



Science Center Renovations

PROJECT MANUAL

PROJECT NO. 77119

December 15, 2020

ROWAN UNIVERSITY

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SECTION I
INSTRUCTIONS TO BIDDERS

1B1. BID PROPOSALS

- 1B1.1. Sealed proposals for the work described herein must be received and time-stamped at the University's Office of Contracting & Procurement. The closing date and time for bids will be stated in the Advertisement and Invitation for Bid. Bidders are cautioned that reliance on the U.S. Mail for timely delivery of proposals is at the bidder's risk. Failure by the contractor to have sealed proposals reach the University by the prescribed time will result in a return of the submission unopened and unread.
- 1B1.2. This contract will be bid as a single prime contract only. Bids for less than all of the project as described herein will be deemed nonconforming.
- 1B1.3. The Instructions to Bidders, Bid forms, Contract forms, plans and specifications, forms of Bid Bond, Agreement of Surety, Performance Bonds, Payment Bonds and other Contract Documents may be examined at the University. Contractors may obtain Contract Documents at the University's Purchasing Website. The University reserves the right to deny award to any bidder who is not clearly responsible based upon experience, past performance and financial capability to perform the work required hereunder or other material factors.
- 1B1.4. Set(s) of Contract Documents will be available for inspection by interested parties free of charge in Rowan University's Purchasing Department.
- 1B1.5. Bid proposals based upon the plans, specifications, general, special and supplementary conditions, clarifications and/or addenda shall be deemed as having been made by the contractor with full knowledge of all project conditions. Bidders are strongly encouraged to visit the site prior to submitting proposals for the work herein described and to have thoroughly examined the conditions under which the contract is to be executed including those reasonably observable conditions of the premises which would hinder, delay or otherwise affect the performance of the contractor required under the terms of the contract. The University will not allow claims for additional costs as a result of the contractor's failure to become aware of the reasonably observable conditions affecting his/her required performance. The bidder is required to make appropriate allowances in the preparation of his/her bid for the accommodation of such conditions. Bidders must warrant in the bid documents that the bidder is familiar with conditions existing at the site at the time the bid is submitted.
- 1B1.6. Bid proposals shall be submitted on the standard form provided by the University, enclosed in a sealed envelope issued by Rowan University. The name and address of the bidder must be indicated on the envelope as well as indication of the project, project location and other appropriate identification.
- 1B1.7. All amounts in the bid documents shall be stated in numerical figures as well as written out in words. In the event of a contradiction between the numerical and written amounts, the written will control. Any illegible amounts will be deemed non-responsive.

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The bidder must include the following items in the bid envelope. Other documents may be required by the University Purchasing Department. Check the University's website for further information on required documents.

- a. Bidder's Checklist
- b. The Bid Form signed by the bidder
- c. Ownership Disclosure
- d. The executed Affidavit of Non-collusion;
- e. Bid security as further described in Paragraph 1B6;
- f. The Acknowledgement of Addenda;
- g. Consent of Surety
- h. The names and license numbers of and evidence of performance security form of all sub-contractors to who the bidder will sub-contract any of the work on the project for the following:
 - 1) The plumbing and gas fitting work;
 - 2) The heating and ventilating systems and equipment;
 - 3) The electrical work including any electrical power plants;
 - 4) The structural and ornamental iron work.
 - 5) Special Categories as may be required.

The remaining documents contained in the complete set of bid forms found after the Table of Contents should be submitted in the bid envelope and shall be required prior to the award of the contract.

1B1.8. Proposals shall remain open for acceptance and may not be withdrawn for a period of sixty (60) days after the bid opening date.

1B1.9. Proposals not submitted and filed in accordance with instructions contained herein and in the Advertisement will be considered informal and rejected as non-responsive.

1B2. BID MODIFICATION

1B2.1. A bidder may modify his/her bid proposal by telegram or letter at any time prior to the scheduled closing time for receipt of bids provided such communication is received by the University prior to such closing time. A written confirmation of any telegraphic modification signed by the bidder must have been mailed and time-stamped by the post office prior to specified closing time. Such confirmation shall be accompanied by a newly executed Affidavit of Non-Collusion.

1B2.2. Telegraphic communications shall not reveal the basic bid price but only shall provide the amount to be added, subtracted or modified so that the final price(s) or term(s) will not be revealed until the sealed proposal is opened. If written confirmation of the telegraphic modification is not received within two (2) working days after the scheduled closing time, no consideration will be given to the telegraphic modification.

1B2.3. Bids may be withdrawn upon written request received from the bidder prior to the time fixed for the bid opening. Right for withdrawal of a bid is lost after a bid has been opened. If any error has been made in the bid amount, request for relief from the bid may be made in writing to the University. The written request shall be signed by an authorized corporate officer. A determination of whether the bidder will be released shall be at the sole discretion of the University who shall issue his/her finding(s) within five (5) days of his/her receipt of all pertinent information relating to such request for relief.

1B3. CONSIDERATION OF BIDS

1B3.1. Award of Projects(s) or Rejection of Bid(s):

- a. The Project will be awarded to the lowest responsible bidder whose bid, conforming to the Contract Documents, will be most advantageous to the University. The award will be made or the bid(s) rejected within sixty (60) days from the date of the opening of the bids.
- b. All bid security deposits of unsuccessful bidders, except the lowest three (3) bidders, will be returned or refunded within five (5) days of the bid opening.
- c. The bid security deposits of the successful bidder and the next two (2) lowest bidders will be retained by the University until the execution and delivery of a formal contract and delivery of performance and payment bonds by the bidder awarded the project. At such time, bid deposits of the other two (2) low bidders will be returned.
- d. The University reserves the right to award the project on the basis of the single bid for the entire work on or the basis of a separate bid and alternate, or any combination of separate bids and alternates, which the University deems best serves the interest of the University.
- e. The University reserves the right to waive, in its sole discretion, minor informalities or non-material exceptions in the bid when such waiver is in the best interests of the University and where such waiver is permitted by law.
- f. The University reserves the right to reject any and all bids when such rejection is in the best interests of the University and is permitted by law. The University may also reject the bid of any bidder who, in its judgement, is not responsible or capable of performing the project based on financial capability, past performance or experience. A bidder whose bid is so rejected may request a hearing before the University by filing a written notice within seven (7) days of the transmittal of the rejection.

1B3.2. The bidder to whom the project is awarded shall execute and deliver the requisite Contract Documents including payment and performance bonds within the time specified. Upon his/her failure or refusal to comply in the manner and within the time specified, the University may either award the contract to the next low, responsible bidder or re-advertise for new proposals. In either case, the University may hold the defaulting bidder and his/her surety liable for the difference between the applicable sums quoted by the defaulting bidder and that sum which the University may be obligated to pay to the contractor who undertakes to perform and complete the work of the defaulting bidder.

1B4. AWARDS

1B4.1. In executing a contract, the successful bidder agrees to perform his/her work in a good and workmanlike manner and to complete portions of the work by established milestone dates and all work within the number of calendar days specified in his/her contract.

1B4.2. The successful bidder will be notified of the time and place for the signing of the contract. Key requirements in the conduct of the contract include, but are not limited to, project milestones, the number of days for performance of the contract, manner and schedule of payments, site logistics and other administrative details will be reviewed at the award meeting. The time and place of the first job meeting will also be announced.

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- 1B4.3. The project shall be awarded to the lowest responsible bidder whose bid, conforming to the Bidding Documents, will be the most advantageous to the University. Alternates will be accepted or rejected as selected by the University. Add alternates and deduct alternates will be specified separately. The University may choose from the add and deduct alternates without priority between the two groups. The University may accept alternates out of sequence provided it states its reasons for so doing.
- 1B4.4. Should submission of unit prices be required for specific items of work in bid proposals, they will be considered in the evaluation of bids.
- 1B4.5. LIQUIDATED DAMAGES ARE PART OF THIS PROJECT. Please refer to Section 017700 Contract Closeout in the Project Manual.
- 1B4.6. PLEASE NOTE THAT THE SUCCESSFUL BIDDER SHALL BE REQUIRED TO ENTER INTO **MODIFIED** AIA A101-2017 CONTRACT FOR CONSTRUCTION AND THE AIA A201-2017, BOTH OF WHICH ARE ATTACHED AS PART OF THIS BID PACKAGE.
- 1B5. QUALIFICATIONS OF BIDDERS
- 1B5.1. If the successful bidder is a corporation not organized under the laws of the State of New Jersey, or is not authorized to do business in this state, the award of the project shall be conditioned upon the prompt filing by the said corporation of a certificate to do business in this state and shall comply with the laws of this state in that regard. This filing must be made within the Division of Revenue and Enterprise Services. No award of project will be made until the Department of State confirms this authorization.
- 1B5.2. The University requires that each contractor shall perform a minimum of thirty-five percent (35%) of the contract work by his/her own forces. The University, however, may, in its sole discretion, reduce this percentage depending upon the nature and circumstances in any particular case if it determines that to do so would be in the best interests of the University provided that a written request is submitted to it prior to the bid opening.
- 1B5.3. The University reserves the right to reject a bid at any time prior to the signing of a contract if information or data is obtained which, in the opinion of the University, adversely affects the responsibility and/or the capability of the bidder to undertake and to complete the work regardless of the bidder's previous qualification or classification. The University may conduct any investigation as it deems necessary to determine the bidder's responsibility and capacity and the bidder shall furnish all information and data for this purpose as the University may request.
- 1B5.4. The bidder shall include a list of the sub-contractors to whom the bidder will sub-contract work with his/her bid for:
- a. the plumbing and gas fitting work;
 - b. the heating and ventilating systems and equipment;
 - c. the electrical work including any electrical power plants;
 - d. the structural and ornamental iron work; and
 - e. special categories as may be required.

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1B6. DEPOSIT AND BID BOND

- 1B6.1. Each proposal shall be accompanied by a bid bond or by a certified or cashier's check made payable to the University equal to ten percent (10%) of the amount of the proposal as evidence of good faith which guarantees that, if the proposal submitted by the bidder is accepted, the bidder will enter into the contract and furnish the required Contract Documents and surety bonds. If a bid bond is submitted, it shall also provide that the surety issuing the bid bond be bound to issue the required payment and performance bonds if the bidder is awarded the project. If the bidder whose proposal is accepted is unable to provide the performance and payment bonds or fails to execute a contract, then such bidder and the bid bond surety shall be obligated to pay to the University the difference between the amount of the bid and the amount which the University contracts to pay another party to perform the work. The University reserves the right to retain any certified or cashier's check deposited hereunder as reimbursement for the difference as aforesaid and shall return any non-required balance to the bidder. Should there be a deficiency in the excess of the bid deposit, the bidder and the surety shall pay the entire amount of the University's difference in cost upon demand. Nothing contained herein shall be construed as reason of a default or breach by the contractor. Certified or cashier's checks or bonds submitted by the unsuccessful bidders will be returned after the contract has been executed. Contractors electing to furnish a bid bond must include consent of surety, both in form acceptable to the University.
- 1B6.2. Attorneys-in-fact who sign bid bonds or contract bonds must file a certified power of attorney with the University indicating the effective date of that power.

1B7. PERFORMANCE AND PAYMENT BONDS

- 1B7.1. Within five (5) calendar days, the successful bidder shall furnish a performance bond in statutory form (N.J.S.A. 2A:44-147) in an amount equal to one hundred percent (100%) of the total contract price as security for the faithful performance of this contract and also a payment bond in statutory form in an amount equal to one hundred percent (100%) of the contract price as security for the payment of all persons and firms performing labor and furnishing materials in connection with this contract. The performance and payment bond may be in one or in separate instruments in accordance with the law. No contract shall be executed unless and until each bond is submitted to and approved by the University and the surety must be presently authorized to do business in the State of New Jersey. The surety's obligation shall continue beyond final acceptance to the extent that the contractor would have such an obligation.
- 1B7.2. The cost of bonds shall be paid for by the contractor.
- 1B7.3. At any time, if the University is dissatisfied with any surety or sureties, who have issued or proposed to issue, the performance or payment bonds for justifiable cause, the contractor shall substitute an acceptable bond or bonds in such form and sum and executed by such other surety or sureties as may be satisfactory to the University within ten (10) days after notice from the University to do so. The premiums of such bonds shall be paid by the contractor. No contract shall be executed and/or no payment made under a contract until the new surety or sureties shall have furnished such an acceptance bond to the University.

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1B7.4. Bonds must be legally effective as of the date the contract is signed. Bonds must indicate contractor's names exactly as they appear on the contract. Current attorney-in-fact instruments and financial statement of the surety must be included with the bond. Bonds must be executed by an authorized officer of the surety. Bonds furnished under this article shall conform in all respects to the requirements and language of N.J.S.A. 2A:44-143 to 147.

1B8. BULLETINS AND INTERPRETATIONS

1B8.1. No interpretation of the meaning of the plans, specifications or other pre- bid documents will be provided to any bidder unless such interpretation is made in writing to all prospective bidders prior to the bid opening. Any such interpretations must be identified in bid proposals submitted. Any interpretations which are not entered in accordance with this provision shall be unauthorized and not binding upon the University.

1B8.2. Every request for an interpretation relating to clarification or correction of the plans, specifications or other bid documents shall be made in writing addressed to the University and must be received at least five (5) working days prior to the date fixed for the bid opening. Any and all interpretations, clarifications or corrections and any supplemental instructions must be issued by the University in writing in the form of bulletins and mailed by certified mail, return receipt requested or by telegraphic notice to all prospective bidders no later than three (3) working days prior to the date of the bid opening. All bulletins issued shall become part of the Contract Documents and shall be acknowledged in all the bid proposals. Failure of a contractor to acknowledge receipt of all such bulletins and interpretations by the time of the bid opening shall result in his/her proposal being considered non-responsive at the option of the University.

1B8.3. Each bidder shall be responsible for thoroughly reviewing the Contract Documents prior to submission of bids. Bidders are advised that no claim for expenses incurred or damage sustained on account of any error, discrepancy, omission or conflict in their bid submission will be entertained. Documents shall be recognized by the University unless, and only to the extent that, a written request for interpretation, clarification or correction has been submitted in compliance with section 1B8.2 and the matter has not been addressed by the University through the issuance of a bulletin interpreting, clarifying and/or correcting such error, discrepancy, omission or conflict.

1B9. ASSIGNMENTS

1B9.1. The contractor shall not assign the whole or any part of this contract without prior written consent of the University. Money due or to become due to the contractor hereunder shall not be assigned for any purposes whatsoever.

1B10. FEDERAL EXCISE TAXES AND STATE SALES TAX

1B10.1. In general, bidders must take into consideration applicable Federal and state tax laws when preparing their bids.

1B10.2. Under Chapter 32 of the Internal Revenue Code, an exemption certificate must be on file with the University of the Division of Purchasing. (example, Number 22-75-005)

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1B10.3. Materials, supplies or services for exclusive use in erecting structures or buildings or otherwise improving, altering or requiring all University-owned property are exempt from the State sales tax.

1B10.4. Bidders must make their own determinations as to the current status and applicability of any tax laws and the contractor may make no claim based upon any error or misunderstanding as to the applicability of any tax laws.

1B10.5. Purchases or rentals of equipment are not exempt from any tax under the State Sales Tax Act.

1B11. RESTRICTIVE SPECIFICATIONS

1B11.1. Should any bidder determine before the bid due date that any portion of the specifications or drawings specify a particular product which can be provided by one (1) supplier or manufacturer with the result that competitive prices are not available, he/she shall immediately notify the University and Construction Manager of the fact in writing.

1B11.2. If such notice is not given in a timely manner, it shall be assumed that the bidder has included the estimate of such sole source in his/her bid. In the alternative, if the University and Construction Manager are notified in a timely manner of the requirement in the specification of a sole source of supply or manufacture, the University may order the project rebid or may take any other lawful action.

1B12. OFFER OF GRATUITIES

1B12.1. (a) Chapter 48 of the laws of 1954 make it a misdemeanor to offer, pay or give any fee, commission, compensation, gift or gratuity to any person employed by the State. It is the policy of the University to treat the offer of any gift or gratuity by any company, its officers or employees to any person employed by Rowan University as grounds for debarment or suspension of such company from bidding on and providing work or materials on University contracts. No vendor shall pay, offer to pay, or agree to pay, either directly or indirectly, any fee, commission, compensation, gift, gratuity, or other thing of value of any kind to any State officer or employee or special State officer or employee, as defined by N.J.S.A. 52:13D-13b. and e., in the Department of the Treasury or any other agency with which such vendor transacts or offers or proposes to transact business, or to any member of the immediate family, as defined by N.J.S.A. 52:13D-13i., of any such officer or employee, or any partnership, firm, or corporation with which they are employed or associated, or in which such officer or employee has an interest within the meaning of N.J.S.A. 52:13D-13g.

b. The solicitation of any fee, commission, compensation, gift, gratuity or other thing of value by any State officer or employee or special State officer or employee from any State vendor shall be reported in writing forthwith by the vendor to the Attorney General and the Executive Commission on Ethical Standards.

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- c. No vendor may, directly or indirectly, undertake any private business, commercial or entrepreneurial relationship with, whether or not pursuant to employment, contract or other agreement, express or implied, or sell any interest in such vendor to, any State officer or employee or special State officer or employee having any duties or responsibilities in connection with the purchase, acquisition or sale of any property or services by or to any State agency or any instrumentality thereof, or with any person, firm or entity with which he is employed or associated or in which he has an interest within the meaning of N.J.S.A. 52:13D-13g. Any relationships subject to this provision shall be reported in writing forthwith to the Executive Commission on Ethical Standards, which may grant a waiver of this restriction upon application of the State officer or employee or special State officer or employee upon a finding that the present or proposed relationship does not present the potential, actuality or appearance of a conflict of interest.
- d. No vendor shall influence, or attempt to influence or cause to be influenced, any State officer or employee or special State officer or employee in his official capacity in any manner which might tend to impair the objectivity or independence of judgment of said officer or employee.
- e. No vendor shall cause or influence, or attempt to cause or influence, any State officer or employee or special State officer or employee to use, or attempt to use, his official position to secure unwarranted privileges or advantages for the vendor or any other person.
- f. The provisions cited above in paragraph a. through e shall not be construed to prohibit a State officer or employee or special State officer or employee from receiving gifts from or contracting with vendors under the same terms and conditions as are offered or made available to members of the general public subject to any guidelines the Executive Commission on Ethical Standards may promulgate under paragraph 3c.

1B.13 ANTIDISCRIMINATION

1B.13.1 Pursuant to N.J.S.A. 10:2-1 The contractor agrees that:

- a. In the hiring of persons for the performance of work under this contract or any subcontract hereunder, or for the procurement, manufacture, assembling or furnishing of any such materials, equipment, supplies or services to be acquired under this contract, no contractor, nor any person acting on behalf of such contractor or subcontractor, shall, by reason of race, creed, color, national origin, ancestry, marital status, gender identity or expression, affectional or sexual orientation or sex, discriminate against any person who is qualified and available to perform the work to which the employment relates;
- b. No contractor, subcontractor, nor any person on his behalf shall, in any manner, discriminate against or intimidate any employee engaged in the performance of work under this contract or any subcontract hereunder, or engaged in the procurement, manufacture, assembling or furnishing of any such materials, equipment, supplies or services to be acquired under such contract, on account of race, creed, color, national origin, ancestry, marital status, gender identity or expression, affectional or sexual orientation or sex;
- c. There may be deducted from the amount payable to the contractor by the contracting public agency, under this contract, a penalty of \$ 50.00 for each person for each calendar day during which such person is discriminated against or intimidated in violation of the provisions of the contract; and

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- d. This contract may be canceled or terminated by the contracting public agency, and all money due or to become due hereunder may be forfeited, for any violation of this section of the contract occurring after notice to the contractor from the contracting public agency of any prior violation of this section of the contract.

