardation, or physical disability, including, but not limited to, blindness, unless it is shown by such Contractor that such disability prevents performance of the work involved.
- 1.3.3 The Contractor agrees, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, to state that it is an "affirmative action-equal opportunity employer" in accordance with regulations adopted by the Commission on Human Rights and Opportunities.
- 1.3.4 The Contractor agrees, to provide each labor union or representative of workers with which such Contractor has a collective bargaining agreement or other contract or understanding and each vendor with which such Contractor has a contract or understanding, a notice to be provided by the Commission advising the labor union or workers' representative of the Contractor's commitments under Sections 4a-60 and 4a-60a of the Connecticut General Statutes, and to post copies of the notice in conspicuous places available to employees and applicants for employment.
- 1.3.5 The Contractor agrees to comply with each provision of Sections 4a-60, 4a-60a, 46a-68e and 46a-68f of the Connecticut General Statutes, and with each regulation or relevant order

issued by said Commission pursuant to Sections 46a-56, 46a-68e and 46a-68f of the Connecticut General Statutes.

- 1.3.6 The Contractor agrees to provide the Commission on Human Rights and Opportunities with such information requested by the Commission, and permit access to pertinent books, records and accounts, concerning the employment practices and procedures of the Contractor as relate to the provision of Sections 4a-60, 4a-60a and 46a-56 of the Connecticut General Statutes. The Contractor further agrees and warrants that he will make good faith efforts to employ minority business enterprises as Subcontractors and suppliers of materials on the project.
- 1.3.7 The Contractor shall include the provisions of Clauses 1.4.1 through 1.4.6 and 1.4.8, (as provided in Connecticut General Statutes Sections 4a-60(a) and 4a-60a (a)) in every subcontract or purchase order entered in order to fulfill any obligation of a contract with the University and such provisions shall be binding on a Subcontractor, vendor or manufacturer unless exempted by regulations or orders of the Commission.
- 1.3.8 The Contractor agrees and warrants that in the performance of the Contract such Contractor will not discriminate or permit discrimination against any person or group of persons on the grounds of sexual orientation, in any manner prohibited by the law of the United States or of the State of Connecticut, and that employees are treated when employed without regard to their sexual orientation.

1.4 Union Labor

- 1.4.1 Attention is called to the fact that there may be construction work now being carried on at the site at which this construction is contemplated being done by UNION LABOR. This fact must be kept in mind by all Bidders submitting proposals for this work.

1.5 Labor Market Area

- 1.5.1 All Bidders shall have read Sections 31-52 and 31-52a of the Connecticut General Statutes, as amended. These references relate to the preference of State citizens, the preference of residents of the labor market area in which the work under the Contract is to be done and the penalties for violations.
- 1.5.2 In order to avoid violations by the Contractor and to cooperate with and assist UCHC in the implementation of the statutory mandates, any Contractor awarded a contract with UCHC shall be required to provide UCHC with the following information:
- .1 The names and addresses of employees utilized by the Contractor and by its Subcontractors and how long each such employee has resided in Connecticut.
 - .2 How long each employee has resided in the labor market area, as established by the State Labor Commissioner, in which the work under the Contract is to be done.
 - .3 Within thirty (30) days after the start of work, the Contractor shall submit a signed statement setting forth the procedures the Contractor and its Subcontractors have taken to assure that they have sought out qualified residents of the labor market area. Also, the statement shall include information as to how many persons were considered for employment and how many were actually hired. Such procedures will include, but not be limited to, obtaining names of available persons from area Employment Security Offices.

- .4 In the same manner as Clause 1.5.2.3 above, the statement shall indicate the steps taken to assure that the Contractor and its Subcontractors have sought out qualified residents of the State of Connecticut.
- .5 The Contractor shall cooperate with and provide information to UCHC Representative assigned to collect and verify the information required. UCHC may request that all such information be updated during the term of the Contract at reasonable times.
- .6 All such information gathered and compiled by UCHC shall be forwarded to the State Labor Commissioner.

1.6 Wage Rates

- 1.6.1 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".

ARTICLE 2 BIDDERS' REPRESENTATIONS

- 2.1 The amount of each Bid shall be deemed to include the entire cost and expense of every item of labor and material necessary to complete the work bid upon, as specified, in full detail ready for use. The risk of all such costs and expenses shall be deemed assumed by the successful Bidder. UCHC shall assign a UCHC Representative to work with the successful Contractor as a liaison.
- 2.2 In performing its obligations under this Contract, the Contractor agrees to comply with all applicable statutes, laws, ordinances, regulations, codes, rules or orders of, or issued by, any governmental body having jurisdiction over the work, location of the work or contract.

ARTICLE 3 BIDDING DOCUMENTS

3.1 Bid Clarifications, Addenda and Interpretations

- 3.1.1 No interpretations of the meaning of the Drawings, specifications or other Contract Documents will be made orally to any Bidder. Every request for such interpretation must be made in writing to UCHC Office of Facility Contracts & Leases, and to be given consideration shall be received at least ten (10) days prior to the date fixed for the opening of Bids unless directed otherwise.
- 3.1.2 Any and all such interpretations and any supplemental instructions will be in the form of written addenda which, if issued, will be mailed, emailed and/or faxed to all prospective Bidders (at the respective addresses furnished for such purposes) not later than five (5) days prior to the date fixed for the opening of Bids unless directed otherwise. Failure of any Bidder to receive any such addendum or interpretation shall not release any Bidder from any obligations under his Bid as submitted, provided notice has been sent to the address furnished by such prospective Bidder for the transmittal of notices, addenda and interpretations. It shall be the Bidder's responsibility to make inquiry as to, and to obtain, the Addenda issued, if any.
- 3.1.3 The number of days shown in 3.1.1 and 3.1.2 may differ from the actual dates given in an Agenda for a Pre-Bid or Pre-Proposal Conference, if so, the number of days listed are, hereby, superseded by the Agenda dates, unless the Bid or Proposal is extended by Addendum, in which case the number of days will again apply unless stated differently in the Addendum.

- 3.1.4 Bidders shall promptly notify the UCHC of any ambiguity, inconsistency or error which they may discover upon examination of these Contract Documents.

ARTICLE 4 BIDDING PROCEDURES

4.1 Form of Proposal

- 4.1.1 Enclosed within this Project Manual is a Bid Form. Bids shall be submitted on a copy of this form. Additional instructions to bidders including information on submission of bids and award and Contract appear on this form. This and all other documents required by these Bid Documents must be returned with your Bid.

4.2 Bids and Rejection of Bids

- 4.2.1 General Bids shall be for the complete work as specified and shall include the names of any Subcontractors for the classes of work specified in Article 4.1.1 below, and for each other class of work for which UCHC has required a separate section and the dollar amounts of their subcontracts, and the General Contractor shall be selected on the basis of such general Bids. It shall be presumed that the general Bidder intends to perform with its own employees all work in such four classes and such other classes, for which no Subcontractor is named. The general Bidder's qualifications for performing such work shall be subject to review by UCHC pursuant to the Bid and the Contract Documents.
- 4.2.2 Bids shall be submitted only on the forms furnished for the specific project, which shall include a completed Bid Form containing all information required on the Proposal form, executed with an original signature by a duly authorized officer or representative of the Bidder, and, in the case of a Joint Venture, by duly authorized representatives of each Joint Venturer. In no event will Bids or changes in Bids made by telephone or telefax be considered. Any Bid Form which omits or adds items, alters the form, contains conditional or alternative Bids, will be rejected.
- 4.2.3 Any Bids received after the scheduled closing time for the receipt of Bids will be returned to the Bidders unopened.
- 4.2.4 Any Bid may only be withdrawn by letter of request, signed by the depositing Bidder and presented to the Office of Facility Contracts & Leases, prior to the time of opening of any Bid for the project designated or identified project.

4.3 Bid Security

- 4.3.1 Each Bid must be accompanied by a Bid Bond in the form required by UCHC, having as surety thereto such surety company or companies acceptable to UCHC and as are authorized to do business in this State, for an amount not less than 10 per cent of the Bid, or the Bid may be accompanied by a certified check payable to the order of UCHC. All checks submitted by unsuccessful Bidders shall be returned to them after the Contract has been awarded. Bid Security is not required for projects under \$20,000.00.
- 4.3.2 Failure of the successful Bidder to file the required Performance and Labor & Material bonds shall be just cause for the amount of the security deposited with the Bid to be forfeited, any part of the whole of which may be used to make up the difference between the Bid of the defaulting Bidder and the Bid of the next lowest responsible qualified Bidder to whom the work is finally awarded. Failure to execute a contract after award as specified and bid shall also result in the forfeiture of such Bid Bonds or Certified Check.

4.4 Subcontractors

- 4.4.1 The Bidder agrees that each of the Subcontractors listed on the Proposal Form will be used for the work indicated at the amount stated unless a substitution is permitted by UCHC.
- 4.4.2 Within five days after being notified of the award of a general Contract by UCHC, or, in the case of an approval of a substitute Subcontractor by UCHC, within five days after being notified of such approval, the general Bidder shall present to each listed or substitute Subcontractor:
- .1 A subcontract in the form set forth in Section 4b-96 of the Connecticut General Statutes, which form is appended and is located under the subcontractor agreement section of the Invitation to Bid must be executed with all of Bidder's named subcontractors in Bidder's form of proposal.
 - .2 Notice of the time limit under this section for executing a subcontract: If a listed Subcontractor fails within five days, Saturdays, Sundays and legal holidays excluded, after presentation of a subcontract by the general Bidder selected as a General Contractor, to perform his agreement to execute a subcontract in the form hereinafter set forth with such general Bidder, contingent upon the execution of the general Contract, the General Contractor shall select another Subcontractor, with the approval of UCHC. When seeking approval for a substitute Subcontractor, the general Bidder shall provide UCHC with all documents showing (a) the general Bidder's proper presentation of a subcontract to the listed Subcontractor and, (b) communications to or from such Subcontractor after such presentation. UCHC shall adjust the Contract Price to reflect the difference between the amount of the price of the new Subcontractor and the amount of the price of the listed Subcontractor if the new Subcontractor's price is lower and may adjust such Contract Price if the new Subcontractor's price is higher. The general Bidder shall, with respect to each listed Subcontractor or approved substitute Subcontractor, file with UCHC a copy of each executed subcontract within ten days, Saturdays, Sundays and legal holidays excluded, of presentation of a subcontract to such Subcontractor.

ARTICLE 5 CONSIDERATION OF BIDS

- 5.1 Every general bid which is conditional or which contains any addition not called for shall be invalid; and UCHC shall reject every such general Bid. UCHC shall be authorized to waive minor irregularities, which it considers in its best interest, provided the reasons for any such waiver are stated in writing by UCHC and made a part of the contract file. No such general Bid shall be rejected because of the failure to submit prices for, or information relating to, any item or items for which no specific space is provided in the general Proposal Form furnished by UCHC, but this sentence shall not be applicable to any failure to furnish prices or information required by Articles 4.2.1 and 4.4.1 above to be furnished in the form provided by UCHC. UCHC also reserves the right to reject any and all bids and again advertise for bids, or to otherwise proceed as permitted under Connecticut General Statutes 10a-109a through 10a-109y.
- 5.2 General Bids shall be publicly opened and read by UCHC forthwith. UCHC may require in the Proposal Form that the General Contractor agree to perform a stated, minimum percentage of work with his own forces. UCHC may also require the General Contractor to set aside a portion of the contract for Subcontractors who are eligible for set aside contracts. UCHC shall not permit substitution of a Subcontractor for one named in accordance with the provisions of these Instructions or substitution of a Subcontractor for any designated sub trade work bid to be performed by the General Contractor's own forces, except for good cause. The term "good cause" includes but is not limited to a Subcontractor's or, where appropriate, a General Contractor's: (1) Death or physical disability, if the listed Subcontractor is an individual; (2)

dissolution, if a corporation or partnership; (3) bankruptcy; (4) inability to furnish any performance and payment bond shown on the Proposal Form; (5) inability to obtain, or loss of, a license necessary for the performance of a particular category of work; (6) failure or inability to comply with a requirement of law applicable to Contractors, Subcontractors, on construction, alteration, or repair projects; (7) failure to perform his agreement to execute a subcontract under Connecticut General Statutes Section 4b-96 and Exhibit U appended hereto.

- 5.3 Pursuant to Connecticut General Statute § 4b-93, the general bid shall include plans and specifications detailing all labor and materials to be furnished the contract. The specifications shall have a separate section for each of the following classes of work if, in the estimate of UCHC, the class of work will exceed twenty-five thousand dollars: (1) Masonry work; (2) electrical work; (3) mechanical work other than heating, ventilating and air conditioning work; and (4) heating, ventilating and air conditioning work. Such specifications shall also have a separate section for each other class of work for which UCHC deems it necessary or convenient. The Bidder shall provide the names of the subcontractor and price of the subcontract for all classes of work designated on the Bid Form provided with the general Bid. **FAILURE TO CORRECTLY STATE A SUBCONTRACTOR'S PRICE SHALL BE CAUSE FOR REJECTION OF THE GENERAL BIDDER'S BID.**
- 5.4 Any General Contractor who violates any provision of Connecticut General Statutes Section 4b-95 may be disqualified from bidding on other contracts that are subject to the provisions of Chapter 60 of the General Statutes for a period not to exceed twenty-four months, commencing from the date on which the violation is discovered, for each violation.
- 5.5 UCHC reserves the right to accept or reject any or all Bids within 90 calendar days of the Bid opening, and the Bidder agrees that it may not modify, withdraw, or cancel its Bid and that its Bid Price will be firm for this 90 day period. This 90 day period may be extended by mutual agreement between UCHC and the Bidder.
- 5.6 The project will be awarded to the responsible qualified Bidder submitting the lowest Bid in compliance with the Bid requirements and within the budget, subject to the provisions of Connecticut General Statutes 10a-109a through 10a-109y.
- 5.7 UCHC reserves the right to elect to implement some, all or none of the Alternates and/or Options set forth in the Proposal forms, as may be in the best interest of UCHC. The low Bid shall be determined by taking the Base Price set forth in Proposal form as selected by UCHC, plus the Alternates and/or Options selected by UCHC.
- 5.8 The Bidder agrees that if selected as General Contractor, he shall, within five days, Saturdays, Sundays and legal holidays excluded, after presentation thereof by UCHC, execute a contract in accordance with the terms of the general Bid.

ARTICLE 6 POST-BID INFORMATION

6.1 Affirmative Action

- 6.1.1 Pursuant to Connecticut General Statutes Section 46a-68d, if this project is estimated to cost more than \$50,000.00 then: In the event that the Bidder's Bid is accepted, after acceptance, but before a contract is awarded, the successful Bidder shall file and have approved by the Commission on Human Rights and Opportunities an Affirmative Action Plan. The Commission may provide for conditional acceptance of an Affirmative Action Plan provided written assurances are given by the Contractor that it will amend its plan to conform to affirmative action requirements. UCHC shall withhold 2% of the total Contract Price per month from any payment made to such Contractor until such time as the Contractor has developed an Affirmative Action Plan, and received the approval of the Commission.

Notwithstanding the provisions of Connecticut General Statutes Section 46a-68d, a Contractor subject to the provisions of that Section may file a plan in advance of or at the same time as its Bid.

- 6.1.2 UCHC shall not enter into a contract with any Bidder or prospective Contractor unless the Bidder or prospective Contractor has satisfactorily complied with the provisions of Sections 4a-60, 32-9e, 46a-56 and 46a-68c to 46a-68f, inclusive of the Connecticut General Statutes, or submits a program for compliance acceptable to the Commission on Human Rights and Opportunities.
- 6.1.3 The Contractor shall designate an "Equal Opportunity Contract Compliance Officer" for the project. The Contractor designee, in addition to any other duties assigned by the Contractor, shall have the following responsibilities for the implementation of the Contractor Affirmative Action Plan (AAP) that is required for the project pursuant to Connecticut General Statutes Sections 46a-68c and 46a-68d.
- .1 Maintain a project EEO file to include all records, correspondence and other documentation related to the project AAP.
 - .2 Communicate to and inform all project Contractors and Subcontractors, regardless of tier, and labor referral organizations (if applicable) about project equal opportunity and AAP expectations and performance requirements.
 - .3 Compile all on-site Contractor MONTHLY EMPLOYMENT UTILIZATION REPORTS (form CHRO cc-257) and submit a cumulative report for the project each month to report on contractor compliance to project AAP hiring goals. The cumulative report shall be submitted to the contract awarding agency and to the Commission on Human Rights and Opportunities by the 15th day following the end of each calendar month during the pendency of the on-site construction work of the project.
 - .4 Attach a copy of your transmittal letter to CHRO as a document to be submitted with your invoice.
 - .5 Compile and submit a QUARTERLY SMALL CONTRACTOR AND MINORITY BUSINESS ENTERPRISE PAYMENT STATUS REPORT (form CHRO cc-258) to report on the participation of such Contractors identified to participate on the project. The report shall be submitted to the contract awarding agency and to the Commission on Human Rights and Opportunities by the 15th day following the end of each calendar quarter during the pendency of the on-site construction work of the project.
 - .6 Attach a copy of your transmittal letter to CHRO as a document to be submitted with your invoice.
 - .7 Participate in project job meetings to inform project Contractors about project equal opportunity and AAP performance.
 - .8 Coordinate "External Communication" section (employment outreach) of contractor AAP for all employment opportunities resultant during the course of the project from all project Contractors and maintain documentation of all contacts and responses.

ARTICLE 7 PERFORMANCE AND PAYMENT BOND

7.1 Performance Bond

7.1.1 Prior to the award of the Contract, the successful Bidder shall substitute for the Bid Bond or check accompanying his Bid, an executed UCHC Performance Bond, in the amount of 100 per cent of the Contract Price, conditioned upon the faithful performance of the Contract.

7.2 Labor and Material Payment Bond

7.2.1 At this same time, the Bidder shall submit a UCHC Labor and Material Payment Bond in the sum of not less than 100 per cent of the Contract Price, containing the condition that the Contractor will promptly pay for all material furnished and labor, supplied or performed in the prosecution of the work whether or not said material or labor is involved and/or becomes a component part of the structure or structures to be erected. Such additional bond shall be held for the use of each party who, as Subcontractor or otherwise, shall have furnished material or supplies or shall have performed labor in the prosecution of the work as herein provided and who has not been paid therefore. Such additional bond shall provide specifically that any person may bring suit thereon in the name of the person suing, prosecute the same to the final judgment and have execution thereon for such sum or sums as may be justly due. The State shall not be liable to furnish counsel nor for the payment of any costs or expenses of any such suit. This bond is to be furnished pursuant to Section 49-41 of the General Statutes of Connecticut, and claims thereon shall be subject to the provisions of Connecticut General Statutes Section 49-42.

7.3 General Provisions Regarding Bonds

7.3.1 The aforementioned Performance and Payment bonds shall be provided in the forms required by UCHC, samples of which are appended hereto. If the Contractor is a Joint Venture, all such bonds shall name all joint venturers as principals. The Contractor shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of the power of attorney. The above bonds shall be required for projects for which the total estimated cost of labor and materials under the Contract is at least \$20,000.00. The above bonds shall be acceptable to UCHC and, as a minimum, issued through a bonding company licensed to transact such business in the State of Connecticut and named on the current list of "Surety Companies Acceptable on Federal Bonds" as published in the "Treasury Department Circular 570."

END OF SECTION

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 Statute31-57c) **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 Statute31-57c) **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 Statute31-57c) **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, 29USC 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 Agency 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 Agency.

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
- 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

PROJECT NAME: 195 FARMINGTON AVE ELEVATOR PIT UPGRADES

PROJECT NUMBER: 18-604.04

PROPOSAL 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 University of Connecticut Health Center Purchasing Department 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 subtrade 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:

**UCONN HEALTH CENTER
195 FARMINGTON AVE ELEVATOR PIT UPGRADES
PROJECT NO – 18-604.04**

in accordance with the accompanying Drawings and Specifications prepared by

Salamone and Associates, P.C.
116 North Plains Industrial Road
Wallingford, CT 06492

for the Contract Price specified below subject to additions and deductions according to the terms of the Contract Documents dated June 14, 2019.

A. ADDENDA:

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

B. ALLOWANCES: not used

C. PROPOSED BASE CONTRACT PRICE:

_____ \$ _____
Written Figures

D. SCHEDULE OF ALTERNATES: not used

E. SCHEDULE OF UNIT PRICES: not used

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.

DESCRIPTION	NAME OF SUBCONTACTOR	DOLLAR AMOUNT	LABOR & MATERIAL BOND	PERFORMANCE BOND
MASONRY				
ELECTRICAL				
MECHANICAL WITHOUT HVAC				
ELEVATOR				

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:

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.

*Refer to ITEM 1A above for stipulations pertaining to those Divisions of Work requiring listing of subcontractors and pricing.

SCHEDULE OF VALUES

Division 1, General Requirements	_____
Division 2, Site Construction	_____
Division 3, Concrete	_____
Division 4, Masonry	_____
Division 5, Metals	_____
Division 6, Wood & Plastic	_____
Division 7, Thermal and Moisture Protection	_____
Division 8, Doors & Windows	_____
Division 9, Finishes	_____
Division 10, Specialties	_____
Division 11, Equipment	_____
Division 12, Furnishings	_____
Division 13, Special Construction	_____
Division 14, Conveying Systems	_____
Division 23, Mechanical, without HVAC	_____
Division 23, Mechanical, HVAC	_____
Division 26, Electrical	_____

TOTAL OF PROPOSED BASE CONTRACT PRICE _____

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)

Firm Name: _____

Street: _____

City/State/Zip Code: _____

Telephone: _____

Fax Number: _____

Duly Authorized Signature: _____

Name / Title _____

Duly Authorized Signature: _____

Name / Title _____

END OF SECTION

**UNIVERSITY OF CONNECTICUT
PURCHASING DEPARTMENT
STATE OF CONNECTICUT
STANDARD BID BOND**

NOW ALL MEN BY THESE PRESENTS,

That we, _____
hereinafter called the principal, of _____, as principal,
and _____, hereinafter called the Surety, a corporation organized
and existing under the laws of the State of _____, and duly authorized to
transact a surety business in the State of Connecticut, as Surety, are held and firmly bound unto the
State of Connecticut, as obligee, in the penal sum of ten (10) percent of the amount of the bid set
forth in a proposal hereinafter mentioned, _____, in lawful money
of the United States of America, for the payment of which sum, well and truly to be made to the
Obligee, the Principal and the Surety bind, themselves, their heirs, executors, administrators,
successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH,

That, whereas the Principal has submitted or is about to submit a proposal the other obligee related
to a contract for **Project No.** _____.

NOW, THEREFORE, if the said contract be awarded to the Principal and the Principal shall, within
such time as may be specified, enter in the said contract in writing with the State of Connecticut and
give the required bonds, with surety acceptable to the Oligee, or if the Principal shall fail to do so,
pay to Obligee the damages which the Obligee may suffer by reason of such failure not exceeding

the penal sum of this bond, then this obligation shall be void, otherwise to remain in full force and effect.

SIGNED, SEALED AND DATED this _____ day of _____, 20____

Witness

Surety

Witness

Principal

Title

Title

UNIVERSITY OF CONNECTICUT
PERFORMANCE BOND

BOND NO. _____

KNOW ALL MEN BY THESE PRESENTS:

That _____ of _____, (hereinafter called the Principal), as Principal, and _____ a corporation duly established under the laws of the State of _____ and duly authorized to transact business in the State of Connecticut (hereinafter called the Surety(ies)) as Surety(ies), are firmly bound and held unto the UNIVERSITY OF CONNECTICUT, as Obligee, in the sum of _____ DOLLARS (\$ _____), for the payment of which we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT:

WHEREAS, the principal has entered into or intends to enter into a written contract (the "contract") with the University of Connecticut for the construction of _____, which contract, together with all plans and specifications now made or which may hereafter be made in extension, modification or alteration thereof, is hereby referred to, incorporated in, and made a part of this bond as though fully set forth herein.

NOW, THEREFORE, if the principal faithfully performs and fulfills all of the undertakings, covenants, terms, conditions, and agreements of the contract during the original term of the contract and any extensions thereof that are granted by the University of Connecticut, with or without notice to the Surety(ies), and during the life of any guaranty required under the contract; and also faithfully performs and fulfills all the undertakings, covenants, terms, conditions and agreements of any and all duty authorized modifications of the contract that hereafter are made, then this obligation shall be void; otherwise it shall remain in full force and effect.

Any alterations which may be made in the terms of the contract, or in the work done or to be done under it, or the giving by the University of Connecticut of any extension of time for the performance of the contract or any other forbearance on the part of either the University of Connecticut or the principal, one to the other, shall not in any way release the principal, and/or the Surety(ies) or either of them, their representatives, heirs, executors, administrators, successors or assigns from liability hereunder, and notice to the surety(ies) of any such alteration, modification, extension or forbearance is hereby specifically and absolutely waived.

Signed, sealed and executed at _____
this _____, day of _____, 20_____.

Signed, sealed and delivered in the presence of :

(L.S.) _____
Principal

As to Principal

Signed, Sealed and Executed at _____
this _____, day of _____, 20_____.

Signed, sealed and delivered in the presence of :

As to Surety(ies)

UNIVERSITY OF CONNECTICUT
LABOR & MATERIAL PAYMENT BOND

BOND NO. _____

KNOW ALL MEN BY THESE PRESENTS:

That _____ of,
_____, (hereinafter called the Principal) as Principal,
and _____ a corporation duly established under the laws of the State of
_____ and duly authorized to transact business in the State of Connecticut
(hereinafter called the Surety(ies)) as Surety(ies), are firmly bound and held unto the UNIVERSITY OF
CONNECTICUT, as Obligee, in the sum of _____
DOLLARS (\$) _____), for the payment of the Principal and Surety(ies) binds, itself,
its successors and assigns, himself, his heirs, executors, administrators, and assigns, jointly and severally by
these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT:

WHEREAS, the principal has entered into or intends to enter into a written contract (the "contract") with
the University of Connecticut for the construction of _____
_____, which contract, together with all plans and
specifications now made or which may hereafter be made in extension, modification or alteration thereof, is
hereby referred to, incorporated in, and made a part of this bond as though fully set forth herein.

NOW, THEREFORE, if the principal faithfully makes payment for all materials and labor used or employed in
the performance of the contract, as required by the contract documents and the General Statutes of
Connecticut, as amended, then this obligation shall be null and void; otherwise it shall remain in full force
and effect. This bond is provided pursuant to Sections 49-41 et seq. Of the General Statutes of Connecticut
and shall be governed thereby.

Signed, sealed and executed at _____

this _____, day of _____, 20____.

Signed, sealed and delivered in the presence of :

(L.S.)

Principal

As to Principal

Signed, Sealed and Executed at _____

this _____, day of _____, 20____.

Signed, sealed and delivered in the presence of :

(L.S.)

As to Surety(ies)

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
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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.

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)

« »« »

« »

THE ARCHITECT:

(Name and address)

« »« »

« »

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
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- 9 PAYMENTS AND COMPLETION
- 10 PROTECTION OF PERSONS AND PROPERTY
- 11 INSURANCE AND BONDS
- 12 UNCOVERING AND CORRECTION OF WORK

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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

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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 any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the 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 their 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 any of them 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 any of them 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.amet.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 place where the Project is located, 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 sixty (60) 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 seven (7) 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 sixty (60) 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 seven (7) 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

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. The request may be made concurrently with the filing of applicable binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of sixty (60) days from the date of filing, unless stayed for a different period of time by agreement of the parties or as modified by court order.

§ 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. If the parties are unable to agree on the dispute resolution entity, the mediation shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of this Contract.

§ 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 either prosecuting the claim against the Contractor in an appropriate court of general jurisdiction, or by arbitrating the claim by filing a demand for arbitration pursuant to the rules of a dispute resolution entity

agreed upon by the parties, except that if the parties cannot agree upon a dispute resolution entity, the rules of the American Arbitration Association shall apply.

§ 15.4.5 Should the Contractor have a claim against the Owner which has not been resolved by mediation or any other procedure set forth in this Contract, the Contractor's rights to assert its claim against the Owner shall be subject to the provisions of Connecticut General Statutes Section 4-61.

§ 15.4.6 Consolidation or Joinder

§ 15.4.6.1 Should either the Contractor institute an arbitration to the extent authorized by Section 4-61 of the Connecticut General Statutes or the Owner institute an arbitration as set forth herein, the Contractor agrees that any such arbitration may be consolidated, at the Owner's discretion, with any arbitration proceeding involving the Owner and the Architect or other Consultant for the Project in which construction or design deficiencies, breaches of contract, or any other alleged wrongful acts by the Contractor or Architect are alleged.

§ 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)

Scott A. Jordan
Executive VP for Administration & CFO

Duly Authorized

(Printed name and title)

CONTRACTOR (Signature)

« Duly Authorized »« »

(Printed name and title)

Date: _____

Date: _____



AIA[®] Document G702[™] - 1992

Application and Certificate for Payment

TO OWNER: PROJECT: _____ APPLICATION NO: 001
FROM CONTRACTOR: VIA ARCHITECT: _____ PERIOD TO: _____
 CONTRACTOR: _____ ARCHITECT: _____
 ARCHITECT: _____ CONTRACTOR: _____
 PROJECT NOS: / / FIELD: _____
 OTHER: _____

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract Continuation Sheet, AIA Document G703, is attached.