1.B.14 EQUAL PAY

1B.14.1. Pursuant to N.J.S.A. 34:11-56.14(b), any employer, regardless of the location of the employer, who enters into a contract with a public body to perform any public work for the public body shall provide to the Commissioner of the New Jersey Department of Labor and Workforce Development, through certified payroll records required pursuant to N.J.S.A. 34:11-56.25 et seq., information regarding the gender, race, job title, occupational category, and rate of total compensation of every employee of the employer employed in the State in connection with the contract. The employer shall provide the Commissioner, throughout the duration of the contract or contracts, with an update to the information whenever payroll records are required to be submitted pursuant to N.J.S.A. 34:11-56.25 et seq.

END OF SECTION I

DRAFT AIA® Document A101™ - 2017

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

AGREEMENT made as of the ___ day of _____ in the year 2020
(In words, indicate day, month and year.)

BETWEEN the Owner:

Rowan University
201 Mullica Hill Road
Glassboro, NJ 08028

and the Contractor:

[Redacted Contractor Name]

for the following Project:

[Redacted Project Description]

The Architect:

[Redacted Architect Name]

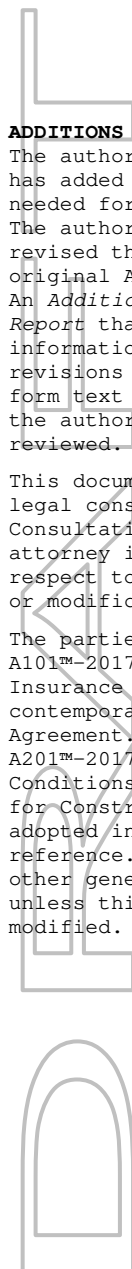
The Owner and Contractor agree as follows.

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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EXHIBIT A INSURANCE AND BONDS

ARTICLE 1 THE CONTRACT DOCUMENTS

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

ARTICLE 2 THE WORK OF THIS CONTRACT

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

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be

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

If a date of commencement of the Work is not selected, then the date of commencement shall be the date of this Agreement.

§ 3.2 The Contract Time shall be measured from the date of commencement of the Work. **TIME IS OF THE ESSENCE.**

§ 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 () calendar days from the date of commencement of the Work.

By the following date:

§ 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
Entire Scope of Work	

§ 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 below:

Liquidated damages of \$1000 per day for each calendar day substantial completion is not achieved.
Liquidated damages of \$1000 per day for each calendar day work on the closeout/punch list is incomplete

§ 3.4 By submission of the its Bid and execution of the Contract, the Contractor agrees that the time specified for Final Completion of the Work is a reasonable period for completion of the Work taking into consideration the average climatic range, material delivery time experience in the Contractor’s industry.

§ 3.5 Should the Contractor fail to substantially complete the Work by the date set for Substantial Completion set forth above, the Contractor shall and hereby agrees to pay the Owner the sum of **\$1000 per day** for each consecutive calendar day which elapses between the above-referenced date set for Substantial Completion and the date of actual Substantial Completion as certified to and approved by the Owner. Should the Contractor fail to fully complete the Work in conformity with all provisions of the Contract by the date set for Final Completion set forth above, the Contractor shall and hereby agrees to pay the Owner the sum of **\$1000 per day** for each consecutive calendar day which elapses between the above-referenced date set for Final Completion and the date of actual Final Completion as certified to and approved by the Owner.

§ 3.6 The per day liquidated damages sum referenced herein is hereby agreed to be a reasonable and proper measure of damages which the Owner will sustain per diem by failure of Contractor to complete Work within time as stipulated; it being recognized by Owner and Contractor that the damages suffered by Owner which could result from a failure of the Contractor to complete the Work on schedule is uncertain and cannot be calculated with any degree of mathematical certainty. In no way shall costs of Liquidated Damages be construed as a penalty to the Contractor. In addition to liquidated damages, Owner shall have the right to recover the actual damages as are capable of being ascertained and which are not duplicative of elements covered by the liquidated damages provisions. Nothing in this paragraph shall limit the right of Owner to complete the Work following the Contractor’s breach of contract.

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 Alternates

§ 4.2.1 Alternates, if any, are inclusive of the total Contract Sum:

Item	Price

§ 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 total Contract Sum reflected in Section 4.1:
(Identify each allowance.)

Item	Price

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

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

§ 4.5 Liquidated damages, if any:
(Insert terms and conditions for liquidated damages, if any.)

See Sections 3.3, 3.4, 3.5, and 3.6 above.

§ 4.6 Other:
(Insert provisions for bonus or other incentives, if any, that might result in a change to the Contract Sum.)

Not Applicable.

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 Provided that an Application for Payment is received by the Architect not later than the last day of a month, the Owner shall make payment of the amount certified to the Contractor not later than the last day of the following month. If an Application for Payment is received by the Architect after the application date fixed above, payment of the amount certified shall be made by the Owner not later than Forty Five (45) days after the Architect receives the Application for Payment.

(Federal, state or local laws may require payment within a certain period of time.)

§ 5.1.3.1 **APPLICATIONS FOR PAYMENT:** The form for Applications for Payment shall be a notarized AIA Document G702, Application and Certification for Payment, supported by AIA document G703 Continuation Sheets. Each Application for Payment must be accompanied by three (3) sets of Certified Payroll Records for the period covered by the Application. The payroll records shall indicate the proper classification of employees and the payment of overtime, if any. These records shall include each Contractor's subcontractor's certified payroll. Payment will not be authorized if the required payroll records have not been submitted.

§ 5.1.3.2 All Applications for Payment, Certified Payroll Records and Manning Reports shall include the relevant purchase order number and project number.

§ 5.1.4 The Owner may decide to disapprove an Application for Payment, or withhold payment, in whole or in part, to the extent reasonably necessary to protect the Owner if, in its opinion, the representations as described in Section 5.1.4.1 below cannot be made. If the Owner withholds a Certificate for Payment, the Owner will notify the

Contractor as provided in Article 5 hereof. The Owner may also decide to withhold certifying payment in whole or in part, because of subsequently discovered evidence or subsequent observations, to such extent as may be necessary to protect the Owner from loss because of:

1. Defective Work which has not been remedied;
2. Third party claims filed or reasonable belief probable filing of such claims;
3. Failure of the Contractor to make payments properly to vendors, subcontractors or for labor, materials and equipment;
4. Reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract sum;
5. Damage to the Owner or another contractor;
6. Reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;
7. Failure to carry out the Work in accordance with the Contract Documents;
8. Avoidable delay in the progress of the Work;
10. Failure to maintain the Project Site in a safe and satisfactory condition in accordance with good construction practices as recommended by the Engineer after consultation with the Contractor; and
11. Failure to submit updates as requested by the Owner or as required by the General Conditions.

When the foregoing reasons for withholding payment are resolved, certification will be made for amounts previously withheld in the manner set forth in Section 5.1.3 above.

§ 5.1.4.1 The issuance of a separate Certificate for Payment will constitute representations by the Owner's Project Manager to the Owner, based on its individual observations at the Site and the data comprising the Application for Payment submitted by the Contractor, that the Work has progressed to the point indicated and that, to the best of the Owner's knowledge, information and belief, quality of the Work is in accordance with the Contract Documents. 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 minor deviations from the Contract Documents correctable prior to completion and to specific qualifications expressed by the Engineer. The issuance of a separate Certificate for Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified. However, the issuance of a separate Certificate for Payment will not be a representation that the Owner has: (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed the Contractor's construction means, methods, techniques, sequences or procedures; (3) reviewed copies of requisitions received from Subcontractors and material 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.

§ 5.1.4 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Architect may require. This schedule of values 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 In accordance with AIA Document A201™–2017, General Conditions of the Contract for Construction, and subject to other 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;
- .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, or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing; and
- .3 That portion of Construction Change Directives that the Architect determines, in the Architect's professional judgment, to be reasonably justified.

§ 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 AIA Document A201–2017;
- .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 AIA Document A201–2017; and
- .5 Retainage withheld pursuant to Section 5.1.7.

§ 5.1.7 Retainage

§ 5.1.7.1 For each progress payment made prior to Substantial Completion of the Work, the Owner may withhold the following amount, as retainage, from the payment otherwise due:

(Insert a percentage or amount to be withheld as retainage from each Application for Payment. The amount of retainage may be limited by governing law.)

Retainage shall be determined as follows: the Owner will withhold Five percent (5%) of the amount due on each partial payment when the outstanding balance of the Contract is more than \$500,000. When the outstanding balance of the Contract is Five Hundred Thousand Dollars (\$500,000.00) or less, Owner will withhold five percent (10%) as retainage. Retainage shall be withheld until the Owner determines that the work has been satisfactorily completed and no unsettled claims exist. The final acceptance shall not be binding or conclusive upon the Owner should it subsequently discover that the contractor has supplied inferior material or workmanship or has departed from the terms of his contract. Should such a condition appear the Owner shall have the right, notwithstanding final acceptance and payment, to cause the work to be properly done in accordance with the drawings and specifications at the cost and expense of the contractor.

§ 5.1.7.1.1 The following items are not subject to retainage:

(Insert any items not subject to the withholding of retainage, such as general conditions, insurance, etc.)

None.

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

(If the retainage established in Section 5.1.7.1 is to be modified prior to Substantial Completion of the entire Work, including modifications for Substantial Completion of portions of the Work as provided in Section 3.3.2, insert provisions for such modifications.)

None.

§ 5.1.7.3

Intentionally Omitted.

§ 5.1.8 If final completion of the Work is materially delayed through no fault of the Contractor, the Owner shall pay the Contractor any additional amounts in accordance with Article 9 of AIA Document A201–2017.

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

§ 5.2 Final Payment

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

- .1 the Contractor has fully performed the Contract except for the Contractor’s responsibility to correct Work as provided in Article 12 of AIA Document A201–2017, 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 45 days after the issuance of the final Certificate for Payment.

<< >>

§ 5.3 Interest

Payments due and unpaid under the Contract shall bear no interest from the date payment is due at the rate stated below.

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 Initial Decision Maker

The Architect will serve as the Initial Decision Maker pursuant to Article 15 of AIA Document A201–2017, unless the parties appoint below another individual, not a party to this Agreement, to serve as the Initial Decision Maker.

§ 6.2 Binding Dispute Resolution

For any Claim subject to, but not resolved by, mediation pursuant to Article 15 of AIA Document A201–2017, the method of binding dispute resolution shall be as follows:

(Check the appropriate box.)

Arbitration pursuant to Section 15.4 of AIA Document A201–2017

Litigation in New Jersey Superior Court, Gloucester County.

Other *(Specify)*

<< >>

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

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201–2017.

<< >>

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201–2017.

ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201–2017 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's representative:

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

Project Manager

Rowan University
201 Mullica Hill Road
Glassboro, NJ 02028

@rowan.edu

§ 8.3 The Contractor's representative:

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

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

§ 8.5 Insurance and Bonds

§ 8.5.1 The Owner and the Contractor shall purchase and maintain insurance as set forth in AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum, Exhibit A, Insurance and Bonds, and elsewhere in the Contract Documents.

§ 8.5.2 The Contractor shall provide bonds as set forth in AIA Document A101™–2017 Exhibit A, and elsewhere in the Contract Documents.

§ 8.6 Notice in electronic format, pursuant to Article 1 of AIA Document A201–2017, may be given in accordance with AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, if completed, or as otherwise set forth below:

(If other than in accordance with AIA Document E203–2013, insert requirements for delivering notice in electronic format such as name, title, and email address of the recipient and whether and how the system will be required to generate a read receipt for the transmission.)

« »

§ 8.7 Other provisions:

§8.8 It is the obligation of the Contractor to provide a full and complete copy of all insurance policies held by it at the Contractor's sole expense, upon reasonable request by the Owner, in the amounts specified in the Bid Documents (see Article 11 of modified AIA Document A201-2007 General Conditions of the Contract for Construction). The Contractor's failure to obtain or maintain adequate insurance coverage shall result in the immediate termination of this Agreement. The Owner will have the right to request copies of the Contractor's insurance policies or any part thereof for the duration of the contract period.

§8.9 This Agreement, the General Conditions of the Contract as modified or supplemented in writing, and the Supplemental General Conditions shall control in the case of conflict between these documents and the Project Specifications, the Project Manual and any other exhibits incorporated by reference into this Agreement in Article 9 herein.

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 This Agreement is comprised of the following documents:

- .1 AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor
- .2 AIA Document A101™–2017, Exhibit A, Insurance and Bonds
- .3 AIA Document A201™–2017, General Conditions of the Contract for Construction
- .4 Drawings: None
- .5 Project Manual

Section	Title	Date	Pages

DIVISION 01 GENERAL REQUIREMENTS DATED October 4, 2018

Section	Title	Date	Pages

TECHNICAL SPECIFICATIONS

Section	Title	Date

.7 Addenda, if any:

Number	Date	Pages

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

.8 Other Exhibits:

(Check all boxes that apply and include appropriate information identifying the exhibit where required.)

AIA Document E204™-2017, Sustainable Projects Exhibit, dated as indicated below:
(Insert the date of the E204-2017 incorporated into this Agreement.)

The Sustainability Plan:

Title	Date	Pages

Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages

.9 Other documents, if any, listed below:

(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201™-2017 provides that the advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor's bid or proposal, portions of Addenda relating to bidding or proposal requirements, and other information furnished by the Owner in anticipation of receiving bids or proposals, are not part of the Contract Documents unless enumerated in this Agreement. Any such documents should be listed here only if intended to be part of the Contract Documents.)

The Bid Package attached hereto as Exhibit "A"
Contractor's Bid attached hereto as Exhibit "B"
Affirmative Action Attachment (Exhibit B) attached hereto as Exhibit "C"
Project Labor Agreement attached hereto as Exhibit "D"

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

OWNER (Signature)

CONTRACTOR (Signature)

Joseph Scully, CFO

DRAFT AIA® Document A201™ - 2017

General Conditions of the Contract for Construction

for the following PROJECT:

(Name and location or address)

Project Name

THE OWNER:

(Name, legal status and address)

Rowan University
201 Mullica Hill Road
Glassboro, NJ 08028

THE ARCHITECT:

(Name, legal status and address)

Architect
Address
City, State, Zip

TABLE OF ARTICLES

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

ADDITIONS AND DELETIONS:

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

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

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

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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, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, the Contractor's Bid, Bid Solicitation 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. The Contract Documents shall include the Requirements as outlined specifically in the Bid Solicitation.

§ 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.

§1.1.2.1 The Contractor acknowledges and warrants that it has closely examined all of the Contract Documents, that they are suitable and sufficient to enable the Contractor to complete the Work in a timely manner for the Contract Sum, and that they include all Work, whether or not shown or described, which reasonably may be inferred to be required or useful for the completion of the Work in full compliance with all applicable codes, laws, ordinances and regulations and that questions regarding the bid documents and any interpretation(s) regarding same have been asked by the contractor, in the form and manner required in the instructions to bidders.

§ 1.1.3 The Work

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

§1.1.3.2 Nothing in these General Conditions shall be interpreted as imposing on the Owner, or its respective agents, employees, officers, directors or consultants, any duty, obligation or authority with respect to any items that are not intended to be incorporated into the completed project, including but not limited to shoring, scaffolding, hoists, temporary weatherproofing, or any temporary facility or temporary activity, since these are the sole responsibility of the Contractor.

§ 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 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.

§ 1.1.8 Initial Decision Maker

The Initial Decision Maker is the Architect. The Initial Decision Maker shall not show partiality to the Owner or Contractor and shall not be liable for results of interpretations or decisions rendered in good faith.

§ 1.2 Correlation and Intent of the Contract Documents

§ 1.2.1 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 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.

§ 1.2.2 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 Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and retain all common law, statutory, and other reserved rights in their Instruments of Service, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors, and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to any protocols established pursuant to Sections 1.7 and 1.8, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not 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.

§ 1.6 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 by certified or registered mail, or by courier providing proof of delivery.

§ 1.7 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 will 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.

§ 1.8 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.

§ 1.9 EXECUTION OF CONTRACT DOCUMENTS

§ 1.9.1 The Contract Documents shall be signed by the Owner and Contractor. The Agreement shall be signed in not less than quadruplicate by the Owner and Contractor.

§ 1.9.2 Execution of the Contract by the Contractor is a representation that said Contract Documents are full and complete, are sufficient to have enabled the Contractor to determine the cost of the Work therein to enter into the Contract and that the Contract Documents are sufficient to enable it to perform the Work outlined therein, and otherwise to fulfill all its obligations hereunder, including, but not limited to, Contractor's obligation to perform the Work for an amount not in excess of the Contract Sum on or before the date(s) of Substantial Completion established in the Agreement. The Contractor further acknowledges and declares that it has visited and examined the site, examined all physical, legal, and other conditions affecting the Work and is fully familiar with all of the conditions thereon and thereunder affecting the same. In connection with the foregoing, and having carefully examined all Contract Documents, as aforesaid, and having visited the site, the contractor acknowledges and declares that it has no knowledge of any discrepancies, omissions, ambiguities, or conflicts in said Contract Documents and that if it becomes aware of any such discrepancies, omissions, ambiguities, or conflicts, it will promptly notify Owner and Engineer of such fact.

1.9.3. The term "reasonably inferable" includes work necessary to "provide" work indicated or specified, as defined in section: Definitions and Standards; that is: furnish and install, complete, in place and ready for use.

1.9.3.1 Details referenced to portions of the Work shall apply to other like portions of the Work not otherwise detailed.

1.9.3.2 The Contractor shall request, from the Owner interpretation of apparent discrepancies, conflicts, or omissions in the Specifications and Drawings. Subcontractors shall forward such requests through the Contractor. Such requests, and the Engineer's interpretation, shall be in written form; other forms of communications shall be used to expedite resolution of concerns, but will not be binding.

§1.9.4 Explanatory notes shall take precedence over conflicting drawn note indications. Large scale drawings shall take precedence over small scale drawings. Figured dimensions shall take precedence over scaled measurements. Should contradictions be found, the Engineer shall determine which indication is correct.

§1.9.5 Where it is required in the specifications that materials, products, processes, equipment, or the like be installed or applied in accordance with manufacturers' instructions, directions, or specifications, or words to this effect, it shall be construed to mean that said application or installation shall be in strict accordance with printed material concerned for use under conditions similar to those at the job site. Three copies of such instructions shall be furnished to the Engineer and his written approval thereof obtained before work is begun.

§1.9.6 Any material specified by reference to the number, symbol, or title of a Commercial Standard, Federal Specification, ASTM Specification, trade association standard, or other similar standards, shall comply with the requirements in the latest revision thereof and any amendments or supplements thereto in effect one month prior to the date on which bids are opened and read, except as limited to type, class, or grade, or modified in such reference. The standards referred to, except as modified in the specifications, shall have full force and effect as though printed in the specifications. The Engineer will furnish upon request information as to how copies of the standards referred to may be obtained.

§ 1.8 The word "contractor" shall mean the prime contractor(s) with whom the contract has been executed.

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. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative. Contractor understands and acknowledges that the authority for all decisions required to be made resides with Owner. Architect and/or Contractor shall not rely upon or request from owner's Representatives any decision which requires Owner's determination

§ 2.2 *Intentionally Omitted.*

§ 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 Intentionally Omitted.

§ 2.3.3 Intentionally Omitted.

§ 2.3.4 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The furnishing of these surveys and the legal description of the site shall not relieve the Contractor from its duties under the Contract Documents. Neither Owner nor the Engineer shall be required to furnish Contractor with any information concerning subsurface characteristics or conditions of the areas where the Work is to be performed. When the Owner or Engineer has made investigations of subsurface characteristics or conditions of the areas where the Work is to be performed, such investigations, if any, were made solely for the purposes of Owner's study. Neither such investigations nor the records thereof are a part of the Contract between Owner and Contractor. To the extent such investigations or the records thereof are made available to Contractor by the Owner or Engineer, such information is furnished solely for the convenience of Contractor. Neither Owner nor Engineer assumes any responsibility whatsoever in respect of the sufficiency or accuracy of the investigations thus made, the records thereof, or of the interpretations set forth therein or made by the Owner or Engineer in its use thereof, and there is no warranty or guaranty, either express or implied, that the conditions indicated by such investigations or records thereof are representative of those existing throughout the areas where the Work is to be performed, or any part thereof, or that unforeseen developments may not occur, or that materials other than or in proportions different from those indicated may not be encountered. The Contractor shall undertake such further investigations and studies as may be necessary or useful to determine subsurface characteristics and conditions. In connection with the foregoing, Contractor shall be solely responsible for locating (and shall locate prior to performing any Work) all utility lines, telephone company lines and cables, sewer lines, water pipes, gas lines, electrical lines, including, without limitation, all buried pipelines and buried telephone cables and shall perform the Work in such a manner so as to avoid damaging any such lines, cables, pipes, and pipelines.

§ 2.3.5 Intentionally Omitted.

§ 2.3.6 Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.

§ 2.4 Owner's Right to Stop the Work

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, or fails or refuses to provide a sufficient amount of properly supervised and coordinated labor, materials, or equipment so as to be able to complete the Work within the Contract Time or fails to remove and discharge (within ten days) any lien filed upon Owner's property by anyone claiming by, through, or under Contractor, or disregards the instructions of Architect or Owner when based on the requirements of the Contract Documents, 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.

§ 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 fails within a ten-day period after receipt of notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such default or neglect. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect and the Architect may, pursuant to Section 9.5.1, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect, or failure. If current and future payments are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. If the Contractor disagrees with the actions of the Owner or the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 15.

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 shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 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 its obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

§ 3.2 Review of Contract Documents and Field Conditions by Contractor

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before 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 2.3.4, 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. In addition to Contractor's duties under this Agreement, the Contractor shall carefully study and compare the Contract Documents with each other and shall at once report to the Owner errors, inconsistencies or omissions discovered. If the Contractor performs any construction activity involving an error, inconsistency or omission in the Contract Documents that the Contractor recognized or reasonably should have recognized without such notice to the Owner, the Contractor shall assume complete responsibility for such performance and shall bear the full amount of the attributable costs for correction. 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.

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

§ 3.2.4 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, subject to Section 15.1.7, as would have been avoided if the Contractor had performed such obligations. 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 recognized such error, inconsistency, omission or difference and knowingly failed to report it to the Owner.

§ 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. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences, or procedures, the Contractor shall evaluate the jobsite safety thereof and shall be 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 acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

§ 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 Contractor shall be solely responsible for the means and methods of the work performed. Owner shall have no obligation, responsibility and/or liability with respect to any issues, claims or controversies arising out of the manner in which work is performed, nor shall the Owner be responsible and/or liable for any issue, claim or controversy arising out of Contractor's failure to operate consistent with OSHA or other safety standards.

§ 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.

§ 3.4.3 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 employment of unfit persons or persons not properly skilled in tasks assigned to them.

§ 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 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 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.

§ 3.6 Taxes

The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

§ 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 and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

§ 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 the correction thereof or related thereto, including all fines and penalties.

§ 3.7.4 Concealed or Unknown Conditions

If 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 shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 14 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 that an equitable adjustment be made in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may submit a Claim as provided in Article 15.

§ 3.7.5 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;
- .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.

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

§ 3.9 Superintendent

§ 3.9.1 The Contractor shall employ a full time competent superintendent, acceptable to the Owner, and necessary assistants who shall be in attendance at the Project site during performance of the Work and until final completion of all work, including all corrective and punch list items. 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 The Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the name and qualifications of a proposed superintendent. Within 14 days of receipt of the information, the Architect may notify the Contractor, stating whether the Owner or the Architect (1) has reasonable objection to the proposed superintendent or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

§ 3.10 Contractor's Construction and Submittal Schedules

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall contain detail appropriate for the Project, including (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. 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 the Architect's approval. The 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.

§ 3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.

§ 3.11 Documents and Samples at the Site

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, 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.

§ 3.12 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.

§ 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 the 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 the Architect of such deviation at the time of submittal and (1) the Architect 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 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 an appropriately 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 and accuracy 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 and 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.

§ 3.13 Use of Site

The Contractor shall confine operations at the 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.

§ 3.13.1 Location and weights of all equipment and materials and the Contractor intends to place on the site shall be submitted to the Owner for review.

§ 3.13.2 Only materials and equipment which are to be used directly in the Work shall be brought to and stored on the Project site by the Contractor. After equipment is no longer required for the Work, it shall be promptly removed from the Project site. Protection of construction materials and equipment stored at the Project site from weather, theft, damage and all other adversity is solely the responsibility of the Contractor.

§ 3.13.3 The Contractor and any entity for whom the Contractor is responsible shall not erect any sign on the Project site without the prior written consent of the Owner with the exception of those directed to be erected through the contract documents and those necessary for site safety or in an emergency.

§ 3.13.4 Contractor shall ensure that the Work, at all times, is performed in a manner that affords reasonable access, both vehicular and pedestrian, to the site of the Work and all adjacent areas. The Work shall be performed, to the fullest extent reasonably possible, in such a manner that public areas adjacent to the site of the Work shall be free from all debris, building materials and equipment likely to cause hazardous conditions. Without limitation of any provision of the Contract Documents, Contractor shall use its best efforts to minimize any interference with the occupancy or beneficial use of (1) any areas and buildings adjacent to the site of the Work.

§ 3.13.5 Without prior approval of the Owner, the Contractor shall not permit any workers to use any existing facilities at the Project site, including without limitation, lavatories, toilets, entrances and parking areas other than those designated by the Owner. Without limitation of any other provision of the Contract Documents, the Contractor shall use its best efforts to comply with all rules and regulations promulgated by the Owner in connection with the use and occupancy of the Project site and the Building, as amended from time to time.

The Contractor shall immediately notify the Owner in writing if during the performance of the Work, the Contractor finds compliance with any portion of such rules and regulations to be impracticable, setting forth the problems of such and suggest alternatives through which the same results can be achieved. The Owner may, in the Owner's sole discretion, adopt such suggestions, develop new alternatives or require compliance with the existing requirement of the rules and regulations. The Contractor shall also comply with all insurance requirements and collective bargaining agreements applicable to use and occupancy of the Project site and the Building.

§ 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.

§ 3.15 Cleaning Up

§ 3.15.1 The Contractor shall keep the premises and surrounding area 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 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 an infringement of a copyright or patent 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.

§ 3.18 Indemnification

§ 3.18.1

§ 3.18.1 To the fullest extent permitted by law the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and their respective 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 negligent acts or omissions of the Contractor, a 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.

- .1 Contractor, for itself, its successors and assigns, agrees to indemnify and save Owner, the individual members (past, present and future), its successors, assigns, employees, agent, Engineers, and/or the harmless from, and against any and all claims, demands, damages, actions or causes of action by any party, together with any and all losses, costs or expenses in connection therewith or related thereto, including, but not limited to, attorney fees and costs of suit, for bodily injuries, death or property damage arising in or in any manner growing out of the work performed, or to be performed under this Contract. Contractor and its successors and assigns agree to indemnify the Owner, its individual members (past, present and future), its successors, assigns, employees, agents, and Engineers and against all fines, penalties or losses incurred for, including, but not limited to, attorney fees and costs of suit, or by reason of the violation by Contractor in the performance of this Contract, or any ordinance, regulation, rule of law of any political subdivision or duly constituted public authority. Without limiting the foregoing, the Contractor, at the request of Owner, its individual members (past and present), its successors, assigns, employees, agents, or Engineers, agrees to defend at the Contractor's expense any suit or proceeding brought against Owner, its individual members (past, present and future), its successors, assigns, employees, agents, Engineers due to, or arising out of the work performed by the Contractor.

- .2 The Contractor assumes the entire risk, responsibility, and liability for any and all damage or injury of every kind and nature whatsoever (including death resulting therefrom) to all persons, whether employees

of the Contractor or otherwise, and to all property (including the Work itself) caused by, resulting from, arising out of or occurring in connection with the execution of the Work, or in preparation for the Work, or any extension, modification, or amendment to the Work by the Change Order or otherwise. To the fullest extent permitted by law, the Contractor and its Surety shall indemnify and save harmless the Owner, the Architect, the Architect's consultants, and the respective agents and employees of any of them (herein collectively called the Indemnitees) from and against any and all liability, loss, damages, interest, judgments, and liens growing out of, and any and all costs and expenses (including, but not limited to, counsel fees and disbursements) arising out of, relating to or incurred in connection with the Work including, any and all claims, demands, suits, actions, or proceedings which may be made or brought against any of the Indemnitees for or in relation to any breach of the Contract for Construction or any violation of the laws, statutes, ordinances, rules, regulations, or executive orders relating to or in any way affecting the performance or breach of the Contract for Construction, whether or not such injuries to persons or damages to property are due or claimed to be due, in whole or in part, to any negligence of the Contractor or its employees, agents, subcontractors, or materialmen, excepting only such injuries and/or damages as are the result of the sole gross negligence of the Owner or Architect.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a 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 or a Subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

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 Owner 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 the Work, when fully completed, 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.

§ 4.2.3 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

The 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 The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.4.2 and 13.4.3, whether or not the Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 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 Architect will prepare Change Orders and Construction Change Directives, and may order minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 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.

§ 4.2.10 If the Owner and Architect agree, the Architect will provide one or more Project representatives to assist in carrying out the Architect's responsibilities at the site. The Owner shall notify the Contractor of any change in the duties, responsibilities and limitations of authority of the Project representatives.

§ 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 or otherwise with reasonable promptness.

§ 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 Architect's decisions 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 or otherwise with reasonable promptness. 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. 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 after award of the Contract, shall notify the Owner and Architect 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 14 days of receipt of the information, the Architect 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 to provide notice within the 14-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. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 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, the Contract Sum and Contract Time 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 or Contract Time 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 for one previously selected if the Owner or Architect makes reasonable objection to such substitution.

§ 5.3 Subcontractual Relations

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 agreement 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 for cause pursuant to Section 14.2 and only for those subcontract agreements 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 agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 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. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

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. The Contractor shall make any revisions to its construction schedule deemed necessary after a joint review and mutual agreement. 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 the Conditions of the Contract, 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.

§ 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. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a Separate Contractor's delays, improperly timed activities, damage to the Work or defective construction.

§ 6.2.4 The Contractor shall promptly remedy damage that the Contractor wrongfully causes to completed or partially completed construction or to 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.

§ 6.3 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 Architect 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.

7.1.1.1 A field directive or field order shall not be recognized as having any impact upon the Contract Sum or the Contract Time and the Contractor shall have no claim therefor unless it shall, prior to complying with same and in no event no later than 10 working days from the date such direction or order was given, submit in writing to the Owner for the Owner's approval its change proposal.

7.1.1.2 When submitting its change proposal, the Contractor shall include and set forth in clear and precise detail breakdowns of labor and materials for all trades involved and the estimated impact on the construction schedule. The Contractor shall furnish spread sheets from which the breakdowns were prepared, plus spread sheets if requested of any Subcontractors.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor, and Architect. A Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor. An order for a minor change in the Work may be issued by the Architect alone.

§ 7.1.2.1 Neither this Contract nor the Work to be performed hereunder can be changed by oral agreement. No course of conduct or dealings between the parties, nor express or implied acceptance of alterations or additions to the Work and no claims that the Owner has been unjustly enriched by any alteration or addition to the Work, whether there is, in fact, any unjust enrichment to the Work, shall be the basis for any alleged implied agreement by the Owner to the change, any alleged waiver of the Owner's right under this Contract or any increase in any amounts due under the Contract or any 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.

§ 7.1.4 A directive or order from the owner or the Engineer, other than a change order, a construction change directive or any order for a minor change pursuant to this article 7, shall not be recognized as having any impact on the contract sum or the contract time and the contractor shall have no claim therefore. If the contractor believes that a directive or order would require it to perform work not required by the contract documents, the contractor shall so inform the owner in writing prior to complying with the same and in no event any later than five (5) working days from the day such direction or order was given, and shall submit to the owner for the owner's approval its change proposal.

§ 7.2 Change Orders

§ 7.2.1 A Change Order is a written instrument prepared by the 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.

§ 7.2.2 Change Order shall include all costs, including cost of preparation of the change order, all impact and ripple costs associated with modifications or delays to the work an assessment of the amount and impact of any perceived potential delays, and all costs associated with modifications to other work.

.1 The Prime Contractor shall furnish all necessary documentation to support the additional cost, including but not limited to the following:

- .1 Copy of subcontractor's proposal.
- .2 Complete breakdown for all costs for labor and material.
- .3 Complete breakdown of related costs.
- .4 Other information as may be requested by the Owner.

§ 7.2.3 The overall cost of the Change Order shall be inclusive and once accepted by the Owner it shall be considered full and final.

§ 7.2.4 No additional time will be granted to the Contractor for minor change orders unless each individual change order totals more than \$50,000.

§ 7.2.5 When a Change Order involves both additions and deletions in material, the net quantity is to be determined and the appropriate overhead and profit is to be applied to the net quantity.

§ 7.2.6 When any change in the Work, regardless of the reason therefore, requires or is alleged to require an adjustment in Contract Time, such request for time adjustment shall be submitted by the Contractor as part of the change proposal. Any Change Order approved by the Owner and for which payment is accepted by the Contractor, in which no adjustment in Contract Time is stipulated, shall be understood to mean that no such adjustment is required by reason of the change, and any and all rights of the Contractor or any subsequent request for adjustment of Contract Time by reason of the change is waived.

§ 7.2.7 Request by the Contractor for adjustment of the Contract Amount regardless of the reason therefore, shall be submitted to the Engineer and the Owner with itemized labor and material quantities and unit prices to permit proper evaluation of the request. A submission by the Contractor containing unsubstantiated lump sum requests for adjustment of the Contract Amount will not be considered by the Owner and Engineer. The Owner and Engineer will not be liable for any delay incurred by reason of the Contractor's failure to submit satisfactory justification and back-up with any request for adjustment to the Contract Amount.

§ 7.2.8 Agreement on any Change Order shall constitute a final settlement of all matters relating to the change in the initial Work which is the subject to the Change Order, including, but not limited to, all direct, indirect and impact costs associated with such change and any and all adjustment to the Contract Sum and the Construction Schedule. The Contractor will not be entitled to any compensation for additional work, impact costs or delays in the Construction Schedule not included in the Change Order.

§ 7.3 Construction Change Directives

§ 7.3.1 A Construction Change Directive is a written order prepared by the 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.

§ 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 an 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; or
- .4 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 Architect shall determine the adjustment 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, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.4 shall be limited to the following:

- .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 cost of transportation, whether incorporated or consumed;
- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes, directly related to the change; and
- .5 Costs of supervision and field office personnel directly attributable to the change.

§ 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 Architect 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. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

§ 7.3.10 When the Owner and Contractor agree with a determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Architect will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.4 Minor Changes in the Work

The Architect may 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 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 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 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.

§ 7.5 OVERTIME AUTHORIZED BY OWNER

§7.5.1 When work beyond the normal working hours for the trade is authorized by the Owner, for his own reasons, in writing, the Contract Sum shall be adjusted by Change Order on the basis of premium payment for labor only plus the actual extra cost for insurance and taxes based on this premium payment. Overhead and profit will not be paid by the Owner for overtime so authorized.

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 work to be performed under this Contract shall commence on October 22, 2018.

§ 8.1.3 The date of Substantial Completion is the date certified by the Architect 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 Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 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.

§ 8.2.4 Owner, or his representative, in coordination with the Contractor, shall set work hours. Contractor may be required to work nights, weekends or holidays as necessary to complete the work in accordance with the Schedule or in coordination with School Activities. Under no circumstances shall the Contractor begin or continue with work that is adversely impacting School activity or operations. All utility shutdowns, interruptions, work in or adjacent to existing buildings will be coordinated through the Owner, or his representative, and may have to be performed during hours when the School is not in operation. All cutting, hammering or other activity that is noisy, produces smoke or fumes or is otherwise disruptive to the School may have to be done during hours when the School is not in operation. Work required to be performed during non-school operating hours, as determined by the Owner or his representative, will be performed at no additional cost to the Owner.

§ 8.2.5 Contractor agrees to increase manpower, increase work hours, and to increase equipment necessary to maintain the Project Construction Schedule, and when also requested by the Engineer and the Owner, and shall be without additional cost or charge to the Owner.

§ 8.2.5 Work shall commence immediately and shall proceed uninterrupted to Final Completion. The Contractor acknowledges and recognizes that the Owner is entitled to full and beneficial occupancy and use of all or part of the completed Work in accordance with the Milestone Dates set forth in other sections of the Contract Documents, as per approved Schedule, and that the Owner has made arrangements to discharge its public obligations based upon the Contractor's achieving Substantial Completion of all of the Work within the Contract Time. The Contractor further acknowledges and agrees that if the Contractor fails to complete substantially or cause the Substantial Completion of any portion of the Work as required by the Project Construction Schedule and/or within the Contract Time, the Owner will sustain extensive damages and serious loss as a result of such failure. The exact amount of such damages will be extremely difficult to ascertain. Therefore, the Owner and the Contractor agrees as set forth below.

- .1 If the Contractor fails to achieve partial completion within the requirements of the Milestone Dates or the approved Schedule or to achieve Substantial Completion of all or part of the Work when and as required by the Project Construction Schedule and/or within the Contract Time, the Owner shall be entitled to retain or recover from the Contractor and its Surety, as liquidated damages and not as a

penalty, the amounts indicated in other sections of the Contract Documents and commencing upon the first day following expiration of the Project Construction Schedule and/or the Contract Time, as the case may be, and continuing until the actual Date of Substantial Completion.

§8.2.6 Adherence to Schedule

- .1 The Owner reserves the right to withhold monthly progress payments if the Contractor is behind schedule, unless the Contractor documents, in writing, any delays that are not the fault of the Contractor and to which the Owner and Engineer agree.
- .2 Monthly progress payments will only be released after the Contractor reaches the status of completion for that month contemplated by the construction schedule.

§ 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; (3) by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, adverse weather conditions documented in accordance with Section 15.1.6.2, or other causes beyond the Contractor's control; (4) by delay authorized by the Owner pending mediation and binding dispute resolution; or (5) by other causes that the Contractor asserts, and the Architect determines, justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may determine.

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

§ 8.3.2.1 Any claim for extension of time should be made in writing to the Owner not more than five (5) days after the commencement of the delay, otherwise, it shall be waived. The Contractor shall provide an estimate of the probable effect of such delay on the progress of the work. No claim made beyond the five (5) days shall be considered valid.

§ 8.3.2.2 The Contractor agrees that if any delay in the Contractor's works unnecessarily delays the work of any other Contractor or Contractors, the Contractor shall in that case pay all costs and expenses incurred by such parties due to such delays and hereby authorizes the Owner to deduct the amount of such costs and expenses from any moneys due or to become due the Contractor under this Contract. The Owner shall be responsible for ascertaining whether the Contractor is responsible for delaying any of the work of any other Contractor. His decision shall be final.

§ 8.3.3 Notwithstanding anything to the contrary in the Contract Documents, any extension of the Contract Time, to the extent permitted under Paragraph 8.3.1., shall be the sole remedy of the Contractor for any (1) delay in the commencement, prosecution or completion of the Work, (2) hindrance or obstruction in the performance of the Work, (3) loss of productivity or (4) other similar claims (collectively referred to in this Paragraph 8.3.3. as "delays"), whether or not such delays are foreseeable, unless a delay is caused by acts of the Owner constituting active interference with the Contractor's performance of the Work and only to the extent such acts continue after the Contractor furnishes the Owner with written notice of such interference. In no event shall the Contractor be entitled to any compensation or recovery of any damages in connection with any delay including without limitation consequential damages, lost opportunity cost, impact damages or other similar remuneration. The Owner's exercise of any of its rights or remedies under the Contract Documents (including without limitation ordering changes in the Work or directing suspension, rescheduling or correction of the Work) regardless of the extent or frequency of the Owner's exercise of such rights or remedies shall not be construed as an act of interference with the Contractor's performance of the Work

§ 8.3.4 The Contractor agrees that the Owner can deduct from the Contract Sum, any wages paid by the Owner to any Inspector or Engineer or other professional necessarily employed by the Owner for any number of days in excess of the number of days allowed in the specifications for completion of work..