- 1. ORIGINAL CONTRACT SUM \$ 0.00
- 2. Net change by Change Orders \$ 0.00
- 3. CONTRACT SUM TO DATE (Line 1 ± 2) \$ 0.00
- 4. TOTAL COMPLETED & STORED TO DATE (Column G on G703) \$ 0.00

5. RETAINAGE:

- a. 0 % of Completed Work (Column D + E on G703) \$ 0.00
- b. 0 % of Stored Material (Column F on G703) \$ 0.00

Total Retainage (Lines 5a + 5b or Total in Column I of G703) \$ 0.00

6. TOTAL EARNED LESS RETAINAGE \$ 0.00
 (Line 4 Less Line 5 Total)

7. LESS PREVIOUS CERTIFICATES FOR PAYMENT \$ 0.00
 (Line 6 from prior Certificate)

8. CURRENT PAYMENT DUE \$ 0.00

9. BALANCE TO FINISH, INCLUDING RETAINAGE

(Line 3 less Line 6) \$ 0.00

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner	\$ 0.00	\$ 0.00
Total approved this Month	\$ 0.00	\$ 0.00
TOTALS	\$ 0.00	\$ 0.00
NET CHANGES by Change Order	\$	0.00

The undersigned 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 current payment shown herein is now due.

CONTRACTOR:

By: _____ Date: _____

State of: _____

County of: _____

Subscribed and sworn to before me this _____ day of _____

Notary Public: _____

My Commission expires: _____

ARCHITECT'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on on-site observations and the data comprising this application, the Architect certifies to the Owner that to the best of the Architect's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED \$ 0.00

(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)

ARCHITECT:

By: _____ Date: _____

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract

AIA[®] Document G703[™] - 1992

Continuation Sheet

AIA Document G702, APPLICATION AND CERTIFICATION FOR PAYMENT, containing Contractor's signed certification is attached.
 In tabulations below, amounts are stated to the nearest dollar.
 Use Column I on Contracts where variable retainage for line items may apply.

APPLICATION NO: 001

APPLICATION DATE:

PERIOD TO:

ARCHITECT'S PROJECT NO:

A ITEM NO.	B DESCRIPTION OF WORK	C SCHEDULED VALUE	D WORK COMPLETED		E THIS PERIOD COMPLETED	F MATERIALS PRESENTLY STORED (NOT IN D OR E)	G TOTAL COMPLETED AND STORED TO DATE (D+E+F)	H BALANCE TO FINISH (C - G)	I RETAINAGE (IF VARIABLE RATE)
			FROM PREVIOUS APPLICATION (D + E)	THIS PERIOD					
1	GENERAL CONDITIONS								
2	BONDS								
3	TEMPORARY WALLS								
4	SELECTIVE DEMOLITION								
5	EQUIPMENT SUPPORTS								
6	ARCHITECTURAL WOODWORK								
7	CARPENTRY								
8	JOINT SEALERS								
9	ROOFING								
10	HOLLOW METAL DOORS & FRAMES								
11	AUTOMATIC DOOR								
12	AUTOMATIC OPERATOR								
13	FINISH HARDWARE								
14	GLASS & GLAZIN								
15	DRYWALL & METAL STUDS								
16	ACOUSTICAL CEILING								
17	FLOOR COVERING								
18	PAINTING								
19	ARCHITECTURAL ACCESSORIES								

20	RADIATION PROTECTION											
21	SPRINKLER											
22	PLUMBING & MED GAS											
23	DUCTWORK											
24	HVAC											
25	CONTROLS											
26	ELECTRICAL											
	GRAND TOTAL	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	0.00 %	\$ 0.00	\$ 0.00	\$ 0.00

LIST OF CONTRACTORS

UCHC PROJECT NO:

ARCHITECT:

PROJECT TITLE:

GENERAL CONTRACTOR:
(Address)

DATE:

TOTAL CONTRACT AMOUNT: \$ _____

List all Contractors, Subcontractors and others proposed to be employed on the above Project as required in the General Conditions of the Bid Documents. Complete the form and return to the UCHC Agent prior to the start of the Work. I.D. badges shall be issued based on the information indicated below.

Trade Name	Firm / Contact Person	Address	Phone Fax	Contractors License No.	Fed. Emp. ID# (SS#, if not avail.)	CT Tax ID No	Set-aside Contractor SBE/MBE/ NO	Cert. Received Yes or No	Contract Amount

(List Continued on next sheet)

550.13A

LIST OF CONTRACTORS (Continued)

Trade Name	Firm / Contact Person	Address	Phone Fax	Contractors License No.	Fed. Emp. ID# (SS#, if not avail.	CT Tax ID No	Set-aside Contractor SBE/MBE/NO	Cert. Received Yes or No	Contract Amount



BACKGROUND INFORMATION SHEET

PLEASE COMPLETE ALL SECTIONS AND SIGN AT THE BOTTOM

The following information is being solicited for purposes of conducting pre-employment criminal and/or other background checks only and is not used in employment decisions unrelated to the results of the background check.

Name: _____
Last First Middle (spell out)
Social Security Number: _____
Contact Phone: _____ Home Phone: _____
e-mail: _____
Marital Status: ___ Single ___ Married ___ Divorced
Maiden Name: _____ Aliases: _____
Race _____ Eyes _____ Height _____ Physically Disabled: _____
Sex _____ Hair _____ Weight _____ Yes _____ No
Identifying Scars/marks/tattoos (type & location): _____

Home Address: _____
Number Street City/Town State Zip
Date of Birth: _____
MM/DD/YYYY
Place of Birth: _____
City and State or Country
Citizenship: _____ Visa Status: _____
Drivers License ___ Yes ___ No
State: _____ License #: _____
List the states that you have lived in the last 7 years: _____

Are you related to, or an unmarried partner of, an employee at UConn Health? ___ YES ___ NO

If "YES" list below. Continue on the reverse side if necessary. Per UConn Health Policy #2002-51 a relative is a spouse, father, mother, sister, brother, child, the spouse of a child, or any relative who is domiciled in the employee's household.

Table with 3 columns: Name, Relationship, Department

Have you ever been CONVICTED of an offense against criminal or military law, or are there criminal charges currently pending against you? Exclude minor traffic violations, or any offense settled in juvenile court or under a youth offender law. ___ YES ___ NO

If "YES" list all cases below, providing details as indicated. Continue on the reverse side if necessary. Special Note: Under the provisions of (C.G.S. § 46a-80 a person is not disqualified from state employment solely because of a prior conviction of a crime. The state can deny employment if a person is found unsuitable after considering (1) the nature of the crime, (2) information relating to the degree of rehabilitation, and (3) the time elapsed since the conviction. You are not required to disclose the existence of any arrest, criminal charge or conviction, the records of which have been erased pursuant to Connecticut General Statutes §46b-146, 54-76o, or 54-142a. If your criminal records have been erased pursuant to one of these statutes, you may swear under oath that you have never been arrested. Criminal records that may be erased are records pertaining to a finding of delinquency or that a child was a member of a family with service needs (C.G.S. § 46b-146), an adjudication as a youthful offender (C.G.S. § 54-76o), a criminal charge that has been dismissed or nolleed, a criminal charge for which the person has been found not guilty or a conviction for which the person received an absolute pardon (C.G.S. § 54-142a).

Table with 5 columns: Date, Place, Court Location, Offense(s), Disposition

Have you ever been excluded, disbarred, restricted, disqualified, or sanctioned from any Federal or State programs or government organizations? ___ YES ___ NO

If "YES" list all cases below, providing details as indicated. Continue on the reverse side if necessary. For the CMHC program, fingerprints taken by the Department of Correction will be submitted to the Connecticut State Police and the FBI for a criminal history check.

Table with 5 columns: Date, Place, Agency, Funding, Current Status

Have there ever been any actions against your professional license(s)? ___ YES ___ NO ___ N/A

If "YES" list all cases below, providing details as indicated. Continue on the reverse side if necessary.

Table with 5 columns: Date, Place, Agency, Funding, Current Status

Have you brought or will you be bringing (or having transported) to UConn Health ANY WYa [W] g'z fUX]cUWij Y'a UHYf]U'g UbX:#f' Ubrni V]c'c[]W'a UHYf]U'g'h UhUFY j]fi gYg'f'f'h Y]f [Ybca Ygtz VUWYf]U'z'z b []z'f]W]YHtg]U'z'a nW'cd Uga U'z'dUfUg]H]Wcrganisms V]c'c[]W' hcl]bgz cf'GY'YW]5]Ybrg3'..... ___ YES ___ NO

If "YES", IMPORTANT NOTE: You must contact [redacted]

I certify that the information provided by me in the Background Information sheet is COMPLETE and TRUE to the best of my knowledge and is made in good faith. I understand that if I knowingly make any misstatement of facts or fail to provide required information I am subject to disqualification or dismissal and other penalties as they may be prescribed by law, policy, or regulation. This sheet is not complete without a wet signature. Digital signatures are not acceptable.

SIGNATURE: _____ DATE SIGNED: _____

OFFICIAL USE ONLY

MUST BE COMPLETED BY HIRING DEPARTMENT

submitted by: ___ Abromaitis D ___ Duggal J ___ Hobson M ___ Leone M ___ Logan N ___ Rucker P ___ Seklecki D ___ Smith J ___ Stockwell L ___ Other:
return to: ___ Abromaitis D ___ Duggal J ___ Hobson M ___ Leone M ___ Logan N ___ Rucker P ___ Seklecki D ___ Smith J ___ Stockwell L ___ Other:
area: ___ CMHC ___ Clinical Operations ___ Clinical Faculty ___ Day Care ___ Dental Clinics ___ IT ___ Non-Clinical ___ Research
type: ___ Paid ___ Volunteer ___ Grad Assistant ___ Dental Resident/Non-Surgical ___ Unpaid ___ Student ___ Non-Affiliated Student/Intern ___ Contractor:
job title: _____

PUBLIC SAFETY USE ONLY

Result/Date
___ Cleared
___ Rejected - failure to disclose ___/___/___
___ Rejected - criminal history ___/___/___
___ Administrative Review Pending ___/___/___
___ Administrative Review Complete ___/___/___

**EXHIBIT A
INSURANCE REQUIREMENTS**

I. CONTRACTOR'S LIABILITY INSURANCE

A. The Contractor shall maintain with a company or companies lawfully authorized to do business in the State of Connecticut such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations and completed operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

1. Claims under workers' compensation, disability benefit and other similar employee benefit acts that are applicable to the Work to be performed;
2. Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
3. Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;
4. Claims for damages insured by usual personal injury liability coverage;
5. Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
6. Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle;
7. Claims for bodily injury or property damage arising out of completed operations; and
8. Claims involving contractual liability applicable to the Contractor's obligations under Section 3.18 of the General Conditions.

B. The insurance required by Section A above shall be written for not less than the limits of liability set forth below or required by law, whichever coverage is greater. Coverages shall be maintained without interruption from the date of commencement of the Work until the date of final payment and, (i) with respect to coverage required to be maintained under the Contract Documents for a period of time after final payment, for such additional period of time, and, (ii) with respect to the Contractor's completed operations coverage, until the expiration of the period for correction of Work and for such additional period as may be specified in the Contract Documents. Coverage for all insurance policies shall be on an occurrence basis, with the exception of the Pollution Liability coverage described in Section I.B.6 herein, which may be on a claims-made basis.

1. **Worker's Compensation Insurance:** Worker's Compensation Insurance in Statutory Limits of the Worker's Compensation Laws of the State of Connecticut, and other extensions, with Coverage B – Employer's Liability of not less than limits of \$1,000,000 – Each Accident, \$1,000,000 – Policy Limit and \$1,000,000 – Each Employee. Coverage under the Broad Form All State extension shall also be included.

2. **Commercial General Liability Insurance:** \$1,000,000 combined single limit per occurrence for bodily injury, personal injury and property damage, with no exclusions for hazards of operations (including but not limited to elevators, explosion, collapse and/or underground hazards). Coverage shall include Premises and Operations, Independent Contractors, Products and Completed Operations, Contractual Liability and Broad Form Property Damage coverage. If a general aggregate is used, the general aggregate limit shall apply separately to the project or the general aggregate limit shall be twice the occurrence limit. The coverage shall contain no special limitations on the scope of protection afforded to the State. Said policy shall also state that it is primary insurance. Completed operations coverage shall be maintained for a period of three (3) years after final completion of the Work.
3. **Automobile Liability Insurance:** Automobile Liability Insurance covering all owned, non-owned and hired automobiles, trucks and trailers of the respective parties required to provide and maintain this insurance. Such insurance shall provide coverage not less than that of the Standard Comprehensive Automobile Liability policy in limits not less than, as respects Contractor and all tiers of Subcontractors, \$1,000,000 Combined Single Limit each occurrence for Bodily Injury and Property Damage.
4. **Umbrella Liability Insurance:** Umbrella liability (following form) in the amount of \$5,000,000 per Occurrence.
5. **Aircraft Liability:** If aircraft of any kind is used by the Contractor, any tier of Subcontractor or by anyone else on their behalf, the Contractor or Subcontractor shall maintain or cause the operator of the aircraft to maintain aircraft public liability insurance insuring passengers and the general public against personal injury, bodily injury or property damage arising from aircraft owned, used, operated or hired in connection with the Work by the Contractor, Subcontractor or anyone else in limits of \$50,000,000 Combined Single Limit for any one occurrence, each aircraft. If the aircrafts to be used are unmanned aircrafts, the Contractor, Subcontractor or operator of the aircraft may be permitted by the Owner to maintain other coverages and limits than as provided herein for aircrafts generally if approved by the Owner in writing in advance of the use of such unmanned aircrafts
6. **Contractor's Pollution Liability:** If the work of this project includes the abatement, removal, cleanup or handling of any asbestos, PCB's, lead based paint, or other pollutants or hazardous materials, then the Contractor shall also provide evidence that Pollution Liability Insurance, including completed operations and Contractual Liability coverage of not less than limits of \$5,000,000 has been procured and is in force on the project. However, if the Contractor demonstrates that coverage for claims arising out of the abatement, removal, cleanup or other handling of asbestos, PCB's, lead based paint, or other pollutants or hazardous materials is covered by the Contractor's general liability insurance, a separate Contractor's Pollution Liability Policy will not be required.
7. **Professional Liability:** If the Contractor is required to furnish professional services for the Project, the Contractor shall procure Professional Liability insurance covering the performance of the professional services, with policy limits of not less than \$1,000,000 per claim and \$2,000,000 in the aggregate unless otherwise required by the Owner.

8. **Additional Insured Requirements:** The University of Connecticut, the State of Connecticut, their respective officers, officials, agents, employees, boards and commissions shall be named as Additional Insureds under the coverages described in Paragraphs 2-6 of this Section B and that said coverage(s) is provided for all operations, uses, occupations, acts and activities of the insureds under the Contract Documents and under any amendments, modifications, extensions or renewals of said Contracts regardless of whether liability is attributable to the named insureds or a combination of the named insureds and the additional named insureds. Coverage shall be provided in the form of an endorsement to the Contractor's insurance policy or policies, which endorsement shall be at least as broad as ISO Form CG 20 37 04 13 and ISO Form CG 20 10 04 13.
9. If the Contractor is a joint venture or general partnership, the joint venture or general partnership and each individual member or partner of the joint venture or general partnership, as applicable, must be designated in each policy as named insureds.
10. A Certificate of Insurance shall clearly indicate the Project name, Project number or some easily identifiable reference to the relationship to the Owner.
11. Each liability policy shall contain a Cross Liability Endorsement and shall include a waiver of subrogation clause.
12. All insurance secured by Contractor or Subcontractors pursuant to the Owner's requirements under the provisions of this Section shall be in policies subject to the Owner's approval, as to form, content, limits of liability, cost and issuing companies. Such companies shall have and maintain an A.M. Best rating of not less than A-(VII), or otherwise acceptable to Owner.
13. If the Contractor maintains insurance against physical loss or damage to Contractor's construction equipment and tools, such insurance shall include an insurer's waiver of rights of subrogation in favor of Owner.

C. Certificates of insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work and thereafter upon renewal or replacement of each required policy of insurance. These certificates and the insurance policies required under this Exhibit A shall contain a provision that coverages afforded under the policies will not be canceled, terminated or materially changed, altered or allowed to expire until at least thirty (30) days' prior written notice has been given to the Owner. If any of the foregoing insurance coverages are required to remain in force after final payment and are reasonably available, an additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment as required by Section 9.10.2 of the General Conditions and thereafter upon renewal or replacement of such coverage until the expiration of the time required by Section I.B of this Exhibit A. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness in accordance with the Contractor's information and belief and shall identify on their faces the project name and contract number to which they apply. The Certificate(s) of Insurance must also provide clear evidence that the Contractor's Insurance Policies contain at least the minimum limits of coverage and special provisions prescribed in this Exhibit A.

II. PROPERTY INSURANCE

A. Property insurance on an all-risk basis, including coverage for the perils of earthquakes and floods, has been purchased by the Owner. Insurance required by this Section is not intended to cover machinery, tools and equipment of the Contractor which is used in the performance of the Work, but is not incorporated into the permanent improvements, nor any materials and equipment paid for by the Owner and stored off-site, for which the Contractor shall procure property insurance satisfactory to the Owner. The Contractor shall, at its own expense, provide coverage for its machinery, tools and equipment subject to these provisions. Unless the Project is for new construction (rather than for renovations to an existing structure or facilities), the Owner's property insurance program shall provide for Builder's Risk insurance coverage for the Project.

B. **Builder's Risk Insurance:** If the Project is for new construction (rather than for renovations to an existing structure or facilities), the Contractor shall purchase and maintain Builder's Risk Insurance in the amount of the initial Contract Sum (or Guaranteed Maximum Price, as applicable) plus values of subsequent modifications or change orders on a replacement cost basis. The terms and conditions of such Builder's Risk insurance shall be satisfactory to the Owner in all respects. The Builder's Risk coverage shall be written on a Special Covered Cause of Loss form and shall include theft, vandalism, malicious mischief, collapse, temporary buildings, transit, debris removal, increased cost of construction, architect fees and expenses, soft costs, flood and earthquake. Builder's Risk shall include portions of Work located away from site but intended for use at the site. Contractor shall obtain consent of the insurance company and delete any provisions with regard to restrictions within any occupancy clause. Equipment break down coverage shall be included and shall cover insured equipment during installation and testing.

C. As regards Builder's Risk insurance maintained by the Contractor under Section II.B above, the Contractor shall be responsible for all costs not covered because of deductibles required under such insurance. As regards Builder's Risk insurance maintained by the Owner under Section II.A above, if such insurance requires deductibles, the Contractor shall pay costs not covered because of such deductibles provided the subject loss was caused by the acts or omissions of the Contractor, a Subcontractor or Sub-subcontractor or any other person or entity for whom or which any of them is responsible.

D. As regards partial occupancy or use by the Owner the Owner and the Contractor shall take reasonable steps to obtain consent of the insurance company or companies and shall, without mutual written consent, take no action with respect to partial occupancy or use that would cause cancellation, lapse or reduction of insurance.

EXHIBIT F

State of Connecticut Terms and Conditions

1. **STATUTORY AUTHORITY.** Statutory Authority. Connecticut General Statutes §§ 4a-52a, 10a-104, 10a-108, 10a-109d(a)(5) and/or 10a-151b, provide the University with authority to enter into contracts in the pursuit of its mission.
2. **NONDISCRIMINATION.** References in this section to "Contract" shall mean this Agreement and references to "Contractor" shall mean the Contractor.
 - (a) For purposes of this Section 1, the following terms are defined as follows: (i) "Commission" means the Commission on Human Rights and Opportunities; (ii) "Contract" and "contract" include any extension or modification of the Contract or contract; (iii) "Contractor" and "contractor" include any successors or assigns of the Contractor or contractor; (iv) "Gender identity or expression" means a person's gender-related identity, appearance or behavior, whether or not that gender-related identity, appearance or behavior is different from that traditionally associated with the person's physiology or assigned sex at birth, which gender-related identity can be shown by providing evidence including, but not limited to, medical history, care or treatment of the gender-related identity, consistent and uniform assertion of the gender-related identity or any other evidence that the gender-related identity is sincerely held, part of a person's core identity or not being asserted for an improper purpose; (v) "veteran" means any person honorably discharged from, or released under honorable conditions from active service in, the armed forces; (vi) "good faith" means that degree of diligence which a reasonable person would exercise in the performance of legal duties and obligations; (vii) "good faith efforts" shall include, but not be limited to, those reasonable initial efforts necessary to comply with statutory or regulatory requirements and additional or substituted efforts when it is determined that such initial efforts will not be sufficient to comply with such requirements; (viii) "marital status" means being single, married as recognized by the State of Connecticut, widowed, separated or divorced; (ix) "mental disability" means one or more mental disorders, as defined in the most recent edition of the American Psychiatric Association's "Diagnostic and Statistical Manual of Mental Disorders", or a record of or regarding a person as having one or more such disorders; (x) "intellectual disability" means a significant limitation in intellectual functioning existing concurrently with deficits in adaptive behavior that originated during the developmental period before eighteen years of age; (xi) "minority business enterprise" means any small contractor or supplier of materials fifty-one percent or more of the capital stock, if any, or assets of which is owned by a person or persons: (1) who are active in the daily affairs of the enterprise, (2) who have the power to direct the management and policies of the enterprise, and (3) who are members of a minority, as such term is defined in subsection (a) of Connecticut General Statutes § 32-9n; and (xi) "public works contract" means any agreement between any individual, firm or corporation and the State or any political subdivision of the State other than a municipality for construction, rehabilitation, conversion, extension, demolition or repair of a public building, highway or other changes or improvements in real property, or which is financed in whole or in

part by the State, including, but not limited to, matching expenditures, grants, loans, insurance or guarantees.

References to “this section” in subsection (b) below means and refers to Connecticut General Statutes § 4a-60 and references to “this section” in subsection (e) below means and refers to Connecticut General Statutes § 4a-60a.

(b) (1) The Contractor agrees and warrants that in the performance of the contract such Contractor will not discriminate or permit discrimination against any person or group of persons on the grounds of race, color, religious creed, age, marital status, national origin, ancestry, sex, gender identity or expression, status as a veteran, intellectual disability, mental disability or physical disability, including, but not limited to, blindness, unless it is shown by such Contractor that such disability prevents performance of the work involved, in any manner prohibited by the laws of the United States or of the state of Connecticut; and the Contractor further agrees to take affirmative action to ensure that applicants with job-related qualifications are employed and that employees are treated when employed without regard to their race, color, religious creed, age, marital status, national origin, ancestry, sex, gender identity or expression, status as a veteran, intellectual disability, mental disability or physical disability, including, but not limited to, blindness, unless it is shown by such Contractor that such disability prevents performance of the work involved;

(2) The Contractor agrees, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, to state that it is an "affirmative action-equal opportunity employer" in accordance with regulations adopted by the Commission on Human Rights and Opportunities;

(3) The Contractor agrees to provide each labor union or representative of workers with which such Contractor has a collective bargaining agreement or other contract or understanding and each vendor with which such Contractor has a contract or understanding, a notice to be provided by the Commission on Human Rights and Opportunities, advising the labor union or workers' representative of the Contractor's commitments under this section and to post copies of the notice in conspicuous places available to employees and applicants for employment;

(4) The Contractor agrees to comply with each provision of this section and sections 46a-68e and 46a-68f and with each regulation or relevant order issued by said commission pursuant to sections 46a-56, 46a-68e, 46a-68f and 46a-86; and

(5) The Contractor agrees to provide the Commission on Human Rights and Opportunities with such information requested by the commission, and permit access to pertinent books, records and accounts, concerning the employment practices and procedures of the Contractor as relate to the provisions of this section and section 46a-56.

(c) If the contract is a public works contract, the Contractor agrees and warrants that he will make good faith efforts to employ minority business enterprises as subcontractors and suppliers of materials on such public works projects.

(1) Determination of the Contractor's good faith efforts shall include, but shall not be limited to, the following factors: The Contractor's employment and subcontracting policies, patterns and practices; affirmative advertising, recruitment and training; technical assistance activities and

such other reasonable activities or efforts as the Commission on Human Rights and Opportunities may prescribe that are designed to ensure the participation of minority business enterprises in public works projects.

(2) The Contractor shall develop and maintain adequate documentation, in a manner prescribed by the Commission on Human Rights and Opportunities, of its good faith efforts.

(d) The Contractor shall include the provisions of subsections (b) and (c) of this section in every subcontract or purchase order entered into in order to fulfill any obligation of a contract with the state and in every subcontract entered into in order to fulfill any obligation of a municipal public works contract or contract for a quasi-public agency project, and such provisions shall be binding on a subcontractor, vendor or manufacturer unless exempted by regulations or orders of the Commission on Human Rights and Opportunities. The Contractor shall take such action with respect to any such subcontract or purchase order as the commission may direct as a means of enforcing such provisions including sanctions for noncompliance in accordance with section 46a-56; provided if such Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the commission regarding a state contract, the Contractor may request the state of Connecticut to enter into any such litigation or negotiation prior thereto to protect the interests of the state and the state may so enter.

(e) (1) The Contractor agrees and warrants that in the performance of the Contract such Contractor will not discriminate or permit discrimination against any person or group of persons on the grounds of sexual orientation, in any manner prohibited by the laws of the United States or the state of Connecticut, and that employees are treated when employed without regard to their sexual orientation;

(2) The Contractor agrees to provide each labor union or representative of workers with which such Contractor has a collective bargaining agreement or other contract or understanding and each vendor with which such Contractor has a contract or understanding, a notice to be provided by the Commission on Human Rights and Opportunities advising the labor union or workers' representative of the Contractor's commitments under this section, and to post copies of the notice in conspicuous places available to employees and applicants for employment;

(3) The Contractor agrees to comply with each provision of this section and with each regulation or relevant order issued by said commission pursuant to section 46a-56; and

(4) The Contractor agrees to provide the Commission on Human Rights and Opportunities with such information requested by the commission, and permit access to pertinent books, records and accounts, concerning the employment practices and procedures of the Contractor which relate to the provisions of this section and section 46a-56.

(f) The Contractor shall include the provisions of subsection (e) in every subcontract or purchase order entered into in order to fulfill any obligation of a contract with the state and in every subcontract entered into in order to fulfill any obligation of a municipal public works contractor contract for a quasi-public agency project, and such provisions shall be binding on a subcontractor, vendor or manufacturer unless exempted by regulations or orders of the Commission on Human Rights and Opportunities.

The Contractor shall take such action with respect to any such subcontract or purchase order as the commission may direct as a means of enforcing such provisions including sanctions for noncompliance in accordance with section 46a-56; provided, if such Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the commission regarding a state contract, the Contractor may request the state of Connecticut to enter into any such litigation or negotiation prior thereto to protect the interests of the state and the state may so enter.

(g) The Contractor agrees to comply with the regulations referred to in this Section 1 as they exist on the date of this Contract and as they may be adopted or amended from time to time during the term of this Contract and any amendments thereto.

2. STATE EXECUTIVE ORDERS

This Contract is subject to the provisions of Executive Order No. Three of Governor Thomas J. Meskill, promulgated June 16, 1971, concerning labor employment practices, Executive Order No. Seventeen of Governor Thomas J. Meskill, promulgated February 15, 1973, concerning the listing of employment openings and Executive Order No. Sixteen of Governor John G. Rowland promulgated August 4, 1999, concerning violence in the workplace, all of which are incorporated into and are made a part of the Contract as if they had been fully set forth in it. The Contract may also be subject to Executive Order No. 14 of Governor M. Jodi Rell, promulgated April 17, 2006, concerning procurement of cleaning products and services and to Executive Order No. 49 of Governor Dannel P. Malloy, promulgated May 22, 2015, mandating disclosure of certain gifts to public employees and contributions to certain candidates for office. If Executive Order 14 and/or Executive Order 49 are applicable, they are deemed to be incorporated into and are made a part of the Contract as if they had been fully set forth in it. At the Contractor's request, the Owner shall provide a copy of these orders to the Contractor.

3. ETHICS AND COMPLIANCE

Contractor acknowledges that by doing business with or seeking to do business with the State it is subject to certain provisions of the Code of Ethics for Public Officials of the State of Connecticut (the "Code of Ethics") applicable to current or prospective state contractors. Contractor acknowledges receipt and review of the "Guide to the Code of Ethics for Current or Potential State Contractors" as currently posted on the Web site of the Office of State Ethics www.ct.gov/ethics and agrees to comply with all provisions of the Code of Ethics applicable to Contractor as a current or potential state contractor. As required under Connecticut General Statutes §1-101qq, the Contractor will include the foregoing reference to the state ethics law summary in each subcontract entered into with Subcontractors in connection with the Project.

In accordance with the Owner's compliance program, the Owner has in place an anonymous ethics and compliance reporting hotline service – 1-888-685-2637. Any person who is aware of unethical practices, fraud, violation of state laws or regulations or other concerns relating to Owner policies and procedures can report such matters anonymously.

Such persons may also directly contact the Owner's compliance office at: Office of Audit, Compliance, and Ethics, 9 Walters Avenue, Unit 5084, Storrs, CT 06269-5084; Phone 860-486-4526; Fax 860-486-4527. As a provider of goods and/or services to the Owner, you are hereby required to notify your employees, as well as any subcontractors, who are involved in the implementation of this contract, of this reporting mechanism.

4. CAMPAIGN CONTRIBUTION RESTRICTIONS

For all State contracts as defined in section 9-612 of the Connecticut General Statutes having a value in a calendar year of \$50,000 or more or a combination or series of such agreements or contracts having a value of \$100,000 or more, the authorized signatory to this Contract expressly acknowledges receipt of the State Elections Enforcement Commission's notice advising state contractors of state campaign contribution and solicitation prohibitions, and will inform its principals of the contents of the notice (SEEC Form 11):

*SEEC FORM 11 CONNECTICUT STATE ELECTIONS ENFORCEMENT COMMISSION
(Rev.7/18)*

Notice to Executive Branch State Contractors and Prospective State Contractors of Campaign Contribution and Solicitation Limitations

This notice is provided under the authority of Connecticut General Statutes §9-612 (f) (2) and is for the purpose of informing state contractors and prospective state contractors of the following law (italicized words are defined on the reverse side of this page).