§ 8.3.5 Where the cause of delay is due to weather conditions, an extension of time shall be granted only for unusually severe weather, as determined by reference to historical data. The term "historical data" as used in the previous sentence shall be construed according to this formula: Average rainfall (or snow or low temperature) for the past five years.

§ 8.3.3 The Contractor shall be precluded from the recovery of damages for delay or for any impacts resulting from delay. This preclusion shall apply for any delays described in paragraph 8.3.1, including (but not limited to) delays caused by an act or neglect on the part of the Owner or Engineer or of an employee of either. The Contractor's sole remedy for any delay (or resulting impacts) shall be an appropriate extension of time for the completion of the Contract. In the event that a Contractor asserts in an arbitration, lawsuit or proceeding of any type, an entitlement to money damages or other damages other than an extension of time in violation of this provision, the Owner and the Engineer shall be entitled to reasonable attorney's fees and costs incurred in the defense of that matter. Anything contained in the General Conditions of the Contract for Construction, AIA Document A201-2007 or as amended, the Supplementary Conditions, the Specifications, the Contract, the Drawings or any other document to the contrary notwithstanding, the Contractor shall not be entitled to damages or to extra compensation by reason of delays occasioned by the proceedings to review the awarding of the Contract to the Contractor or to review the awarding of any other Contract to any other Contractor.

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

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit a schedule of values to the Architect before the first Application for Payment, 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, required by the Architect. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment. Any changes to the schedule of values shall be submitted to the Architect and supported by such data to substantiate its accuracy as the Architect may require, and unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's subsequent Applications for Payment.

§ 9.3 Applications for Payment

§ 9.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. The application shall be notarized, if required, and supported by all data substantiating the Contractor's right to payment that the Owner or Architect require, such as copies of requisitions, and releases and waivers of liens from Subcontractors and suppliers, and shall reflect retainage if provided for in the Contract Documents.

§ 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.

§ 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 supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the 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.

§ 9.3.3 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.

§ 9.4 Certificates for Payment

§ 9.4.1 The Architect will, within Fourteen 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 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. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect 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 security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a Separate Contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 repeated failure to carry out the Work in accordance with 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.

.1 If the Contractor disputes any determination by the Owner with regard to any Certificate of Payment, the Contractor nevertheless expeditiously shall continue to prosecute the Work.

.2 The failure of the Owner to retain any percentage payable to the Contractor or any change in or variation of the time, method or condition of payments to the Contractor shall not release or discharge to any extent whatsoever the Surety upon any bond given by Contractor hereunder. The Owner shall have the right, but not the duty, to disregard any schedule of items and costs that the Contractor may have furnished and defer or withhold in whole or in part any payment if it appears to the Owner, in its sole discretion, that the balance available in the Contract Sum as adjusted and less retained percentages, may be insufficient to complete the Work.

.3 Notwithstanding any provision of any law to the contrary, the Contractor agrees that the time and conditions for payment under the Contract for Construction shall be as stated in the Contract for Construction and in the Contract Documents. The Contractor specifically agrees that Owner's failure to give, or timely give, notice of:

.1 any error in an invoice or application for payment submitted by the Contractor for payment; or
.2 any deficiency or non-compliance with the Contract Documents with respect to any Work for which payment is requested, shall not waive or limit any of the Owner's rights or defenses under the Contract for Construction and the Contract Documents, or require the Owner to make a payment in advance of the time, or in an amount greater than, as provided by the Contract for Construction.

.4 The Contractor shall make payments to its subcontractors in accordance with the provisions of any applicable law governing the time, conditions, or requirements for payment to its Subcontractors, and shall comply with the provisions of any such law.

.1 The Contractor will pay its Subcontractors no later than (15) fifteen days after receipt of a payment from the Owner which includes payment for the work of any such Subcontractors.

.2 The Contractor shall require its Subcontractors, by appropriate agreement, to pay their subcontractors and suppliers (of any tier) within the same time.

.3 The Contractor and its Surety shall indemnify and defend the Owner any loss, cost, expenses, or damages including attorney's fees, arising from or relating to the Contractor's failure to comply with such law.

§ 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.

§ 9.6 Progress Payments

§ 9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.

§ 9.6.2 The Contractor shall pay each Subcontractor, no later than seven days after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 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 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's 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 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors or provided by suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, create any fiduciary liability or tort liability on the part of the Contractor for breach of trust, or entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

§ 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 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, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven 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 additional days' notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided for in the Contract Documents.

§ 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 the Work for its intended use.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list 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 list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, 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 list 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. Upon such acceptance, and consent of surety if any, the Owner shall make payment of retainage applying to the Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

§ 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 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 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, and (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. 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 refund 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 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 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

- .1 liens, Claims, security interests, or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents;
- .3 terms of special warranties required by the Contract Documents; or

4 audits performed by the Owner, if permitted by the Contract Documents, after final payment.

§ 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.

9.11 LIQUIDATED DAMAGES

§ 9.11.1 The Contractor understands and agrees that all work must be performed in an orderly and closely coordinated sequence so that the date for substantial completion is met.

§ 9.11.2 If the Contractor fails to complete his work or fails to complete a portion of his work, he shall pay the Owner, as liquidated damages and not as a penalty, the sum as specified in the technical portion of the contract documents. Such amount is agreed upon as a reasonable and proper measure which the Owner will sustain each calendar day by failure of the Contractor to complete work within the stipulated time. Liquidated damages shall also apply to all Phased construction milestone dates as established by the phasing plan

§ 9.11.3 Substantial completion will be determined by the Owner.

§ 9.11.4 For damage occurring at the time of delay, the Owner may retain the amount due to him under this clause from any payments due to the Contractor.

§ 9.11.5 The Owner will suffer financial loss if the project is not substantially complete on the date set forth in the Contract Documents. The Contractor (and the Contractor's Surety) shall be liable for and pay to the Owner the sum of \$500.00 stipulated and fixed, agreed as liquidated damages for each calendar day of delay until the work is substantially complete.

§ 9.11.6 FIVE HUNDRED (\$500.00) PER DAY CALENDAR DAY FOR PUNCH LIST ITEMS.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 Safety Precautions and Programs

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract.

§ 10.1.1 The Contractor must fully comply with the job safety requirements in addition to all Federal, State and Local safety guidelines. All cost associated with complying with all safety requirements shall be included in the Contract.

§ 10.2 Safety of Persons and Property

§ 10.2.1 The Contractor shall take reasonable precautions for 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.

§ 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 safety of persons or property or their protection from damage, injury, or loss.

§ 10.2.2.1 Contractor shall comply with all regulations required by the Federal Occupational Safety and Health Act (OSHA).

§ 10.2.2.2 The Contractor shall conform to all applicable New Jersey Department of Environmental Protection regulations.

§ 10.2.2.3 Contractors must comply with Construction and Environmental Standards contained in Federal and State Regulations and other applicable laws.

§ 10.2.3 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 the owners and users of adjacent sites and utilities consistent with applicable laws, statutes, ordinances, codes, rules and regulations and lawful orders of public authorities, and prevailing industry practice.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment, or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

§ 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 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 to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

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

§ 10.2.8 Injury or Damage to Person or Property

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, notice of the injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 10.2.9 The Contractor shall provide and maintain in good operating condition suitable and adequate fire protection equipment, and shall comply with all reasonable recommendations regarding fire protection made by the representatives of the fire insurance company carrying insurance on the Work or by the local fire chief or fire marshal. The area within the site limits under the Contractor's control shall be kept orderly and clean, and all combustible rubbish shall be promptly removed from the site. Contractor will comply with all reasonable requests of the Owner and Engineer with respect to additional security and protections required for work interfacing with School Operations. Safety is of utmost importance on this project and all issues relative to safety and protection of the School, Staff and Students will be treated as emergency needs and will not be subject to the 7-day notice requirements of Article 14.

§ 10.2.10 The Contractor shall remove snow or ice which may accumulate on the site within areas under his control which might result in damage or delay.

§ 10.2.11 The Contractor shall take all precautions necessary to prevent loss or damage caused by vandalism, theft, burglary, pilferage, or unexplained disappearance of property of the Owner and Contractor, whether or not forming part of the Work, located within those areas of the Project to which the Contractor has access. Whenever unattended, including nights and weekends, mobile equipment and operable machinery shall be kept locked and made inoperable and immovable.

§ 10.2.12 Neither the Owner and/or the Engineer shall be responsible for providing a safe working place for the Contractor, the Subcontractors or their employees, or any individual responsible to them for the work.

§ 10.2.13 The Contractor shall conform to requirements of OSHA, the Construction Safety Code of the State Department of Labor and those of the AGC Manual. The requirements of the New Jersey and Local Building Construction Codes shall apply where there are equal to or more restrictive than the requirements of the Federal Act.

§ 10.2.14 When all or a portion of the Work is suspended for any reason, the Contractor shall securely fasten down all coverings and protect the Work as necessary from injury or any cause.

§ 10.2.15 The Contractor shall promptly report in writing to the Owner and Engineer all accidents arising out of or in connection with the Work which caused death, personal injury or property damage giving full details and statements of any witnesses. In addition, if death, serious personal injury or serious property damage is caused, the accident shall be reported immediately by telephone or messenger to the Owner and Engineer.

§ 10.2.16 Contractor is required to follow and enforce the work rules set forth below. Failure to comply with or enforce any of these rules will be grounds for suspension and/or termination of this Contract:

- .1 No use of alcoholic beverages prior to or during working hours. Anyone found impaired after lunch will be escorted from the Project site.
- .2 No use of illegal drugs or prescription medications which could induce drowsiness or otherwise impair perception or performance. Use of illegal drugs may result in prosecution to the fullest extent of the law. Any warning associated with use of prescription drugs must be complied with, particularly warning against operation of machinery and equipment.
- .3 No horseplay or rough-housing will be allowed.
- .4 No sexual, racial, or ethnic harassment, or similar conduct will be tolerated.
- .5 All employees shall use proper sanitation habits including use of toilet facilities and garbage cans.
- .6 All employees shall dress in clothing appropriate for the work they are to perform. All personnel are to wear hardhats, safety shoes, glasses, gloves, masks or respirators, noise protection devices, and other protective clothing and equipment as required by OSHA standards.
- .7 All equipment is to be properly stored and/or secured at the end of the work day or if it is to remain idle for greater than one hour.
- .8 All personnel are to be made aware of the availability of Material Safety Data Sheets for materials used at the Project site. This information is available from the Contractor using the product. The Contractor shall maintain a copy of all MSDS forms at the construction site office for all personnel to review.

§ 10.2.17 Contractor shall protect adjoining private or municipal property and shall provide barricades, temporary fences and covered walkways required by prudent construction practices, local building codes, ordinances or other laws, or the Contract Documents.

§ 10.3 Hazardous Materials and Substances

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials or substances. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and notify the Owner and Architect of the condition.

§ 10.3.2 Upon receipt of the Contractor's notice, the Owner shall obtain the services of a licensed laboratory to verify 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. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying 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 material or substance has been rendered harmless, 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 and the Contract Sum shall be increased by the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up.

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for hazardous materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents.

§ 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 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.

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 in the Agreement or 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, Architect, and Architect's consultants shall be named as additional insureds under the Contractor's commercial general liability policy or as otherwise described in the Contract Documents.

§ 11.1.2 The Contractor shall provide surety bonds of the types, for such penal sums, and subject to such terms and conditions as required by the Contract Documents. The Contractor shall purchase and maintain the required bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

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

§ 11.1.4 Notice of Cancellation or Expiration of Contractor's Required Insurance. Within three (3) business days of 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.

§ 11.3.2 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, to the extent permissible by such policies, the Owner waives all rights in accordance with the terms of Section 11.3.1 for damages caused by fire or other causes of loss covered by this separate property insurance.

§ 11.4 Loss of Use, Business Interruption, and Delay in Completion Insurance

The Owner, at the Owner's option, may purchase and maintain insurance that will protect the Owner against loss of use of the Owner's property, or the inability to conduct normal operations, due to fire or other causes of loss.

§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 as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.5.2. 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 similar manner.

§ 11.5.2 Prior to settlement of an insured loss, the Owner shall notify the Contractor of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The Contractor shall have 14 days from receipt of notice to object to the proposed settlement or allocation of the proceeds. If the Contractor does not object, the Owner shall settle the loss and the Contractor shall be bound by the settlement and allocation. Upon receipt, the Owner shall deposit the insurance proceeds in a separate account and make the appropriate distributions. Thereafter, if no other agreement is made or the Owner does not terminate the Contract for convenience, the Owner and Contractor shall execute a Change Order for reconstruction of the damaged or destroyed Work in the amount allocated for that purpose. If the Contractor timely objects to either the terms of the proposed settlement or the allocation of the proceeds, the Owner may proceed to settle the insured loss, and any dispute between the Owner and Contractor arising out of the settlement or allocation of the proceeds shall be resolved pursuant to Article 15. Pending resolution of any dispute, the Owner may issue a Construction Change Directive for the reconstruction of the damaged or destroyed Work.

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 change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect 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.

§ 12.2 Correction of Work

§ 12.2.1 Before Substantial Completion

The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, discovered before Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense. If prior to the date of Substantial Completion the Contractor, a subcontractor or anyone for whom either 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 each 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, if, within one year after the date of Final Acceptance of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, 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 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. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.5.

§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Final Acceptance 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 establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 Acceptance of Nonconforming Work

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

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 Governing Law

The Contract shall be governed by the law of the State of New Jersey and any dispute regarding the Contract shall be venued in Superior Court of New Jersey, Gloucester County.

§ 13.2 Successors and Assigns

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives 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 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 as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules, and regulations or lawful orders of public authorities. 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.

§ 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 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

§ 13.5.1. The Contractor shall not be entitled to any payment of interest for any reason, action or inaction by the Engineer or the Owner.

§ 13.5.2 Any payments withheld for time delays, faulty materials, or workmanship, shall not bear interest for period of delay or non-acceptance.

§ 13.6 Anti Discrimination

§ 13.6.1 Pursuant to N.J.S.A. 10:2-1, Contractor agrees:

a. In the hiring of persons for the performance of work under this contract or any subcontract hereunder, or for the procurement, manufacture, assembling or furnishing of any such materials, equipment, supplies or services to be acquired under this contract, no contractor, nor any person acting on behalf of such contractor or subcontractor, shall, by reason of race, creed, color, national origin, ancestry, marital status, gender identity or expression, affectional or sexual orientation or sex, discriminate against any person who is qualified and available to perform the work to which the employment relates;

b. No contractor, subcontractor, nor any person on his behalf shall, in any manner, discriminate against or intimidate any employee engaged in the performance of work under this contract or any subcontract hereunder, or engaged in the procurement, manufacture, assembling or furnishing of any such materials, equipment, supplies or services to be acquired under such contract, on account of race, creed, color, national origin, ancestry, marital status, gender identity or expression, affectional or sexual orientation or sex;

c. There may be deducted from the amount payable to the contractor by the contracting public agency, under this contract, a penalty of \$ 50.00 for each person for each calendar day during which such person is discriminated against or intimidated in violation of the provisions of the contract; and

d. This contract may be canceled or terminated by the contracting public agency, and all money due or to become due hereunder may be forfeited, for any violation of this section of the contract occurring after notice to the contractor from the contracting public agency of any prior violation of this section of the contract.

§ 13.7 Conflict of Interest

§ 13.7.1

a. No vendor shall pay, offer to pay, or agree to pay, either directly or indirectly, any fee, commission, compensation, gift, gratuity, or other thing of value of any kind to any State officer or employee or special State officer or employee, as defined by N.J.S.A. 52:13D-13b. and e., in the Department of the Treasury or any other agency with which such vendor transacts or offers or proposes to transact business, or to any member of the immediate family, as defined by N.J.S.A. 52:13D-13i., of any such officer or employee, or any partnership, firm, or corporation with which they are employed or associated, or in which such officer or employee has an interest within the meaning of N.J.S.A. 52:13D-13g.

b. The solicitation of any fee, commission, compensation, gift, gratuity or other thing of value by any State officer or employee or special State officer or employee from any State vendor shall be reported in writing forthwith by the vendor to the Attorney General and the Executive Commission on Ethical Standards.

c. No vendor may, directly or indirectly, undertake any private business, commercial or entrepreneurial relationship with, whether or not pursuant to employment, contract or other agreement, express or implied, or sell any interest in such vendor to, any State officer or employee or special State officer or employee having any duties or responsibilities in connection with the purchase, acquisition or sale of any property or services by or to any State agency or any instrumentality thereof, or with any person, firm or entity with which he is employed or associated or in which he has an interest within the meaning of N.J.S.A. 52:13D-13g. Any relationships subject to this provision shall be reported in writing forthwith to the Executive Commission on Ethical Standards, which may grant a waiver of this restriction upon application of the State officer or employee or special State officer or employee upon a finding that the present or proposed relationship does not present the potential, actuality or appearance of a conflict of interest.

d. No vendor shall influence, or attempt to influence or cause to be influenced, any State officer or employee or special State officer or employee in his official capacity in any manner which might tend to impair the objectivity or independence of judgment of said officer or employee.

e. No vendor shall cause or influence, or attempt to cause or influence, any State officer or employee or special State officer or employee to use, or attempt to use, his official position to secure unwarranted privileges or advantages for the vendor or any other person.

f. The provisions cited above in paragraph a. through e shall not be construed to prohibit a State officer or employee or special State officer or employee from receiving gifts from or contracting with vendors under the same terms and conditions as are offered or made available to members of the general public subject to any guidelines the Executive Commission on Ethical Standards may promulgate under paragraph 3c.

§ 13.8 Equal Pay

§ 13.8.1 Pursuant to N.J.S.A. 34:11-56.14(b), any employer, regardless of the location of the employer, who enters into a contract with a public body to perform any public work for the public body shall provide to the Commissioner of the New Jersey Department of Labor and Workforce Development, through certified payroll records required pursuant to N.J.S.A. 34:11-56.25 et seq., information regarding the gender, race, job title, occupational category, and rate of total compensation of every employee of the employer employed in the State in connection with the contract. The employer shall provide the Commissioner, throughout the duration of the contract or contracts, with an update to the information whenever payroll records are required to be submitted pursuant to N.J.S.A. 34:11-56.25 et seq.

§ 13.9 PREVAILING WAGE

§ 13.89.1 to the New Jersey Prevailing Wage Act, NJSA 34:11-56.27 et seq., is hereby made a part of this contract, which designates the workers employed in the performance of this contract shall be paid not less than such prevailing wage rate. In the event it is found that any worker, employed by the contractor or any subcontractor covered by said contract, has been paid a rate of wages less than the prevailing wage required to be paid by such contract, the University may terminate the contractor's or subcontractor's right to proceed with the work, or such part of the work as to which there has been a failure to pay required wages and to prosecute the work to completion or otherwise. The contractor and his sureties shall be liable for any excess costs occasioned thereby to the public body, any lessee to whom the public body is leasing a property or premises or any lessor from whom the public body is leasing or will be leasing a property or premises.

§ 13.10 Contractor shall maintain all documentation related to products, transactions or services under this contract for a period of five years from the date of final payment. Such records shall be made available to the New Jersey Office of the State Comptroller upon request

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 30 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;
- .2 An act of government, such as a declaration of national emergency, that requires all Work to be stopped;
- .3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment (without cause) within the time stated in the Contract Documents; or

§ 14.1.2 If one of the above reasons exist, the Contractor may, upon fourteen (14) days written notice to the Owner, terminate the Contract, unless this reason is cured prior to the expiration of the notice, and recover from the Owner payment of work properly executed in accordance with the Contract Documents (the basis for such payment shall be as provided in the Contract) and for payment for cost directly related to work thereafter performed by Contractor in terminating such work including reasonable demobilization and cancellation charges provided said work is authorized in advance by Architect and Owner.