CAMPAIGN CONTRIBUTION AND SOLICITATION LIMITATIONS

No state contractor, prospective state contractor, principal of a state contractor or principal of a prospective state contractor, with regard to a state contract or state contract solicitation with or from a state agency in the executive branch or a quasi-public agency or a holder, or principal of a holder, of a valid prequalification certificate, shall make a contribution to (i) an exploratory committee or candidate committee established by a candidate for nomination or election to the office of Governor, Lieutenant Governor, Attorney General, State Comptroller, Secretary of the State or State Treasurer, (ii) a political committee authorized to make contributions or expenditures to or for the benefit of such candidates, or (iii) a party committee (which includes town committees).

In addition, no holder or principal of a holder of a valid prequalification certificate, shall make a contribution to (i) an exploratory committee or candidate committee established by a candidate for nomination or election to the office of State senator or State representative, (ii) a political committee authorized to make contributions or expenditures to or for the benefit of such candidates, or (iii) a party committee.

On and after January 1, 2011, no state contractor, prospective state contractor, principal of a state contractor or principal of a prospective state contractor, with regard to a state contract or state contract solicitation with or from a state agency in the executive branch or a quasi-public agency or a holder, or principal of a holder of a valid prequalification certificate, shall knowingly solicit

contributions from the state contractor's or prospective state contractor's employees or from a subcontractor or principals of the subcontractor on behalf of (i) an exploratory committee or candidate committee established by a candidate for nomination or election to the office of Governor, Lieutenant Governor, Attorney General, State Comptroller, Secretary of the State or State Treasurer, (ii) a political committee authorized to make contributions or expenditures to or for the benefit of such candidates, or (iii) a party committee.

DUTY TO INFORM

State contractors and prospective state contractors are required to inform their principals of the above prohibitions, as applicable, and the possible penalties and other consequences of any violation thereof.

PENALTIES FOR VIOLATIONS

Contributions or solicitations of contributions made in violation of the above prohibitions may result in the following civil and criminal penalties:

Civil penalties —Up to \$2,000 or twice the amount of the prohibited contribution, whichever is greater, against a principal or a contractor. Any state contractor or prospective state contractor which fails to make reasonable efforts to comply with the provisions requiring notice to its principals of these prohibitions and the possible consequences of their violations may also be subject to civil penalties of up to \$2,000 or twice the amount of the prohibited contributions made by their principals.

Criminal penalties —Any knowing and willful violation of the prohibition is a Class D felony, which may subject the violator to imprisonment of not more than 5 years, or not more than \$5,000 in fines, or both.

CONTRACT CONSEQUENCES

In the case of a state contractor, contributions made or solicited in violation of the above prohibitions may result in the contract being voided.

In the case of a prospective state contractor, contributions made or solicited in violation of the above prohibitions shall result in the contract described in the state contract solicitation not being awarded to the prospective state contractor, unless the State Elections Enforcement Commission determines that mitigating circumstances exist concerning such violation.

The State shall not award any other state contract to anyone found in violation of the above prohibitions for a period of one year after the election for which such contribution is made or solicited, unless the State Elections Enforcement Commission determines that mitigating circumstances exist concerning such violation.

Additional information may be found on the website of the State Elections Enforcement Commission, www.ct.gov v/ see c . Click on the link to "Lobbyist/Contractor Limitations."

DEFINITIONS

“State contractor” means a person, business entity or nonprofit organization that enters into a state contract. Such person, business entity or nonprofit organization shall be deemed to be a state contractor until December thirty-first of the year in which such contract terminates. “State contractor” does not include a municipality or any other political subdivision of the state, including any entities or associations duly created by the municipality or political subdivision exclusively amongst themselves to further any purpose authorized by statute or charter, or an employee in the executive or legislative branch of state government or a quasi-public agency, whether in the classified or unclassified service and full or part-time, and only in such person's capacity as a state or quasi-public agency employee.

“Prospective state contractor” means a person, business entity or nonprofit organization that (i) submits a response to a state contract solicitation by the state, a state agency or a quasi-public agency, or a proposal in response to a request for proposals by the state, a state agency or a quasi-public agency, until the contract has been entered into, or (ii) holds a valid prequalification certificate issued by the Commissioner of Administrative Services under section 4a-100.

“Prospective state contractor” does not include a municipality or any other political subdivision of the state, including any entities or associations duly created by the municipality or political subdivision exclusively amongst themselves to further any purpose authorized by statute or charter, or an employee in the executive or legislative branch of state government or a quasi-public agency, whether in the classified or unclassified service and full or part-time, and only in such person's capacity as a state or quasi-public agency employee.

“Principal of a state contractor or prospective state contractor” means (i) any individual who is a member of the board of directors of, or has an ownership interest of five per cent or more in, a state contractor or prospective state contractor, which is a business entity, except for an individual who is a member of the board of directors of a nonprofit organization, (ii) an individual who is employed by a state contractor or prospective state contractor, which is a business entity, as president, treasurer or executive vice president, (iii) an individual who is the chief executive officer of a state contractor or prospective state contractor, which is not a business entity, or if a state contractor or prospective state contractor has no such officer, then the officer who duly possesses comparable powers and duties,

(iv) an officer or an employee of any state contractor or prospective state contractor who has *managerial or discretionary responsibilities with respect to a state contract*, (v) the spouse or a *dependent child* who is eighteen years of age or older of an individual described in this subparagraph, or (vi) a political committee established or controlled by an individual described in this subparagraph or the business entity or nonprofit organization that is the state contractor or prospective state contractor.

“State contract” means an agreement or contract with the state or any state agency or any quasi-public agency, let through a procurement process or otherwise, having a value of fifty thousand dollars or more, or a combination or series of such agreements or contracts having a value of one hundred thousand dollars or more in a calendar year, for (i) the rendition of services, (ii) the

furnishing of any goods, material, supplies, equipment or any items of any kind, (iii) the construction, alteration or repair of any public building or public work,

(iv) the acquisition, sale or lease of any land or building, (v) a licensing arrangement, or (vi) a grant, loan or loan guarantee. "State contract" does not include any agreement or contract with the state, any state agency or any quasi-public agency that is exclusively federally funded, an education loan, a loan to an individual for other than commercial purposes or any agreement or contract between the state or any state agency and the United States Department of the Navy or the United States Department of Defense.

"State contract solicitation" means a request by a state agency or quasi-public agency, in whatever form issued, including, but not limited to, an invitation to bid, request for proposals, request for information or request for quotes, inviting bids, quotes or other types of submittals, through a competitive procurement process or another process authorized by law waiving competitive procurement.

"Managerial or discretionary responsibilities with respect to a state contract" means having direct, extensive and substantive responsibilities with respect to the negotiation of the state contract and not peripheral, clerical or ministerial responsibilities.

"Dependent child" means a child residing in an individual's household who may legally be claimed as a dependent on the federal income tax of such individual.

"Solicit" means (A) requesting that a contribution be made, (B) participating in any fundraising activities for a candidate committee, exploratory committee, political committee or party committee, including, but not limited to, forwarding tickets to potential contributors, receiving contributions for transmission to any such committee, serving on the committee that is hosting a fundraising event, introducing the candidate or making other public remarks at a fundraising event, being honored or otherwise recognized at a fundraising event, or bundling contributions, (C) serving as chairperson, treasurer or deputy treasurer of any such committee, or (D) establishing a political committee for the sole purpose of soliciting or receiving contributions for any committee. Solicit does not include: (i) making a contribution that is otherwise permitted by Chapter 155 of the Connecticut General Statutes; (ii) informing any person of a position taken by a candidate for public office or a public official, (iii) notifying the person of any activities of, or contact information for, any candidate for public office; or (iv) serving as a member in any party committee or as an officer of such committee that is not otherwise prohibited in this section.

"Subcontractor" means any person, business entity or nonprofit organization that contracts to perform part or all of the obligations of a state contractor's state contract. Such person, business entity or nonprofit organization shall be deemed to be a subcontractor until December thirty first of the year in which the subcontract terminates. "Subcontractor" does not include (i) a municipality or any other political subdivision of the state, including any entities or associations duly created by the municipality or political subdivision exclusively amongst themselves to further any purpose authorized by statute or charter, or (ii) an employee in the executive or legislative branch of state government or a quasi-public agency, whether in the classified or unclassified service and full or part-time, and only in such person's capacity as a state or quasi-public agency employee.

“Principal of a subcontractor” means (i) any individual who is a member of the board of directors of, or has an ownership interest of five per cent or more in, a subcontractor, which is a business entity, except for an individual who is a member of the board of directors of a nonprofit organization, (ii) an individual who is employed by a subcontractor, which is a business entity, as president, treasurer or executive vice president, (iii) an individual who is the chief executive officer of a subcontractor, which is not a business entity, or if a subcontractor has no such officer, then the officer who duly possesses comparable powers and duties, (iv) an officer or an employee of any subcontractor who has managerial or discretionary responsibilities with respect to a subcontract with a state contractor, (v) the spouse or a dependent child who is eighteen years of age or older of an individual described in this subparagraph, or (vi) a political committee established or controlled by an individual described in this subparagraph or the business entity or nonprofit organization that is the subcontractor.

5. WHISTLEBLOWING

This Contract is subject to the provisions of § 4-61dd of the Connecticut General Statutes. In accordance with this statute, if an officer, employee or appointing authority of the Contractor takes or threatens to take any personnel action against any employee of the Contractor in retaliation for such employee’s disclosure of information to any employee of the Contracting state or quasi-public agency or the Auditors of Public Accounts or the Attorney General under the provisions of subsection (a) of such statute, the Contractor shall be liable for a civil penalty of not more than five thousand dollars for each offense, up to a maximum of twenty per cent of the value of this Contract. Each violation shall be a separate and distinct offense and in the case of a continuing violation, each calendar day’s continuance of the violation shall be deemed to be a separate and distinct offense. The Owner may request that the Attorney General bring a civil action in the Superior Court for the Judicial District of Hartford to seek imposition and recovery of such civil penalty. In accordance with subsection (f) of such statute, each large state Contractor, as defined in the statute, shall post a notice of the provisions of the statute relating to large state Contractors in a conspicuous place which is readily available for viewing by the employees of the Contractor.

6. CODE OF CONDUCT

In furtherance of its longstanding commitment to fundamental human rights, to the dignity of all people, and to the environment, the Owner has developed the Code of Conduct for University of Connecticut Vendors (the “Vendor Code of Conduct”). The Contractor hereby acknowledges receipt of the Vendor Code of Conduct. A copy of the Vendor Code of Conduct is available at <http://csr.uconn.edu/>. The Vendor Code of Conduct is hereby incorporated herein by reference to the extent the Contractor is required to comply with the same pursuant to this section.

The Contractor agrees to comply with the “Principal Expectations” described in the Vendor Code of Conduct. The Contractor further agrees to comply with the “Preferential Standards” described in the Vendor Code of Conduct, to the extent a commitment to so comply, or a

representation of compliance, was provided by the Contractor to the Owner in writing. Any such commitment or representation is hereby incorporated herein by reference.

The Contractor agrees to provide the Owner with such evidence of Contractor's compliance with this section as the Owner reasonably requests and to, at the request of the Owner, provide a comprehensive, annual summary report of the Contractor's corporate social and environmental practices.

7. BACKGROUND CHECKS

The Contractor shall comply with all of the Owner's background screening requirements applicable to the Project (the "Screening Requirements"). If the Project is to take place on the UConn Health campus in Farmington, Connecticut, the Screening Requirements will be outlined in the Specifications for the Project. If the Project is located on any other campus of the Owner, the Screening Requirements will be outlined in the Bid Documents for the Project. The Contractor warrants that it will not assign any employee, independent contractor or agent to perform services under this Contract unless that employee, independent contractor or agent is cleared for work on the Project by the Contractor, in a manner consistent with the Screening Requirements, for performing such services. Without limiting the foregoing, the Contractor shall immediately remove any employee, independent contractor or agents performing services under this Contract on any campus of the Owner if it becomes known to the Contractor that such person may be a danger to the health or safety of the campus community, or at the request of the Owner based on a concern of community or individual safety.

Without limiting the obligations of the Contractor under §3.18 of the General Conditions, the Contractor shall defend, indemnify and hold harmless the state of Connecticut, the Owner, and all of their employees, agents and/or assigns for and against any claims, suits or proceedings resulting from the failure of the Contractor to comply with the Screening Requirements and/or that are caused in whole or in part by the actions or omissions of the Contractor, any Subcontractor, Sub-subcontractor, their respective employees, or any other person or entity for whom any of them is responsible.

**SECTION 010150
GENERAL PROJECT REQUIREMENTS**

PART 1 - PROJECT DESCRIPTION

1.01 GENERAL

- A. The Project consists of elevator pit upgrades 195 Farmington Ave at the University of Connecticut Health Center, in Farmington, Connecticut, as required in these Specifications.
- B. The work shall consist of that identified on the Contract Documents to provide for upgrades of the elevator pits.
- C. The work includes, but shall not be limited to the following:
Demolition
- Removal of elevator pit lighting and receptacles
 - Removal of electrical wiring/conduit
 - Excavation for sump pump
 - Excavation for capping of existing storm piping
- Renovation
- Installation of elevator pit lighting and receptacles
 - Installation of electrical wiring/conduit
 - Installation of sump pump and associated controllers and alarms
 - Installation of sump pump discharge piping and water backflow valve
 - Installation of elevator pit waterproofing
 - Installation of cap for existing storm piping in pit
 - Interconnection of sump pump alarm system to fire alarm system priority 2 alarm
 - Painting and patching
- D. The work includes, but is not limited to, all related demolition, removal and disposal of all associated materials as well as reconstruction of areas required to make the project complete.
- E. **SUBSTANTIAL COMPLETION:** The Contractor shall achieve Substantial Completion within **NINETY DAYS (90)** calendar days from the date of Notice to Proceed.
- F. **WORK HOURS:** All work must be planned and done in a manner so that interference with continued use of adjacent areas is not compromised and such that the environment for continued use of the adjacent areas is fully maintained. The Contractor(s) shall perform all demolition related activities and work determined to be detrimental to continued daily activities during off hours as established herein.

Standard Work Hours: Monday through Friday 7:00 AM - 7:00 PM.

Off Work hours: Monday through Friday 7:00 PM - 7:00 AM and Weekends Friday 7:00 PM through Monday 7:00 AM.

Normal construction related activities determined not to be detrimental to continued daily activities shall be performed during standard hours as established above.

Use of approved materials containing volatile organic compounds or odorous materials detrimental to continued daily activities shall be performed during off-hours, refer to paragraph 1.01-G below.

- G. **CONTRACTORS USE OF MATERIALS CONTAINING VOLATILE ORGANIC COMPOUNDS AND ODOROUS MATERIALS:** It is the intent of these specifications to control the amount and types of materials to be used which may effect the environment of patient and employee occupied areas of the University of Connecticut Health Center. The Contractor shall make every effort possible to use low VOC content products.

Material Safety Data Sheets (MSDSs) for all paints, coatings, mastics, degreasers, adhesives, etc. **MUST** be submitted to the UCHC Representative as part of the requirements of Section 01300 – SUBMITTALS, for review and acceptance prior to use. Acceptance will be based on quantity, location of use, potential patient care/employee impact, alternative commercially available products, etc. and must involve the Office of Research Safety, Epidemiology and the UCHC Representative. The Health Center reserves the right to cease the work of any primary or any secondary contractor should it be determined that an un-approved product is being used. Any cost incurred as a result of work stoppage or any remedial actions necessary as a direct result of its (un-approved product) use will be the sole responsibility of the contractor. Utilization of “approved” volatile or odorous compounds may require that UCHC mandate that the work/process be completed during un-occupied off hours times (nights, weekends or holidays) as indicated in paragraph 1.01-F above.

- H. The Contractor shall refer to and provide provisions for the conformance of Section-01020: CONSTRUCTION AREA ENVIRONMENTAL CONTROL for the protection of adjacent use areas.

Plans for precautionary measures for each area shall be reviewed and approved by the UCHC REPRESENTATIVE; the Department of Environmental Safety and the Department of Epidemiology prior to implementation. The first area reviewed and approved shall act as a model for the determination of minimum standards for other areas.

- I. **SCHEDULE:** The Contractor shall prepare and submit to the UCHC Representative, a construction schedule / timetable. Such schedule / timetable shall identify phases in which work shall be performed as well as all dates and times (standard / off hours) in which the work shall be performed.

In developing said schedule, the Contractor shall refer to statements on the drawings regarding sequence of the work.

The work shall not commence until such time that UCHC has reviewed and accepted in writing the schedule / timetable submitted by the Contractor.

1.02 AGENCY REPRESENTATIVE

- A. The Agency is the University of Connecticut Health Center. The Agency representative for construction, once the contract has been awarded, is Mr. Thomas Trutter, AIA, Associate Vice President of Campus Planning Design and Construction (860) 679-8723 or his assigned designee.

1.03 CONTRACT DOCUMENTS

- A. The Contract Documents for the Work are Documents prepared by The University of Connecticut Health Center, Department of Campus Planning, Design and Construction; **“195 FARMINGTON AVE ELEVATOR PIT UPGRADES”** dated JUNE 14, 2019.
- B. Refer to Specification Manual TABLE OF CONTENTS for a complete listing of specification sections and schedule of drawings. The Contractor shall notify the Agency Representative of items listed in the Table of Contents but omitted from the Bid Package.

1.04 INTENT OF DOCUMENTS

- A. 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.

- B. Following award of the contract, the Contractor shall submit product data and shop drawings for approval by the UCHC.

Fire-suppression: The Contractor shall be responsible for verification of all existing conditions. The information contained in these drawings (pipe size, splice locations as well as dimensions) shall be used for graphic intent only. The Contractor shall upon verification of the existing conditions, prepare and submit engineered shop drawings to FM Global for approval prior to performing any work. The Contractor shall submit copies of FM Global approved shop drawings, acceptance letter / approval letter and product literature to the UCHC Representative. The documents shall be submitted to:

FM Global
Plan Review Department
500 River Ridge Drive
Norwood MA, 02062
(800) 546 1364

- C. The Contractor shall further perform all work and supply all materials required to provide a complete installation meeting with the intent of the Contract Documents, in accordance with the actual site conditions.

1.05 CONTRACTOR USE OF PREMISES

- A. General: During the construction period, and except as noted otherwise, the Contractor shall have partial use of the site for construction operations. The Contractor's use of the site is limited only by the Owner's right to access and exit the property. Areas of access and exiting shall not be disrupted and or blocked from use.

The University Of Connecticut Health Center prohibits the use of cellular phones and/or radio frequency transmitters in all areas of the main complex building except as approved by the UCHC Representative.

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.

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.

Areas for parking of contractor's personnel, material deliveries, and storage of materials will be limited to areas designated by the Agency representative.

- B. Partial Owner Occupancy: The Owner reserves the right to occupy selected areas, and/or place and install equipment in completed areas of the work prior to Substantial Completion provided that such occupancy does not interfere with completion of the Work. Such placing of equipment and partial occupancy shall not constitute acceptance of the total Work.

A Certificate of Substantial Completion will be executed for each specific portion of the Work to be occupied prior to Owner occupancy.

1.06 MAINTENANCE OF TRAFFIC

- A. The Contractor will be granted the use of paved roads and parking areas, but shall not infringe on the use of the same, or access thereto, for passage over the Agency's property.

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.

1.07 FORMS AND IDENTIFICATION BADGES

- A. The contractor shall provide a list of all contact persons. Planning and Construction FORM 550.13A, "LIST OF SUBCONTRACTORS" is to be utilized as a standard format. The list shall include each trade, name of contractor, contact person(s), phone numbers, fax numbers, Federal Employer Identification Number (FEIN), social security number if FEIN is not available, and Connecticut Tax Registration number. Refer to Division-0 of this manual for List of Contractors, UCHC FORM 550.13A.

- B. IDENTIFICATION BADGES: Prior to the start of work all Contractor and Sub-Contractor personnel assigned to perform work at the University of Connecticut Health Center shall be required to fill out and submit a University of Connecticut Health Center, Department of Human Resources, Background Informational Sheet. All completed forms shall be submitted to the UCHC Representative for forwarding to the Universities Department of Public Safety. Information for background check includes the following:

Identity Verification
Criminal Background
Additional checks as deemed warranted

Personnel cleared through the review process shall be notified to visit the Department of Public Safety Office to obtain their Identification Badge. Refer to Division-0 of this manual for UCHC Background Information Sheet.

Effective July 1, 2008, the UCHC Public Safety Department shall institute a fee of \$75.00 for each background check completed. The fee is payable in advance and shall accompany the submission of the Background Information Sheet

1.08 CONSTRUCTION EQUIPMENT

- A. The Contractor shall furnish and maintain, at his own cost and risk, all tools, equipment, apparatus and appliances, and power for same, runways, ladders, temporary supports, and bracing, and all other similar work or material necessary to insure speed, convenience, and safety in the execution of this work.

All such items shall be subject to approval by the Agency as to general stability, type, and location; but responsibility for proper design, strength and safety shall remain the responsibility of the Contractor. All such items shall comply with OSHA regulations and all other applicable local, state, and federal codes, statutes, rules and regulations.

1.09 TEMPORARY FACILITIES

Materials and facilities that constitute temporary facilities are property of the Contractor.

- A. Temporary utilities as deemed necessary for the completion of the work for which it is located include but are not limited to:

Electric power.
Telephone service.
Water.

Refer to paragraph 1.09 F

- B. Temporary construction and support facilities as deemed necessary for the completion of the work for which it is located include but are not limited to:

Sanitary facilities, including drinking water.
Waste Disposal services.

Refer to paragraph 1.09 F

- C. Security and protection facilities required include but are not limited to:

Fire Protection, Barricades, warning signs, lights,
Environmental protection.

- D. The University Of Connecticut Health Center prohibits the use of cellular phones and/or radio frequency transmitters in all areas of the main complex building except as approved by the UCHC Representative.

- E. Regulations: Comply with industry standards and applicable laws and regulations if authorities having jurisdiction, including but not limited to:

Building Code requirements.
Health and safety regulations.
Utility company regulations.
Police, Fire Department and UCHC Rescue Squad rules.
Environmental protection regulations.
NFPA 241.

- F. Conditions of Use: The Contractor will be allowed to use the following UCHC utilities and facilities:

Electric power: The Contractor will be allowed to tie into the existing facility for power use, limited to the construction of the work. Coordinate power tie-in with the Agency's representative.

Telephone: The Contractor will be allowed to use existing pay telephone facilities at the facility for construction purposes only. The use of telephone facilities is deemed a privilege, not a right. Such use may be discontinued if, in the UCHC's opinion, the Contractor is found to be abusive of said privilege.

Water: The Contractor will be allowed to take water for construction purposes from existing services within the building. Upon completion of the work, the Contractor shall remove any piping, metering and other materials installed for temporary connections and close all connections. The Contractor shall be responsible for the daily maintenance and shutoff of this temporary water service. Coordinate water tie-in with the Agency's representative.

Sanitary Facilities: The Contractor will be allowed to use the toilet facilities available at the UCHC.

- G. **Equipment Requirements:** Provide new equipment; if acceptable to the UCHC, undamaged, previously used equipment in serviceable condition may be used. Provide equipment suitable for use intended.
- 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.
- 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.
- H. **First Aid Supplies:** Comply with governing regulations.
- I. **Collection and Disposal of Waste:** Collect and remove 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. Dispose of material in a lawful manner.
- J. **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.
- K. **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.
- L. **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.
- M. **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.
- 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:
- Floor Materials
 - Wall surfaces
 - 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 UCHC 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.

1.10 APPLICATIONS FOR PAYMENT

- A. This Section specifies administrative and procedural requirements governing the Contractor's Applications for Payment.

Coordinate the Schedule of Values and Applications for Payment with the Contractor's Construction Schedule, List of Subcontracts, and Submittal Schedule.

- B. Coordinate preparation of the Schedule of Values with preparation of the Contractor's Construction Schedule.

Correlate line items in the Schedule of Values with other required administrative schedules and forms, including:

Contractor's construction schedule.
Application for Payment form.
Schedule of submittals.

Submit the Schedule of Values to the UCHC prior to the start of any on site construction activity, but in no case no later than 7 days before the date scheduled for submittal of the initial Application for Payment.

Arrange the Schedule of Values in a tabular form with separate columns to indicate the following for each item listed:

Generic name.

Dollar value.

Percentage of Contract Sum to the nearest percent, adjusted to total 100 percent.

Provide a breakdown of the Contract Sum in sufficient detail to facilitate continued evaluation of Applications for Payment and progress reports. Break principal subcontract amounts down into several line items.

Round amounts off to the nearest whole dollar; the total shall equal the Contract Sum.

For each part of the Work where an Application for Payment may include materials or equipment, purchased or fabricated and stored, but not yet installed, provide separate line items on the Schedule of Values for initial cost of the materials, for each subsequent stage of completion, and for total installed value of that part of the Work.

Each Application for Payment shall be consistent with previous applications and payments as certified by the UCHC.

The initial Application for Payment, the Application for Payment at time of Substantial Completion, and the final Application for Payment involve additional requirements.

- C. Payment Application Times: Each progress payment date is as indicated in the Agreement. The period of construction Work covered by each Application or Payment is the period indicated in the Agreement.
- D. Payment Application Forms: Use AIA Document G 702 and Continuation Sheets G 703 as the form for Application for Payment.

- E. Application Preparation: Complete every entry on the form, including notarization and execution by person authorized to sign legal documents on behalf of the Owner. Incomplete applications will be returned without action.

Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions have been made.

Include amounts of Change Orders and Construction Change Directives issued prior to the last day of the construction period covered by the application.

- F. Retainage: Until substantial Completion, and Owner's acceptance of the work, the owner shall withhold 10% of the amount due to the Contractor on each progress payment application.
- G. Transmittal: Submit 3 executed copies of each Application for Payment to the UCHC by means ensuring receipt within 24 hours; one copy shall be complete, including waivers of lien and similar attachments, when required.

Transmit each copy with a transmittal form listing attachments, and recording appropriate information related to the application in a manner acceptable to the UCHC.

- H. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of the first Application for Payment include the following:

Schedule of Values.

- I. Application for Payment at Substantial Completion: Prior to the issuance of the Certificate of Substantial Completion, submit an Application for Payment; this application shall reflect any Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.

Administrative actions and submittals that shall proceed or coincide with this application include:

Warranties (guarantees) and maintenance agreements.

Maintenance instructions.

Final cleaning.

Application for reduction of retainage, and consent of surety.

List of incomplete Work, recognized as exceptions to UCHC's Certificate of Substantial Completion.

- J. Final Payment Application: Administrative actions and submittals which must precede or coincide with submittal of the final payment Application for Payment include the following:

Completion of Project close-out requirements.

Completion of items specified for completion after Substantial Completion.

Assurance that unsettled claims will be settled.

General Contractor / Sub-Contractor / Material Supplier, Affidavit of Waiver of Liens.

Removal of surplus materials, rubbish and similar elements.

1.11 PROJECT COORDINATION

- A. This Section specifies administrative and supervisory requirements necessary for Project coordination including, but not necessarily limited to:

Coordination.

Administrative and supervisory personnel.

General installation provisions.

- B. Coordination: Coordinate construction activities included under various portions of this work to assure efficient and orderly installation of each part of the Work. Coordinate construction operations included under different portions of the work that are dependent upon each other for proper installation, connection, and operation.

Where installation of one part of the Work is dependent on installation of other components, either before or after its own installation, schedule construction activities in the sequence required to obtain the best results.

- C. Administrative Personnel: The Contractor shall provide his own construction supervisor. Acceptance of the project, however, shall be by the Agency. The Agency and its representative(s) shall be the sole judge(s) as to compliance and conformance with plans, specifications and design intent. Agency acceptance shall not relieve the Contractor of responsibility for errors or deviation from the contract documents or approved drawings.

- D. General Installation Provisions: Comply with manufacturer's installation instructions and recommendations, to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in Contract Documents.

Inspect materials or equipment immediately upon delivery and again prior to installation. Reject damaged and defective items.

Mounting Heights: Where mounting heights are not indicated, install individual components at standard mounting heights recognized within the industry for the particular application indicated. Refer questionable mounting height decisions to the UCHC for final decision.

During handling and installation, clean and protect construction in progress and adjoining materials in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

Clean and maintain completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

Limiting Exposures: Supervise construction activities to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period. Where applicable, such exposures include, but are not limited to, the following:

- Excessive static or dynamic loading.
- Water or ice.
- Soiling, staining and corrosion.
- Combustion.
- Destructive testing.
- Misalignment.
- Unprotected storage.
- Improper shipping or handling.
- Theft and Vandalism.

1.12 CODES AND SPECIFICATIONS

- A. All references to Standard Specifications and codes made throughout the specifications refer to the latest editions in effect at the time of the proposal. Such references include current addenda and errata, if any, and shall be considered an integral part of the work.
- B. Codes: The Codes and Standards listed below apply to all new construction. Wherever Codes and/or Standards are mentioned in these specifications or drawings, the latest applicable edition or revision shall be followed, including but not limited to:

Connecticut State Building Code	Health and safety regulations
International Building Code	International Plumbing Code
International Mechanical Code	Utility company regulations
National Electric Code	NFPA, ANSI, OSHA
UCHC Public Safety Regulations	ASHRAE, SMACNA
Environmental Protection Agency	

- C. All materials furnished and all work installed shall comply with the requirements of the local utility companies and all Governmental departments having jurisdiction.
- D. The Contractor shall include in the work, without extra cost to the Owner, any labor, materials, services, apparatus and drawings in order to comply with all applicable laws, ordinances, rules and regulations.

1.13 SITE IMPROVEMENTS AND EXTERIOR BUILDING WORK

- A. General: Unless specifically identified to be removed, protect all existing landscape and site improvements. All removed or damaged landscaping or improvements shall be restored to their original condition at no additional expense to the UCHC.
- B. All site improvement and exterior building work must be conducted in compliance with Town of Farmington, Ordinance No. 61, chapter 135, as related to noise emissions.

1.14 TAX EXEMPTION

- A. This project is tax exempt. The Owner, upon request, will provide the successful bidder with appropriate information and documentation.

END OF SECTION

SECTION 010180
SPECIAL PROJECT PROCEDURES

PART 1 - REQUIREMENTS

1.01 GENERAL

A. Section includes:

Phasing.
Owner's Right to Contract and Schedule Work within the Project Area.
Relocation of Owner's Furniture and Equipment.
Special Working Conditions.
Contractor Use of Premises.
Owner Occupancy.
Protection of Installed Work.
Salvage.
Discovery of Hazardous Material.
Volatile Environmental Considerations.
Project Meetings.
Fire Suppression Work Parameters

1.02 Phasing:

- A. Refer Section 01015-GENERAL PROJECT REQUIREMENTS paragraph 1.01 (F) Work Hours and paragraph 1.01 (I) Schedule. 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.

1.03. Owner's Right to Contract and Schedule Work within the Project Area:

- A. Not used

1.04 Relocation of Owner's Furniture and Equipment:

- A. The Contractor shall be responsible for moving existing items to be reused in new construction.
B. Disconnect, detach, and disassemble as required to move to new location.
C. Protect from damage during handling and transit.
D. Reassemble and install in new location, make ready for use, and test in presence of Owner's Representative.

1.05 Special Working Conditions:

- A. Access to other building areas by construction personnel shall be limited to emergency needs only.
B. For access to specific areas, department, or any environmental service, the following procedures shall be followed:

72-hour notice shall be given during normal working hours, Monday through Friday.

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.

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.

- C. Contractor shall provide Owner with name and telephone number of contact person to be available at all times.
- D. Noise and vibration: The spaces in proximity of the work, including those of the floors above and below, shall be continually occupied during time frame of this project. Demolition and Construction operations causing vibration or noise (which interferes with continued use of adjacent areas) shall be scheduled for off hours as determined by the Owner. Refer to Section 01015-GENERAL PROJECT REQUIREMENTS for work hours schedule.
- E. 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. Where it is determined that material can only be removed effectively with jackhammers, this work shall be scheduled in consultation with the Owner. When ever jackhammers must be used, they shall be equipped with sound attenuating mufflers.
- F. 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.

1.06 Contractor Use of Premises:

- A. Limit use of premises for work and for construction operations to allow for Owner occupancy and public access.
- B. The Contractor may use on-site paved roads and parking areas as designated by the Owner, but shall not encumber same or their access. Roads shall not be blocked by standing trucks, parked cars, material storage, construction operations, or in any other manner.

Public roads and existing paved roads, drives, and parking areas on Owner's property shall be kept free from scrap or debris due to construction operations, and any damage to their surface caused by the Contractor shall be repaired by him at his own expense.

- C. Coordinate use of premises under direction of Owner.
- D. Routes to and from the areas of work for Contractor's personnel and for removal of equipment and material shall be strictly restricted to those designated by the Owner.
- E. Scheduled times for delivery of material shall be as designated by the Owner. No deliveries shall be made at other times.
- F. Delivery routes to and within the hospital shall be as designated by the Owner. No other routes shall be used.

1.07 Owner Occupancy:

- 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

1.08 Protection of Installed Work:

- A. Provide temporary protection for installed products. Control traffic in immediate area to minimize damage.
- B. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings. Protect finished floors from traffic, movement of heavy objects, and storage.
- C. Maintain finished surfaces clean, unmarred, and suitably protected until accepted by the Owner.

1.09 Salvage:

- A. Owner shall have the right to salvage existing building elements. Before beginning demolition or removal work in any area, the Owner shall be notified and given the opportunity to designate items for salvage.
- B. Items designated to be saved shall be protected from damage and turned over to the Owner.

1.10. DISCOVERY OF HAZARDOUS MATERIAL

- A. Existing Hazardous Materials as identified by the Department of Environmental Protection Agency to the best of the knowledge of UCHC does NOT exist within the project area.
- B. The Contractor shall be required to inform the UCHC Agent for materials uncovered during the course of construction (not previously identified or removed) believed to be hazardous. The UCHC Agent shall take necessary steps to have this material tested and if required removed by an approved method from a hazardous waste materials removal specialist. Once discovered the Contractor shall not remove or disturb any of this material until direction has been received from the UCHC Agent.
- C. The Contractor shall be prohibited from disposing regulated waste. Regulated waste is lead waste material created as result of removal of partitioning, doors and glass panels containing lead as well as fluorescent bulbs, thermostats, and or any electrical or electronic equipment such as transformers, computer monitors, speed drives, control panels, etc that contain oil or circuit boards. Such material shall be removed carefully and individually segregated for proper disposal.

When disposing of such items, the Contractor shall contract with an authorized recycling firm to remove regulated waste from the UCHC campus, and shall deliver such waste in a packaged form acceptable to the waste contractor(s). An authorized recycling firm means licensed for such work by a State or Federal Agency and approved by the UCHC Office of Research Safety. The Contractor shall present a bill of lading and or a manifest of materials for disposal to the UCHC Agent for signature of the UCHC Office of Research Safety. The UCHC Office of Research Safety shall keep and maintain records of such disposed materials. No waste may leave the site without Office of Research Safety approval (x2723).

1.11 VOLATILE ENVIRONMENTAL CONSIDERATIONS

- A. Material Safety Data Sheets for all paints, coatings, mastics / volatile materials etc. shall be submitted to the UCHC Agent as part of the requirements of SECTION 01300 - SUBMITTALS, for review by the UCHC Environmental Safety Officer in advance of use. Toxicity and odor will be a factor in selection of such materials and only those materials approved shall be used.

1.12 PROJECT MEETINGS

- A. It is the intent of this project to hold weekly project coordination meetings. The Contractor shall develop and distribute the minutes of such meetings to the Project Team as well as to other parties as directed by the Owner.

1.13 FIRE SUPPRESSION AND FIRE NOTIFICATION WORK PARAMETERS

- A. Sprinkler systems and or fire alarm systems may be impaired, either in whole or in part, but no more than necessary for the required work and only for work on the sprinkler system. This may be for no more than one period of time and for no longer than (4) hours in any day.
- B. In accordance with the Connecticut Fire Code, should the sprinkler system and or the fire alarm system be impaired for a period of time longer than that indicated, the Contractor shall arrange through the UCHC Agent a fire watch with the UCHC Fire Deputy. Expense for the fire watch shall be the responsibility of the Contractor
- C. The fire alarm system must remain fully functional during the period of any sprinkler system impairment except for any devices or that must also be impaired in order for the work to proceed.
- D. Hot work is prohibited in the area of the building where the system is impaired.

END OF SECTION 010180

**SECTION 010200
CONSTRUCTION AREA ENVIRONMENTAL CONTROL
CLASS I**

PART 1 - GENERAL

1.01 SUMMARY

- A. The Contractor will be required to work in areas occupied by or adjacent to areas occupied by employees of the University of Connecticut Health Center. All work must be planned and done in a manner so that the continued Health Center operations is not compromised and shall follow procedures set-forth herein to ensure that the environment for occupied areas is fully maintained.
- B. The Contractor(s) shall, be required to follow the guidelines below throughout the constructed period. These guidelines address:
 - Maintaining a clean work environment
 - Post construction procedures
 - Protection of occupied areas including controls on the transportation of materials and debris
 - Training of contractor personnel
- C. All precautionary measures shall be reviewed and accepted by the UCHC Agent(s) prior to the start of any work.
- D. Material Safety Data Sheets on materials used will be provided in hard copy to the UCHC Agent in advance of brining the materials into the UCHC.

1.02 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.
- B. The Contractor shall coordinate the specific requirements of the following specification sections:
 - Section 01015 - GENERAL PROJECT REQUIREMENTS
 - Section 01018 - SPECIAL PROJECT PROCEDURES

PART 2 -REQUIREMENTS

2.01 MAINTAINING A CLEAN WORK ENVIRONMENT

- A. All dust created as a result of the work activity must be immediately cleaned, either by use of a HEPA-filtered vacuum and/or damp mopping

2.02 POST CONSTRUCTION PROCEDURES

- A. When the work activity is completed, the Contractor shall
 - Vacuum work area with HEPA filtered vacuums.
 - Wet mop area with disinfectant.

2.03 PROTECTION OF OCCUPIED AREAS AND TRANSPORT OF MATERIALS

- A. Entrance and exit to work site shall be as approved by the UCHC Agent and will be routed away from patient flow as much as possible.

Prior to leaving the construction area, all personnel shall remove any and all loose debris, dust, etc.
- B. Dumping of debris will only be at the location(s) authorized by the UCHC Agent.
- C. Removal of daily construction debris and staging of the area with new construction materials shall be by a predetermined and pre-approved route and shall be performed during off hours only.
- D. Transporting the debris from work site shall be done in clean and tightly covered carts to prevent airborne dust release, spills, etc.
- E. Fine debris likely to become easily airborne (e.g. floor sweepings ,dust from vacuum, etc) shall be placed in a suitable plastic bag which is then twisted and closed prior to placement in the transport cart.
- F. The shoes and clothing of workers and materials (e.g., carts) leaving the work area will be cleaned (e.g., HEPA vacuum), as necessary, so that dust release outside the area is prevented. Wipe hard surfaces down with damp cloth.
- G. The contractor shall carefully consider at the start of the project the need to protect by individual barriers items remaining in the work area in order to minimize the amount and time needed for cleaning such objects prior to seeking authorization from the UCHC Agent to remove barriers.

2.04 TRAINING

- A. Key supervisory personnel of the contractor and subcontractors will be trained on the importance of contamination control and the critical nature of the area(s) they will be working in by UCHC personnel prior to the start of work.
- B. These supervisory personnel will be responsible for training other site personnel on these matters and helping to enforce procedures.
- C. The Department of Epidemiology and Environmental Health and Safety Office will provide training assistance and/or training materials.

END OF SECTION 010200

SECTION 010450 CUTTING AND PATCHING

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 administrative and procedural requirements for cutting and patching.
- B. Refer to other Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.
- C. Requirements of this Section apply to mechanical and electrical installations. Refer to Division-23 and Division-26 Sections for other requirements and limitations applicable to cutting and patching mechanical and electrical installations.

1.03 QUALITY ASSURANCE

- A. Requirements for Structural Work: Do not cut and patch structural elements in a manner that would reduce their load-carrying capacity or load-deflection ratio.
- B. Obtain specific Architect approval before cutting and patching the following structural elements:
 - Foundation / Slab construction.
 - Structural steel.
 - Lintels.
 - Miscellaneous structural metals.
- C. Operational and Safety Limitations: Do not cut and patch operating elements or safety related components in a manner that would result in reducing their capacity to perform as intended, or result in increased maintenance, or decreased operational life or safety.
- D. Visual Requirements: Do not cut and patch construction exposed on the exterior or in occupied spaces, in a manner that would, in the Architect's opinion, reduce the building's aesthetic qualities, or result in visual evidence of cutting and patching. Remove and replace Work cut and patched in a visually unsatisfactory manner.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Use materials that are identical to existing materials. If identical materials are not available or cannot be used where exposed surfaces are involved, use materials that match existing adjacent surfaces to the fullest extent possible with regard to visual effect. Use materials whose installed performance will equal or surpass that of existing materials.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Before cutting existing surfaces, examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed. Take corrective action before proceeding, if unsafe or unsatisfactory conditions are encountered.
- B. Before proceeding, meet at the 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.

3.02 PREPARATION

- A. Temporary Support: Provide temporary support of Work to be cut.
- B. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.
- C. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- D. Take all precautions necessary to avoid cutting existing pipe, conduit or ductwork serving the building, but scheduled to be removed or relocated until provisions have been made to bypass them.

3.03 PERFORMANCE

- A. General: Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.

Cut existing construction to provide for installation of other components or performance of other construction activities and the subsequent fitting and patching required to restore surfaces to their original condition.

- B. Cutting: Cut existing construction using methods least likely to damage elements to be retained or adjoining construction. Where possible review proposed procedures with the original installer; comply with the original installer's recommendations.

In general, where cutting is required use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut holes and slots neatly to size required with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.

To avoid marring existing finished surfaces, cut or drill from the exposed or finished side into concealed surfaces.

Cut through concrete and masonry using a cutting machine such as a carborundum saw or diamond core drill.

- 4. By-pass utility services such as pipe or conduit, before cutting, where services are shown or required to be removed, relocated or abandoned. Cut-off pipe or conduit in walls or partitions to be removed. Cap, valve or plug and seal the remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after by-passing and cutting.
- C. Patching: Patch with durable seams that are as invisible as possible. Comply with specified tolerances.

Where feasible, inspect and test patched areas to demonstrate integrity of the installation. 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.

Where removal of walls or partitions extends one finished area into another, patch and repair floor and wall surfaces in the new space to provide an even surface of uniform color and appearance. Remove existing floor and wall coverings and replace with new materials, if necessary to achieve uniform color and appearance.

Patch, repair or rehang existing ceilings as necessary to provide an even plane surface of uniform appearance. Cut, patch, point-up and repair plaster to accommodate other construction and to restore cracks, dents and imperfections.

3.04 CLEANING

- A. Thoroughly clean areas and spaces where cutting and patching is performed or used as access. Remove completely paint, mortar, oils, putty and items of similar nature. 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 010450

SECTION 013000 SUBMITTALS

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 administrative and procedural requirements for submittals required for performance of the Work, including;

Contractor's construction schedule; shall be submitted prior to the start of the work.
Submittal schedule.
Shop Drawings.
Product Data.
Samples.
Warranties.
Operations Manuals.

- B. Administrative Submittals: Refer to other Division-1 Sections and other Contract Documents for requirements for administrative submittals. Such submittals include, but are not limited to:

Applications for payment.
Performance and payment bonds; shall be submitted prior to the start of the work.
Certificates of insurance and insurance policies; shall be submitted prior to the start of the work.
List of Subcontractors; shall be submitted prior to the start of the work.

- C. The Schedule of Values submittal is included in Section 01015 GENERAL PROJECT REQUIREMENTS "Applications for Payment."
D. Inspection and test reports are included in Section "Quality Control Services."

1.03 SUBMITTAL PROCEDURES

- A. General: The Contractor shall prepare and submit material submittals conforming to the contract documents.

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.

- B. Submittal Transmittal: Package each submittal appropriately for transmittal and handling. Transmit each submittal from Contractor to UCHC using a transmittal form. Submittals received from sources other than the Contractor will be returned without action.

On the transmittal, record relevant information and requests for data. On the form, or separate sheet, record deviations from Contract Document requirements, including minor variations and limitations. Include Contractor's certification that information complies with Contract Document requirements.

- C. Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.

Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals and related activities that require sequential activity.

Coordinate transmittal of different types of submittals for related elements of the Work so processing will not be delayed by the need to review submittals concurrently for coordination.

The UCHC reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

- D. Processing: Allow sufficient review time so that installation will not be delayed as a result of the time required to process submittals, including time for resubmittals.

Allow two weeks for initial review. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. The UCHC will promptly advise the Contractor when a submittal being processed must be delayed for coordination.

If an intermediate submittal is necessary, process the same as the initial submittal.

Allow two weeks for reprocessing each submittal.

No extension of Contract Time will be authorized because of failure to transmit submittals to the UCHC sufficiently in advance of the Work to permit processing.

- C. Submittal Preparation: Place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block.

Provide a space approximately 4" x 5" on the label or beside the title block on Shop Drawings to record the Contractor's review and approval markings and the action taken.

Submittals which have not properly been recorded as reviewed and marked as approved by the Contractor will not be processed.

Include the following information on the label for processing and recording action taken.

UCHC Project name and number.

Date.

Name and address of Contractor.

Name and address of subcontractor.

Name and address of supplier.

Name of manufacturer.

Number and title of appropriate Specification Section.

Drawing number and detail references, as appropriate.

1.04 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Bar-Chart Schedule: Prepare a fully developed, horizontal bar-chart type Contractor's construction schedule. Submit within 30 days of the contract award.

Provide a separate time bar for each significant construction activity. Provide a continuous vertical line to identify the first working day of each week. Use the same breakdown of units of the Work as indicated in the "Schedule of Values".

Prepare the schedule on a sheet, or series of sheets, of stable transparency, or other reproducible media, of sufficient width to show data for the entire construction period.

Secure time commitments for performing critical elements of the Work from parties involved. Coordinate each element on the schedule with other construction activities; include minor elements involved in the sequence of the Work. Show each activity in proper sequence. Indicate graphically sequences necessary for completion of related portions of the Work.

Coordinate the Contractor's construction schedule with the schedule of values, list of subcontracts, submittal schedule, progress reports, payment requests and other schedules.

Indicate completion in advance of the date established for Substantial Completion. Indicate Substantial Completion on the schedule to allow time for the UCHC's procedures necessary for certification of Substantial Completion.

- B. Work Stages: Indicate important stages of construction for each major portion of the Work, including testing and installation.
- C. Cost Correlation: At the head of the schedule, provide a two item cost correlation line, indicating "precalculated" and "actual" costs. On the line show dollar-volume of Work performed as of the dates used for preparation of payment requests.

Refer to Section "Applications for Payment" for cost reporting and payment procedures.

- D. Distribution: Following response to the initial submittal, print and distribute copies to the UCHC, subcontractors, and other parties required to comply with scheduled dates. Post copies in the Project meeting room and temporary field office.

When revisions are made, distribute 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 construction activities.

- E. Schedule Updating: Revise the schedule after each meeting or activity, where revisions have been recognized or made. Issue the updated schedule concurrently with report of each meeting.

1.05 SHOP DRAWINGS

- A. Submit newly prepared information, drawn to accurate scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not considered Shop Drawings.

- B. Shop Drawings include fabrication and installation drawings, setting diagrams, schedules, patterns, templates and similar drawings. Include the following information:

Dimensions.

Identification of products and materials included.

Compliance with specified standards.

Notation of coordination requirements.

Notation of dimensions established by field measurement.

- C. Initial Submittal: Submit one correctable translucent reproducible print and three blue- or black-line prints for the UCHC's review; the reproducible print will be returned.

- D. Final Submittal: Submit 3 blue- or black-line prints; submit 5 prints where required for maintenance manuals. 2 prints will be retained; the remainder will be returned.

Do not use Shop Drawings without an appropriate final stamp indicating action taken in connection with construction.

- E. Coordination drawings are a special type of Shop Drawing that show the relationship and integration of different construction elements that require careful coordination during fabrication or installation to fit in the space provided or function as intended.

Preparation of coordination Drawings is specified in section "Project Coordination" and may include components previously shown in detail on Shop Drawings or Product Data.

Submit coordination Drawings for integration of different construction elements. Show sequences and relationships of separate components to avoid conflicts in use of space.

1.06 PRODUCT DATA

- A. Collect Product Data into a single submittal for each element of construction or system. Product Data includes printed information such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams and performance curves. Where Product Data must be specially prepared because standard printed data is not suitable for use, submit as "Shop Drawings."

Mark each copy to show applicable choices and options. Where printed Product Data includes information on several products, some of which are not required, mark copies to indicate the applicable information. Include the following information:

Manufacturer's printed recommendations.
Compliance with recognized trade association standards.
Compliance with recognized testing agency standards.
Application of testing agency labels and seals.
Notation of dimensions verified by field measurement.
Notation of coordination requirements.

Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.

- B. Submittals: Submit 4 copies of each required submittal. The UCHC will retain one, and will return the other marked with action taken and corrections or modifications required.

Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.

- C. Distribution: Furnish copies of final submittal to installers, subcontractors, suppliers, manufacturers, fabricators, and others required for performance of construction activities. Show distribution on transmittal forms.

Do not proceed with installation until an applicable copy of Product Data applicable is in the installer's possession.

Do not permit use of unmarked copies of Product Data in connection with construction.

1.07 SAMPLES

- A. Submit full-size, fully fabricated Samples cured and finished as specified and physically identical with the material or product proposed. Samples include partial sections of manufactured or fabricated components, cuts or containers of materials, color range sets, and swatches showing color, texture and pattern.

Mount, display, or package Samples in the manner specified to facilitate review of qualities indicated. Prepare Samples to match the UCHC's Sample. Include the following:

Generic description of the Sample.

Sample source.

Product name or name of manufacturer.

Compliance with recognized standards.

Availability and delivery time.

Submit Samples for review of kind, color, pattern, and texture, for a final check of these characteristics with other elements, and for a comparison of these characteristics between the final submittal and the actual component as delivered and installed.

Where variation in color, pattern, texture or other characteristics are inherent in the material or product represented, submit multiple units (not less than 3), that show approximate limits of the variations.

Refer to other Specification Sections for requirements for Samples that illustrate workmanship, fabrication techniques, details of assembly, connections, operation and similar construction characteristics.

- B. Preliminary submittals: Where Samples are for selection of color, pattern, texture or similar characteristics from a range of standard choices, submit a full set of choices for the material or product.

Preliminary submittals will be reviewed and returned with the UCHC's mark indicating selection and other action.

- C. Submittals: Except for Samples illustrating assembly details, workmanship, fabrication techniques, connections, operation and similar characteristics, submit 3 sets; one will be returned marked with the action taken.

Maintain sets of Samples, as returned, at the Project site, for quality comparisons throughout the course of construction.

Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.

Sample sets may be used to obtain final acceptance of the construction associated with each set.

- C. Distribution of Samples: Prepare and distribute additional sets to subcontractors, manufacturers, fabricators, suppliers, installers, and others as required for performance of the Work. Show distribution on transmittal forms.

Field Samples specified in individual Sections are special types of Samples. Field Samples are full-size examples erected on site to illustrate finishes, coatings, or finish materials and to establish the standard by which the Work will be judged.

Comply with submittal requirements to the fullest extent possible. Process transmittal forms to provide a record of activity.

1.08 UCHC'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:

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.

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.

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.

Do not permit submittals marked "Amend and Resubmit," or "Rejected" to be used at the Project site, or elsewhere where Work is in progress.

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".

1.09 ELECTRONIC SUBMITTALS

- A. Submitting electronic product data, literature, schedules, shop drawings, etc shall be permitted. The documented and submitted information shall be as stipulated above. Submittal Documents lacking the required information shall be returned without action. The submission of Electronic Submittals shall additionally conform to the following conditions;

1. The Contractor shall be provided with a UCHC Standard Electronic Submittal Transmittal Form. The Contractor shall be required to use, provide requested project information, digitally sign, and submit this form with each submittal document submitted. Documents containing varying information shall not be combined in one submittal.
2. Hard copies of electronic submittals shall be made and distributed to field personnel for construction, coordination and reference information. Such documents shall be field and stored with the project documents for field reference.
3. Project's utilizing the Electronic Submittal process shall at the end of the project as part of Section 01700-Project Close-out, prepare an electronic CD File of all approved submittal documents and inserted as part of each Operating and Maintenance Manual.

PART 2 - SCHEDULE

- A. Submittal Schedule: The Contractor shall prepare and submit shop drawings and product literature as required by the contract documents, which typically include the items indicated below. U.C.H.C. reserves the right to require additional submittals as the project progresses.

The submittals shall include but not be limited to:

Floor finishes

Ceiling finishes and suspension systems
Architectural Millwork
Doors, Frames and Hardware
Metal studs
Gypsum board and accessories
Fire Stopping Systems
Architectural Accessories
Paint products and samples
Material Safety Data Sheets for all environmentally volatile materials
Electrical fixtures / devices

PART 3 - EXECUTION

(Not Applicable).

END OF SECTION 013000

**SECTION 017000
PROJECT CLOSEOUT**

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 administrative and procedural requirements for project closeout, including but not limited to:

Substantial Completion
Inspection procedures
Operating and maintenance manual submittal
Final cleaning
Final Acceptance
Project record document submittal

- B. Closeout requirements for specific construction activities are included in the appropriate Sections in Divisions 2 through 26.

1.03 SUBSTANTIAL COMPLETION

- A. General: In addition to the requirements indicated below, the Contractor shall prepare and complete the requirements of paragraphs 1.04 – INSPECTION PROCEDURES, 1.05 – OPERATING AND MAINTENANCE MANUAL SUBMITTAL and 1.06 – FINAL CLEANING prior to Owner acceptance of substantial completion.
- B. Preliminary Procedures: Before requesting inspection for certification of Substantial Completion, complete the following. List exceptions in the request.
- C. In the Application for Payment that coincides with, or first follows, the date Substantial Completion is claimed, show 100 percent completion for the portion of the Work claimed as substantially complete. Include supporting documentation for completion as indicated in these Contract Documents and a statement showing an accounting of changes to the Contract Sum.
- D. If 100 percent completion cannot be shown, include a list of incomplete items, the value of incomplete construction, and reasons the Work is not complete.
- E. Advise UCHC of pending insurance change-over requirements.
- F. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications and similar documents.
- G. Obtain and submit releases enabling the UCHC unrestricted use of the Work and access to services and utilities; include occupancy permits, operating certificates and similar releases.
- H. Deliver tools, spare parts, extra stock, and similar items.

I. Complete start-up testing of systems, and instruction of the UCHC's operating and maintenance personnel. Discontinue or change over and remove temporary facilities from the site, along with construction tools, mock-ups, and similar elements.

J. Complete final clean up requirements, including touch-up painting. Touch-up and otherwise repair and restore marred exposed finishes.

1.04 INSPECTION PROCEDURES

A. On receipt of a request for inspection, the UCHC will either proceed with inspection or advise the Contractor of unfilled requirements. The UCHC will prepare the Certificate of Substantial Completion following inspection, or advise the Contractor of construction that must be completed or corrected before the certificate will be issued.

B. The UCHC will repeat inspection when requested and assured that the Work has been substantially completed.

C. Results of the completed inspection will form the basis of requirements for final acceptance.

1.05. OPERATING AND MAINTENANCE MANUAL SUBMITTAL:

A. Thirty-days prior to claim for completion submit 3 copies of the Operating & Maintenance Manual. Bind properly indexed data in individual heavy-duty 1" to 3" diameter 3-ring vinyl-covered binders, with pocket folders for folded sheet information. Mark appropriate identification on front and spine of each binder. Each binder shall contain mylar tabbed separators by subject matter (lighting, panelboards, etc.). Each binder shall be less than 60% full (1" binder shall have no more than 0.6" of filling).

The manual shall contain the following:

Table of Contents

Operating instructions

Maintenance instructions

Manufacturers catalog sheets

List of materials used on project

Service call list

Installation instructions packaged with equipment

Parts list for items replaced under regular maintenance

Guarantees and warranties for each piece of equipment with the purchase order number, effective dates and the contact name and phone number.

Emergency instructions.

Spare parts list.

Copies of warranties.

Wiring diagrams (8-1/2" x 11" and 11" x 17").

Copy of panelboard indexes

Recommended "turn around" cycles.

Inspection procedures.

Shop Drawings and Product Data.

Insert CD File(s) of all Electronic Submittals.

Fixture lamping schedule.

Sufficient information shall be given to enable quick and easy cross-referencing between the manual and record drawings.

B. Operating and Maintenance Instructions: Arrange for each installer of equipment that requires regular maintenance to meet with the UCHC's personnel to provide instruction in proper operation and

maintenance. If installers are not experienced in procedures, provide instruction by manufacturer's representatives. Include a detailed review of the following items:

- Maintenance manuals.
- Spare parts and materials.
- Tools.
- Lubricants.
- Fuels.
- Identification systems.
- Control sequences.
- Hazards.
- Cleaning.
- Warranties and bonds.
- Maintenance agreements and similar continuing commitments.

C. As part of instruction for operating equipment, demonstrate the following procedures:

- Start-up.
- Shutdown.
- Emergency operations.
- Noise and vibration adjustments.
- Safety procedures.
- Economy and efficiency adjustments.
- Effective energy utilization.

1.06 FINAL CLEANING

A. General: Provide general and final cleaning in accordance with Section - 01715-Project Cleaning.

1.07 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 UCHC'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 UCHC.

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 UCHC 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 UCHC.

Upon completion of reinspection, the UCHC 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.

1.08 RECORD DOCUMENT SUBMITTALS

- A. General: Do not use record documents for construction purposes; protect from deterioration and loss in a secure, fire-resistive location; provide access to record documents for the UCHC's reference during normal working hours.
- B. Record Drawings: Maintain a clean, undamaged set of blue or black line white-prints of Contract Drawings and Shop Drawings. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark whichever drawing is most capable of showing conditions fully and accurately; where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.

Mark record sets with red erasable pencil; use other colors to distinguish between variations in separate categories of the Work.

Mark new information that is important to the UCHC, but was not shown on Contract Drawings or Shop Drawings.

Note related Change Order numbers where applicable.

Organize record drawing sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dates and other identification on the cover of each set.

Upon completion of the project, submit (2) copies of record drawings to the UCHC Agent.

- C. Record Product Data: Maintain one copy of each Product Data submittal. Mark these documents to show significant variations in actual Work performed in comparison with information submitted. Include variations in products delivered to the site, and from the manufacturer's installation instructions and recommendations. Give particular attention to concealed products and portions of the Work which cannot otherwise be readily discerned later by direct observation. Note related Change Orders and mark-up of record drawings and Specifications.

Upon completion of mark-up, submit complete set of record Product Data to the UCHC for its records.

Electronic Submittals: Prepare an electronic CD File of all submittals and insert it as part of each Operating and Maintenance Manual. Refer to Paragraph 1.05 (A) above.

- D. Miscellaneous Record Submittals: Refer to other Specification Sections for requirements of miscellaneous record-keeping and submittals in connection with actual performance of the Work. Immediately prior to the date or dates of Substantial Completion, complete miscellaneous records and place in good order, properly identified and bound or filed, ready for continued use and reference. Submit to the UCHC for its records.

END OF SECTION 017000

SECTION 017100 PROJECT CLEANING

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.
- B. Refer to applicable provisions of Section 01020-CONSTRUCTION AREA ENVIRONMENTAL CONTROL for procedural requirements for keeping the project area as well as surrounding areas and accessways clean during the duration of the project.