§ 14.1.3 The Owner shall not be responsible for damages for loss of anticipated profits on work not performed on account of any termination described in Subparagraph 14.1.1 and 14.1.2.

§ 14.1.4 If the Work is stopped for a period of 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 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 the Contract if the Contractor

- .1 refuses or fails to supply enough properly skilled workers or proper materials and/or equipment;
- .2 fails to make prompt payment to Subcontractors or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or suppliers;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 disregards the instructions of Owner (when such instructions are based on the requirements of the Contract Documents).
- .5 Is adjudged bankrupt or insolvent, or makes a general assignment for the benefit of Contractor's creditors, or a trustee or a receiver is appointed for Contractor or for any of its property, or files a petition to take advantage of any debtor's act, or to recognize under bankruptcy or similar laws; or
- .6 Breaches any warranty made by the Contractor under or pursuant to the Contract Documents.
- .7 Fails to furnish the Owner with assurances satisfactory to the Owner evidencing the Contractor's ability to complete the Work in compliance with the requirements of the Contract Documents.
- .8 Fails after the commencement of the Work to proceed continuously with the construction and completion of the work for more than 10 days except as permitted under the Contract Documents.
- .9 Otherwise does not fully comply with the Contract Documents.

§ 14.2.2 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 costs of finishing the Work, including compensation for the services of any consultants and the Architect's services and expenses made necessary thereby, and the other costs and expenses identified hereinafter,

exceed the unpaid balance of the Contract Sum, the contractor and its Surety shall pay the difference to the Owner upon demand. The costs of finishing the Work include, without limitation, all reasonable attorney's fees, additional title costs, insurance, additional interest because of any delay in completing the Work, and all other direct and indirect consequential costs, including, without limitation, Liquidated Damages for untimely completion as specified in the Contract Documents, incurred by the Owner by reason of, or arising from, or relating to the termination of the Contractor as stated herein

§ 14.3 Suspension by the Owner for Convenience

§ 14.3.1 The Owner may, without cause, 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 as described in Section 14.3.1. Adjustment of the Contract Sum shall include profit. 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, terminate the Contract for the Owner's convenience and without cause.

§ 14.4.2 Upon receipt of notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- .1 cease operations as directed by the Owner in the notice;
- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .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.

§ 14.4.3 In case of such termination for the Owner's convenience, the Contractor shall be entitled to Owner payment for Work performed as of the date of termination in accordance with the contract Documents. The Contractor shall, as a condition of receiving the payments referred to herein, execute and deliver all such papers, turn over all plans, documents and files of whatsoever nature required by the Owner, and take all such steps, including the legal assignment of its contractual rights, as the Owner may require for the purpose of fully vesting in the Owner the rights and benefits of the Contractor. The Contractor warrants that it will enter into no subcontracts or other agreements that would adversely impact the Owner's rights or increase the Owner's obligations under this paragraph. In no event shall the Owner be liable to the Contractor for lost or anticipated profits or consequential damages, or for any amount in excess of the compensation due to the Contractor in accord with the Contract Documents for the Work performed as of the date of termination. The warranty and indemnity obligations of the Contractor and Surety shall survive and continue, notwithstanding any termination pursuant to this paragraph, with respect to the Work performed as of the date of termination.

§ 14.4.4 If Owner terminates the Contract for cause pursuant to Paragraph 14.2 and it is subsequently determined that the Owner was not authorized to terminate the Contract as provided in Paragraph 14.2, the Owner's termination shall be treated as a termination for convenience under this Paragraph 14.4 and the rights and obligations of the parties shall be the same as if the Owner has issued a notice of termination to the Contractor as provided in this Paragraph 14.4

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 Claims

§ 15.1.1 Definition

A Claim is a 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

Issues involving the applicable statute of limitations shall be governed by New Jersey Law.

§ 13.7.1 No act or omission by the Owner or Engineer, or by anyone acting on behalf of either shall be deemed or construed as a waiver or limitation of any right or remedy under the Contract Documents, or as an admission, acceptance, or approval with respect to any breach of the Contract for Construction or failure to comply with the Contract Documents by the Contractor, unless the Owner expressly agrees, in writing.

§ 13.7.2 The Owner's exercise, or failure to exercise, any rights, claims or remedies it may have arising out of or relating to the Contract documents shall not release, prejudice, or discharge the Owner's other rights and remedies, nor shall it give rise to any right, claim, remedy or defense by any other person, including the Contractor, its Surety, any Subcontractor, or any other person or entity.

§ 13.7.3 Whenever possible, each provision of the Contract Documents shall be interpreted in a manner as to be effective and valid under applicable law. If, however, any provision of the Contract Documents, or portion thereof, is prohibited or found invalid by law, only such invalid provision or portion thereof shall be ineffective, and shall not invalidate or affect the remaining provision of the Contract Documents or valid portions of such provision, which shall be deemed severable. Further, if any provision of this Contract is deemed inconsistent with applicable law, applicable law shall control.

§ 13.8 Contractor shall promptly pay to Owner all costs and reasonable attorneys fees incurred in connection with any action or proceeding in which Owner prevails, based on a breach of the Contract or other dispute arising out of or in connection with the Contract.

§ 13.9 In the event of the appointment of a trustee and/or receiver or any similar occurrence affecting the management of the account of the Contractor pertaining to the Work, it shall be the obligation of the Contractor, its representatives, receivers, sureties, or successors in interest to continue the progress of the Work without delay and specifically to make timely payment to Subcontractors and Suppliers of all amounts that are lawfully due them and to provide the Owner and all Subcontractors and Suppliers whose work may be affected with timely notice of the status of receivership, bankruptcy, etc., and the status of their individual accounts.

§ 13.10 Regularly scheduled job meetings shall be held at a location and time convenient to the Owner's representatives, the Engineer and the Contractor. The Contractor shall attend such meetings, or be represented by a person in authority who can speak for and make decisions for the Contractor.

§ 15.1.3 Notice of Claims

§ 15.1.3.1 Claims by either the Owner or 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 other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party under this Section 15.1.3.1 shall be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

§ 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. In such event, no decision by the Initial Decision Maker is required.

§ 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 Section 9.7 and 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.

§ 15.1.6 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. 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.

§ 15.2 Initial Decision

§ 15.2.1 Claims, 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 Architect will serve as the Initial Decision Maker, unless otherwise indicated in 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. If an initial decision has not been rendered within 30 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation and binding dispute resolution without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 15.2.2 The Initial Decision Maker will review Claims and within ten 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, 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. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of the 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.

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.

§15.2.5.1 All claims and disputes and other matters in question between the Contractor and the Owner arising out of or relating to the Contract Documents or a breach thereof with regard to the Engineer's decision, shall be decided through suit in New Jersey Superior Court, Camden County, and Contractor consents to the jurisdiction of the New Jersey Superior Court. The Contractor shall carry on all work and maintain its progress during such suit and the

Owner shall continue to make payments not related to the dispute of the Contractor in accordance with Contract Documents.

§ 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 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.





PLANNING AND CONSTRUCTION

ALLOWANCE CHARGE REQUEST (PROPOSAL)

Project: _____ Allowance Charge Request Number: _____
_____ From (Contractor): _____
To: _____ Date: _____
_____ RU Project Number: _____
Re: _____ PO Number: _____

This Allowance Charge Request contains charges to be made against the contract allowance

Description of Proposed Charge:

Attached supporting information from: Subcontractor Supplier _____

Reason for Charge:

Attached pages: Proposal Worksheet Summary:
 Proposal Worksheet Details:

Signed by: _____ Date: _____

Copies: Owner Contractor Consultants _____ _____ _____ File

CHANGE ORDER REQUEST

OWNER
ARCHITECT
CONTRACTOR
FIELD
OTHER

PROJECT: (name, address)

CHANGE ORDER REQUEST NUMBER:

DATE OF ISSUANCE:

ARCHITECT'S PROJECT NO:

CONTRACT FOR:

OWNER: (name, address)

CONTRACT DATE:

ARCHITECT: (name, address)

FROM CONTRACTOR: (name, address)

The contractor must submit this proposal with all appropriate documentation and/or notify the Architect or Owner, in writing, of the date on which proposal submission is anticipated.

THIS IS NOT A CHANGE ORDER, A CONSTRUCTION DIRECTIVE OR A DIRECTION TO PROCEED WITH THE WORK DESCRIBED IN THE PROPOSED MODIFICATIONS.

DESCRIPTION: (Insert a written description of the Work)

ATTACHMENTS: (List attached documents that support description)

REQUESTED BY THE CONTRACTOR:

(Signature)

(Printed Name and title)

CHANGE ORDER

OWNER
ARCHITECT
CONTRACTOR
FIELD
OTHER

PROJECT:
(name, address)

CHANGE ORDER NUMBER:

DATE:

TO CONTRACTOR:
(name, address)

ARCHITECT'S PROJECT NO:

CONTRACT DATE:

CONTRACT FOR:

PURCHASE ORDER NO:

The Contract is changed as follows:

Not valid until signed by the Owner, Architect and Contractor.

The original (Contract Sum) (Guaranteed Maximum Price) was
New change by previously authorized Change Orders
The (Contract Sum) (Guaranteed Maximum Price) prior to this Change Order was
The (Contract Sum) (Guaranteed Maximum Price) will be (increased) (decreased)
(unchanged) by this Change Order in the amount of
The new (Contract Sum) (Guaranteed Maximum Price) including this Change Order will be

The Contract Time will be (increased) (decreased) (unchanged) by () days.
The date of Substantial Completion as of the date of this Change Order therefore is

NOTE: This summary does not reflect changes in the Contract Sum, Contract Time or Guaranteed Maximum Price which have been authorized by Construction Change Directive.

_____ ARCHITECT	_____ CONTRACTOR	_____ Rowan University OWNER
_____ Address	_____ Address	_____ 201 Mullica Hill Road Address
_____ BY _____	_____ BY _____	_____ Glassboro, NJ 08028-1701 BY _____
_____ DATE _____	_____ DATE _____	_____ DATE _____

PROJECT NAME _____
 CONTRACTOR _____
 SUBCONTRACTOR _____

PROJECT NO. _____
 CONTRACT NO. _____
 DATE _____

HOURLY LABOR RATE BREAKDOWN FORM

All Contractors (Including sub-subcontractors) need to include a detailed breakdown of all wage rates, payroll burden costs and material costs for lump sum and time and material extras. Payroll burden items, FICA, FUI, SUI, and Workmen's Compensation will be reimbursed on an average annualized basis. **This information must be provided for all trade to be utilized on the project by any and all contractors at the time of contractors bid submission.** The required format is as follows:
 (Reference 'Change Orders' in AIA 201 General Conditions. Certified payrolls required for all workers on Project.)

TRADE: _____

CLASSIFICATION: _____

Item	Rate Per \$100	Prevailing Wage Rate			Notes
		Regular Time	Overtime	Double Time	
Base Labor Rate					Use certified payroll to verify.
Fringe Benefits:					
Pension ¹					
Annuity Fund ¹					
Health/Welfare ¹					
Training/Certification ¹					
Vacation ¹					
Paid Holiday ¹					
Associate Dues ¹					
Other ¹					
Fringe Benefits Subtotal					
Total PW Hourly Rate					= Base Labor Rate + Benefits
Benefits Paid					
Total Paid Hourly Rate					= Base Labor Rate + Benefits
Burden: Taxes & Insurance ²					
FICA					
Medicare					
Federal Unemployment					
State Unemployment					Maximum - 0.062.
Workers Compensation ¹					Usually less than 11%; can
Other ¹					
Other ¹					
Burden Subtotal					
Contractor Liability Insurance		N/A	N/A	N/A	Included in OH&P
Small Tools		N/A	N/A	N/A	Included in OH&P
Other (warranty, record drawings, payment bonds, performance bonds, etc.)		N/A	N/A	N/A	Included in OH&P
TOTAL HOURLY RATE (Total Hourly Rate + Burden)					= Amount Contractor paid to employee

Note: For change order work, mark-ups for overhead and profit shall be applied to the above rates (these rates are subject to audit) in accordance with the provisions of AIA 201 General Conditions, under 'Change Orders'.

¹ Costs for Overtime and Double Time are same as for Regular Time.

² Taxes & Insurance apply to Total Paid Hourly Rate which includes Base Labor Rate plus benefits paid in cash.

By signing below, the submitter certifies and declares under penalty of perjury under the laws of the State of New Jersey that the foregoing is true and correct.

Rates certified by: _____
 (print name)

Company Name: _____

Signature: _____

Date: _____

PROJECT NAME: **Superiority Hall Renovation Project**
 CONTRACTOR: **Cut No Corners Contractors**
 SUBCONTRACTOR: **Don Write Electrical**

PROJECT NO.: **RU00000**
 CONTRACT NO.: **PO000000**
 DATE: **1/1/2019**

HOURLY LABOR RATE BREAKDOWN FORM

All Contractors (Including sub-subcontractors) need to include a detailed breakdown of all wage rates, payroll burden costs and material costs for lump sum and time and material extras. Payroll burden items, FICA, FUI, SUI, and Workmen's Compensation will be reimbursed on an average annualized basis. **This information must be provided for all trade to be utilized on the project by any and all contractors at the time of contractors bid submission.** The required format is as follows:
 (Reference 'Change Orders' in AIA 201 General Conditions. Certified payrolls required for all workers on Project.)

TRADE: **Electrical** CLASSIFICATION: **Electrical Forman**

Item	Rate Per \$100	Prevailing Wage Rate			Notes
		Regular Time	Overtime	Double Time	
Base Labor Rate		\$ 37.40	\$ 56.10	\$ 74.80	Use certified payroll to verify.
Fringe Benefits:					put X in appropriate box
Pension ¹		5.65	5.65	5.65	X
Annuity Fund ¹		-	-	-	X
Health/Welfare ¹		10.40	10.40	10.40	X
Training/Certification ¹		0.70	0.70	0.70	X
Vacation ¹		-	-	-	X
Paid Holiday ¹		-	-	-	X
Associate Dues ¹		-	-	-	X
Other ¹		0.41	0.41	0.41	X
Fringe Benefits Subtotal		\$ 17.16	\$ 17.16	\$ 17.16	
Total PW Hourly Rate		\$ 54.56	\$ 73.26	\$ 91.96	= Base Labor Rate + Benefits
Benefits Paid		\$ 11.10	\$ 11.10	\$ 11.10	
Total Paid Hourly Rate		\$ 48.50	\$ 67.20	\$ 85.90	= Base Labor Rate + Benefits
Burden: Taxes & Insurance ²					
FICA	0.0620	3.01	4.17	5.33	
Medicare	0.0145	0.70	0.97	1.25	
Federal Unemployment	0.0080	0.39	0.54	0.69	
State Unemployment		-	-	-	Maximum - 0.062.
Workers Compensation ¹		-	-	-	Usually less than 11%; can
Other ¹		-	-	-	
Other ¹		-	-	-	
Burden Subtotal		\$ 4.10	\$ 5.68	\$ 7.26	
Contractor Liability Insurance		N/A	N/A	N/A	Included in OH&P
Small Tools		N/A	N/A	N/A	Included in OH&P
Other (warranty, record drawings, payment bonds, performance bonds, etc.)		N/A	N/A	N/A	Included in OH&P
TOTAL HOURLY RATE (Total Hourly Rate + Burden)		\$ 58.66	\$ 78.94	\$ 99.22	= Amount Contractor paid to employee

Note: For change order work, mark-ups for overhead and profit shall be applied to the above rates (these rates are subject to audit) in accordance with the provisions of AIA 201 General Conditions, under 'Change Orders'.

¹ Costs for Overtime and Double Time are same as for Regular Time.

² Taxes & Insurance apply to Total Paid Hourly Rate which includes Base Labor Rate plus benefits paid in cash.

By signing below, the submitter certifies and declares under penalty of perjury under the laws of the State of New Jersey that the foregoing is true and correct.

Rates certified by: **Don Write**
 (print name)

Company Name: **Don Write Electrical**

Signature: **Don Write**

Date: **1/1/2019**

DAILY JOB REPORT
Project #

DATE:

WEATHER CONDITIONS:

VISITORS:

CONTRACTORS ON SITE:	SUPER ON SITE (Y/N):	WORKFORCE ON SITE: (Foreman, Tradesmen, Laborers, etc.)	NO. OF WORKERS	WORK BEING DONE:

MATERIALS DELIVERED:	EQUIPMENT ONSITE:

PROBLEMS/STATUS/CAUSES FOR DELAY:

NOTEWORTHY PHONE CALLS:

APPLICATION AND CERTIFICATE FOR PAYMENT

AIA DOCUMENT G702

TO OWNER:

PROJECT:

APPLICATION NO:

PERIOD TO:

PROJECT/CONTRACT NO:

FROM CONTRACTOR:

VIA ENGINEER:

CONTRACT DATE:

APPLICATION DATE:

CONTRACTOR'S APPLICATION FOR PAYMENT

CHANGE ORDER SUMMARY		ADDITIONS	DEDUCTIONS
Change Orders approved in previous months by owner			
TOTAL			
Approved This Month Number	Date Approved		
TOTALS			
Net Change By Change Orders			

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: _____

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

1. ORIGINAL CONTRACT SUM.....
2. Net change by Change Orders.....
3. CONTRACT SUM TO DATE (LINE 1 + 2).....
4. TOTAL COMPLETED & STORED TO DATE.....
{Column G on G703}
5. Retainage:
 - a. _____ % of Completed Work.....
{Column D + E on G703}
 - b. 0 % of Stored Materials.....
{Column f on G703}
 Total Retainage (line 5a + 5b or Total in Column I of G703).....
6. TOTAL EARNED LESS RETAINAGE.....
{Line 4 less Line 5 Total}
7. LESS PREVIOUS CERTIFICATES FOR PAYMENT (Line 6 from prior Certificate).....
8. CURRENT PAYMENT DUE.....
9. BALANCE TO FINISH, PLUS RETAINAGE.....
{Line 3 less Line 6}

State _____ County of: _____
 Subscribed and sworn to before me this _____ day of _____ 2010
 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 the above 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..... \$ _____

{Attach explanation if amount certified differs from the amount applied for.}

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.

Attachment to G702 (or equivalent)
Certification for Payment

Project Name: _____
Project Number: _____ Payment Number: _____

I, _____, a prime contractor working for Rowan University on the above-mentioned project, hereby certify as required by P.L. 191, c.507 of the State of New Jersey that: **(you must check one under "A" and one under "B")**

A. . With respect to previous progress payments:

- () all my sub-contractors and suppliers have been paid all amounts due from all previous progress payments I have received from Rowan University for my work on this project
- () all my sub-contractors and suppliers have been paid all amounts due from all previous progress payments with the exception of those listed below for which payment is being withheld as there exists a valid basis for those sub-contractors and suppliers listed below under the terms of their contract(s) to withhold payment from each such sub-contractor and supplier:

- 1. _____
- 2. _____
- 3. _____

For each such sub-contractor and supplier for which payment is being withheld, I further certify that written notice detailing the specific reason(s) for withholding payment has been provided to each such sub-contractor and supplier with copies

thereof provided to my performance bond company and Rowan University.

B. With respect to this payment number_____:

- () all my sub-contractors and suppliers shall be paid all amounts due from this progress payment
- () all my sub-contractors and suppliers shall be paid all amounts due from this progress payment with the exception of those listed below for which payment will be withheld as there exists a valid basis for those sub-contractors and suppliers listed below under the terms of their contract(s) to withhold payment from each such sub-contractor and supplier:

1. _____

2. _____

3. _____

For each sub-contractor and supplier for which payment is being withheld, I further certify that written notice detailing the specific reason(s) for withholding payment has been provided to each sub-contractor and supplier with copies thereof provided to my performance bond company and Rowan University.

I certify that the above statements are true. I am aware that if any of the above statements are willfully false, I am subject to punishment.