1.02 DESCRIPTION OF WORK:

- A. General: Provide general cleaning throughout the construction period. Keep the construction area free of debris and fire hazards throughout the construction period. Surrounding areas and project access routes shall be kept free of construction debris, dirt and dust. Should any such area become soiled from construction related activities, the contractor shall clean the area immediately. Such efforts to do so shall include;

Picking up, transporting and disposing of all materials
 Vacuuming area with Hepa Filtered vacuum
 Wet mopping area
 Wet wiping wall surfaces

- B. Final Cleaning: The Contractor shall provide for a complete project area final cleaning in accordance with the provisions herein. Such final cleaning shall be performed after the completion of the construction related activities but prior to the scheduled completion date of the project.

Employ experienced workers or professional cleaners for final cleaning. Clean area(s) and objects with UCHC Department of Facilities Management standardized products specified herein. Prior to the scheduling of cleaning crews; the Contractor shall meet with the UCHC Agent, and Department of Facilities Management, Director of Buildings and Grounds or designee, to become familiar with UCHC standards and practices.

For work identified to be Phased, the contractor shall clean each phased area in accordance with the requirements specified herein prior to the Owners receivership (occupancy) of the completed space.

1.03 COMPLIANCE

- A. Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the UCHC's property. Do not discharge volatile, harmful or dangerous materials into drainage systems. Remove waste materials from the site and dispose of in a lawful manner.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Prior to the start of cleaning activities, submit MSDS for all chemicals to be used.
- B. The contractor shall be responsible for removal and disposal of cleaning products and chemicals at the end of cleaning activities.

- C. Products used shall be those listed in specific use paragraphs or those products determine to be compatible with such products indicated.

PART 3 - EXECUTION

3.01 FINAL CLEANING

- A. General Requirements: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturers instructions.

Remove labels that are not permanent labels.

Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compound and other substances that are noticeable vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials.

Clean exposed interior hard-surfaced finishes to a dust-free condition, free of stains, films and similar foreign substances. Restore reflective surfaces to their original reflective condition. Leave concrete floors broom clean.

Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication and other substances. Clean plumbing fixtures to a sanitary condition. Clean light fixtures and lamps.

Removal of Protection: Remove temporary protection, environmental control barriers, construction barriers, and facilities installed for protection of the Work during construction.

Where extra materials of value remaining after completion of associated work have become the UCHC's property, arrange for disposition of these materials as directed.

- B. Complete cleaning operations before requesting inspection for certificate of Substantial Completion.

3.02 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.

B. SPECIFIC AREA CLEANING

1. **VACUUM COMPLETELY (new carpet)**
Use a hepa-filtered carpet vacuum to remove visible and hidden soil and debris from all areas of the carpet surface and from within the carpet pile that are accessible. Chairs, trash receptacles and other such items should be tilted or moved where necessary to vacuum underneath. A hose and brush or crevice attachment should be used to vacuum areas inaccessible to the carpet vacuum such as carpet edges, corners, crevices and under low furniture. After completely vacuuming, the carpet should be free of all soil which can be removed from the carpet pile by vacuuming.

END OF SECTION 017100

**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 26.

Warranty period shall commence at time of UCHC 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 UCHC has benefited from use of the Work through a portion of its anticipated useful service life.
- D. UCHC's Recourse: Written warranties made to the UCHC 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 UCHC reserves the right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.

The UCHC 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 UCHC prior to the date certified for Substantial Completion. If the UCHC'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 UCHC.

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 UCHC 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 020700
SELECTIVE DEMOLITION**

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 DESCRIPTION OF WORK:

- A. Extent of selective demolition work is indicated on drawings.
- B. Types of Selective Demolition Work: Demolition requires the selective removal and subsequent offsite disposal of the following:

Elevator, mechanical and electrical components indicated on drawings and as required to accommodate proposed construction.

Portions of building structure indicated on drawings and as required to accommodate new construction.

- C. 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.

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.

- D. In addition to that work noted above, the Contractor(s) shall be responsible for the re-supporting of any and all equipment, conduits, boxes, lighting etc. required as a result of the removal of items identified by the project documents.

- E. Related work specified elsewhere:

Remodeling construction work and patching is included within the respective sections of specifications, including removal of materials for re-use and incorporated into remodeling or new construction.

Relocation of pipes, conduits, ducts, other mechanical and electrical work are specified by respective trades.

1.03 JOB CONDITIONS:

- A. Occupancy: Owner will be continuously occupying areas of the building immediately adjacent to areas of selective demolition. Conduct selective demolition work in manner that will minimize need for disruption of Owner's normal operations.
- B. Condition of Structures: Owner assumes no responsibility for actual condition of items or structures to be demolished.
- C. Damages: Promptly repair damages caused to adjacent facilities by demolition work at no cost to Owner.
- D. Traffic: Conduct selective demolition operations and debris removal in a manner to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities.

Do not close, block or otherwise obstruct streets, walks or other occupied or used facilities without written permission from authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.

- E. Explosives: Use of explosives will not be permitted.
- F. Utility Services: Maintain existing utilities indicated to remain, keep in service, and protect against damage during demolition operations.

Do not interrupt existing utilities serving occupied or used facilities, except when authorized in writing by authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to governing authorities.

- G. Fire Suppression System: For work requiring fire suppression shut down, the Contractor shall submit request to the Fire Department 24 hours in advance of the work to be performed. Work shall not commence until such time that the request has been acknowledged by the Fire Department.

Refer to Section 01018-Special Project Procedures for work procedures and impairment of the fire suppression and fire notification system.

1.04 DISCOVERY AND REMOVAL OF HAZARDOUS MATERIALS

- A. Refer to Section 01018 Special Project Requirements for direction relative to discovery and removal of hazardous materials.

1.05 FIRE SUPPRESSION AND FIRE NOTIFICATION WORK PARAMETERS

- A. Refer to Section 01018 Special Project Requirements for direction relative to Fire Suppression and Fire Notification Work Parameters.

PART 2 - PRODUCTS

(Not Applicable).

PART 3 - EXECUTION

3.01 PREPARATION:

- A. Cover and protect furniture, equipment and fixtures to remain from soiling or damage when demolition work is performed in rooms or areas from which such items have not been removed.

- B. Erect and maintain dust-proof partitions and closures as required to prevent spread of dust or fumes to occupied portions of the building.
- C. Locate, identify, stub off and disconnect utility services that are not indicated to remain.

Provide by-pass connections as necessary to maintain continuity of service to occupied areas of building. Provide minimum of 72 hours advance notice to Owner if shut-down of service is necessary during change-over.

3.02 PROTECTION OF EXISTING MATERIALS

- A. The Contractor shall in all areas requiring demolition and/or construction as well as for all access ways to the project site, take necessary precautions to protect all finish surfaces, materials and equipment to remain. Should damage occur, the Contractor shall at no additional expense to the Owner, repair to original condition.

3.03 DEMOLITION:

- A. Perform selective demolition work in a systematic manner. Use such methods as required to complete work indicated on Drawings in accordance with demolition schedule and governing regulations.
- B. If unanticipated mechanical, electrical or structural elements which conflict with intended function or design are encountered, investigate and measure both nature and extent of the conflict. Submit report to Owner's Representative in written, accurate detail. Pending receipt of directive from Owner's Representative rearrange selective demolition schedule as necessary to continue overall job progress without delay.
- C. The Contractor shall remove all abandoned piping within the project area. The removal of abandoned piping shall continue through all project area encompassing walls and floors. In addition, the removal of abandoned piping shall continue through fire rated barriers such as shafts and stairs.

The Contractor shall be required to patch and seal openings left by the removal of said abandoned piping by methods consistent with the adjacent construction and or in accordance with the requirements of Section 07900-FIRESTOPPING.

3.04 DISPOSAL OF DEMOLISHED MATERIALS:

- A. Remove debris, rubbish and other materials resulting from demolition operations from building site. Transport and legally dispose of materials off site.

If hazardous materials are encountered during demolition operations, contact the UCHC Agent immediately. Do not remove and or disturb in any way. Removal of such material shall be the responsibility of the Owner.

Burning of removed materials is not permitted on project site.

3.05 CLEAN-UP AND REPAIR:

- A. Upon completion of demolition work, remove tools, equipment and demolished materials from site. Remove protections and leave interior areas broom clean.

- B. Repair demolition performed in excess of that required. Return structures and surfaces to remain to condition existing prior to commencement of selective demolition work. Repair adjacent construction or surfaces soiled or damaged by selective demolition work.

END OF SECTION 020700

07 16 16 Crystalline Waterproofing

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions apply to work of this section.

1.2 DESCRIPTION OF WORK:

- A. Cementitious Crystalline Waterproofing on concrete structures and surfaces as shown on drawings and as specified in this section.

1.3 QUALITY ASSURANCE:

- A. Manufacturer's Qualifications: Firms regularly engaged in the manufacturing of components/products specified herein whose products have been in satisfactory use in similar service for not less than 10 years.
- B. Installer's Qualifications: Individual trained and certified by the product manufacturer with a minimum of five (5) years' experience.
- C. Codes, References and Standards:
 - 1. ASTM C 109 – Standard Test Method for Compressive Strength of Hydraulic Cement Mortars.
 - 2. ASTM C 321 – Standard Test Method for Bond Strength of Chemical-Resistant Mortars.
 - 3. ASTM C 348 – Standard Test Method for Flexural Strength Hydraulic Cement Mortars.
 - 4. ASTM C 596 – Standard Test Method for Drying Shrinkage of Mortar Containing Hydraulic Cement.
 - 5. COE CRD-C 48-92 – Method of Test for Water Permeability of Concrete, US Army Corps of Engineers.
 - 6. NSF/ANSI Standard 61 – Drinking Water System Components – Health Effects

1.4 SUBMITTALS:

- A. Product Data:
 - 1. Submit manufacturer's description literature and specifications for proposed products.
 - 2. Submit manufacturer's technical product data/certifications for proposed products.
- B. Material test reports: For crystalline waterproofing, from independent testing laboratory, demonstrating that the waterproofing system complies with requirements of this Section.

1.5 DELIVERY, STORAGE AND HANDLING:

- A. Product shall be covered, delivered and stored off the ground. Product shall be protected from moisture per manufacturer's requirements.
- B. Materials shall be new and delivered in the manufacturer's unopened container/packaging. Container/packaging shall incorporate manufacturer's name, brand of product, type, grade and class and all other qualifying information. Material safety data sheet shall accompany each respective product.

1.6 WARRANTY:

- A. Special Warranty: Manufacturer's standard form in which the manufacturer and Installer agrees to repair or replace components of crystalline waterproofing that fail in materials or workmanship within specified warranty period stated below.
 - 1. Failures include, but are not limited to, the following:
 - a. Failure to maintain watertight conditions within specified warranty period.
 - 2. Warranty Period: Five (5) years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS:

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include the following:
1. Aquafin
 2. Kryton
 3. Xypex
 4. Engineer approved equal

2.2 MATERIALS:

- A. Crystalline Waterproofing: A prepackaged, (white or gray colored) proprietary blend of Portland cement, specially treated sand, and active chemicals that, when mixed with water and applied, penetrates by capillary action into concrete or masonry and reacts chemically with free lime in the presence of water to develop crystalline growth within concrete or masonry capillaries to produce an impervious, dense, waterproof concrete or masonry with the following properties.
1. Compression Strength (ASTM C-109): >3,000 PSI at 28 Days.
 2. Adhesion bond (ASTM C-321): >220 PSI at 28 Days.
 3. Flexural Strength (ASTM C-348): >700 PSI at 28 Days.
 4. Shrinkage (ASTM C-596): -0.02% at 28 Days.
 5. Permeability (CRD-C 48-92): No measurable water at 460 feet.
 6. Potable water (NSF/ANSI 61): Certification of potable water as per NSF 61.
- B. Fast Setting Patching Compound: Cementitious waterproofing and repair mortar for filling and patching tie holes, honeycombs, reveals, seal strips and other imperfections; with properties meeting or exceeding the following criteria:
1. Compression Strength (ASTM C-109): 4,000 PSI at 28 Days.
 2. Flexural Strength (ASTM C-348): 800 PSI at 28 Days.
 3. Shrinkage (ASTM C-596): 0.04%.
 4. Potable water (NSF/ANSI 61): Certification of potable water as per NSF 61.
- C. Plugging Compound: Cementitious compound with hydrophobic properties; resistant to water and moisture but vapor permeable for all standard applications (vertical, overhead and horizontal surfaces not exposed to vehicular traffic); with properties meeting or exceeding the following criteria:
1. Compression Strength (ASTM C-109): 2,800 PSI at 24 Hours.
 2. Flexural Strength (ASTM C-348): 320 PSI at 24 Hours.
 3. Potable water (NSF/ANSI 61): Certification of potable water as per NSF 61.
- D. Water: Clean, clear, non-alkaline, free of salts and other harmful elements (potable).

PART 3 - EXECUTION

3.1 EXAMINATION:

- A. Examine substrates and adjoining construction, and conditions under which Work is to be performed. Do not proceed with work until any unsatisfactory conditions are corrected.
- B. Verify the following substrate conditions before application of capillary/crystalline waterproofing:
1. Substrate condition is satisfactory and in accordance with manufacturer's instructions.
 2. Pores of concrete surfaces have been opened.
 3. Concrete surfaces are free of voids, spalled areas, loose aggregate and sharp protrusions, and no visible coarse aggregate.
 4. Curing compounds or surface hardeners incompatible with waterproofing have not been used on concrete.

3.2 PREPARATION:

- A. Protect adjacent surfaces not designated to receive waterproofing.
- B. Substrate preparation:

1. Remove any remaining concrete fins and projections, and general surface dirt.
 2. Remove grease, oil and other contaminants. Use steam cleaning, high-pressure water blasting, wet or dry sand blasting, wire brush or other methods recommended by waterproofing manufacturer to produce surfaces suitable ("tooth and suction") for application of waterproofing, minimum ICRI CSP 3 profile. Do not apply to smooth slabs.
 3. Follow manufacturer's instructions to clean and prepare surfaces and seal cracks and joints.
 4. Rout out faulty construction joints and visible cracks not subject to movement, exceeding 0.02" (0.4 mm) in width to approx. 3/4" (20 mm) width and minimum 1" (25 mm) depth.
 5. Remove all protrusions, work back to sound concrete and chisel out any spalled or honeycombed areas.
 6. Roughen form tie holes.
 7. Stop active water leakages as per manufacturers plugging specifications.
- C. Rinse surfaces to be waterproofed several times so that the concrete is thoroughly saturated. Surfaces shall be moist but not wet when waterproofing system is applied. Remove any surface water on horizontal surfaces.

3.3 INSTALLATION

- A. Mix waterproofing material in proportions recommended by manufacturer.
- B. Apply waterproofing material in quantities as per manufacturer's specifications and recommendations.
- C. Cavity Fill:
1. Prime cavities at cleaned and prepared faulty construction joints, cracks, form tie holes, etc. with waterproofing material and fill flush to surface with patching compound in mortar consistency.
 2. Laminate patching compound in 2 to 3 layers as per manufacturer's instructions for larger spalled or honeycombed areas.
- D. Horizontal and Vertical Construction Joints:
1. Prime seal strips/reglets in pre-formed 1" x 1" (25 x 25 mm) cavities with waterproofing material and fill flush to surface with patching compound in mortar consistency.
- E. Horizontal surfaces:
1. Dry-sprinkle waterproofing material to freshly poured slabs at 2.0 lb/sq.yd. (1.0 kg/sq.m) and power or hand trowel.
 2. Dry distribute to pre-watered mud slab or existing slab to receive another topping at 2.25 lb/sq.yd. (1.2 kg/sq.m) immediately prior to casting the structural slab or new topping. Alternatively apply in slurry form. Contact manufacturer for guidance.
 3. Brush or spray apply waterproofing material in slurry consistency, in one coat on existing slabs.
 - a. For standard applications, apply at rate of 2.0 lb/sq.yd. (1.0 kg/sq.m).
 - b. For applications in contact with salt or waste water, apply at rate of 2.5 - 2.8 lb/sq.yd. (1.4 to 1.5 kg/sq.m).
 - c. Spread material evenly and work it well into the surface.
- F. Vertical Surfaces:
1. Apply base coat of waterproofing material in slurry consistency at uniform rate of 1.25 - 1.4 lb/sq.yd. (0.7 to 0.75 kg/sq.m). Apply using appropriate compressed-air spray equipment, stiff masonry brush or stiff broom.
 2. After base coat has reached initial set but is still "green" (tacky), apply finish slurry coat of waterproofing material at 1.25 - 1.4 lb/sq.yd. (0.7 to 0.75 kg/sq.m). Apply so that final brush or broom strokes leave parallel, uniform texture. Use light pre-watering between coats when rapid drying conditions occur.

3.4 CURING

- A. Follow manufacturer's general instructions for curing and hardening of waterproofing material.

3.5 ACCEPTANCE

- A.** Remove left over materials and any foreign material resulting from the work from the site.
- B.** Clean adjacent surfaces and materials.

End
Section - 07 16 16

26 05 00 COMMON WORK RESULTS FOR ELECTRICAL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General Conditions, apply to this section.

1.2 SUMMARY

- A. This Section includes general administrative, procedural, and other requirements for electrical installations. The following requirements are included in this Section to expand the requirements specified in Divisions 1 through 26:
1. Submittals.
 2. Quality control.
 3. Definitions and abbreviations.
 4. Scheduling.
 5. Coordination drawings.
 6. Record documents.
 7. Maintenance manuals.
 8. Delivery, storage, and handling.
 9. Products.
 10. Rough-ins.
 11. Electrical installations.
 12. Permits and instructions.
 13. Field quality control.
 14. Protection.
 15. Additional work.
 16. Electrical schedules.
 17. Cutting and patching.
- B. Related Sections: The following sections contain requirements that relate to this section:
1. Division 2 thru 22

1.3 SUBMITTALS

- A. General: Follow the procedures specified.

1.4 QUALITY CONTROL

- A. Functional and Operational Test Procedure:
1. Test procedure to completely test all systems as to their functional and sequential operation.
 2. Submit two (2) draft copies for review before conducting test.
 3. Certify that the test procedure was used and testing completed, and that all systems are operational and functioning properly.
 4. Submit certified Test Procedure for review prior to the date of final inspection.
 5. Systems to be covered by test procedure:
 - a. Elevator pit sump pump systems
 - b. Lighting systems
- B. Installation shall comply with the National Electrical Code (N.E.C.), local authorities, State of Connecticut, Life Safety and Building Codes. Work shall be in accordance with State of Connecticut Department of Public Safety Elevator Inspector's office.

1.5 DEFINITIONS AND ABBREVIATIONS

- A. Electrical Definitions: As defined by National Electrical Code, Article 100.
- B. The term "indicated" shall mean "as shown on contract documents (specifications, drawings, and related attachments)".

- C. The term "provide" shall mean "to furnish, install and connect completely".
- D. The term "size" shall mean one or more of the following: "length, current and voltage rating, number of poles, NEMA size, and other similar electrical characteristics".
- E. The term "space" on panelboard and switchboard schedules shall mean "provide space to install the number of poles and size of the protective device indicated with all the necessary buss and fittings to install the device at some future date".

1.6 SCHEDULING

- A. Coordinate electrical work with other divisions of this project.
- B. Coordinate electrical work with Owner.
- C. Written requests for approval for planned shutdowns or interruption of Owner's operation or equipment shall be made in accordance with Special Conditions.

1.7 RECORD DOCUMENTS

- A. Prepare record documents in accordance with the requirements specified. Indicate installed conditions for:
 - 1. Equipment locations (exposed and concealed), dimensioned from prominent building lines.
 - 2. Approved substitutions, Contract Modifications, and actual equipment and materials installed.

1.8 MAINTENANCE MANUALS

- A. Prepare maintenance manuals in accordance with the requirements specified. Include the following information for equipment items:
 - 1. Description of function, normal operating characteristics and limitations, performance curves, engineering data and tests, and complete nomenclature and commercial numbers of replacement parts.
 - 2. Manufacturer's printed operating procedures to include start-up, break-in, and routine and normal operating instructions; regulation, control, stopping, shutdown, and emergency instructions; and summer and winter operating instructions.
 - 3. Maintenance procedures for routine preventative maintenance and troubleshooting; disassembly, repair, and reassembly; aligning and adjusting instructions.
 - 4. Servicing instructions and lubrication charts and schedules.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to the project properly identified with names, model numbers, types, grades, compliance labels, and other information needed for identification.

PART 2 PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Unless otherwise indicated, all electrical equipment has been based on General Electric Company products.
- B. Comparable manufacturers may be utilized, and include the following:
 - 1. Eaton Corp.
 - 1. Schneider Electric – Square D
 - 2. Siemens
 - 3. Westinghouse
- C. As specified on Drawings.

2.2 MATERIAL

- A. General:
 - 1. Unless otherwise indicated, all raceways for service, feeders, branch and control wiring are IMC.
 - 2. Unless otherwise indicated, interior branch and control wiring may be installed in EMT.

3. Unless otherwise indicated, wiring to equipment and motors may be installed in liquid tight flexible conduit, or in interior locations in flexible metal conduit, with a maximum length of 5 feet.
4. Unless otherwise indicated, all conductors to be copper THHN/THWN.
5. Unless otherwise indicated, all outlet and switch boxes to be cast iron with threaded hubs.
6. In interior protected locations, outlet and switch boxes may be stamped steel.
7. Unless otherwise indicated, provide white, heavy duty grade, 20 ampere, receptacles and switches. Plates for surface mounted interior boxes may be stamped steel. Plates exposed to weather or water to be metal, weatherproof type.

B. As specified on Drawings.

2.3 EQUIPMENT

A. General:

1. Unless otherwise indicated, externally operated safety switches are unfused, solid neutral, heavy duty, and selected to meet the load requirements.

B. As specified on Drawings.

2.4 FABRICATION

A. General:

1. Unless otherwise indicated, all enclosures NEMA Type 1. Enclosures exposed to the wet and/or damp locations shall be NEMA Type 3R.

B. As specified on Drawings.

2.5 WIRING DEVICES:

A. General: Provide wiring devices, in types, characteristics, grades, colors, and electrical ratings for applications indicated which are UL listed and which comply with NEMA WD 1 and other applicable UL and NEMA standards. Provide ivory color devices and wall plates except as otherwise indicated. Verify color selections with Architect.

B. Ground-Fault Interrupter (GFI) Receptacles: 20 Ampere rated heavy duty. Provide unit designed for installation in a 2-3/4 inch deep outlet box without adapter, grounding type, Class A, Group 1, per UL Standard 94.3.

C. Snap Switches: quiet type AC switches 277/120VAC, 20 ampere rated.

2.6 WIRING DEVICE ACCESSORIES

A. Wall plates: single and combination, of types, sizes, and with ganging and cutouts as indicated. Provide plates which mate and match with wiring devices to which attached. Provide metal screws for securing plates to devices with screw heads colored to match finish of plates. Provide wall plates with engraved legend where indicated. Provide plates possessing the following additional construction features:

1. Material and Finish: 0.04 inch thick, type 302 satin finished stainless steel, typical throughout.
2. Material and Finish: steel plate, galvanized, limited to mechanical rooms only.

2.7 CIRCUIT BREAKER

A. Branch circuit breakers shall be thermal-magnetic bolt-on type with visible trip position.

B. All multi-pole breakers shall have a common trip. Single-pole breakers equipped with handle ties for multi-pole use shall not be used.

C. Circuit breakers used for controlling lighting circuits shall be UL rated for switching duty.

D. Circuit breakers shall be from the same manufacturer as the panelboard or switchboard manufacturer.

E. Breakers provided for panels that do not have lockable doors shall be capable of being padlocked without use of an adapter.

2.8 FUSES

- A. Replacement fuses for 0 to 600 Ampere circuits shall be current limiting Bussmann Low-Peak dual-element fuses or approved equal by Hi-Cap or Limitron. The fuse shall hold 500% of rated current for a minimum of 10 seconds with an interrupting rating of 200,000 Amperes RMS symmetrical.

2.9 WIRE AND TERMINATIONS

- A. All building lighting and power conductors shall be rated at 600 Volts and carry the appropriate UL label.
- B. Black (A), red (B), blue(C) and white (neutral) shall be used for 208/120-Volt distribution systems.
- C. Brown (A), orange (B), yellow (C) and gray (neutral) shall be used for 480/277-Volt distribution systems.
- D. Compression type terminals equivalent to T&B "Color Keyed" shall be used. Bolted type shall not be used.
- E. Use THHN insulation for dry and 90°C maximum operating temperature applications unless otherwise specified or approved by UCHC Agent.
- F. The grounding conductor for each isolated ground receptacle outlet shall be green with a stripe. A different colored stripe shall be used for each receptacle outlet.
- G. Wire not in a raceway shall be UL listed as plenum cable.
- H. Wire shall be no smaller than the following minimum sizes:
 - 1. Lighting and Power Wiring - #12 AWG with 600 Volt insulation
 - 2. Control Wire up to 50 Volts - stranded #16 AWG with 600-Volt insulation
 - 3. Control Wire at 120Volts –stranded #12 AWG with 600-Volt insulation

PART 3 EXECUTION

3.1 ROUGH-IN

- A. Verify final locations for rough-ins with field measurements and with the requirements of the actual equipment to be connected.
- B. Refer to equipment specifications in Divisions 2 through 16 for rough-in requirements.

3.2 ELECTRICAL INSTALLATIONS

- A. General: Sequence, coordinate, and integrate the various elements of electrical systems, materials, and equipment. Comply with the following requirements:
 - 1. Coordinate electrical systems, equipment, and materials installation with other building components. Electrical plans and details do not show all interferences and conditions, visible and/or hidden, that may exist. Before selecting material and equipment, and proceeding with work, inspect areas where material and equipment are to be installed to insure suitability, and check needed space for placements, clearances and interconnections. Before cutting or drilling into building elements inspect and layout work to avoid damaging structural elements or building utilities.
 - 2. Electrical plans, details, and diagrams show the general location and arrangement of electrical systems. They are diagrammatic and do not show all conduit bodies, connectors, bends, fittings, hangers, and additional pull and junction boxes which the Contractor must provide to complete the electrical system.
 - 3. Verify all dimensions by field measurements.
 - 4. Arrange for chases, slots, and openings in other building components during progress of construction, to allow for electrical installations.
 - 5. Coordinate the installation of required supporting devices and sleeves to be set in poured-in-place concrete and other structural components, as they are constructed.
 - 6. Sequence, coordinate, and integrate installations of electrical materials and equipment for efficient flow of the Work. Give particular attention to large equipment requiring positioning prior to closing in the building. Verify dimensional constraints of building door openings and passageways, and the maximum floor loadings, for the movement of selected material and

- equipment. Order equipment and material, broken down as may be required, to meet these constraints.
7. Measurement from above finished floor (AFF) shall be taken from the finished floor surface to the top of wall receptacles and switch boxes, to the centerline of wall lighting outlet boxes, to the top of wall mounted equipment enclosures, to the centerline of top most switch handle, or to the lowest surface of ceiling lighting fixtures and other ceiling mounted equipment.
 - a. Unless otherwise indicated, wall switch boxes shall be 44 inches AFF.
 - b. Unless otherwise indicated, receptacle boxes shall be 18 inches AFF.
 8. Where mounting heights are not detailed or dimensioned, install systems, materials, and equipment to provide the maximum headroom possible. Switch and receptacle heights shall meet handicap accessible code requirements.
 9. Coordinate connection of electrical systems. Comply with requirements of governing regulations and controlling agencies. Provide required connections for equipment.
 10. Install systems, materials, and equipment to conform with approved submittal data, including coordination drawings, to greatest extent possible. Conform to arrangements indicated by the Contract Documents, recognizing that portions of the Work are shown only in diagrammatic form. Where coordination requirements conflict with individual system requirements, refer conflict to the Engineer.
 11. Install systems, materials, and equipment level and plumb, parallel and perpendicular to other building systems and components, where installed exposed in finished spaces.
 12. Conduit Sizing:
 - b. Unless otherwise indicated, conduit size for indicated conductor shall be based on Chapter 9 of NEC.
 - c. Conduit size:
RSC, IMC & EMT: 3/4 inch minimum.
MC Cable, FMC, LFMC: 3/4 inch minimum
 13. Install electrical equipment to facilitate servicing, maintenance, and repair or replacement of equipment components. As much as practical, connect equipment for ease of disconnecting, with minimum of interference with other installations. Measure and locate placement of equipment and materials in relation to building structure and surfaces, and between equipment to be installed and wired. Maintain required minimum access spacing for equipment and enclosures.
 14. Install access panel or doors where units are concealed behind finished surfaces. Access panels and doors are specified elsewhere.
 15. Install systems, materials, and equipment giving right-of-way priority to systems required to be installed at a specified slope.
 16. Electrical equipment, such as junction boxes, pull boxes, controls and apparatus shall be installed accessible.
 17. The Electrical Contractor shall seal conduits passing into the building watertight.
 18. A-B-C type wiring arrangement (left-to-right, top-to-bottom, and front-to-rear) shall be used throughout.
 19. Fuses shall be installed such that the size is readily visible.
 20. Provide a label in a visible location near the fuseholder indicating UL fuse class and size.
- 3.3 FIRE-STOPS AND WATER SEALS**
- A. Fire stop compound shall be a UL approved sealant with a 3-hour rating.
 - B. Water seals for conduits entering building shall be provided and installed by the Electrical Contractor.
- 3.4 PERMITS AND INSPECTIONS**
- A. Obtain all required permits and arrange for all required inspections in accordance with state and local governing authorities.
 - B. Final Electrical Inspection Certificate from inspection agency or governing authority.
- 3.5 FIELD QUALITY CONTROL**
- A. Perform field tests as specified under other electrical sections.

- B. Arrange for local Inspection Authorities to inspect work performed prior to burial, closing-in behind wall and above ceiling, or encased in concrete. Also arrange for final inspection of work and obtain Final Inspection Certificate before final inspection of work by Owner or his representative.

3.6 PROTECTION

- A. Protect personnel from coming in contact with live parts.
- B. During remodeling or alteration work, maintain fire ratings of walls, floors and ceilings when work is left unattended.
- C. Protect from damage and theft equipment and materials provided or supplied by others in accordance with manufacturer's recommendation and warranties, and with electrical standards and practices.