Dated: _____

Signature

Please Print Name

CONTRACTOR'S PARTIAL OR FINAL RELEASE AND WAIVER OF LIENS

OWNER:

CONTRACT FOR:

OWNER'S AGENT:

PROJECT:

CONTRACT DATE:

Upon receipt by the undersigned Contractor of a check from Owner in the sum of \$ _____, which check will consume payment of all sums due the Contractor for labor, equipment and/or materials supplied in connection with the Project, and when said check has been paid by the bank upon which it is drawn, this document shall become effective to fully and finally waive and release any and all liens, claims, liabilities, actions, and demands that this Contractor and all its subcontractors have or might have against Owner, Lender, the Project, the real property upon which the Project is located and any and all other property owned by Owner on account of or in connection with labor, equipment and/or materials supplied by the undersigned to the Project.

The undersigned Contractor does hereby further acknowledge and represent that through the date hereof the undersigned has received payments totaling \$ _____ for labor, equipment and/or materials supplied to the Project.

This instrument has been executed as of the _____ day of _____, 20__.

CONTRACTOR:

By: _____

Name: _____

Title: _____

STATE OF _____ δ

δ

COUNTY OF _____ δ

Sworn to and subscribed before me the undersigned authority on this _____ day of _____, 20__.

[S E A L]

Notary Public, State of _____

My Commission Expires:

Printed Name of Notary Public



To Whom It May Concern:

Your recent request to Rowan University requesting information or a tax exempt form is hereby acknowledged.

It has been determined that Rowan University is a government body and is Exempt from New Jersey Sales and Use Taxes imposed by the Sales and Use Tax Act (P.L. 1966, c.30 and c.52). An opinion from the State of New Jersey, Office of the Attorney General has been reproduced below.

If you have any questions, please contact the Accounts Payable Office at (856) 256-4115.

Sincerely,

Joseph F. Scully, Jr.

Joseph F. Scully, Jr.
Vice President for Finance & CFO



State of New Jersey
OFFICE OF THE ATTORNEY GENERAL
DEPARTMENT OF LAW AND PUBLIC SAFETY
DIVISION OF LAW
25 MARKET STREET
PO Box 112
TRENTON, NJ 08625-0112

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

PAULA T. DOW
Attorney General

ROBERT M. HANNA
Director

May 4, 2011

Joseph F. Scully, Jr.
Vice President for Finance & CFO
Rowan University
Bole Hall
201 Mullica Hill Road
Glassboro, NJ 08028-1701

Re: Tax Exempt Status of Rowan University
Federal Tax ID #222-764-819

Dear Mr. Scully:

You have asked this office for an opinion whether Rowan University is obligated to pay New Jersey sales and use taxes in the conduct of the University's business.

You are hereby advised that, pursuant to N.J.S.A. 54:32B-9, any sales, service or amusement charge by or to the University or any use or occupancy by the University is not subject to taxes imposed by the New Jersey Sales and Use Tax Act, N.J.S.A. 54:32B-1 *et seq.*, where the University or its authorized representative conducting University business, is the purchaser, user or consumer. Further, should the United States or any other state grant an exemption from certain taxes to the State of New Jersey, Rowan University, as an arm of the State, is entitled to such consideration.

Sincerely yours,

PAULA T. DOW
ATTORNEY GENERAL OF NEW JERSEY

By: *Cheryl R. Clarke*
Cheryl R. Clarke
Deputy Attorney General

CRC/zd



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Chief Financial Officer
Bole Hall
201 Mullica Hill Road
Glassboro, NJ 08028-1701

856-256-4127
856-256-4443 fax

**CONSENT OF
SURETY COMPANY
TO FINAL PAYMENT**

AIA DOCUMENT G707

OWNER
ARCHITECT
CONTRACTOR
SURETY
OTHER

PROJECT:
(name, address)

TO (Owner)

ARCHITECT'S PROJECT NO.:
CONTRACT FOR:

CONTRACT DATE:

CONTRACTOR:

In accordance with the provisions of the Contract between the Owner and the Contractor as indicated above, the
(there insert name and address of Surety Company)

, SURETY COMPANY,

on bond of (there insert name and address of Contractor)

, CONTRACTOR,

hereby approves of the final payment to the Contractor, and agrees that final payment to the Contractor shall not
relieve the Surety Company of any of its obligations to (there insert name and address of Owner)

, OWNER,

as set forth in the said Surety Company's bond.

IN WITNESS WHEREOF,
the Surety Company has hereunto set its hand this

day of

2017

Surety Company

Signature of Authorized Representative

Title

Attest:
(Seal):

NOTE: This form is to be used as a companion document to AIA DOCUMENT G706, CONTRACTOR'S AFFIDAVIT OF PAYMENT OF DEBTS AND
CLAIMS, Current Edition

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section. In the event of any conflicts between the requirements of these Sections, the more stringent requirement shall apply.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Work covered by the Contract Documents
 - 2. Use of premises.
- B. Related Sections include the following:
 - 1. Division 01 Section "Construction Facilities and Temporary Controls" for limitations and procedures governing temporary use of Owner's premises.

1.3 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification:
 - 1. Project Location: Rowan University School of Medicine, Stratford, New Jersey
 - a. Science Center Building: Floors 1 & 2
 - 2. Owner: Rowan University
- B. Architect Identification: The Contract Documents were prepared for Project by:
 - 1. J.W. Pedersen Architect
1199 E. Park Avenue
Vineland, NJ 08360
- C. The Work consists of the following:
 - 1. The contractor will be permitted to conduct their building surveys once the letter of award is issued. Contractor shall also begin the submittal process.
 - 2. Contractor must outline in their bid any long lead items that may impact their ability to meet the deadlines of the schedule.
 - 3. Rowan University has submitted the Plans and Specification to DCA for the Plan Review Process.
 - 4. Contractor is responsible to submit all permits.
 - 5. Bid shall include all systems improvements as shown on the Science Center Renovations Specifications and Design Documents issue under this IFB.
 - 6. Contractor must follow all OSHA and Rowan safety guidelines and procedures.

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7. Contractor shall Schedule and Coordinate all work activities with Rowan University.
8. Contractor must bid the project to meet the schedule outlined in the bid documents which may include weekend and/or shift work. Contractor must staff the project accordingly to meet the schedule since the end date is firm. Rowan will not entertain change orders for contractor's inability to meet this schedule or time extensions.
9. Contractor is responsible to schedule and manage all required inspections, including but not limited to Final Certificate of Occupancy inspection.
10. Contractor is required to maintain a clean job site and to turn over the building back to the owner in the condition it was received.
11. Contractor is responsible to perform final cleaning prior to Final Turn Over and Owner's Final Acceptance.

1.4 CONTRACT

- A. Project will be constructed under a single prime general construction contract.

1.5 USE OF PREMISES

- A. General Construction Operations: Contractor shall have limited use of premises for construction operations, including a limited use of the project site (outside the facilities exterior walls) during the period of construction activity. Contractor's use of the premises is limited by Rowan's right to perform work or to retain other contractor's on portions of the Project or to limit access for events or other functions as the University might require. The Contractor will be given notice of any such events well in advance so that arrangements can be made to insure the prosecution of the work continues as scheduled.
- B. Arrange use of site and premises to allow:
 1. Owner occupancy.
 2. Work by others.
 3. Work by Owner.
- C. Use of Site: Limit use of premises to work in areas indicated. Do not disturb portions of Project site beyond the building perimeter unless prior approval of the University is received prior to conduction such work or operations.
 1. Limit site disturbance, as approved by Rowan University.
 2. **REFER TO SECTION 011400 FOR WORK HOURS.**
 3. Storage of construction materials and equipment is not permitted inside the existing building.
 4. Driveways and Entrances: Keep driveways and entrances serving premises clear and available to Rowan University, Rowan's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 - a. Schedule deliveries to minimize use of the driveways and entrances.
 - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- D. Use of Existing Building: Maintain existing building in a weather tight condition throughout construction period. Repair damage caused by construction operations. Protect building and its occupants during construction period.

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- E. **The Contractor will be responsible for photographing the entire area of work, adjacent spaces where incidental work may occur, corridors and elevators accessing the area of work, the loading area, and contractor parking area. The Contractor will provide the Owner with digital copies of all the photographs prior to mobilization as a record of the existing conditions PRIOR to the start of the work.** Digital format will be in PDF format.

1.6 SPECIFICATION FORMATS AND CONVENTIONS

- A. Specification Format: The Specifications are organized into Divisions and Sections using the 48-division format and CSI/CSC's "MasterFormat" numbering system.
1. Section Identification: The Specifications use section numbers and titles to help cross-referencing in the Contract Documents. Sections in the Project Manual are in numeric sequence; however, the sequence is incomplete. Consult the table of contents at the beginning of the Project Manual to determine numbers and names of sections in the Contract Documents.

1.7 MISCELLANEOUS PROVISIONS

- A. **WORK REQUIRED TO BE PERFORMED UNDER THIS CONTRACT SHALL BE COMPLETED IN ACCORDANCE WITH THE FOLLOWING MILESTONES AND COMPLETION DATES. CONTRACTORS MUST INCLUDE IN THEIR BIDS ALL COSTS INCLUDING OVERTIME ASSOCIATED WITH INSURING THAT THE PROJECT IS COMPLETED BY THE MILESTONE DEADLINES LISTED HEREIN.**
- B. Summary of Milestones:
1. Notice to Proceed/Authorization by: The University intends to issue Notice to Proceed, Construction Contract, and/or University purchase order as evidence of contract award.
 2. ALL submittals to Architect: one (1) week after Notice to Proceed.
 3. Architect return of reviewed of submittals by: (5) days after receipt.
 4. **Substantial Completion by 05/14.**
 5. Final Completion of work on site by **FIVE (5) BUSINESS DAYS FROM SUBSTANTIAL COMPLETION.** All construction including punch list work will be completed by this date.
 6. **Final Completion by TEN (10) BUSINESS DAYS FROM SUBSTANTIAL COMPLETION DATE.** All closeout documentation, final payment application, etc.
- C. Weather Conditions:
1. Unfavorable weather conditions shall not be justification for delays in completion or final completion dates as specified. No change orders will be issued or approved for extensions of time due to weather conditions. Seasonal weather conditions shall be considered in the planning and scheduling of all work influenced by high or low ambient temperatures for the completion of all contract work within the allotted contract time. In addition, appropriate allowances shall be made for anticipated time losses due to normal rain and snow conditions by statistically expanding the estimated time durations for weather sensitive activities with the constraint that the substantial completion deadline cannot change.
 2. The University may at its sole discretion entertain extensions of time from the contractor for weather related delays. However no extensions of time shall be considered by the University until at least twenty-five (25) lost project schedule days have accrued. Lost

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time will accrue on a proportionate basis – 1/4 lost day will be charged as 1/4 lost day, 1/2 lost day will be charged as 1/2 lost day, and so forth. A lost project schedule day is considered a day or any portion of a day when all members of the construction workforce on the project cannot work due to inclement weather conditions. Whether or not the contractors' workforce fails to begin work or leaves the project site on any given day due to a claim of inclement weather a lost project schedule day will not be recognized by the University until it is approved in writing by the Owner's Project Manager.

3. Should the University approve an extension of time the contractor may only submit reimbursement for the cost of the extension of rental equipment agreements; bond premium and insurance adjustments at actual cost with no mark up; and general conditions directly impacted by the approved extension. Appropriate back up documentation as requested by the Owner's Project Manager must accompany any submission for reimbursement. Appropriate back up can be anything from copies of contractor's rental agreements showing rental durations, unit costs, rental rates, etc. to copies of superintendents pay stubs.
- D. Intent of Contract: The drawings and specifications of the contract are intended to require the contractor to provide for everything reasonably necessary to accomplish the proper and complete finishing of the work. All work and materials included in the specifications and not shown on the drawings, or shown on the drawings and not in the specifications, shall be performed and/or furnished by the contractor as if described in both. Any incidental materials and/or work not specified in the drawings and/or the specifications which are, nevertheless, necessary for the true development thereof and reasonably inferable therefrom, the contractor shall understand the same to be implied and required, and shall perform all such work and furnish all such materials as if particularly delineated or described therein. Should there be an obvious error between the drawings and specifications, the most stringent constraints of the conflicting information shall be assumed by the contractor and it shall be the contractor's responsibility to complete the work as reasonably required, consistent with the intent of such drawings and specifications as may be interpreted by the University.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 011000

SECTION 011400 – WORK RESTRICTIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section. In the event of any conflicts between the requirements of these Sections, the more stringent requirement shall apply.

1.2 USE OF PREMISES

- A. Use of Site: Limit use of premises to work in areas indicated. Do not disturb portions of site beyond areas in which the Work is indicated.
 - 1. Limits: Confine construction operations to weekdays (Monday through Friday) from 7:30 AM to 5:00 PM. Weekend and Holiday work may be permitted if approved by the Owner.
 - 2. Owner Occupancy: Allow for Owner occupancy of building, site and use by the public.
 - 3. Driveways and Entrances: Keep streets, driveways and entrances serving premises clear and available to owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 - a. Schedule deliveries to minimize use of driveways and entrances.
 - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- B. Use of Existing Building: Repair damage caused by construction operations. Protect building and its occupants during construction period.

1.3 OCCUPANCY REQUIREMENTS

- A. Full Owner Occupancy: Owner will occupy site and existing building during entire construction period. Cooperate with owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations.

1.4 WORK SEQUENCE

- A. Work shall be completed within the schedule as outlined in Section 011000 – Summary. University intends to issue Notice to Proceed, Construction Contract, and/or University Purchase Order as evidence of contract award on or before Project start date listed.

1.5 CONTRACTOR WORK AREAS, WORKING CONDITIONS AND EQUIPMENT STORAGE REGULATIONS

- A. The Contractor shall not unreasonably encumber the facilities with its equipment or work to be performed. Work conducted by the Contractor, Subcontractor, or any other person and/or firm affiliated with the Contractor shall be contained within pre-designated working areas established by the documents.

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- B. The Contractor shall, at all times during the progress of the work, keep the site free from the accumulation of all rubbish and debris caused by its performance. The Contractor shall remove all debris and rubbish related to its work at the end of each workday to the satisfaction of the Owner's Project Manager. Tool storage boxes shall not be permitted inside the building on the first floor or outside the building.
- C. The Contractor shall adequately secure and protect its equipment, materials and vehicles. The University assumes no liability for any damage to, or theft of, the Contractor's property. The Contractor shall have the use of a designated area for storage and staging of construction materials and equipment. The Contractor shall be responsible for adhering to security procedures outlined by the Owner's Project Manager.
- D. The Contractor is responsible for all safety precautions for all of its employees and property while performing its services.
- E. The Contractor shall strictly limit its employees' use of the facilities for lunch, smoking or rest time usage to only those areas designated by the Owner's Project Manager. Use of facility telephones will not be allowed. Use of building toilet facilities shall not be permitted. Smoking is not allowed inside the building.

1.6 WORK STOPPAGES, EXISTING UTILITY INTERRUPTIONS, NOISE AND ODOR RESTRICTIONS, AND MATERIAL APPROVALS

- A. Work Stoppages – DOES NOT APPLY.
- B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 - 1. Notify Owner not less than five (5) working days in advance of proposed utility interruptions.
 - 2. Do not proceed with utility interruptions without Owner's Project Manager's written permission.
- C. Consideration shall be given by the Contractor regarding odors emanating from adhesives and sealants, etc and excessive noise. If the odors or noise are such that they may disturb the employees and guests, then such work shall be performed while the building is not occupied. This determination shall be at the sole discretion of the Owner's Project Manager. The playing of radios and other unnecessary noise will not be permitted at any time.
- D. All material safety data sheets shall be submitted and approved by the Owner's Project Manager prior to use of the material.

1.7 PROTECTION OF INTERIOR FINISHES

- A. The Contractor shall take extra care to avoid damage or soiling to any part of the facility. The Contractor is responsible for all damages or destruction caused directly or indirectly by its performance to any part of the building or adjoining property. Any damage or destruction caused by the Contractor or its employees will be repaired or replaced as the Owner's Project Manager directs and to their satisfaction with all costs charged to the Contractor. The costs may be deducted from any and all amounts due to the Contractor.
- B. Any of the Contractor's employees found defacing, damaging or marring the building or its finishes or contents shall be immediately removed by the Contractor. The Contractor shall

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be charged for all remedial work to restore the damaged area or contents to their original condition to the satisfaction of the State.

- C. The Contractor shall take all necessary steps to ensure adequate protection of all building furniture, equipment and building finishes, including but not limited to: floors, walls, ceilings, windows, draperies, blinds, carpeting, doors, doorways and contents. In this endeavor, all workers are to take precautions to protect rugs and floors. The Contractor shall be charged for all remedial work to clean, repair and/or replace items damaged by the Contractor to the satisfaction of the State.
- D. The Contractor is responsible for the cost of cleanup of dust, dirt and stains caused by the work to the satisfaction of the Owner's Project Manager. The Contractor shall take all necessary precautions to keep dust, dirt and debris to a minimum both within the construction area and throughout the buildings.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 011400

SECTION 01210 - ALLOWANCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section. In the event of any conflicts between the requirements of these Sections, the more stringent requirement shall apply.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements governing allowances.
 - 1. Certain items are specified in the Contract Documents by allowances. Allowances have been established in lieu of additional requirements and to defer selection of actual materials and equipment to a later date when additional information is available for evaluation. If necessary, additional requirements will be issued by Change Order Directive **THE ALLOWANCE SHALL BE INCLUDED IN THE BASE BID.**
- B. Types of allowances include the following:
 - 1. Lump-sum allowances.
- C. Related Sections include the following:
 - 1. Division 01 Section "Quality Control Services" for procedures governing the use of allowances for testing and inspecting.
 - 2. Divisions 02 through 48 Division Sections for items of Work covered by allowances.

1.3 SELECTION AND PURCHASE

- A. If applicable, at the earliest practical date after award of the Contract, advise Architect of the date when final selection and purchase of each product or system described by an allowance must be completed to avoid delaying the Work.
- B. At Architects request and Owners approval, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.
- C. Purchase products and systems selected by Architect from the designated supplier.

1.4 SUBMITTALS

- A. Submit proposals for purchase of products or systems included in allowances, in the form specified for Change Orders.
- B. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.

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- C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.
- D. All Allowances will be recorded as separate line items on the initial Schedule of Values to be approved by the Owner and/or Architect. Once the initial Schedule of Values is approved all subsequent Schedule's will continue to include these Allowances as separate line items. Allowances will be tracked as separate line items.

1.5 COORDINATION

- A. Coordinate allowance items with other portions of the Work. Furnish templates as required to coordinate installation.

1.6 LUMP-SUM ALLOWANCES

- A. Allowance shall include cost to Contractor of specific products and materials and shall include taxes, freight, and delivery to Project site.
- B. Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials accepted by Owner under this Section shall be included as part of the allowance.

1.7 UNUSED MATERIALS

- A. Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.
 - 1. If requested by Architect, prepare unused material for storage by Owner when it is not economically practical to return the material for credit. If directed by Architect, deliver unused material to Owner's storage space. Otherwise, disposal of unused material is Contractor's responsibility.

1.8 UNUSED ALLOWANCES

- A. All unused Allowances are and will remain the Owner's property. The Contractor shall return any remaining Allowance balances to the Owner upon completion of all punch list items and Final Acceptance of the Building.
 - 1. Allowance balances will be returned to the Owner by Change Order.
 - 2. Change Orders for returning Allowance balances to the Owner will be initiated and approved prior to the Contractor submitting for Final Payment. Allowance balances will not be included in the Final Application for Payment.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

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3.2 PREPARATION

- A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 SCHEDULE OF ALLOWANCES

Lump Sum Allowance No. 1, Owner Directed Work: n/a

END OF SECTION 012100

SECTION 012200 – UNIT PRICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for unit prices.
- B. Related Requirements:
 - 1. Section 012500 “Contract Modification Procedures” for procedures for submitting and handling Change Orders.
 - 2. Section 014000 “Quality Control Requirements” for general testing and inspection requirements.