3.7 ADDITIONAL WORK

- A. Provide power and control wiring for sump pump systems.
- B. Provide wiring to miscellaneous components as indicated.
- C. Provide lighting fixtures as noted.

3.8 ELECTRICAL SCHEDULES

- A. As shown on drawings.

3.9 CUTTING AND PATCHING

- A. General: Perform cutting and patching in accordance with the following requirements:
 - 1. Perform cutting, fitting, and patching of electrical equipment and materials required to:
 - a. Uncover Work to provide for installation of ill-timed Work.
 - b. Remove and replace defective Work.
 - c. Remove and replace Work not conforming to requirements of the Contract Documents.
 - d. Remove samples of installed Work as specified for testing.
 - e. Install equipment and materials in existing structures.
 - f. Upon written instructions from the Engineer, uncover and restore Work to provide for Engineer observation of concealed Work.
 - 2. Cut, remove, and legally dispose of selected electrical equipment, components, and materials as indicated, including but not limited to removal of electrical items indicated to be removed and items made obsolete by the new Work.
 - 3. Protect the structure, furnishings, finishes, and adjacent materials not indicated or scheduled to be removed.
 - 4. Provide and maintain temporary partitions or dust barriers adequate to prevent the spread of dust and dirt to adjacent areas.
 - 5. Protection of Installed Work: During cutting and patching operations, protect adjacent installations.
 - 6. Patch existing finished surfaces and building components using new materials matching existing materials and experienced Installers. Installers' qualifications refer to the materials and methods required for the surface and building components being patched.
 - 7. Patch finished surfaces and building components using new materials specified for the original installation and experienced Installers. Installers' qualifications refer to the materials and methods required for the surface and building components being patched.

End
Section 26 05 00

26 05 05 COMMON WORK RESULTS FOR ELECTRICAL MATERIALS & METHODS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General Conditions, apply to this section.

1.2 DESCRIPTION

- A. Contractors are to comply with this document as a standard of quality and performance characteristics for basic material selection and installation methods.

- B. Following is a table of contents for Parts 2 and 3 of this document:

PART 2 - PRODUCTS provides a description of:

- 2.1 RACEWAYS AND FITTINGS
- 2.2 CIRCUIT BREAKERS
- 2.3 WIRE AND TERMINATIONS
- 2.4 SAFETY SWITCHES
- 2.5 FUSES
- 2.6 ENCLOSURES
- 2.7 OUTLET AND JUNCTION BOXES
- 2.8 FIRE-STOPS AND WATER SEALS

PART 3 - EXECUTION provides a description of requirements and installation methods to be us following:

- 3.1 GENERAL
- 3.2 RACEWAYS
- 3.3 GROUNDING
- 3.4 BOXES AND ENCLOSURES
- 3.5 WIRE AND TERMINATIONS
- 3.6 SLEEVES AND INSERTS
- 3.7 FIRE-STOPS, SEALS AND SPECIAL FITTINGS
- 3.8 IDENTIFICATION SYSTEMS
- 3.9 SAFETY SWITCHES
- 3.10 WORKMANSHIP
- 3.11 INSPECTION AND ACCEPTANCE TESTS

1.3 GENERAL REQUIREMENTS

- A. All materials and equipment shall be new and of first-class quality. The material shall be furnished, delivered, installed, connected and finished in every detail and shall be so selected and arranged as to fit properly into the building spaces. Where no specific kind or quality of material is specified, a first-class standard article as accepted by the UCHC Agent shall be furnished.
- B. The nameplate of a subcontractor, contractor or distributor shall not be affixed to any equipment.
- C. All electrical equipment shall bear the Underwriters' Laboratories' (UL) label.
- D. Existing panelboards shall not be relocated; they are to be replaced with a new panel and breakers when the panelboard has to be relocated. The feeder shall not be spliced.
- E. Specifications on contract drawings that specify a product by model number, type, series, etc. shall take precedence over product specified herein.
- F. Relocatable power taps shall not be used.

- G. Tamper resistant receptacles shall be used in waiting rooms.
- H. Space in electrical closets is at a premium and equipment shall not be mounted there except where explicitly specified in contract drawings. Mounting locations in electrical closets shall be approved by the UCHC agent prior to equipment being located

PART 2 PRODUCTS

(The following product references are those typically used at UCHC. Contractor shall refer to the contract drawings for specific products).

2.1 RACEWAYS

- A. Rigid Galvanized Steel Conduit (RGS) - All threads shall be galvanized after cutting. Conduit shall be 3/4 inch or larger.
- B. Electrical Metallic Tubing (EMT) - Couplings and connectors shall be compression type; indent screw or crimp type connectors are not acceptable. Tubing shall be 3/4 inch or larger.
- C. Rigid Non-Metallic Conduit (PVC) - The Conduit shall be used with standard PVC couplings, fittings and boxes, and a solvent cement specifically intended for use with PVC. All PVC Conduits shall be Schedule 80 and 3/4 inch or larger.
- D. Metal-Clad (MC) Cable – where MC is acceptable for use, only galvanized armor shall be used. Fittings to be screw type, not clip.
- E. Armored Cable (AC) – when used in patient care areas this shall be AFC – model HCF-90 or approved equivalent.
- F. Flexible Metallic Conduit (FMC) - Fittings shall be galvanized or copper-free aluminum type. Flexible Metallic Conduit shall be 1/2 inch or larger
- G. Liquid tight Flexible Metallic Conduit - All liquid tight flexible metallic conduit shall be used with liquid tight fittings. The conduit shall be 1/2 inch or larger.
- H. Wireways - The complete wireway shall be constructed of sheet metal finished with rust inhibiting phosphate coating and gray baked enamel finish. Wireway shall be furnished with a hinged cover, spring steel wire retainer, and without knockouts. The wireway shall be as manufactured by SquareD, General Electric or Cutler-Hammer.
- I. No die cast fittings shall be used.
- J. Surface Raceways –
 - General - Surface raceways shall only be permitted as directed on the drawings, specifications, or by the UCHC Agent. Alternate manufactures with identical features will be considered as submitted.
 - Office areas – Use non-metallic raceway.
 - Office Area (when retrofitting existing Wiremold series 4000) - Nonmetallic overlapping device plates shall be used.
 - Patient Care Areas - Raceway components shall be two-piece steel Wiremold series 4000 in the standard ivory finish.
 - Plugmold TM or similar equipment shall not be used.

2.2 CIRCUIT BREAKERS

- A. Branch circuit breakers shall be thermal-magnetic bolt-on type with visible trip position.
- B. All multi-pole breakers shall have a common trip. Single-pole breakers equipped with handle ties for multi-pole use shall not be used.

- C. Circuit breakers used for controlling lighting circuits shall be UL rated for switching duty.
- D. Circuit breakers shall be from the same manufacturer as the panelboard or switchboard manufacturer.
- E. Breakers provided for panels that do not have lockable doors shall be capable of being padlocked without use of an adapter.

2.3 WIRE AND TERMINATIONS

- A. All building lighting and power conductors shall be rated at 600 Volts and carry the appropriate UL label.
- B. Black (A), red (B), blue(C) and white (neutral) shall be used for 208/120-Volt distribution systems.
- C. Brown (A), orange (B), yellow (C) and white (neutral) shall be used for 480/277-Volt distribution systems.
- D. Compression type terminals equivalent to T&B "Color Keyed" shall be used. Bolted type shall not be used.
- E. Use THHN insulation for dry and 90°C maximum operating temperature applications unless otherwise specified or approved by UCHC Agent.
- F. The grounding conductor for each isolated ground receptacle outlet shall be green with a stripe. A different colored stripe shall be used for each receptacle outlet.
- G. Wire not in a raceway shall be UL listed as plenum cable.
- H. Wire shall be no smaller than the following minimum sizes:
 - 1. Lighting and Power Wiring - #12 AWG with 600 Volt insulation
 - 2. Control Wire up to 50 Volts - stranded #16 AWG with 600-Volt insulation
 - 3. Control Wire at 120Volts –stranded #12 AWG with 600-Volt insulation

2.4 SAFETY SWITCHES

- A. Safety switches shall be UL listed and of the heavy-duty (TH) fused or (THN) non-fused type as manufactured by General Electric, Square D or Cutler-Hammer. They shall be lockable in the off position.
- B. The switches shall be in enclosures suitable for the environment in which they will be installed. Enclosures used out doors shall be stainless steel or non-metallic.

2.5 FUSES

- A. Replacement fuses for 0 to 600 Ampere circuits shall be current limiting Bussmann Low-Peak dual-element fuses or approved equal by Hi-Cap or Limitron. The fuse shall hold 500% of rated current for a minimum of 10 seconds with an interrupting rating of 200,000 Amperes RMS symmetrical.

2.6 ENCLOSURES

- A. Non-flush mounted units shall be fabricated of Code-gauge steel meeting or exceeding the requirements of the NEC. Units shall have a gray, baked enamel finish and be provided with knockouts for the size of the raceway to which they are connected.
- B. Flush mount enclosures to be recessed in finished walls shall be constructed of Code-gauge steel, finished with gray, baked enamel and furnished with conduit knockout holes and flush combination trim cover and door assembly at least two inches higher and two inches wider than the box dimensions. The door shall be furnished with a continuous, concealed-type hinge and lockable panelboard type latches.
- C. Enclosures used outdoors shall be stainless steel or non-metallic.

2.7 OUTLET AND JUNCTION BOXES

- A. Boxes and accessories shall be made from 14-gauge hot-rolled steel and protected from rust and corrosion by zinc galvanizing. Boxes and component parts shall be as manufactured by Raco, Steel City or Appleton.

- B. Where conduit is exposed boxes shall be drawn-type with covers to fit devices used.
- C. Where exposed to weather or wet locations, boxes shall be threaded hub type and provided with watertight covers and gaskets.
- D. Solid gang boxes shall be used; no "built-up" boxes shall be used.
- E. Minimum box size shall be 4 inches square.
- F. Extension boxes or rings to extend a box are not permitted.

2.11 FIRE-STOPS AND WATER SEALS

- A. Fire stop compound shall be a UL approved sealant with a 3-hour rating.
- B. Water seals for conduits entering building shall be provided and installed by the Electrical Contractor.

PART 3 EXECUTION

3.1 GENERAL

- A. The Contractor shall coordinate his work with other trades involved so that exact locations may be obtained for all switches, outlets, apparatus, appliances and wiring.
- B. If so directed by the UCHC Agent, it shall be understood that any light switch or electrical outlet may be relocated within a distance of ten (10') feet from the location shown on the Drawings at no additional cost to the UCHC Agent.
- C. Parallel blade receptacles shall be installed so that the ground pin or grounded conductor (neutral) blade socket is facing up.
- D. Electrical equipment, such as junction boxes, pull boxes, controls and apparatus shall be installed accessible.
- E. All outlets shall be mounted below electric radiation unless the outlet is mounted integral with the radiation.
- F. The Electrical Contractor shall seal conduits passing into the building watertight.
- G. A-B-C type wiring arrangement (left-to-right, top-to-bottom, and front-to-rear) shall be used throughout.
- H. Fuses shall be installed such that the size is readily visible.
- I. Provide a label in a visible location near the fuseholder indicating UL fuse class and size.

3.2 RACEWAYS

- A. Application:
 - Outdoors – use Rigid Non-metallic Conduit except:
 - Concealed or above ground – use Rigid Metal Conduit
 - Where not subjected to damage and at least 10 feet above ground level use rigid non-metallic conduit schedule 80 (RMC).
 - Underground use rigid non-metallic conduit schedule 80 (RMC).
 - When connecting to equipment - use Liquid tight Flexible Metal Conduit (LFMC)
 - Indoors in patient care areas - use Electrical Metallic Tubing, except:
 - In exposed finished areas use metal surface raceway.
 - When necessary for fishing in concealed spaces Armor Clad Cable (AC) may be used when approved by the UCHC agent. Metal Clad (MC) cable shall NOT be used
 - Up to a 6 foot AC cable whip shall be used for luminaires to lighting junction box. Luminaires shall not to be "daisy chained".
 - Indoors not in patient care areas - use Electrical Metallic Tubing, except:

- When connecting to equipment use Flexible Metal Conduit (FMC) or Liquid tight Flexible Metal Conduit (LFMC) not to exceed 6 feet.
 - In unfinished areas subject to abuse use Rigid Metal Conduit
 - In exposed finished areas use surface raceway.
 - Up to a 6 foot MC whip may be used to tie in luminaires to a junction box. Luminaires are not to be "daisy chained".
- B.** Conduit shall be concealed below floors, above ceilings and in walls in all finished areas.
- C.** In this specification, the word "conduit", without a modifying adjective, refers to Galvanized Rigid Steel (GRS), Intermediate Metallic Conduit (IMC), Electrical Metallic Tubing (EMT) and Rigid Non-Metallic Conduit – PVC.
- D.** Conduit shall be supported to prevent distortion and misalignment during wire pulls.
- Individual conduits shall be supported by means of adjustable malleable hangers placed not more than 8'-0" on center. Perforated pipe straps or wire shall not be acceptable.
 - Conduit shall be grouped together and run parallel to building lines and as tight to the building structure as possible. Steel channel racks or struts with vertical hanger rods at both ends shall be used to support parallel runs. Provide space on the rack for 25 percent additional conduit.
 - Supports for conduit on concrete masonry walls may be attached to walls, with all-metal expansion shields.
- E.** Exposed conduit passing vertically through floor slabs shall be grouped together, and in no case shall the conduits block openings or work access.
- F.** Corrosion protection (cold galvanizing) shall be applied on field cut threads of rigid metal conduit. This corrosion protective compound must also be electrically conductive to maintain the effective ground-fault current path. Currently there is no product ("Zinc Rich Paint", ZRC) that is listed for this purpose, so a product that is recommended by the raceway manufacturers shall be used and it shall be applied in accordance with the instructions of the compound manufacturer.
- G.** Conduits shall not be installed in structural concrete floors or slabs. All conduits installed below slabs shall be located in the sub-grade at 36" to permit a uniform thickness when the floor or slab is poured.
- H.** A minimum of 6-inch clearance shall be maintained between conduit and piping. A minimum of 12-inch clearance shall be maintained between conduit and heat sources such as steam pipes, flues or heating appliances.
- I.** All conduits shall be installed free of dents and be fished before pulling wires. All conduits shall be suitably protected against damage and the entrance of dirt and moisture during construction.
- J.** The ends of all conduits shall be cut square and reamed. Conduit connections to boxes shall be with malleable iron insulated bushings. Grounding bushings shall be provided at panel connections.
- K.** Conduit shall not cross between buildings except when necessary and pre-approved by the UCHC Agent.
- L.** UL approved expansion couplings shall be used when crossing building joints and to compensate PVC conduit for thermal expansion.
- M.** Conduit penetrations through walls, floors, and ceilings or between heated and unheated areas and laboratory animal use rooms shall be sealed.
- N.** Conduits passing through built-up roofs or waterproof membranes shall be installed with flashing and pitch boxes in order to provide watertight joints.
- O.** Pull boxes shall be installed as minimum after the equivalent of every three (3) 90° bends.
- P.** Particular care shall be paid to drainage for conduit runs. Wherever possible, conduit runs shall be installed

so as to drain to one or both ends of the run. Where pockets or inverted loops are impossible to avoid, low points in the conduit shall be drilled to allow them to drain.

- Q.** Connections to motor frames shall have a minimum of 18 inches and a max of 6 feet of flexible metallic conduit with bonding jumper. Connections shall have UL listed grounding fittings.
- R.** Hydraulic one-shot conduit bender or factory bends shall be used for all bends in conduit larger than two (2") inches in size. Conduit bodies may be used to make changes in direction where elbows are not practical.
- S.** Seismic lateral restraints designed and constructed to resist horizontal movement in any direction shall be installed on all suspended conduits 2-1/2 inches in diameter or greater. Quantity and location of the lateral restraints shall be based on the conduit system layout and in general shall be installed at conduit bends, J-boxes and approximately every 20 feet along conduit runs. Seismic lateral restraints are not required for any piping suspended by individual hangers 12 inches or less in length from the top of the conduit to the bottom of the support for the hanger.
- T.** Wireway openings shall face up if accessible for service, and if that is not possible, to the side.

3.3 GROUNDING

- A.** GROUNDING SYSTEM - The electrical system, which includes switchboards, panelboards, transformers, motor frames, metal conduit, raceways, metal enclosures (such as pull boxes, junction boxes etc.), and enclosures for electrical devices and conductive, non-current-carrying material and other equipment, shall be made to form a continuous, conducting, permanent ground path of low impedance to enhance the safe conduction of ground fault currents and facilitate the operation of the circuit protective devices within the circuit. The ground path between all grounded items shall be installed and arranged to prevent objectionable, continuous current flow over grounding conductors or grounding paths.
- B.** SEPARATELY DERIVED SYSTEM - Transformers, generators, UPSs, converters or other separately derived systems, which do not have a solidly grounded circuit conductor or other direct electrical connection with the supply conductors, shall be grounded. A properly sized bonding jumper shall connect the equipment grounding conductors of the derived system to the grounded conductor. A grounding electrode conductor, which shall be sized according to the NEC, shall be used to connect the grounded conductor of the derived system with the grounding electrode. The grounding electrode of the separately derived system shall be the nearest available, effectively grounded structural steel member or other grounding electrode as specified by the NEC.
- C.** GROUNDING ELECTRODE CONDUCTOR - Grounding electrode conductors shall be insulated stranded copper installed in one continuous length without splice or joint and identified with green insulation. All grounding conductors shall be installed in raceway or as part of a cable assembly and shall be protected from physical damage. All grounding conductors shall be sized in accordance with the NEC.
- D.** CONNECTIONS - Positive ground connections with the grounding conductors shall be made at each outlet box, luminaire, and motor and other equipment components by means of a positively secured grounding clamp or screw, no clips shall be used. Connections to grounding rods, building steel or other grounding electrode conductors shall be made with Cadweld, exothermic weld process. Connections to pipes shall be made with approved clamps.
- E.** BONDING - Bonding shall be provided where necessary to assure electrical continuity and the capacity to safely conduct any fault current likely to be imposed. Bonding shall be accomplished through the use of the following:
 - Pressure connectors or clamps
 - Wrench-tight, threaded couplings on enclosures when used with rigid metal conduit or intermediate metal conduit
 - Tight threadless couplings and connectors when used with rigid metal conduit intermediate conduit and electrical metallic tubing
 - Bonding jumpers when used around concentric or eccentric knock-outs
 - Bonding-type lock nuts and bushings

- Bonding jumpers shall be copper.

F. GROUNDING ELECTRODE SYSTEM - If available, each of the following items shall be bonded together to form the grounding electrode system:

- Incoming metal underground water service pipes in contact with the earth for more than ten (10') feet supplemented with grounding electrode rods (see specification below).
- Effectively grounded metal frame of building. The main complex is a concrete structure and does not have an effectively grounded frame.
- Concrete-encased Bare, galvanized, or other electrically conductive coating, reinforcing steel rods not smaller than ½ inch in diameter if the total length of the steel is not less than 20 feet located near the bottom of a concrete foundation
- Ground ring encircling the building or structure in direct contact with the earth at a depth below the earth's surface of not less than 2½ feet consisting of at least 20 feet of bare copper conductor not smaller than AWG 2.

If none of the above is available, grounding electrode rods (see specification below) shall be used. Grounding electrode rods shall be copper-clad steel not less than 5/8 inch in diameter, eight (8') feet long and driven full length into the earth in groups of three. The group of three rods shall be installed in a triangular configuration not less than six (6') feet apart from each other.

G. EQUIPMENT GROUNDING CONDUCTOR - All raceways shall contain a separate grounding conductor. Conduit shall not be used as the sole means of grounding. Grounding conductors shall be stranded copper conductors with green insulation. Grounding conductors shall be installed in one continuous length without splice.

H. ISOLATED RECEPTACLES - The grounding conductor from the grounding terminal on an isolated receptacle outlet shall be wired without splicing to the panelboard with derived source grounding electrode conductor. The wiring shall be isolated from all other ground points and receptacles. The insulation on the grounding conductor from each isolated receptacle shall be green with a yellow stripe with additional permanent identification if there is than one isolated grounding conductor to the panel.

3.4 OUTLET BOXES AND ENCLOSURES

- A.** All boxes and enclosures shall be securely fastened to the building structure, not by the "wall board", etc.
- B.** Recessed outlet boxes or plaster rings shall be set flush with face of finished wall, but in no case set greater than 1/4 inch behind finished face of wall.
- C.** Receptacle boxes shall be 18 inches on center above the finished floor or higher as specified in the drawings. Switch boxes shall be 48 inches on center above finished floor. The Contractor shall check with the Architectural Drawings for possible interference.
- D.** Boxes and enclosures shall be located for convenient access for inspection or work.

3.5 CONDUCTORS AND TERMINATIONS

- A.** Each branch circuit shall have its own grounded conductor (neutral) wire back to the panel.
- B.** No splices shall be permitted unless specifically approved in writing by the UCHC Electrical; Engineer.
- C.** Oxide-inhibiting joint compound such as Penetrox or approved equivalent shall be used wherever there is a joint, bolted or compression, involving aluminum conductor.
- D.** Compression connectors shall be applied with non-reversible tools according to manufacturer's recommendations. Bolted pressure connectors shall not be used

- E. Wire in cabinets; panels, outlet boxes or equipment shall have sufficient length to make up circuit splices for extending circuits or connecting wiring termination devices. Minimum wire length shall be six (6") inches.
- F. Swab-out all conduits and tubing before installing wires and cables and install no wires and cables before conduit systems are complete.
- G. Only one conductor shall be installed under a screw terminal or clamp even if it is approved for 2 or more.
- H. When more than one grounded conductor (neutral) is run in the same raceway each conductor shall be distinguished at both ends with an identification number.
- I. Cable shall be tied at a minimum of every four feet with a UL listed device.
- J. Cable shall be tied to the structure and not to other cabling, conduit, piping or ductwork.
- K. Cable shall run parallel and within 6 inches of walls except when connecting to a device.
- L. 208 and 480 shall not share the same raceway or box
- M. Horizontal runs of conduit or open cabling shall be a minimum of 6 inches above the finished ceiling
- N. Conduit shall be used for the following cabling applications:
 - Voltages equal to or greater than 50 volts in Buildings C, F& H. (Exception: luminaire in all areas may use up to 6 foot whips)
 - Life support, patient care and critical equipment such as blood bank refrigeration, medical gas alarms, vacuum pumps, critical care communication systems, etc.
 - Life safety systems such as egress lighting and exit signage.
 - All wiring in anesthetizing areas.
 - Fire and smoke alarm system.
- O. Open cabling (conduit is not used or required from 3.06M.) is permitted only as follows:
 - Cable shall be used for less than 50 volts
 - Cable shall be UL listed CMP.
 - Before open cabling is designed into new installations the UCHC Agent shall approve the proposal per Facilities Management Policy 551.00.

3.6 SLEEVES AND INSERTS

- A. Sleeve through all outside walls with cast iron with intermediate, integral flange. Sleeves shall be set with ends flush with each face of the wall. The space between sleeve and conduit shall be made watertight with Link-Seal compressed rubber sleeves as manufactured by Thunderline Corporation or an approved equal.
- B. Sleeve through all concrete floors and interior masonry walls with Schedule 40 black steel pipe set flush with finished walls or ceiling surfaces, but extending six (6") inches above the finished floor.
- C. Sleeve through all interior partitions with 22-gauge galvanized sheet steel set flush with finished surfaces or partitions.

3.7 FIRE-STOPS, SEALS AND SPECIAL FITTINGS

- A. All wires, cables and conduit, which pass through floors, ceilings and firewalls, shall be sleeved (see 3.6) and fire stopped according to the manufacturers directions.

- B.** Expansion type fittings shall be used on all conduit runs subject to expansion and contraction due to temperature change and building movement. Deflection and expansion type fittings shall be installed where conduit crosses building expansion joints.

3.8 IDENTIFICATION SYSTEMS (ref. NEC 110.22)

Generally, every device or piece of equipment that is powered by, distributes or controls electricity shall be labeled with identification of where it can be turned on/off and what it controls.

A. CONDUIT or JACKET

Circuits will be identified with panel name and circuit number on junction box covers with black permanent magic marker for normal circuits and red permanent magic marker for emergency circuits. Conduit will be labeled with appropriate color code.

Conduit marking as below shall be every 50' in straight runs and at every wall or floor penetration.

- 120/208 volt normal black band of tape in non plenum ceilings, paint in plenum ceilings
- 120/208 volt emergency black and red band of paint in plenum ceilings, tape in non-plenum ceilings
- 277/480 volt normal yellow band of tape in non plenum ceilings, paint in plenum ceilings
- 277/480 volt emergency yellow and red band of paint in plenum ceilings, tape in non-plenum ceilings
- Fire Alarm - red band of tape in non plenum ceilings red band of paint in plenum rated ceilings, jacket shall be red
- Telecom - band of green tape in non plenum ceilings, band of green paint in plenum ceilings, jacket shall be green or orange
- Security - band of Pink tape in non plenum ceilings, band of pink paint in plenum ceilings cable jacket shall be pink

B. CIRCUIT BREAKER

1. Panelboard indexes shall define the room number and device protected for each circuit breaker.
2. The indexes shall be neatly typed

C. LUMINAIRE AND RECEPTACLE

1. All luminaries, lighting switches and outlets shall be visibly labeled on their faceplates or frames with panelboard and breaker identification (R2A/21 indicates panel R2A breaker #21).
2. The labeling shall be done with black or blue Dymotape for Normal powered circuits and red for Emergency powered circuits or a pre-approved equivalent.
3. Calibration data on circuit breakers 100 amp and greater shall be submitted to the UCHC agent before installation.

D. CONDUCTOR

1. Plastic-coated wire markers of the wraparound, self-adhesive type with legible numbers, letters and symbols shall be used to identify all conductors.
2. The ungrounded and grounded conductors for each branch circuit shall have the same identification code.
3. All conductors shall be marked at the time wires are pulled in and tested; markers shall not be removed for any reason.
4. All wire and cables shall be labeled with wire markers in all junction boxes, panels, switchgear, etc.

E. EQUIPMENT IDENTIFICATION

1. Nameplates designating the power source and the equipment being controlled and its location shall be furnished and installed on all electrical or electrically powered equipment.
2. Nameplates shall consist of black (red for emergency) Lamacoid, or equal pre-approved by the UCHC Agent, with 3/8-inch white letters.
3. Nameplates shall be securely attached in place by sheet metal screws.

3.9 SAFETY SWITCHES

- A. Each motor, motor controller and other hardwired piece of electrical equipment shall have a safety switch which is within sight of the equipment and capable of disconnecting the equipment from the circuit. Controllers or starters which have an integral disconnect switch, as in the case of combination starter/disconnect units, are not required to have a separate disconnect means. Motors or other equipment, which have remote-mounted controllers, shall have a separate safety switch as close as possible and within sight of the motor or equipment served.
- B. Where more than one motor is connected to a single-branch feeder, each motor shall have a disconnect switch even if within sight of the feeder branch breaker.
- C. Install fuses in fusible disconnect switches. Install fuses with label oriented such that manufacturer, type and size are easily readable. Apply permanent adhesive label inside door indicating NEMA fuse class and size required.
- D. The Electrical Contractor shall furnish and install disconnect switches for motors and/or power equipment to meet applicable Code requirements. Disconnect switches, unfused or fusible, for motors 1/2 HP and larger shall be as specified in this Section. Disconnect switches for motors under 1/2 HP shall be of the thermal trip, toggle switch type for the motor involved.
- E. Surface-mounted disconnect switches shall be vertically mounted on $\frac{3}{4}$ " fire-rated plywood painted with 2 coats of fire-retardant light gray paint.

3.10 WORKMANSHIP

- A. The Electrical Contractor shall at all times have someone on the project authorized to make decisions and receive instructions exactly as if the Contractor himself were present.
- B. All work shall be done and all equipment shall be installed in strict accordance with the requirements of all State, local and UCHC, the utility companies, the Underwriters' Laboratories, NFPA, National Electrical Code and/or similar Codes applied hereto. Where Code requirements exceed those shown on the Drawings and in the Specifications, Code requirements shall prevail.

3.11 INSPECTION AND ACCEPTANCE TESTS --- all testing shall be done with the UCHC agent present

- A. All installations shall be available for inspection by UCHC during installation and at completion.
 - 1. An **interim inspection** shall be done by the UCHC Agent before electrical wiring is covered by wallboard, ceiling, etc.
 - 2. An open **panelboard inspection** shall be done once all of the wiring is done and the index and labeling is completed.
 - 3. At the time of the **final inspection** all devices and equipment installed, labeled and properly operating ready for acceptance testing.
- B. The contractor shall test each feeder circuit for an insulation resistance of not less than 0.5 megohms when tested with a 500 VDC potential between conductors and between conductors and grounds at ambient temperature.
- D. Verify that the ground on any isolated ground receptacle the branch circuits only go to ground at the 120/208-transformer panelboard For each isolated ground receptacle, one at a time disconnect the isolated ground wire at the 120/208 transformer panelboard and check for greater than 1 Megohm to ground between the grounding pin and the receptacle box. Reconnect the wire.

End
Section 26 05 05

26 05 19 LOW VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division Specification Sections, apply to this Section.
- B. Requirements of other specified Division 26 Sections apply to this section.

1.2 SUMMARY

- A. This Section includes wires, cables, and connectors for power, lighting, signal, control and related systems rated 600 volts and less.

1.3 SUBMITTALS

- A. Product Data for electrical wires, cables and connectors.

1.4 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with provisions of the following code:
 - B. NFPA 70 "National Electrical Code."
 - 1. Conform to applicable codes and regulations regarding toxicity of combustion products of insulating materials.
 - C. UL Compliance: Provide components which are listed and labeled by UL under the following standards.
 - 1. UL Std. 83 Thermoplastic-Insulated Wires and Cables.
 - 2. UL Std. 486A Wire Connectors and Soldering Lugs for Use with Copper Conductors.
 - 3. UL Std. 1569 Metal Clad Cable.
 - D. NEMA/ICEA Compliance: Provide components which comply with the following standards:
 - 1. WC-5 Thermoplastic-Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy.
 - E. IEEE Compliance: Provide components which comply with the following standard.
 - 1. Std. 82 Test procedures for Impulse Voltage Tests on Insulated Conductors.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products which may be incorporated in the work include, but are not limited to, the following:
 - 1. Wire and Cable:
 - a. American Insulated Wire Corp.
 - b. Republic Wire Inc.
 - c. Southwire Company.
 - 2. Connectors for Wires and Cable Conductors:
 - a. AMP
 - b. 3M Company
 - c. O-Z/Gedney Co.
 - d. Square D Company.

2.2 WIRES AND CABLES

- A. General: Provide wire and cable suitable for the temperature, conditions and location where installed.
- B. Conductors: Provide stranded conductors for power and lighting circuits no. 10 AWG and smaller. Provide stranded conductors for sizes no. 8 AWG and larger.
- C. Conductor Material: copper for all wires and cables.
- D. Conductor sizes indicated are based on copper.
- E. Insulation: Provide THHN/THWN-2 insulation for all conductors size 500MCM and larger, and no. 8 AWG and smaller. For all other sizes provide, THHN/THWN-2 or XHHW insulation as appropriate for the locations where installed.
- F. Color Coding for phase identification in accordance with Table 1 in Part 3 below.
- G. Jackets: Factory-applied nylon or PVC external jacketed wires and cables for pulls in raceways over 100-feet in length, for pulls in raceways with more than three equivalent 90 deg. bends, for pulls in conduits underground or under slabs on grade, and where indicated.
- H. Cables: Provide the following type(s) of cables in NEC approved locations and applications where indicated. Provide cable UL listed for particular application:
 - 1. Metal-Clad Cable: Type MC - limited to the following:
 - a. lighting fixtures and outlets concealed in gypsum wallboard partitions.

2.3 CONNECTORS FOR CONDUCTORS

- A. Provide UL-listed factory-fabricated, solderless metal connectors of sizes, ampacity ratings, materials, types and classes for applications and for services indicated. Use connectors with temperature ratings equal to or greater than those of the wires upon which used.

PART 3 EXECUTION

3.1 WIRING METHOD

- A. Use the following wiring methods as indicated:
 - 1. Wire: install all wire in raceway.
 - 2. Metal Clad Cable, Type MC: where wiring concealed in gypsum wall partitions, ceilings, for connections from raceway outlet boxes to lighting fixtures, unless otherwise noted.

3.2 INSTALLATION OF WIRES AND CABLES

- A. General: Install electrical cables, wires, and connectors in compliance with NEC.
- B. Coordinate cable installation with other Work.
- C. Pull conductors simultaneously where more than one is being installed in same raceway. Use UL listed pulling compound or lubricant, where necessary.
- D. Use pulling means including, fish tape, cable, rope, and basket weave wire/cable grips which will not damage cables or raceways. Do not use rope hitches for pulling attachment to wire or cable.
- E. Conceal all cable in finished spaces.
- F. Keep conductor splices to minimum.
- G. Install splice and tap connectors which possess equivalent or better mechanical strength and insulation rating than conductors being spliced.
- H. Use splice and tap connectors which are compatible with conductor material.

- I. Provide adequate length of conductors within electrical enclosures and train the conductors to terminal points with no excess. Bundle multiple conductors, with conductors larger than no 10 AWG cabled in individual circuits. Make terminations so there is no bare conductor at the terminal.
- J. Tighten electrical connectors and terminals, including screws and bolts, in accordance with manufacturer's published torque tightening values. Where manufacturer's torquing requirements are not indicated, tighten connectors and terminals to comply with tightening torques specified in UL 486A and UL 486B.

3.3 FIELD QUALITY CONTROL

- A. Prior to energizing, check installed wires and cables with megohm meter to determine insulation resistance levels to assure requirements are fulfilled.
- B. Prior to energizing, test wires and cables for electrical continuity and for short-circuits.
- C. Subsequent to wire and cable hook-ups, energize circuits and demonstrate proper functioning. Correct malfunctioning units, and retest to demonstrate compliance.
- D. TABLE 1: Color Coding for Phase Identification:
 - 1. Color code secondary service, feeder, and branch circuit conductors with factory applied color as follows:

<u>208Y/120Volts</u>	<u>Phase</u>	<u>480/277Volts</u>
Black	A	Yellow
Red	B	Brown
Blue	C	Orange
White	Neutral	White
Green	Ground	Green

End
Section 26 05 19

26 05 26 - GROUNDING

PART 1 GENERAL

1.1 SUMMARY

- A. This Section includes solid grounding of electrical systems and equipment. It includes basic requirements for grounding for protection of life, equipment, circuits, and systems. Grounding requirements specified in this Section may be supplemented in other sections of these Specifications.
- B. Related Sections: The following sections contain requirements that relate to this Section:
 - 1. Division 26 Section "low voltage electrical power conductors and cables."

1.2 SUBMITTALS

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.
- B. Product data for ground rods, connectors and connection materials, and grounding fittings.
- C. Field-testing organization certificate, signed by the Contractor, certifying that the organization performing field tests complies with the requirements specified in Quality Assurance below.
- D. Report of field tests and observations certified by the testing organization.

1.3 QUALITY ASSURANCE

- A. Listing and Labeling: Provide products specified in this Section that are listed and labeled. The terms "listed" and "labeled" shall be defined as they are in the National Electrical Code, Article 100.
 - 1. Listing and Labeling Agency Qualifications: A "Nationally Recognized Testing Laboratory" (NRTL) as defined in OSHA Regulation 1910.7.
- B. Field-Testing Organization Qualifications: To qualify for acceptance, the independent testing organization must demonstrate, based on evaluation of organization-submitted criteria conforming to ASTM E 699, that it has the experience and capability to conduct satisfactorily the testing indicated.
- C. Electrical Component Standard: Components and installation shall comply with NFPA 70, "National Electrical Code" (NEC).
- D. UL Standard: Comply with UL 467, "Grounding and Bonding Equipment."

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following:
 - 1. Anixter Bros., Inc.
 - 2. Bashlin Industries, Inc.
 - 3. Erico Products, Inc.
 - 4. GB Electrical, Inc.
 - 5. Ideal Industries, Inc.
 - 6. O-Z/Gedney Co.
 - 7. Raco, Inc.
 - 8. Thomas & Betts Corp.
 - 9. Utilco Co.

2.2 GROUNDING AND BONDING PRODUCTS

A. Products: Of types indicated and of sizes and ratings to comply with NEC. Where types, sizes, ratings, and quantities indicated are in excess of NEC requirements, the more stringent requirements and the greater size, rating, and quantity indications govern.

B. Conductor Materials: Copper.

2.3 WIRE AND CABLE CONDUCTORS

A. General: Comply with Division 26 Section "low voltage electrical power conductors and cables." Conform to NEC Table 8, except as otherwise indicated, for conductor properties, including stranding.

B. Equipment Grounding Conductor: Green insulated.

C. Grounding Electrode Conductor: Stranded cable.

D. Bare Copper Conductors: Conform to the following:
1. Assembly of Stranded Conductors: ASTM B-8.

2.4 MISCELLANEOUS CONDUCTORS

A. Ground Bus: Bare annealed copper bars of rectangular cross section.

B. Braided Bonding Jumpers: Copper tape, braided No. 30 gage bare copper wire, terminated with copper ferrules.

C. Bonding Strap Conductor/Connectors: Soft copper, 0.05 inch thick and 2 inches wide, except as indicated.

2.5 CONNECTOR PRODUCTS

A. General: Listed and labeled as grounding connectors for the materials used.

B. Pressure Connectors: High-conductivity-plated units.

C. Bolted Clamps: Heavy-duty units listed for the application.

D. Exothermic Welded Connections: Provided in kit form and selected for the specific types, sizes, and combinations of conductors and other items to be connected.

E. Aluminum-To-Copper Connections: Bimetallic type, conforming to UL 96, "Lighting Protection Components," or UL 467.

PART 3 EXECUTION

3.1 APPLICATIONS

A. Equipment Grounding Conductor Application: Comply with NEC Article 250 for sizes and quantities of equipment grounding conductors, except where larger sizes or more conductors are indicated.

1. Install separate insulated equipment grounding conductors with circuit conductors for the following in addition to those locations where required by Code:
 - a. Lighting circuits.
 - b. Feeders and branch circuits.
 - c. Receptacle Circuits.
 - d. Single-phase motor or appliance circuits.
 - e. Three-phase motor or appliance branch circuits.

2. Busway Circuits: Install separate insulated equipment ground conductor from the ground bus in the switchgear, switchboard, or distribution panel to the equipment ground terminal on the busway.

3. Elevator Equipment Circuits: Install an insulated equipment grounding conductor to electrical devices operating at 120-V and above including hard-wired and plug-cord assemblies. Bond the conductor to each such unit and in accordance with manufacturer's requirements.
4. Special systems: Provide isolated ground feeder back through each IDF & MDF room. Bond conductor back to building ground.
5. Nonmetallic Raceways: Install an insulated equipment ground conductor in nonmetallic raceways.

B. Underground Conductors: Bare, stranded copper except as otherwise indicated.

3.2 INSTALLATION

A. General: Ground electrical systems and equipment in accordance with NEC requirements except where the Drawings or Specifications exceed NEC requirements.

B. Ground Rods: Locate a minimum of one rod length from each other and at least the same distance from any other grounding electrode, or as indicated otherwise on the drawings. Interconnect ground rods with bare conductors buried at least 24 inches below grade. Connect bare cable ground conductors to ground rods by means of exothermic welds except as otherwise indicated. Make these connections without damaging the copper coating or exposing the steel. Use 3/4 inch by 10 ft. ground rods except as otherwise indicated. Drive rods until tops are 6 inches below finished floor or final grade except as otherwise indicated.

C. Metallic Water Service Pipe: Provide insulated copper ground conductors, sized as indicated, in conduit from the building main service equipment, or the ground bus, to main metallic water service entrances to the building. Connect ground conductors to the main metallic water service pipes by means of ground clamps. Do not install a grounding jumper around dielectric fittings. Connect the ground conductor to the street side of the fitting. Bond the ground conductor conduit to the conductor at each end.

D. Braided Type Bonding Jumpers: Install to connect ground clamps on water meter piping to bypass water meters electrically. Use elsewhere for flexible bonding and grounding connections.

E. Route grounding conductors along the shortest and straightest paths possible without obstructing access or placing conductors where they may be subjected to strain.

F. Test Wells: Locate as indicated, and as required.

G. Grounding connections should conform to NEC in addition to local requirements.

H. Neutral Ground Resistor (NGR) shall be installed within walkin style generator enclosure. The NGR shall be mounted above the generator assembly and will be either supported from the floor or ceiling of said assembly. Coordinate installation location and requirements with generator manufacturer. Install per manufacturer's installation requirements.

3.3 CONNECTIONS

A. General: Make connections in such a manner as to minimize possibility of galvanic action or electrolysis. Select connectors, connection hardware, conductors, and connection methods so metals in direct contact will be galvanically compatible.

1. Use electroplated or hot tin coated materials to assure high conductivity and make contact points closer in order of galvanic series.
2. Make connections with clean bare metal at points of contact.
3. Aluminum to steel connections shall be with stainless steel separators and mechanical clamps.
4. Aluminum to galvanized steel connections shall be with tin plated copper jumpers and mechanical clamps.
5. Coat and seal connections involving dissimilar metals with inert material such as red lead paint to prevent future penetration of moisture to contact surfaces.

B. Exothermic Welded Connections: Use for connections to structural steel and for underground connections except those at test wells. Install at connections to ground rods and plate electrodes.

Comply with manufacturer's written recommendations. Welds that are puffed up or that show convex surfaces indicating improper cleaning are not acceptable.

- C. Terminate insulated equipment grounding conductors for feeders and branch circuits with pressure type grounding lugs. Where metallic raceways terminate at metallic housings without mechanical and electrical connection to the housing, terminate each conduit with a grounding bushing. Connect grounding bushings with a bare grounding conductor to the ground bus in the housing. Bond electrically noncontinuous conduits at both entrances and exits with grounding bushings and bare grounding conductors.
- D. Tighten grounding and bonding connectors and terminals, including screws and bolts, in accordance with manufacturer's published torque tightening values for connectors and bolts. Where manufacturer's torquing requirements are not indicated, tighten connections to comply with torque tightening values specified in UL 486.
- E. Connections at Test Wells: Use compression type connectors on conductors and make bolted and clamped type connections between conductors and ground rods.
- F. Compression Type Connections: Use hydraulic compression tools to provide the correct circumferential pressure for compression connectors. Use tools and dies recommended by the manufacturer of the connectors. Provide embossing die code or other standard method to make a visible indication that a connector has been adequately compressed on the ground conductor.
- G. Moisture Protection: Where insulated ground conductors are connected to ground rods or ground buses, insulate the entire area of the connection and seal against moisture penetration of the insulation and cable.

3.4 FIELD QUALITY CONTROL

- A. Independent Testing Organization: Arrange and pay for the services of a qualified independent electrical testing organization to perform tests described below.
- B. Tests: Subject the completed grounding system to a megger test at service disconnect enclosure ground terminal, and at ground test wells. Measure ground resistance without the soil being moistened by any means other than natural precipitation or natural drainage or seepage and without chemical treatment or other artificial means of reducing natural ground resistance. Perform tests by the 2 point method in accordance with Section 9.03 of IEEE 81, "Guide for Measuring Earth Resistivity, Ground Impedance and Earth Surface Potentials of a Grounding System."
- C. Ground/resistance maximum values shall be as follows:
 - 1. Equipment rated 500 kVA and less: 5 Ohms
 - 2. Equipment rated 500 kVA to 1000 kVA: 5 Ohms
 - 3. Equipment rated over 1000 kVA: 3 Ohms
 - 4. Pad Mounted equipment: 5 ohms.
- D. Deficiencies: Where ground resistances exceed specified values, and if directed, modify the grounding system to reduce resistance values. Coordinate with the Owner's Representative.
- E. Report: Prepare test reports, certified by the testing organization, of the ground resistance at each test location. Include observations of weather and other phenomena that may affect test results. Describe measures taken to improve test results.

3.5 CLEANING AND ADJUSTING

- A. Restore surface features at areas disturbed by excavation and reestablish original grades except as otherwise indicated. Where sod has been removed, replace it as soon as possible after backfilling is completed. Restore areas disturbed by trenching, storing of dirt, cable laying, and other Work to their original condition. Include necessary topsoiling, fertilizing, liming, seeding, sodding, sprigging, or mulching. Perform such Work in accordance with Division 2.

University of Connecticut Health Center
195 Farmington Avenue Elevator Pit Upgrades
Project No. 18-604.04
Farmington, Connecticut

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End
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26 05 29 SUPPORTING DEVICES

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1. Specification Sections, apply to this Section.
- B. Requirements specified in other Division 26 Sections apply to this section.

1.2 SUMMARY

- A. This Section includes secure support from the building structure for electrical items by means of hangers, supports, anchors, sleeves, inserts, seals, and associated fastenings.

1.3 SUBMITTALS

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.
 - B. Product data for each type of product specified.
 - 1. Hanger and support schedule showing manufacturer's figure number, size, spacing, features, and application for each required type of hanger, support, sleeve, seal, and fastener to be used.
 - C. Shop drawings indicating details of fabricated products and materials.
 - D. Engineered Design consisting of details and engineering analysis for supports for the following items:
 - 1. Fastener supporting systems.

1.4 QUALITY ASSURANCE

- A. Electrical Component Standard: Components and installation shall comply with NFPA 70 "National Electrical Code."
- B. Electrical components shall be listed and labeled by UL, ETL, CSA, or other approved, nationally recognized testing and listing agency that provides third-party certification follow-up services.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following:
 - 1. Slotted Metal Angle and U-Channel Systems:
 - a. Allied Tube & Conduit
 - b. B-Line Systems, Inc.
 - c. Cinch Clamp Co., Inc.
 - d. GS Metals Corp.
 - e. Unistrut Diversified Products
 - 2. Conduit Sealing Bushings:
 - a. Cooper Industries, Inc.
 - b. GS Metals Corp.
 - c. Killark Electric Mfg. Co.
 - d. O-Z/Gedney
 - e. Raco, Inc.
 - f. Spring City Electrical Mfg. Co.
 - g. Thomas & Betts Corp.

2.2 COATINGS

- A. Coating: Supports, support hardware, and fasteners shall be protected with zinc coating or with treatment of equivalent corrosion resistance using approved alternative treatment, finish, or inherent material characteristic. Products for use outdoors shall be hot-dip galvanized.

2.3 MANUFACTURED SUPPORTING DEVICES

- A. Raceway Supports: Clevis hangers, riser clamps, conduit straps, threaded C-clamps with retainers, ceiling trapeze hangers, wall brackets, and spring steel clamps.
- B. Fasteners: Types, materials, and construction features as follows:
 - 1. Expansion Anchors: Carbon steel wedge or sleeve type.
 - 2. Toggle Bolts: All steel springhead type.
- C. Conduit Sealing Bushings: Factory-fabricated watertight conduit sealing bushing assemblies suitable for sealing around conduit, or tubing passing through concrete floors and walls. Construct seals with steel sleeve, malleable iron body, neoprene sealing grommets or rings, metal pressure rings, pressure clamps, and cap screws.
- D. Cable Supports for Vertical Conduit: Factory-fabricated assembly consisting of threaded body and insulating wedging plug for non-armored electrical cables in riser conduits. Provide plugs with number and size of conductor gripping holes as required to suit individual risers. Construct body of malleable-iron casting with hot-dip galvanized finish.
- E. U-Channel Systems: 16-gage steel channels, with 9/16-inch-diameter holes, at a minimum of 8 inches on center, in top surface. Provide fittings and accessories that mate and match with U-channel and are of the same manufacture.

2.4 FABRICATED SUPPORTING DEVICES

- A. General: Shop- or field-fabricated supports or manufactured supports assembled from U-channel components.
- B. Steel Brackets: Fabricated of angles, channels, and other standard structural shapes. Connect with welds and machine bolts to form rigid supports.
- C. Pipe Sleeves: Provide pipe sleeves of one of the following:
 - 1. Sheet Metal: Fabricate from galvanized sheet metal; round tube closed with snap-lock joint, welded spiral seams, or welded longitudinal joint. Fabricate sleeves from the following gage metal for sleeve diameter noted:
 - a. 3-inch and smaller: 20-gage.
 - b. 4-inch to 6-inch: 16-gage.
 - c. over 6-inch: 14-gage.
 - 2. Steel Pipe: Fabricate from Schedule 40 galvanized steel pipe.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install supporting devices to fasten electrical components securely and permanently in accordance with NEC requirements.
- B. Coordinate with the building structural system and with other electrical installation.
- C. Raceway Supports: Comply with the NEC and the following requirements:
 - 1. Conform to manufacturer's recommendations for selection and installation of supports.
 - 2. Strength of each support shall be adequate to carry present and future load multiplied by a safety factor of at least four. Where this determination results in a safety allowance of less than 200 lbs, provide additional strength until there is a minimum of 200 lbs safety allowance in the strength of each support.
 - 3. Install individual and multiple (trapeze) raceway hangers and riser clamps as necessary to support

- raceways. Provide U-bolts, clamps, attachments, and other hardware necessary for hanger assembly and for securing hanger rods and conduits.
4. Support parallel runs of horizontal raceways together on trapeze-type hangers.
 5. Support individual horizontal raceways by separate pipe hangers. Spring steel fasteners may be used in lieu of hangers only for 1-1/2-inch and smaller raceways serving lighting and receptacle branch circuits above suspended ceilings only. For hanger rods with spring steel fasteners, use 1/4-inch-diameter or larger threaded steel. Use spring steel fasteners that are specifically designed for supporting single conduits or tubing.
 6. Space supports for raceways in accordance with Paragraph 3.02 Table 1: Spacing for Raceway Supports. Space supports for raceway types not covered by the above in accordance with NEC.
 7. Support exposed and concealed raceway within 1 foot of an unsupported box and access fittings. In horizontal runs, support at the box and access fittings may be omitted where box or access fittings are independently supported and raceway terminals are not made with chase nipples or threadless box connectors.
 8. In vertical runs, arrange support so the load produced by the weight of the raceway and the enclosed conductors is carried entirely by the conduit supports with no weight load on raceway terminals.
- D. Vertical Conductor Supports: Install simultaneously with installation of conductors.
- E. Miscellaneous Supports: Support miscellaneous electrical components as required to produce the same structural safety factors as specified for raceway supports. Install metal channel racks for mounting cabinets, panelboards, disconnects, control enclosures, pull boxes, junction boxes, transformers, and other devices.
- F. In open overhead spaces, cast boxes threaded to raceways need not be supported separately except where used for fixture support; support sheet metal boxes directly from the building structure or by bar hangers. Where bar hangers are used, attach the bar to raceways on opposite sides of the box and support the raceway with an approved type of fastener not more than 24 inches from the box.
- G. Sleeves: Install in concrete slabs and walls and all other fire-rated floors and walls for raceways and cable installations. For sleeves through fire rated-wall or floor construction, apply UL- listed firestopping sealant in gaps between sleeves and enclosed conduits and cables in accordance with requirements specified elsewhere.
- H. Conduit Seals: Install seals for conduit penetrations of slabs on grade and exterior walls below grade and where indicated. Tighten sleeve seal screws until sealing grommets have expanded to form watertight seal.
- I. Fastening: Unless otherwise indicated, fasten electrical items and their supporting hardware securely to the building structure, including but not limited to conduits, raceways, cables, cable trays, busways, cabinets, panelboards, transformers, boxes, disconnect switches, and control components in accordance with the following:
1. Fasten by means of wood screws or screw-type nails on wood, toggle bolts on hollow masonry units, concrete inserts or expansion bolts on concrete or solid masonry, and machine screws, welded threaded studs, or spring-tension clamps on steel. Do not weld conduit, pipe straps, or items other than threaded studs to steel structures. In partitions of light steel construction, use sheet metal screws.
 2. Holes cut to depth of more than 1-1/2 inches in reinforced concrete beams or to depth of more than 3/4 inch in concrete shall not cut the main reinforcing bars. Fill holes that are not used.
 3. Ensure that the load applied to any fastener does not exceed 25 percent of the proof test load. Use vibration- and shock- resistant fasteners for attachments to concrete slabs.
- J. TESTS: Test pull-out resistance of one of each type, size, and anchorage material for the following fastener types:
1. Expansion anchors.
 2. Toggle bolts.
- K. Provide all jacks, jigs, fixtures, and calibrated indicating scales required for reliable testing. Obtain the structural Engineer's approval before transmitting loads to the structure. Test to 90 percent of rated proof load for fastener. If fastening fails test, revise all similar fastener installations and retest until satisfactory results are achieved.

- L. Conduit seals at walk-in cooler& freezer location: Install seals for conduit penetrations into cooler or freezer equipment where conduit enters the repsective conditional areas, and at slab locations.

3.2 TABLE I: SPACING FOR RACEWAY SUPPORTS

HORIZONTAL RUNS

Raceway Size (Inches)	No. of Conductors in Run	Location	RSC/	
			IMC (1)	EMT (1)
1/2,3/4	3 or more	Any location.	7	7
1/2-1	3 or more	Any location.	7	7
1 & larger	1 or 2	Flat ceiling or wall.	6	6
1 & larger	3 or more	Any location.	10	10
Any	Concealed.	10	10

VERTICAL RUNS

Raceway Size (Inches)	No. of Conductors in Run	Location	RSC/	
			IMC (1)	EMT (1)
1/2,3/4	Exposed.	7	7
1,1-1/4	Exposed.	8	8
1-1/2 & larger	Exposed.	10	10
Any	Concealed.	10	10

NOTES:

(1) Maximum spacing of supports (feet).

Abbreviations: EMT: Electrical metallic tubing.
 RSC: Rigid steel conduit.
 IMC: Intermediate metal conduit

End
Section 26 05 29

26 05 33 – RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Requirements specified in other Division 26 Sections apply to this section.

1.2 SUMMARY

- A. This Section includes raceways for electrical wiring. Types of raceways in this section include the following:
 - 1. Rigid metal conduit.
 - 2. Intermediate metal conduit.
 - 3. Liquidtight flexible conduit.
 - 4. Flexible metal conduit.
 - 5. Electrical Metallic Tubing (EMT).
 - 6. Wireways.
- B. This section includes cabinets, boxes, and fittings for electrical installations and certain types of electrical fittings not covered in other sections. Types of products specified in this Section include:
 - 1. Outlet and device boxes.
 - 2. Pull and junction boxes.
 - 3. Cabinets.
 - 4. Hinged door enclosures.
- C. Related Sections: The following Division 26 Sections contain requirements that relate to this Section:
 - 1. "Low voltage electrical power conductors and cables" for other wiring methods.
 - 2. "Supporting Devices" for raceway supports.

1.3 DEFINITIONS

- A. Cabinets: An enclosure designed either for surface or for flush mounting and having a frame, or trim in which a door or doors may be mounted.
- B. Device Box: An outlet box designed to house a receptacle device or a wiring box designed to house a switch.
- C. Enclosure: A box, case, cabinet, or housing for electrical wiring or components.
- D. Outlet Box: A wiring enclosure where current is taken from a wiring system to supply utilization equipment.
- E. Wiring Box: An enclosure designed to provide access to wiring systems or for the mounting of indicating devices or of switches for controlling electrical circuits.

1.4 SUBMITTALS

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections:
 - 1. Product data for Raceway systems.
 - 2. Product data for cabinets and enclosures with classification higher than NEMA 1.
 - 3. Shop drawings for boxes, enclosures and cabinets that are to be shop fabricated, (nonstock items). For shop fabricated junction and pull boxes, show accurately scaled views and spatial relationships to adjacent equipment. Show box types, dimensions, and finishes.

1.5 QUALITY ASSURANCE

- A. UL Listing and Labeling: Items provided under this section shall be listed and labeled by UL.

- B. Nationally Recognized Testing Laboratory Listing and Labeling (NRTL): Items provided under this section shall be listed and labeled by a NRTL. The term "NRTL" shall be as defined in OSHA Regulation 1910.7.
- C. National Electrical Code Compliance: Components and installation shall comply with NFPA 70 "National Electrical Code."
- D. NEMA Compliance: Comply with NEMA Standard 250, "Enclosures for Electrical Equipment (1000 Volts Maximum)."
- E. NEMA Compliance: Comply with applicable requirements of NEMA standards pertaining to raceways.
- F. Provide raceway products and components listed and labeled by UL, ETL, or CSA.

1.6 SEQUENCING AND SCHEDULING

- A. Coordinate with other Work, including metal and concrete deck installation, as necessary to interface installation of electrical raceways and components with other Work.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following:
 - B. Conduit Bodies:
 - 1. Appleton Electric Co.
 - 2. Carlon
 - 3. Killark Electric Mfg. Co.
 - 4. O Z/Gedney
 - 5. Spring City Electrical Mfg. Co.
 - C. Wireways:
 - 1. Erickson Electric Equipment Co.
 - 2. GS Metals Corp.
 - 3. Hoffman Engineering Co.
 - D. Cabinets:
 - 1. Erickson Electrical Equipment Co.
 - 2. Hoffman Engineering Co.
 - 3. Spring City Electrical Mfg. Co.
 - 4. Square D Co.

2.2 METAL CONDUIT AND TUBING

- A. Rigid Steel Conduit: ANSI C80.1.
- B. Intermediate Steel Conduit: UL 1242.
- C. Electrical Metallic Tubing and Fittings: ANSI C80.3
- D. Flexible Metal Conduit: UL 1, zinc coated steel.
- E. Liquid-tight Flexible Metal Conduit and Fittings: UL 360. Fittings shall be specifically approved for use with this raceway.

2.3 CONDUIT BODIES

- A. General: Types, shapes, and sizes as required to suit individual applications and NEC requirements. Provide matching gasketed covers secured with corrosion resistant screws.

- B. Metallic Conduit and Tubing: Use metallic conduit bodies. Use bodies with threaded hubs for threaded raceways.
- C. Conduit Bodies 1 Inch and Smaller: Use bodies with compression type threaded connectors.

2.4 WIREWAYS

- A. General: Electrical wireways shall be of types, sizes, and number of channels indicated. Fittings and accessories including but not limited to couplings, offsets, elbows, expansion joints, adapters, hold-down straps, and end caps shall match and mate with wireway as required for completed system. Where features are not indicated, select to fulfill wiring requirements and comply with applicable provisions of NEC.
- B. Wireway covers to be hinged type.

2.5 CABINETS, BOXES, AND FITTINGS, GENERAL

- A. Electrical Cabinets, Boxes, and Fittings: Of indicated types, sizes, and NEMA enclosure classes. Where not indicated, provide units of types, sizes, and classes appropriate for the use and location. Provide all items complete with covers and accessories required for the intended use. Provide gaskets for units in damp or wet locations. This applies to kitchen areas.
- B. Materials and finish
 1. Sheet Steel: Flat-rolled, code-gage, galvanized steel.
 2. Fasteners for General Use: Corrosion resistant screws and hardware including cadmium and zinc plated items.
 3. Fasteners for Damp or Wet Locations: Stainless steel screws and hardware.
 4. Cast Metal for Boxes, Enclosures, and Covers; Copper-free aluminum except as otherwise specified.
 5. Exterior Finish: Gray baked enamel for items exposed in finished locations except as otherwise indicated.
 6. Painted Interior Finish: Where indicated, white baked enamel.
 7. Fittings for Boxes, Cabinets, and Enclosures: Conform to UL 514B. Malleable iron or zinc plated steel for conduit hubs, bushings and box connectors.