1.3 DEFINITIONS

- A. Unit price is a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

1.4 PROCEDURES

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.
- B. Measurement and Payment: See individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.
- C. Owner reserves the right to reject Contractor’s measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner’s expense, by an independent surveyor acceptable to Contractor.
- D. List of Unit Prices: A schedule of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 SCHEDULE OF UNIT PRICES

- A. n/a

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END OF SECTION 012200

SECTION 012300 - ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section. In the event of any conflicts between the requirements of these Sections, the more stringent requirement shall apply.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for alternates.

1.3 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
 - 1. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.4 PROCEDURES

- A. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
 - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.
- C. Execute accepted alternates under the same conditions as other work of the Contract.
- D. Schedule: A Schedule of Alternates is included at the end of this Section. If specification Sections are referenced in alternate schedule, the specification section contains the requirements for materials necessary to achieve the work described under each alternate. If specifications are not listed in the schedule below, base the alternate price on the

description below.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 SCHEDULE OF ADD – ALTERNATES

A. Add Alternate No. 1: n/a

3.2 SCHEDULE OF DEDUCT – ALTERNATES

A. Deduct Alternate No. 1: n/a

END OF SECTION 012300

SECTION 012400 – PROCEDURES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, General Conduct of the Work and Special Requirements, Supplementary Conditions, and other Division 01 Specification Sections, apply to this Section. In the event of any conflicts between the requirements of these Sections, the more stringent requirement shall apply.

1.2 DESCRIPTION OF WORK

- A. The types of minimum requirements for procedures and performance or control work of a general nature, to be fulfilled collectively by contractors, include but are not necessarily limited to the following categories:

1. Coordination and meetings.
2. Administration/supervisory personnel.
3. Examination and checking of contract drawings.
4. Surveys and records or reports.
5. Limitations for use of site.
6. Protection of Persons and Property.
7. Special reports.
8. Subcontractor, material approval.
9. Tradesmen and workmanship standards.
10. Inspections, tests and reports.
11. Progress photographs.
12. General installation provisions.
13. Control Wiring.
14. Chases, recesses and openings.
15. Sleeves, built-in items.
16. Cutting and patching.
17. Uncovering and correction of work.
18. Cleaning and protection.
19. Conservation and salvage.

1.3 COORDINATION AND MEETINGS

- A. General: Contractor shall prepare a written memorandum of general instructions on required coordination activities including notices/reports/meetings, and distribute memorandum to each engaged entity performing work at project site, with copies to Architect and Owner.
- B. Coordination Drawings: Where work by separate entities requires off-site fabrication of products and materials which must be accurately interfaced and closely intermeshed to produce required results, prepare coordination drawings to indicate how work shown by separate shop drawings will be interfaced, intermeshed, and sequenced for installation.
 1. Comply with submittal requirements of "Submittals" section, and other requirements outlined in the other Divisions.
- C. Biweekly Job Meeting: The Contractor's Project Manager and Superintendent, the Owner's

Project Manager and the Architect shall attend biweekly job meetings convened by the Owner for the purpose of affording the opportunity to review Contractor's coordination efforts, to expedite the performance of administrative tasks, and to generally assess the work progress. Contractor shall require representation (at each meeting) by every entity currently involved in coordination or planning for the work (of the entire project). Contractor shall participate in meetings in a manner, which will resolve coordination problems.

1. Time and location of job meetings shall be designated by the mutual agreement of the Contractor, Architect and Owner.
2. Job meetings shall be chaired by the Architect, who shall record the proceedings in the form of minutes and shall be responsible for proper distribution thereof to all parties. Initial minutes will be distributed within three (3) business days after the meeting.
3. Any and all corrections or clarifications to these minutes shall be received by the Architect in writing within three (3) days of their issuance. After the interval allowed for corrections and clarifications, Job Meeting Minutes will stand as part of the project record.
4. All decisions, instructions and interpretations given by Owner, with concurrence of the Architect, at these meetings shall be binding and conclusive on Contractor.
5. Architect and Owner shall have the right to schedule Special Job Meetings or increase the frequency of job meetings if, in his opinion, the progress and condition of the work warrant it. Attendance at such meetings is mandatory.
6. Subcontractors and suppliers shall attend at the request of the Architect or Owner as appropriate to the agenda topics at each meeting.
7. Agenda:
 - a. Review of Work progress.
 - b. Field observations, problems, and decisions.
 - c. Identification of problems, which impede planned progress.
 - d. Maintenance of Progress Schedule- updated by Contractor and discussed at every meeting.
 - e. Corrective measures to regain projected schedule milestones and deadlines.
 - f. Planned progress during succeeding work period and two (2) week look ahead.
 - g. Effect of proposed changes on progress schedule and coordination.
 - h. Review and update Submittal Log for every meeting.
 - i. Other business relating to the Work.

D. Pre-Construction Meeting: Owner will schedule a meeting after Notice of Award.

1. Attendance Required:
 - a. Owner.
 - b. Architect.
 - c. Contractor.
2. Agenda:
 - a. Execution of Owner/Contractor Agreement.
 - b. Submission of executed bonds and insurance certificates.
 - c. Distribution of Contract Documents.
 - d. Submission of list of Subcontractors, list of Products, schedule of values, etc.
 - e. Procedures and processing of field decisions, submittals, substitutions, applications for payment, proposal requests, Change Orders, and Contract closeout procedures.

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- f. Scheduling (Preliminary Progress Schedule by Contractor).
 3. The above Agenda is a comprehensive list of items that could be discussed at the Pre-Construction Meeting. Some items will be included while the Owner may choose to handle other items by other means.
 4. Architect will record minutes and distribute copies within two (2) days after meeting to participants, with two copies to Contractor, Owner, and those affected by any decisions made.
- E. Pre-Installation Conferences:
1. When required by individual specification sections, contractor shall convene a pre-installation conference prior to the start of installation for the portion of work in question.
 2. Require attendance of all Subcontractors, suppliers, manufacturers (if necessary), Owner Architect (at the Owners request), Engineers (at the Owners request) directly affecting of affected by the Work in question.
- F. Application for Payment "PENCIL COPY" review meeting:
1. Contractor to schedule a Pencil Copy Review Meeting five (5) working days prior to payment period deadline stipulated in the Agreement.
 2. Contractor will be responsible to incorporate all agreed upon changes to the Pencil Copy version of the Application and submit the revised Application in accordance with all Contract requirements.

1.4 ADMINISTRATIVE/SUPERVISORY PERSONNEL

- A. General: In addition to a Home Office Project Manager and a Field Construction Superintendent and other administrative and supervisory personnel required for performance of the work, the Contractor shall provide specific coordinating personnel as may be required for proper interface between the trades and other work of the total project.
- B. Project Superintendent: The Contractor shall provide a full-time Project Superintendent, who is experienced in administration and supervision of building construction of a type similar in nature and scope to this Project, including mechanical and electrical work, and who is hereby authorized to act as the general coordinator of interfaces between the work of all the trades. For purpose of this provision, "interface" is defined to include the scheduling and sequencing of work, sharing of access to work spaces, installations, each trade's protection of work by other trades, cutting and patching, tolerances, preparation of coordination drawings, inspections, tests, and temporary facilities and services.
- C. Submittal of Staff Names, Duties: Within 15 days of contract date, the Contractor shall submit to the Owner and Architect a listing of Contractor's principal staff assignments and consultants, naming persons and listing their addresses, telephone numbers and past construction experience.

1.5 EXAMINATION AND CHECKING OF CONTRACT DOCUMENTS

- A. Contractor shall be responsible for reviewing the contract documents in accordance with the requirements specified herein.
1. Contractor shall examine and check all quantities and dimensions given on contract drawings, and shall be responsible for noting any errors which can be discovered by

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such examination and check, and shall be responsible for satisfactory joining and fitting of all parts of the work; any check or observation by Architect/Engineer shall not relieve the Contractor of any responsibility as to correctness of the work.

2. Field verification of dimensions on drawings is specifically directed and required of the Contractor as a matter of course, because locations, distances and elevations will be governed by actual field conditions. Contractor shall review plans, site plans and details of construction on the drawings, and adjust his work to conform to all conditions indicated thereon or reasonably inferable therefrom.
3. Discrepancies shown on different plans and details, or between drawings, and actual field conditions, or between drawings and specifications, shall promptly be brought to the attention of the Architect for interpretation and resolution.
4. If, in Contractor's opinion, any work is indicated on drawings or specified in such a manner as will make it impossible to produce such in conformance with the contract, he shall refer same to Architect for interpretation. If additional and supplementary instructions are necessary, Architect/Engineer will prepare and issue same in an appropriate form to the Contractor, with a copy being forwarded to the Owner.
5. Contractor is directed never to scale dimensions or locations from contract drawings. Consult Architect/Engineer for dimensions and locations of all items.

1.6 SURVEYS AND RECORDS/REPORTS

- A. General: Working from lines and levels established by property survey, and as shown in relation to the work, the Contractor shall establish and maintain bench marks and other dependable markers to set lines and levels for the work at each story of construction and elsewhere on site as needed to properly locate each element of entire project. Contractor shall calculate and measure required dimensions as shown (within recognized tolerances if not otherwise indicated); and shall not scale drawings to determine dimensions. Advise tradesmen performing the work, of marked lines and levels provided for their use in layout of work.

1.7 LIMITATIONS FOR USE OF SITE

- A. General: It is the intent of the Owner to preserve the present character of the campus to the greatest extent possible, both during and after the period of construction. To this end the Contractor will be subject to certain operational controls in the movement of personnel and equipment on and off the construction site. The Contractor's cooperation with the general goal of protecting and preserving the Institute campus, and with the specific controls specified hereinafter, shall be mandatory. The following general controls shall be observed:
 1. Construction activities, including location of temporary support facilities, stockpiling of materials, loading and unloading, parking for construction personnel and other related activities shall be restricted to areas as specified by the Owner.
 2. The accumulation or stockpiling of debris, rubbish or other material resulting from demolition or construction operations will not be permitted. Removal and off-site disposal must proceed concurrent with demolition and construction activities, to the end that the site shall at all times present a neat, orderly and workmanship appearance. No liquid or solid material of any kind is to be disposed of on campus property. No burning of trash or debris will be permitted on the site.
 3. The Contractor shall be responsible for the prevention, abatement and control of any environmental pollution arising from demolition or construction activities in the performance of the work, in full compliance with all applicable Federal and State laws and regulations.
 - a. Existing trees and other vegetation on and adjacent to the project site shall be

protected. Refer to Section 015000 - "Temporary Facilities" - for specific requirements concerning fencing. Under no circumstances shall materials be stored or heavy equipment operated beneath the drip lines of existing trees.

4. Contractor shall be responsible for the control of dust arising from demolition or construction operations within the project site or along the Access Routes.
- B. Allocation of Space: In addition to site utilization limitations and requirements shown on drawings, and indicated by other contract documents, Contractor shall administer allocation of available space equitably among separate subcontractors and other entities needing access and space, so as to produce overall efficiency in performance of total work of project.
- C. Deliveries: Contractor shall schedule deliveries so as to minimize space and time requirements for storage of materials and equipment on site.
- D. Construction Access:
1. Contractor shall plan, coordinate and execute all construction activities in such manner as to avoid traffic disruption over local streets.
 - a. Prior to the start of work, Contractor shall contact the Police Department and determine approved travel routes for delivery vehicles on local streets.
 - b. Contractor shall obtain and pay for all necessary permits in connection with the operation of overweight and over length vehicles on City streets.
 2. Contractor shall be responsible for controlling all traffic entering and leaving the Owner's property including provision of flagmen as necessary. Contractor shall be responsible to require mud removal from rubber-tired vehicles departing the immediate project site. Operation of tracked vehicles shall be restricted to the project site as defined by the contract limit lines, and is not permitted on paved areas.
 3. Whenever and wherever the project work must be performed outside the contract limit lines, and after the necessary permits have been secured from local authorities, Contractor shall erect and maintain barricades, danger signals and warning signs at working sites, closed roads, intersections and other places of danger to traffic, the work, or the public. Barricades and obstructions of any kind shall be marked with lights or flares at not more than five (5) foot intervals visible for a distance of not less than 500 feet. Contractor shall provide sufficient watchmen and traffic directors and shall take all necessary precautions for the proper protection of the work and the safety of the public.
 4. Contractor shall be responsible for identification, control and maintenance of construction traffic within the contract limit lines. Identification and control shall include the provision of temporary traffic signs and the installation of barricades and warning lights to protect the work and to identify excavations or other hazards, all as may be required. Maintenance shall include the provision and placing of ballast materials as may be required, grading and compaction, removal of debris, removal of snow, and general care to insure a serviceable roadbed at all times.
 - a. The Owner shall be responsible for snow removal from paved roadways and parking lots in the vicinity of the project area, but not within the work areas or areas immediate to the Contractor's temporary facilities.
 5. Prior to final completion, perform all cleaning and repairs as necessary to restore all existing areas within the limits of any and all work required as a part of the scope of these contract documents, to their original condition.

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- E. Temporary Parking for Construction Personnel: The Owner shall designate available areas for parking.
 - 1. Offsite parking will be available for employee parking, in an area to be designated by the Owner on RUI property. Construction personnel will not be permitted to park in campus parking lots, except as specifically designated and authorized by the Owner. The designated parking area may change due to seasonal demands of the Owner.

- F. Staging and Storage Area: The Contractor shall have the authority and responsibility to plan and locate storage areas, equipment marshaling areas, and temporary field facilities. Staging and storage areas shall be so located and utilized as to afford unrestricted access to all of the work at all times. Such areas shall not encroach upon access routes to the work, nor shall they be so located or utilized as to impede free access of emergency vehicles. Such areas must be approved by the Owner prior to use by the contractor.
 - 1. Staging and storage areas shall be located wholly within the contract limit lines and site enclosure fence.
 - 2. All loading and unloading operations shall occur inside the contract limit lines and behind the site enclosure fence.
 - 3. Storage of materials and equipment outside the site enclosure fence or on City streets is absolutely prohibited.
 - 4. Prior to final completion, perform all cleanup, disposal, grading, topsoiling, seeding and other work as necessary to restore the entire staging/storage area to its original condition.

- G. Verification of Underground Utilities: Contractor shall have the responsibility to verify the actual locations of existing underground utility lines. Should verified underground utility locations conflict with excavation required in connection with the work, Contractor shall notify the Owner's Project Manager immediately. Hand excavation shall be required at locations in close proximity to verified existing utilities.
 - 1. The Owner does not guarantee the accuracy and completeness of information shown on any contract drawings for underground utilities; Contractor must be responsible for ascertaining all facts concerning utility locations.
 - 2. Damage to existing underground utilities, caused as a result of Contractor's negligence or failure to comply with the requirements listed herein, shall be repaired and/or replaced at Contractor's expense, to the complete satisfaction of the Owner and utility company by close of business of the day of damage.

- H. Cleaning and Trash Disposal: Comply with requirements specified in Section 01500, "Temporary Facilities".

1.8 PROTECTION OF PERSONS AND PROPERTY

- A. Safety Precautions and Programs: Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the work. He shall designate a responsible member of his organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent, unless otherwise designated by the Contractor, in writing, to the Owner.

- B. Protection of Persons: Contractor shall take all necessary precautions for the safety of employees on the work, and shall comply with all applicable provisions of Federal and State safety laws, union safety regulations, and building codes to prevent accidents or injury to persons on, about or adjacent to the premises where the work is being performed. Particular

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attention is called to the requirements of the Federal Occupational Safety and Health Act (OSHA). In connection with the work of its own forces, Contractor shall direct and properly maintain, at all times, as required by the conditions and progress of the work, all necessary safeguards for the protection of workers and the public and shall post danger signs warning against the hazards created by such features of construction as protruding nails, hoists, well holes, elevator hatchways, scaffolding, window openings, stairways and falling materials.

1. Security/protection provisions are specified in "Temporary Facilities" section.
- C. Protection of Work and Property: Contractor shall take all precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury or loss to:
 1. All the work and all materials and equipment to be incorporated therein, whether in storage on or off the site, under the care, custody or control of the Contractor or any of his Subcontractors, or Sub-subcontractors; and
 2. Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.
 - a. Refer to "Temporary Facilities" section for specific requirements concerning fencing around existing trees.
- D. Emergencies: In any emergency affecting the safety of persons or property, Contractor shall act with diligence, at his discretion, to prevent threatening injury, damage or loss. In such case, he shall immediately notify the Owner, of the action taken and shall forthwith prepare and submit a detailed and documented report to the Owner and the Architect.
- E. Insurance and Indemnification: Comply with requirements of the Contract Agreement.

1.9 SPECIAL REPORTS

- A. General: Except as otherwise indicated, submit special reports directly to Owner within one day of occurrence requiring special report, with copy to Architect/Engineer and others affected by occurrence.
- B. Reporting Unusual Events: When an event of unusual and significant nature occurs at site, the Contractor shall prepare and submit a special report listing chain of events, persons participating, response by Contractor's personnel, evaluations of results or effects, and similar pertinent information. When such events are known or predictable in advance, it is the responsibility of the Contractor to advise the Owner in advance at earliest possible date.
- C. Reporting Accidents: Contractor shall prepare and submit reports of significant accidents, at site and anywhere else work is in progress. Record and document data and actions; comply with industry standards. For this purpose, a significant accident is defined to include events where bodily injury is sustained, or property loss of substance is sustained, or where the event posed a significant threat of loss or personal injury.

1.10 SUBCONTRACTOR, MATERIAL APPROVAL

- A. Material Approval: Contractor shall submit to the Owner and Architect, for approval, a list of all vendors and manufacturers for the supply of materials and equipment, whether specified or not, starting within fifteen (15) calendar days after award of contract; said list shall be complete within forty-five (45) days thereafter. In instances where specified materials and equipment are subject to the Owner's and Architect's approval by way of the submittal

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process, no contract shall be entered into with any vendor, supplier or manufacturer before the Owner and Architect have approved his name in writing.

- B. Subcontractor Approval: Contractor shall, beginning within fifteen (15) calendar days after award of contract and ending within forty-five (45) days thereafter, notify the Architect and Owner in writing of the names of all subcontractors proposed for the work, and shall not employ any without prior written approval of the Owner, or any that Owner may within a reasonable time reject.

1.11 TRADESMEN AND WORKMANSHIP STANDARDS

- A. General: Contractor shall instigate and maintain procedures to ensure that tradesmen performing work at site are skilled and knowledgeable in methods and craftsmanship needed to produce required quality-levels for workmanship in completed work. Remove and replace work, which does not comply with workmanship standards as specified and as recognized in the construction industry for applications indicated. Remove and replace other work damaged or deteriorated by faulty workmanship or its replacement.
- B. Availability of Tradesmen: At each progress or job meeting, Contractor shall review availability of tradesmen and projected needs to accomplish work as scheduled. Require each entity employing tradesmen to report on current and pending trade actions and jurisdictional matters, which might affect progress of work. Where possible dispute or delay is identified, consider alternatives and take actions to avoid disputes and delays.
- C. Labor Peace Clause:
 - 1. The Contractor agrees that in the performance of the work called for under these Contract Documents, it will employ only such labor as will not delay or interfere with the speedy and diligent progress of the project and as will be acceptable to and work in harmony with all other workmen employed by the Owner.
 - 2. In the event of labor difficulties (including, but not limited to, strikes, walkouts, picketing, boycotts, shutdowns, or inability to obtain a sufficient number of competent laborers or mechanics), which interfere with the work, or any part thereof, it shall be the responsibility of the contractor to take all measures necessary and possible to insure the projects progress and completion as prescribed by the time schedule including, but not limited to, seeking injunctive relief in an appropriate Court of Common Pleas, filing an unfair labor practices charge(s) with the National Labor Relations Board, discharging employees who engage in an unprotected strike or work stoppage, or any other applicable legal or equitable action related to the aforesaid labor difficulty which occurs in connection with the performance of this contract.
 - 3. In the event of a strike or stoppage of work resulting from a dispute involving or affecting the labor employed by the contractor (including subcontractors and suppliers), the Owner may, at its option, terminate this contract. However, where practicable the contractor will give subcontractors 24 hours to resolve the strike or stoppage of work before terminating its contract. In the event there is a conflict between this clause and any other agreement between contractor and the Owner, including but not limited to other provisions of this contract, other written agreements and verbal agreements, this clause will take precedent. In the event of such termination, the Owner shall have the right to take possession, for the purpose of completing such work, of all materials, tools, and appliances on its premises and employ any person or persons to finish the work and provide the materials and labor for such work. The Contractor shall not be entitled to receive any further payments under this agreement until the work shall be finished completely, at which time the contractor shall be paid whatever balance is found to be due to contractor for amounts

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expended by it either for labor, materials, or otherwise, plus contractors percentage of profit as provided in this agreement, less, however such expenses or damages as the Owner may suffer by so completing the work. The Contractor shall not be entitled to prospective profits on portions of the project not performed by it or with respect to the materials not furnished by it. Further, it is understood and agreed that should the expenses to the Owner in completing the contract be increased by reason of such discontinuance of the services of this contractor, then this contractor shall be responsible to the Owner for such entire increase in addition to the other expenses or damages referred to above.