2.6 METAL OUTLET, DEVICE, AND SMALL WIRING BOXES

- A. General: Conform to UL 514A, "Metallic Outlet Boxes, Electrical," and UL 514B, "Fittings for Conduit and Outlet Boxes." Boxes shall be of type, shape, size, and depth to suit each location and application.
- B. Steel Boxes: Conform to NEMA OS 1, "Sheet Steel Outlet Boxes, Device Boxes, Covers, and Box Supports." Boxes shall be sheet steel with stamped knockouts, threaded screw holes and accessories suitable for each location including mounting brackets and straps, cable clamps, exterior rings and fixture studs.
- C. Cast-Iron Boxes: Iron alloy, waterproof, with threaded raceway entries and features and accessories suitable for each location, including mounting ears, threaded screw holes for devices and closure plugs.

2.7 PULL OR JUNCTION BOXES

- A. General: Comply with UL 50, "Electrical Cabinets and Boxes", for boxes over 100 cubic inches volume. Boxes shall have screwed or bolted on covers of material same as box and shall be of size and shape to suit application.
- B. Steel Boxes: Sheet steel with welded seams. Where necessary to provide a rigid assembly, construct with internal structural steel bracing.
- C. Hot-Dipped Galvanized Steel Boxes: Sheet steel with welded seams. Where necessary to provide a rigid assembly, construct with internal structural steel bracing. Hot-dip galvanized after fabrication. Cover shall be gasketed.

- D. Stainless-Steel Boxes: Fabricate of stainless steel conforming to Type 302 of ASTM A 167, "Specification for Stainless and Heat Resisting Chromium-Nickel Steel Plate, Sheet, and Strip." Where necessary to provide a rigid assembly, construct with internal structural stainless steel bracing. Cover shall be gasketed.
- E. Cast-Iron Boxes: Molded of cast iron alloy with gasketed cover and integral threaded conduit entrances.

2.8 CABINETS

- A. Comply with UL 50, "Electrical Cabinets and Boxes."
- B. Construction: Sheet steel, NEMA 4 class except as otherwise indicated. Cabinet shall consist of a box and a front consisting of a one piece frame and a hinged door. Arrange door to close against a rabbet placed all around the inside edge of the frame, with a uniformly close fit between door and frame. Provide concealed fasteners, not over 24-inches apart, to hold fronts to cabinet boxes and provide for adjustment. Provide flush or concealed door hinges not over 24-inches apart and not over 6-inches from top and bottom of door. For flush cabinets, make the front approximately 3/4 inch larger than the box all around. For surface mounted cabinets make front same height and width as box.
- C. Doors: Double doors for cabinets wider than 24-inches.
- D. Locks: Combination spring catch and key lock, with all locks for cabinets of the same system keyed alike. Locks may be omitted on signal, power, and lighting cabinets located within wire closets and mechanical-electrical rooms. Locks shall be of a type to permit doors to latch closed without locking.

2.9 STEEL ENCLOSURES WITH HINGED DOORS

- A. Comply with UL 50, "Cabinets and Enclosures" and NEMA ICS 6,
- B. "Enclosures for Industrial Controls and Systems."
- C. Construction: Sheet steel, 16 gage, minimum, with continuous welded seams. NEMA class as indicated; arranged for surface mounting.
- D. Doors: Hinged directly to cabinet and removable, with approximately 3/4-inch flange around all edges, shaped to cover edge of box. Provide handle operated, key locking latch. Individual door width shall be no greater than 24-inches. Provide multiple doors where required.
- E. Mounting Panel: Provide painted removable internal mounting panel for component installation.
- F. Enclosure: NEMA 4 except as indicated. Where door gasketing is required, provide neoprene gasket attached with oil-resistant adhesive, and held in place with steel retaining strips. For all enclosures of class higher than NEMA 1, use hubbed raceway entrances.

PART 3 EXECUTION

3.1 RACEWAY WIRING METHOD

- A. Outdoors: Use the following wiring methods:
 - 1. Exposed / Concealed: Rigid metal conduit, Intermediate metal conduit. EMT with rain-tight fittings.
 - 2. Connection to Vibrating Equipment: Including transformers and hydraulic, pneumatic, or electric solenoid or motor driven equipment: liquidtight flexible metal conduit. Maximum length six (6) feet.
- B. Indoors: Use the following wiring methods:
 - 1. Connection to Vibrating Equipment: Including transformers and hydraulic, pneumatic or electric solenoid or motor operated equipment: Flexible metal conduit. Maximum length six (6) feet.
 - 2. Exposed/Concealed unfinished areas: branch circuits: EMT.
 - 3. Exposed/Concealed unfinished areas: Panelboards feeders: Intermediate metal conduit, Rigid metal conduit.

4. Connection to vibrating equipment and hydraulic, pneumatic, or electric solenoid or motor driven equipment in moist or humid location or corrosive atmosphere, or where subject to water spray or dripping oil, grease, or water: Liquidtight flexible metal conduit. Maximum length six (6) feet.
5. Elevator Pit: Intermediate metal conduit, Rigid metal conduit.

3.2 RACEWAY INSTALLATION

- A. General: Install electrical raceways in accordance with manufacturer's written installation instructions, applicable requirements of NEC, and as follows:
- B. Conceal Conduit, unless indicated otherwise, within finished walls, ceilings, and floors. Keep raceways at least 6 inches away from parallel runs of flues and hot water pipes. Install raceways level and square and at proper elevations.
- C. Elevation of Raceway: Where possible, install horizontal raceway runs above water and sanitary piping.
- D. Complete installation of electrical raceways before starting installation of conductors within raceways.
- E. Provide supports for raceways as specified elsewhere in Division 26.
- F. Prevent foreign matter from entering raceways by using temporary closure protection.
- G. Protect stub ups from damage where conduits rise from floor slabs. Arrange so curved portion of bends is not visible above the finished slab.
- H. Make bends and offsets so the inside diameter is not effectively reduced. Unless otherwise indicated, keep the legs of a bend in the same plane and the straight legs of offsets parallel.
- I. Use raceway fittings that are of types compatible with the associated raceway and suitable for the use and location. For intermediate steel conduit, use threaded rigid steel conduit fittings except as otherwise indicated.
- J. Run concealed raceways with a minimum of bends in the shortest practical distance considering the type of building construction and obstructions except as otherwise indicated.
- K. Install exposed raceways parallel and perpendicular to nearby surfaces or structural members and follow the surface contours as much as practical.
- L. Run exposed, parallel, or banked raceways together. Make bends in parallel or banked runs from the same center line so that the bends are parallel. Factory elbows may be used in banked runs only where they can be installed parallel. This requires that there be a change in the plane of the run such as from wall to ceiling and that the raceways be of the same size. In other cases provide field bends for parallel raceways.
- M. Join raceways with fittings designed and approved for the purpose and make joints tight. Where joints cannot be made tight, use bonding jumpers to provide electrical continuity of the raceway system. Make raceway terminations tight. Where terminations are subject to vibration, use bonding bushings or wedges to assure electrical continuity. Where subject to vibration or dampness, use insulating bushings to protect conductors.
- N. Tighten set screws of threadless fittings with suitable tool.
- O. Terminations: Where raceways are terminated with locknuts and bushings, align the raceway to enter squarely and install the locknuts with dished part against the box. Where terminations cannot be made secure with one locknut, use two locknuts, one inside and one outside the box.
- P. Where terminating in threaded hubs, screw the raceway or fitting tight into the hub so the end bears against the wire protection shoulder. Where chase nipples are used, align the raceway so the coupling is square to the box, and tighten the chase nipple so no threads are exposed.

- Q. Install pull wires in empty raceways. Use no. 14 AWG zinc coated steel or monofilament plastic line having not less than 200 lb tensile strength. Leave not less than 12 inches of slack at each end of the pull wire.
- R. Install raceway sealing fittings in accordance with the manufacturer's written instructions. Locate fittings at suitable, approved, accessible locations and fill them with UL listed sealing compound. For concealed raceways, install each fitting in a flush steel box with a blank cover plate having a finish similar to that of adjacent plates or surfaces. Install raceway sealing fittings at the following points and elsewhere as indicated:
 - 1. Where conduits pass from warm locations to cold locations, such as the boundaries of conditioned spaces and mechanical spaces.
 - 2. Where required by the NEC.
- S. Stub up Connections: Extend conduits through concrete floor for connection to freestanding equipment with an adjustable top or coupling threaded inside for plugs and set flush with the finished floor. Extend conductors to equipment with rigid steel conduit; flexible metal conduit may be used 6 inches above the floor.
- T. Flexible Connections: Use short length (maximum of 6 ft.) of flexible conduit for equipment subject to vibration, noise transmission, or movement; and for all motors. Use liquidtight flexible conduit in wet locations. Install separate ground conductor across flexible connections.

3.3 CABINETS AND BOXES INSTALLATION, GENERAL

- A. Locations: Install items where indicated and where required to suit code requirements and installation conditions.
- B. Cap unused knockout holes where blanks have been removed and plug unused conduit hubs.
- C. Support and fasten items securely in accordance with Division 16 Section "Supporting Devices."
- D. Sizes shall be adequate to meet NEC volume requirements, but in no case smaller than sizes indicated.
- E. Remove sharp edges where they may come in contact with wiring or personnel.

3.4 APPLICATIONS

- A. Cabinets: Flush mounted, NEMA enclosure Type 1 except as otherwise indicated.
- B. Hinged Door Enclosures: NEMA Type 1 enclosure except as indicated.
- C. Hinged Door Enclosures Outdoors: Install drip hood, factory tailored to individual units.
- D. Outlet Boxes and Fittings: Install outlet and device boxes and associated covers and fittings of materials and NEMA types suitable for each location and in conformance with the following requirements:
 - 1. Interior Dry Locations: NEMA Type 1, sheet steel or as permitted by local code.
 - 2. Locations Exposed to Weather, Dampness, or Wet Locations: NEMA Type 3R enclosures.
- E. Pull and Junction Boxes: Install pull and junction boxes of materials and NEMA types suitable for each location except as otherwise indicated.

3.5 INSTALLATION OF OUTLET BOXES

- A. Outlets at Windows and Doors: Locate close to window trim.
- B. Column and Pilaster Locations: Locate outlet boxes for switches and receptacles on columns or pilasters so the centers of the columns are clear for future installation of partitions.
- C. Locations in Special Finish Materials: For outlet boxes for receptacles and switches mounted in desks or furniture cabinets or in glazed tile, concrete block, marble, brick, stone or wood walls, use rectangular

shaped boxes with square corners and straight sides. Install such boxes without plaster rings. Saw cut all recesses for outlet boxes in exposed masonry walls.

- D. Gasketed Boxes: At the following locations use cast metal, threaded hub type boxes with gasketed weatherproof covers:
 - 1. Exterior locations.
 - 2. Where surface mounted on unfinished walls, columns or pilasters. (Cover gaskets may be omitted in dry locations).
 - 3. Where exposed to moisture laden atmosphere.
 - 4. Where indicated.
- E. Cast-Iron Boxes: Iron alloy, waterproof, with threaded raceway entries and features and accessories suitable for each location, including mounting ears, threaded screw holes for devices and closure plugs.
- F. Mounting: Mount outlet boxes for switches with the long axis vertical or as indicated. Mount boxes for receptacles either vertically or horizontally but consistently either way. Three or more gang boxes shall be mounted with the long axis horizontal. Locate box covers or device plates so they will not span different types of building finishes either vertically or horizontally. Locate boxes for switches near doors on the side opposite the hinges and close to door trim, even though electrical floor plans may show them on hinge side.
- G. Ceiling Outlets: For fixtures, where wiring is concealed, use outlet boxes 4-inches square by 1-1/2-inches deep, minimum.
- H. Cover Plates for Surface Boxes: Use plates sized to box front without overlap.
- I. Protect outlet boxes to prevent entrance of plaster, and debris. Thoroughly clean foreign material from boxes before conductors are installed.

3.6 INSTALLATION OF PULL OR JUNCTION BOXES

- A. Box Selection: For boxes in main feeder conduit runs, use sizes not smaller than 8-inches square by 4-inches deep. Do not exceed 6 entering and 6 leaving raceways in a single box. Quantities of conductors (including equipment grounding conductors) in pull or junction box shall not exceed the following:

Size of Largest Conductors in Box	Maximum no. of Conductors in Box
No. 4/0 AWG	30
250 MCM	20
500 MCM	15
Over 500 MCM	10

- 1. Cable Supports: Install clamps, grids, or devices to which cables may be secured. Arrange cables so they may be readily identified. Support cable at least every 30-inches inside boxes.
- 2. Mount pull boxes in inaccessible ceilings with the covers flush with the finished ceiling.
- 3. Size: Provide pull and junction boxes for telephone, signal, and other systems at least 50 percent larger than would be required by or as indicated. Locate boxes strategically and provide shapes to permit easy pulling of future wires or cables of types normal for such systems.

3.7 INSTALLATION OF CABINETS AND HINGED DOOR ENCLOSURES

- A. Mount with fronts straight and plumb.
- B. Install with tops 78-inches above floor.
- C. Set cabinets in finished spaces flush with walls.

3.8 GROUNDING

- A. Electrically ground metallic cabinets, boxes, and enclosures. Where wiring to item includes a grounding conductor, provide a grounding terminal in the interior of the cabinet, box or enclosure.

3.9 RACEWAY ADJUSTING AND CLEANING

- A. Upon completion of installation of raceways, inspect interiors of raceways; clear all blockages and remove burrs, dirt, and construction debris.

3.10 CLEANING AND FINISH REPAIR

- A. Upon completion of installation, inspect components. Remove burrs, dirt, and construction debris and repair damaged finish including chips, scratches, abrasions and weld marks.
- B. Galvanized Finish: Repair damage using a zinc-rich paint recommended by the tray manufacturer.
- C. Painted Finish: Repair damage using matching corrosion inhibiting touch-up coating.

End
Section 26 05 33

26 05 53 ELECTRICAL IDENTIFICATION

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Requirements specified in other Division 26 Sections apply to this section.

1.2 SUMMARY

- A. This Section includes identification of electrical materials, equipment, and installations. It includes requirements for electrical identification components including but not limited to the following:
 - 1. Identification labeling for switchboards, panelboards, devices, raceways, cables, and conductors.
 - 2. Operational instruction signs.
 - 3. Warning and caution signs.
 - 4. Equipment labels and signs.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 26 Section "Low voltage Electrical Power Conductors and Cables" for requirements for color coding of conductors for phase identification.
- C. Refer to other Division 26 sections for additional specific electrical identification associated with specific items.

1.3 SUBMITTALS

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.
- B. Product Data for each type of product specified.
- C. Schedule of identification nomenclature to be used for identification signs and labels.
- D. Samples of each color, lettering style, and other graphic representation required for identification materials; samples of labels and signs.

1.4 QUALITY ASSURANCE

- A. Electrical Component Standard: Components and installation shall comply with NFPA 70 "National Electrical Code."
- B. ANSI Compliance: Comply with requirements of ANSI Standard A13.1, "Scheme for the Identification of Piping Systems," with regard to type and size of lettering for raceway and cable labels.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following:
 - 1. American Labelmark Co.
 - 2. Ideal Industries, Inc.
 - 3. LEM Products, Inc.
 - 4. Markal Corp.
 - 5. National Band and Tag Co.
 - 6. Panduit Corp.
 - 27. Seton Name Plate Co.

2.2 ELECTRICAL IDENTIFICATION PRODUCTS

- A. Adhesive Marking Labels for Raceway and Cable: Pre-printed, flexible, self-adhesive labels with legend indicating voltage and service (Emergency, Lighting, Power, Light, Air Conditioning, Communications, Control, Fire, etc.).
- B. Label Size: as follows:
 - 1. Raceways 1-Inch and Smaller: 1-1/8 inches high by 4 inches long.
 - 2. Raceways Larger than 1-Inch: 1-1/8 inches high by 8 inches long.
- C. Color: Black legend on orange background.
- D. Colored Adhesive Marking Tape for Raceways, Wires, and Cables: Self-adhesive vinyl tape not less than 3 mils thick by 1 inch to 2 inches in width.
- E. Pretensioned Flexible Wraparound Colored Plastic Sleeves for Raceway and Cable Identification: Flexible acrylic bands sized to suit the raceway diameter and arranged to stay in place by pre-tensioned gripping action when coiled around the raceway or cable.
- F. Wire/Cable Designation Tape Markers: Vinyl or vinyl-cloth, self-adhesive, wraparound, cable/conductor markers with preprinted numbers and letter.
- G. Plasticized Card Stock Tags: Vinyl cloth with preprinted and field-printed legends to suit the application. Orange background, except as otherwise indicated, with Eyelet for fastener.
- H. Engraved, Plastic-Laminated Labels, Signs, and Instruction Plates: Engraving stock melamine plastic laminate, 1/16-inch minimum thick for signs up to 20 square inches, or 8 inches in length; 1/8-inch thick for larger sizes. Engraved legend in white letters on black face and punched for mechanical fasteners.
- I. Baked-Enamel Warning and Caution Signs for Interior Use: Preprinted aluminum signs, punched for fasteners, with colors, legend, and size appropriate to the location.
- J. Exterior Metal-Backed Butyrate Warning and Caution Signs: Weather-resistant, nonfading, preprinted cellulose acetate butyrate signs with 20-gage, galvanized steel backing, with colors, legend, and size appropriate to the location. Provide 1/4-inch grommets in corners for mounting.
- K. Fasteners for Plastic-Laminated and Metal Signs: Self-tapping stainless steel screws or number 10/32 stainless steel machine screws with nuts and flat and lock washers.
- L. Cable Ties: Fungus-inert, self-extinguishing, one-piece, self-locking nylon cable ties, 0.18-inch minimum width, 50-lb minimum tensile strength, and suitable for a temperature range from minus 50 deg F to 350 deg F.
 - 1. Provide ties in specified colors when used for color coding.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Lettering and Graphics: Coordinate names, abbreviations, colors, and other designations used in electrical identification work with corresponding designations specified or indicated. Install numbers, lettering, and colors as approved in submittals and as required by code.
- B. Install identification devices in accordance with manufacturer's written instructions and requirements of NEC.
- C. Sequence of Work: Where identification is to be applied to surfaces that require finish, install identification after completion of finish work.
- D. Conduit Identification:
 - 1. The following areas shall be identified:
 - a. On wall surfaces directly external to conduits run concealed within wall.
 - b. On all accessible surfaces of concrete envelope around conduits in vertical shafts, exposed at ceilings or concealed above suspended ceilings.

2. Apply identification to areas as follows:
 - a. Clean surface of dust, loose material, and oily films before painting.
 - b. Prime surfaces: For galvanized metal, use single-component acrylic vehicle coating formulated for galvanized surfaces. For concrete masonry units, use heavy-duty acrylic resin block filler. For concrete surfaces, use clear alkali-resistant alkyd binder-type sealer.
 - c. Apply one intermediate and one finish coat of orange silicone alkyd enamel.
 - d. Apply primer and finish materials in accordance with manufacturer's instructions.

- E. Identify Raceways of Certain Systems with Color Banding: Band exposed or accessible raceways of the following systems for identification. Bands shall be pretensioned, snap-around colored plastic sleeves, colored adhesive marking tape, or a combination of the two. Make each color band 2 inches wide, completely encircling conduit, and place adjacent bands of two-color markings in contact, side by side. Install bands at changes in direction, at penetrations of walls and floors, and at 40-foot maximum intervals in straight runs. Apply the following colors:
 1. Fire Alarm System: Red
 2. Fire Suppression Supervisory and Control System: Red
 3. Mechanical and Electrical Supervisory System: Green and Blue
 4. Telephone System: Green and Yellow

- F. Identify Junction, Pull, and Connection Boxes: Code-required caution sign for boxes shall be pressure-sensitive, self-adhesive label indicating system voltage in black, preprinted on orange background. Install on outside of box cover. Also label box covers with identity of contained circuits. Use pressure-sensitive plastic labels at exposed locations and similar labels or plasticized card stock tags at concealed boxes.

- G. Conductor Color Coding: Provide color coding for secondary service, feeder, and branch circuit conductors throughout the project secondary electrical system as follows:

208Y/120 Volts	Phase	480/277 Volts
Black	A	Brown
Red	B	Orange
Blue	C	Yellow
White	Neutral	Gray
Green	Ground	Green

- H. Use conductors with color factory-applied the entire length of the conductors except as follows:
 1. The following field-applied color-coding methods may be used in lieu of factory-coded wire for sizes larger than No. 10 AWG.
 - a. Apply colored, pressure-sensitive plastic tape in half-lapped turns for a distance of 6 inches from terminal points and in boxes where splices or taps are made. Apply the last two laps of tape with no tension to prevent possible unwinding. Use 1-inch-wide tape in colors as specified. Do not obliterate cable identification markings by taping. Tape locations may be adjusted slightly to prevent such obliteration.
 - b. In lieu of pressure-sensitive tape, colored cable ties may be used for color identification. Apply three ties of specified color to each wire at each terminal or splice point starting 3 inches from the terminal and spaced 3 inches apart. Apply with a special tool or pliers, tighten for snug fit, and cut off excess length.

- I. Tag or label conductors as follows:
 1. Future Connections: Conductors indicated to be for future connection or connection under another contract with identification indicating source and circuit numbers.
 2. Multiple Circuits: Where multiple branch circuits or control wiring or signal conductors are present in the same box or enclosure (except for three-circuit, four-wire home runs), label each conductor or cable. Provide legend indicating source, voltage, circuit number, and phase for branch circuit wiring. Phase and voltage of branch circuit wiring may be indicated by mean of coded color of conductor insulation. For control and signal wiring, use color coding or wire marking tape at

- terminations and at intermediate locations where conductors appear in wiring boxes, troughs, and control cabinets. Use consistent letter/number conductor designations throughout on wire marking tapes.
3. Match identification markings with designations used in panelboards shop drawings, Contract Documents, and similar previously established identification schemes for the facility's electrical installations.
- J.** Apply warning, caution, and instruction signs and stencils as follows:
1. Install warning, caution, or instruction signs where required by NEC, where indicated, or where reasonably required to assure safe operation and maintenance of electrical systems and of the items to which they connect. Install engraved plastic- laminated instruction signs with approved legend where instructions or explanations are needed for system or equipment operation. Install butyrate signs with metal backing for outdoor items.
- K.** Install equipment identification as follows:
1. Apply equipment identification labels of engraved plastic- laminate on each major unit of electrical equipment in building, including central or master unit of each electrical system. This includes alarm systems, unless unit is specified with its own self-explanatory identification. Except as otherwise indicated, provide single line of text, with 1/2-inch-high lettering on 1-1/2-inch-high label (2-inch-high where two lines are required), white lettering in black field. Text shall match terminology and numbering of the Contract Documents and shop drawings. Apply labels for each unit of the following categories of electrical equipment.
 - a. Electrical cabinets and enclosures.
 - b. Access doors and panels for concealed electrical items.
 - c. Contactors.
 - d. Control devices.
 - e. Transformers.
 - f. Disconnect switches.
- L.** Apply designation labels of engraved plastic laminate for disconnect switches, breakers, pushbuttons, pilot lights, motor control centers, and similar items for power distribution and control components above, except panelboards and alarm/signal components, where labeling is specified elsewhere. For panelboards, provide framed, typed circuit schedules with explicit description and identification of items controlled by each individual breaker.
- M.** Install labels at locations indicated and at locations for best convenience of viewing without interference with operation and maintenance of equipment.

End
Section 26 05 53

26 27 26 WIRING DEVICES

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Requirements of other specified Division 26 Sections apply to this section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Receptacles
 - 2. Ground Fault Circuit Interrupter Receptacles
 - 3. Snap Switches
 - 4. Wall Plates
- B. Related Sections: The following sections contain requirements that relate to this section:
 - 1. Division 26 Section "Electrical Identification" for requirements for legends to be engraved on wall plates.

1.3 SUBMITTALS

- A. Product data for each type of product specified.
- B. Samples of those products indicated for sample submission in Engineer's comments on product data submittal. Include color and finish samples of device plates and other items per Engineer's request.

1.4 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with provisions of the following codes.
- B. NFPA 70 "National Electrical Code".
 - 1. UL and NEMA Compliance: Provide wiring devices which are listed and labeled by UL and comply with applicable UL and NEMA standards.

1.5 SEQUENCE AND SCHEDULING

- A. Schedule installation of finish plates after the surface upon which they are installed has received final finish.

PART 2 PRODUCTS

2.1 RECEPTACLES

- A. All 120VAC receptacles shall be:
 - 1. Rated for 20 ampere
 - 2. Ivory with the following exceptions:
 - Isolated ground shall be orange
 - Emergency shall be red
 - Emergency with isolated ground shall be orange and have red faceplate
 - 3. Tamper resistant in waiting areas, family areas, psychiatric areas and maternity rooms. They shall be compliant with 2.1 B
- B. Hospital grade receptacles shall be used exclusively in Buildings H, F and C and in any other patient care areas. Specification grade receptacles shall be used in all other areas; no commercial or residential grade receptacles shall be used at UCHC. Reference the following:
Items 1, 3, 8, 9, 11 and 12 shall be as manufactured by Pass and Seymour only – no substitutions permitted
The remaining items shall be as manufactured by Leviton, Hubbell, Pass and Seymour, GE or Arrow Hart equivalent to the following Leviton part numbers:

		NORMAL	EMERGENCY
1. Patient Care Use	duplex	PT8300IL-I	PT8300IL -RED
2. Patient Care Use	single	8310-I	8310-R
3. Patient Care Use	GFCI	PT2095HG-I	shall not be used for emergency
4. Patient Care Use	isolated ground – duplex	shall not be used because there is no redundant ground	
5. Patient Care Use	isolated ground - single	shall not be used because there is no redundant ground	
6. Patient Care Use	surge protection - quad	8490-I	8490-R
7. Patient Care Use	surge protection - duplex	8380-I	8380-R
8. Patient Care Use	tamper resistant	PT2095HGTR-I	PT2095HGTR-RED
9. General Use	duplex	PT5362A-I	PT5362-R
10. General Use	single	5361-I	5361-R
11. General Use	GFCI	PT2095-I	PT2095-RED
12. General Use	isolated ground - duplex	PTIG5362-I	PTIG5362-RED
13. General Use	surge protection - quad	5490-I	5490-R
14. General Use	surge protection - duplex	8380-I	8380-R

- C. All 250 VAC 20 AMP receptacles shall be NEMA 6-20R type (straight blade) as manufactured by Leviton, Hubbell, GE or Arrow Hart equivalent to the following Leviton part numbers:
- | | | |
|-----------------|--------|-----------|
| 1. Hospital Use | duplex | GE 8400-2 |
| 2. General Use | duplex | GE 5462-2 |
| 3. General Use | single | GE 4182-2 |
- D. All 250 VAC 30 AMP receptacles for use in L building labs shall be NEMA L6-30R (locking type) as manufactured by Hubbell, GE or Arrow Hart equivalent to the following:
- | | | |
|----------------|--------|--------|
| 1. General Use | single | GL0630 |
|----------------|--------|--------|

2.2 SWITCHES

- A. Switches shall be 20A rated and ivory in color. Refer to Table 1 in 2.2B for further requirements:

B. TABLE 1

SNAP SWITCHES

DESIG NATION (1)	TYPICAL APPLICATION	LOAD RATING(AC)	VOLTAGE RATING	POLES	UL GRADE	NOTES
S	CONTROL LIGHTS	20A	120/277 1	HEAVY DUTY		
S3	CONTROL LIGHTS	20A	120/277 3 way	HEAVY DUTY		
S	DISCONN. MOTOR	1HP	120/277 1	HEAVY DUTY	(2)	
STOL	DISCONN. MOTOR	2HP	208/480 3	HEAVY DUTY	(2)	

NOTES

- (1) For snap switches, designation is the same as the symbol used on plans for the device. Type of switch is determined from plan context including type of device or circuit being controlled.
 (2) With overload element in switch.

2.3 WALL PLATES

- A. Receptacle wall plates shall be ivory (red for emergency) colored nylon. Switch wall plates shall be ivory colored nylon.
- B. Wherever switches are grouped, they shall be ganged into one box and provided with a one-piece gang plate to suit the installation.

- C. Plates for exposed installations in unfinished areas shall be raised galvanized steel.

PART 3 EXECUTION

3.1 INSTALLATION

- A. The Contractor shall coordinate his work with other trades involved so that exact locations may be obtained for all switches, outlets, apparatus, appliances and wiring.
- B. If so directed by the UCHC Agent, it shall be understood that any light switch or electrical outlet may be relocated within a distance of ten (10') feet from the location shown on the Drawings at no additional cost to the UCHC Agent.
- C. Parallel blade receptacles shall be installed so that the ground pin or grounded conductor (neutral) blade socket is facing up.
- D. All outlets shall be mounted below electric radiation unless the outlet is mounted integral with the radiation.
- E. Install wiring devices and accessories as indicated, in accordance with manufacturer's written instructions, applicable requirements of NEC and in accordance with recognized industry practices to fulfill project requirements.
- F. Coordinate with other Work, including painting, electrical boxes and wiring installations, as necessary to interface installation of wiring devices with other Work.
- G. Install wiring devices only in electrical boxes which are clean; free from building materials, dirt, and debris.
- H. Install wiring devices after wiring work is completed.
- I. Install wall plates after painting work is completed.
- J. Tighten connectors and terminals, including screws and bolts, in accordance with equipment manufacturer's published torque tightening values for wiring devices. Where manufacturer's torquing requirements are not indicated, tighten connectors and terminals to comply with tightening torques specified in UL Standard 486A. Use properly scaled torque indicating hand tool.

3.2 PROTECTION

- A. Protect installed components from damage. Replace damaged items prior to final acceptance.

3.3 FIELD QUALITY CONTROL

- A. Testing: Prior to energizing circuits, test wiring for electrical continuity, and for short circuits. Ensure proper polarity of connections is maintained. Subsequent to energizing, test wiring devices and demonstrate compliance with requirements, operating each operable device at least six times.
- B. Test ground fault interruptor operation with both local and remote fault simulations in accordance with manufacturer recommendations.

End
Section 26 27 26