1.12 INSPECTIONS, TESTS AND REPORTS

- A. General: Required inspection and testing services are intended to assist in determination of probable compliances of the work with requirements, but do not relieve Contractor of responsibility for those compliances, or for general fulfillment of requirements of contract documents. Specified inspections and tests are not intended to limit Contractor's quality control program. Afford reasonable access to agencies performing tests and inspections.
- B. Inspection and Testing by Independent Agencies: General requirements are specified in "Quality Control Services" section of these specifications (Section 01400). Particular requirements are specified in the technical sections (Divisions 02 through 48).
- C. Inspection and Testing by Authorities with Jurisdiction: If the Contract Documents, laws, ordinances, rules, regulations or order of any public authority having jurisdiction require any portion of the Work to be inspected, tested or approved, the Contractor shall give the Owner not less than five (5) working days notice in writing of its readiness for inspections or testing. The Contractor shall bear all costs of such inspections, tests or approvals conducted by public authorities.
- D. Inspection and Testing by Contractors: When inspections and tests are required by the technical sections of these specifications to be performed by Contractors on installed materials and equipment, all such inspections and tests shall be conducted in the presence of, and upon timely notice to, the Owner, and the results thereof approved prior to acceptance of the installation. Fuel, power and any other items or services required for the proper inspecting and testing of equipment and for the period of instructing the Owner's operating personnel shall be at the cost and expense of the Contractor furnishing such equipment.
- E. Special Inspection and Testing: If the Owner or Architect/Engineer determines that any Work requires special inspection, testing or approval, not otherwise required herein, he will instruct the Contractor to order such special inspection, testing or approval, and the Contractor shall give notice as provided in subparagraph C. If such special testing or inspection reveals a failure of the Work to comply with the requirements of the Contract Documents, the Contractor shall bear all costs thereof, including compensation for the Architect/Engineer's additional services made necessary by such failure; otherwise the Owner shall bear all costs and an appropriate Change Order will be issued.

1.13 PROGRESS PHOTOGRAPHS

- A. Refer to Specification Section 01300, "Submittals" for requirements pertaining to Progress Photographs.
- B. Provide photographs of the site and construction throughout progress of Work produced by an experienced photographer or job superintendent experienced in taking construction

photographs, acceptable to the Owner.

- C. Take photos in a timely fashion to allow for their submission with each application for a payment and/ as follows (as applicable):
1. Installation of site utilities.
 2. Installation of footings.
 3. Installation of foundations.
 4. Building pad proof roll.
 5. Building pad sub grade (vapor barrier and stone).
 6. Installation of concrete floors, decks, walls, etc.
 7. Installation of masonry for stair towers, elevator, exterior walls, etc.
 8. Installation of structural steel, steel deck and joist, etc.
 9. Rough grading.
 10. Installation of parking lot paving, parking lot lighting, line stripping, etc.
 11. Installation of interior and exterior framing.
 12. Plumbing and electrical rough-ins.
 13. HVAC ductwork and units.
 14. Installation of telecommunications cabling and devices.
 15. Installation of roofing.
 16. Installation of windows, doors, hardware, etc.
 17. Enclosure of walls and ceilings.
 18. Interior and exterior finishes.
 19. Installations of millwork, casework, trim work, etc.
 20. Landscaping
 21. Final Completion.
- D. Digital PDFs: Color; three (3) prints of each view. 4" X 8" or larger of each view. Provide enough photos at each stage of construction to give someone not familiar with the Project a clear understanding of the progress of the work. Review photos with the Owner's representative at each stage of construction requiring photographs. The Owner will determine if additional photos will be needed.
1. PDF format.
 2. Identify each print. Identify name of Project, orientation of view, date and time of view.
- E. Deliver prints with each Application for Payment or at times specified by Owner with transmittal letter.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

3.1 GENERAL INSTALLATION PROVISIONS

- A. Pre-Installation Conference: Well in advance of installation of every major unit of work which requires coordination and interfacing with other work, Contractor shall meet at project site with subcontractors, installers and representatives of manufacturers and fabricators who are involved in or affected by unit of work, and in its coordination or integration with other work which has preceded or will follow. Contractor shall advise Owner and Architect of scheduled meeting dates. At each meeting review progress of other work and preparations for particular work under consideration, including requirements of contract documents, options,

related change orders, purchases, deliveries, shop drawings, product data, quality control samples, possible conflicts, compatibility problems, time schedules, weather limitations, temporary facilities, space and access limitations, structural limitations, governing regulations, safety, inspection and testing requirements, required performance results, recording requirements, and protection. Contractor shall record significant discussions of each conference, and agreements and disagreements, along with final plan of action. Distribute record of meeting promptly to everyone concerned, including Architect/Engineer and Owner.

1. Do not proceed with the work if associated pre-installation conference cannot be concluded successfully. Instigate actions to resolve impediments to performance of the work, and reconvene conference at earliest date feasible.
 - B. Installer's Inspection of Conditions: Require Installer of each major unit of work to inspect substrate to receive the work, and conditions under which the work will be performed, and to report (in writing to Contractor) unsatisfactory conditions. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to Installer.
 - C. Manufacturer's Instructions: Where installations include manufactured products, comply with manufacturer's applicable instructions and recommendations for installation, to whatever extent these are more explicit or more stringent than applicable requirements indicated in contract documents.
 - D. Inspect each item of materials or equipment immediately prior to installation, and reject damaged and defective items.
 - E. Provide attachment and connection devices and methods for securing work properly as it is installed; true to line and level, and within recognized industry tolerances if not otherwise indicated. Allow for expansions and building movements. Provide uniform joint widths in exposed work, organized for best possible visual effect. Refer questionable visual-effect choices to Architect for final decision.
 - F. Recheck measurements and dimensions of the work, as an integral step of starting each installation.
 - G. Install work during conditions of temperature, humidity, exposure, forecasted weather, and status of project completion, which will ensure best possible results for each unit of work, in coordination with entire work. Isolate each unit of work from non-compatible work, as required to prevent deterioration.
 - H. Coordinate enclosure (closing-in) of work with inspections and tests, so as to minimize necessity of uncovering work for that purpose.
 - I. Mounting Heights: Except as otherwise indicated, mount individual units of work at industry-recognized standard mounting heights, for applications indicated. Refer questionable mounting height choices to Architect/Engineer for final decision.
- 3.2. The contractor shall include in his/her proposal the cost of all control wiring and its installation for all mechanical equipment including, but not limited to, heating, ventilating and air conditioning systems, ATC systems, boilers, remote monitoring systems, etc. which systems require electrical control wiring. The contractor shall employ a sub-contractor approved by the University for all such control wiring. The sub-contractor shall provide a final certificate of electrical inspection of the control wiring. Installed or control wiring must connect to a point of electrical power supply as shown on the contract documents.

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3.3 CHASES, RECESSES AND OPENINGS

- A. Contractor shall build chases, recesses, openings, channels and flues, and shall leave or create holes where shown on drawings, or where directed for piping, electrical conduits, switchboxes, panelboards, flues and ducts, or any other feature of the mechanical and electrical work. All trades requiring chases, recesses, openings, etc. shall furnish to the Contractor, complete detailed drawings for all chases, recesses and openings required in connection with such work in ample time to allow the construction to proceed without interruption or delay. Comply with requirements of "Submittals" section of these specifications.
1. Contractor shall close, build in and finish around or over all chases, recesses, openings, etc. after installation of mechanical and electrical work has been completed. Should any fail to furnish the above required information in time, he shall, at his own expense, arrange for all cutting, rebuilding, patching and finishing, but shall employ the Contractor whose work must be cut to do so.
 2. Contractor shall obtain prior written approval from the Architect/Engineer and the Owner before cutting or boring through beams, floor construction or supporting members.

3.4 SLEEVES, BUILT-IN ITEMS

- A. Each trade shall be responsible for furnishing and setting of sleeves, built-in items, anchors, inserts, etc. for his work. Contractor shall build these items into the construction.
1. Comply with requirements of "Submittals" section in the preparation of sleeve drawings.

3.5 CUTTING AND PATCHING

- A. General: Do not cut-and-patch structural work in a manner resulting in reduction of load-carrying capacity or load/deflection ratio; submit proposed cutting and patching to Architect/Engineer for structural approval before proceeding. Do not cut-and-patch operational elements and safety-related components in a manner resulting in reduction of capacities to perform in manner intended or resulting in decreased operational-life, increased maintenance, or decreased safety. Do not cut-and-patch work which is exposed on exterior or exposed in occupied spaces of building, in a manner resulting in reduction of visual qualities or resulting in substantial evidence of cut-and-patch work, both as judged solely by Architect. Remove and replace work judged by Architect to be cut-and-patched in a visually unsatisfactory manner.
1. Contractor shall do all cutting, fitting, adjusting and patching as may be required to permit the several parts to properly come together as intended and indicated.
 2. Engage original Fabricator/Installer to perform cutting-and-patching of structural work, operational/ safety-related components, and visually exposed work; or, if not available, engage only recognized experts; employ only proven methods.
 3. Do not cut or alter work performed under separate contracts without the Architect's written permission.
 4. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specific requirements and methods needed for proper performance of the work of this Section.
 5. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Beginning new work means acceptance of existing conditions.
 6. Verify that existing substrate is capable of structural support or attachment of new

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- work being applied or attached.
7. Examine and verify specific conditions described in individual specification sections.
 8. Verify that utility services are available, of the correct characteristics, and in the correct locations.
 9. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.
- B. Materials: Except as otherwise indicated or approved by Architect/Engineer, provide materials for cutting-and-patching which will result in equal-or-better work than work being cut-and- patched, in terms of performance characteristics and including visual effect where applicable. Use materials identical with original materials where feasible and where recognized that satisfactory results can be produced thereby.
- C. Temporary Support and Protection: Provide adequate temporary support for work to be cut, to prevent failure. Do not endanger other work. Provide adequate protection of other work during cutting-and-patching, to prevent damage; and provide protection of the work from adverse weather exposure.
- D. Cut work using methods least likely to damage work to be retained and work adjoining.
1. Where physical cutting action is required, cut work with sawing and grinding tools, not with hammering and chopping tools. Core drill openings through concrete work. Comply with the requirements of applicable sections of Division 02 where cutting-and-patching requires excavating and backfilling.
 2. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
 3. At penetrations of fire rated walls, partitions, ceilings, or floor construction, completely seal voids with fire rated materials in accordance with Section 07841 to full thickness of the penetrated elements.
 4. Refinish surfaces to match adjacent finish. For continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
- E. Patch with seams, which are durable and as invisible as possible. Comply with specified tolerances for the work.
1. Where feasible, inspect and test patched areas to demonstrate integrity of work.
- F. Restore exposed finishes of patched areas; and, where necessary extend finish restoration onto retained work adjoining, in a manner, which will eliminate evidence of patching.
1. Where patch occurs in a smooth painted surface, extend final paint coat over entire unbroken surface containing patch, after patched area has received prime and base coats.
- G. Execute cutting and patching including excavation and fill to complete the work, to uncover work to install improperly sequenced work, to remove and replace defective or non-conforming work, to remove samples of installed work for testing when requested, to provide opening in the work for penetrations of mechanical and electrical work, to execute patching to complement adjacent work, and to fit Products together to integrate with other work.
- H. Execute work by methods to avoid damage to other work, and which will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to

original conditions.

- I. **ALL CUTTING AND PATCHING SHALL BE CONSIDERED PART OF THE BASE BID PRICE WHEN THE WORK IS REQUIRED AS PART OF THE OVERALL PROJECT. NO ADDITIONAL PAYMENT WILL BE CONSIDERED FOR WORK OF THIS SECTION UNLESS ALL APPLICABLE PARTIES OBTAIN PRIOR AUTHORIZATION OR WRITTEN APPROVAL.**

3.6 UNCOVERING AND CORRECTION OF WORK

- A. Comply with requirements of the General Conditions of the Contract, and with additional requirements specified herein.
 1. Subsequent Disclosure of Faulty Work: Failure of Owner or Architect/Engineer to exercise powers of rejection or condemnation against the work of the Contractor during construction shall not be construed as an acceptance on Owner's part or Architect/ Engineer's part that Contractor's work has been faithfully performed, if the fact be otherwise.

3.7 PROJECT CONDITIONS

- A. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion.
- B. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.
- C. Pollution Control: Provide methods, means, and facilities to prevent contamination of soil, water, and air from discharge of noxious, toxic substances, and pollutants produced by construction activities. Comply with all governmental and code requirements.

3.8 PREPERATION FOR CUTTING AND PATCHING AND/OR NEWWORK.

- A. Prepare surfaces and remove surface finishes to provide for proper installation of work and finishes.
- B. Clean substrate surfaces prior to applying next material or substance.
- C. Seal cracks or openings of substrate prior to applying next material or substance.
- D. Apply manufacturers required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.9 LAYING OUT THE WORK

- A. Verify locations of survey control points prior to starting work.
- B. Promptly notify Owner's Representative and Architect of any discrepancies discovered.
- C. Protect survey control points prior to starting site work; preserve permanent reference points during construction.
- D. Promptly report to Architect/Engineer and Owner's Representative the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.

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- E. Utilize recognized engineering survey practices.
- F. Establish elevations, lines and levels. Locate and lay out by instrumentation and similar appropriate means:
 - 1. Site improvements including but not limited to pavements; stakes for grading, fill and topsoil placement; utility locations, slopes, and invert elevations, etc.
 - 2. Building foundation, column locations, all floor elevations, stairwells, elevator shafts, machine and mechanical rooms, etc.
 - 3. All other work as necessary to complete all the requirements of the contract documents.
- G. Periodically verify layouts by same means.
- H. Maintain a complete and accurate log of control and survey work as it progresses.

3.10 GENERAL INSTALLATION REQUIREMENTS

- A. Install Products as specified in individual sections and in accordance with manufacturer's recommendations.
- B. Make neat transitions. Patch work to match adjacent work in texture and appearance. Where new Work abuts or aligns with existing, perform a smooth and even transition.
- C. When existing finished surfaces are cut so that a smooth transition with new Work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendations to the Architect and Owner.

3.11 CLEANING AND PROTECTION

- A. General: During handling and installation of work at project site, Contractor shall clean and protect work in progress and adjoining work on a basis of perpetual maintenance. Apply suitable protective covering on newly installed work where reasonably required to ensure freedom from damage or deterioration at time of substantial completion; otherwise, clean and perform maintenance on newly installed work as frequently as necessary through remainder of construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- B. Removal of all debris and rubbish resulting from or relating to the construction work; rubbish shall not be thrown from building openings above the ground floor unless confined within chutes.
 - 1. Progress Cleaning:
 - a. Maintain areas free of waste material, debris, and rubbish (on a daily basis). Maintain site in a clean and orderly condition, as determined by the Owner.
 - b. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.
 - c. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
 - d. Collect and remove waste materials, debris, and rubbish from site periodically and dispose of off-site.
 - e. Protect installed work and provide special protection where specified in individual specification sections.

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- f. Provide temporary and removable protection for installed Products. Control activity during and after installation in the immediate work area to prevent damage.
 - g. Protect finished floors and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials appropriate for the task involved.
- C. Limiting Exposures of Work: To extent possible through reasonable control and protection methods, Contractor shall supervise performance of work in a manner and by means which will ensure that none of the work, whether completed or in progress, will be subjected to harmful, dangerous, damaging, or otherwise deleterious exposures during construction period. Such exposures include (where applicable, but not by way of limitation) static loading, dynamic loading, internal pressures, external pressures, high or low temperatures, thermal shock, high or low humidity, air contamination or pollution, water, ice, solvents, chemicals, light, radiation, puncture, abrasion, heavy traffic, soiling, bacteria, insect infestation, combustion, electrical current, high speed operation, improper lubrication, unusual wear, misuse, incompatible interface, destructive testing, misalignment, excessive weathering, unprotected storage, improper shipping/handling, theft and vandalism.
- D. Construction Debris: The Contractor shall intermittently remove waste and rubble so that at no time shall there be undue accumulations. Upon completion, the Contractor shall dress up all areas affected by this work whether inside or outside the boundary of the Project. Loading, crating, hauling and dumping will be at the contractor's expense.
- E. Rubbish: The Contractor shall provide covered metal trash cans in sufficient quantity to accept the accumulation of rubbish and garbage from lunch and the like of employees of all Contractors working on site.
 1. The Contractor shall instruct his and his subcontractors' employees to deposit their trash and garbage in these containers and not elsewhere about the site; and also not to use the containers for construction scraps, rubbish, trash and surplus materials.
 2. The Contractor shall empty these containers daily and haul the rubbish to a legal disposal site off the property.
- F. Roads and Pathways:
 1. The Contractor is responsible for the removal of construction dirt and debris in public areas on the site and in the surrounding areas serving the site.
 2. Dirt and mud tracked onto streets by the Contractor or its subcontractors is to be immediately cleaned up by the Contractor to the satisfaction of the Owner and the local municipal authorities.
- G. Trucks: All trucks leaving the construction area are to be covered in accordance with NJDOT over the road requirements. Trucks leaving the site are to be clean and free of mud or other materials.
- H. Quality Assurance: University streets and pathways are to be maintained in a clean safe condition at all times. Under no circumstances shall the Contractor leave the site each day without inspecting and verifying that streets and paths to the construction site, access areas, lay down areas, and gates in the area of the site are clean of all construction related materials and are clean and safe for use by the Rowan University population. The Contractor will immediately correct any violation of this provision upon notification by the Owner.

3.12 CONSERVATION AND SALVAGE

- A. General: It is a general procedural requirement for Contractor's supervision and administration of the work that construction operations be carried out with maximum practical consideration for conservation of energy, water and materials; and with maximum practical consideration for salvaging materials and equipment involved in performance of the work but not incorporated therein.

END OF SECTION 012400

SECTION 012500 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section. In the event of any conflicts between the requirements of these Sections, the more stringent requirement shall apply.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Sections include the following:
 - 1. Division 01 Section "Allowances" for procedural requirements for handling and processing allowances.
 - 2. Division 01 Section "Unit Prices" for administrative requirements for using unit prices.
 - 3. Division 01 Section "Product Requirements" for administrative procedures for handling requests for substitutions made after Contract award.

1.3 MINOR CHANGES IN THE WORK

- A. Architect may issue through Owner's Project Manager supplemental instructions authorizing Changes in the Work, not involving adjustment to the Contract Time, as "Architects Supplemental Instructions" (ASI). Architects Supplemental Instructions may or may not involve adjustments to the contract sum. THERE WILL BE NO ADJUSTMENTS TO THE CONTRACT TIME ALLOWED FOR THIS PROJECT.
 - 1. For ASI's involving no adjustment to the contract sum or time, the contractor is authorized to execute the change or clarification immediately.
 - 2. For ASI's resulting in an adjustment to the contract sum, do not consider them instructions either to stop work in progress or to execute the proposed change without obtaining written authorization from the Owner. Written authorization can include the provisions of the general conditions, Article 14, paragraphs 14.5.3 and 14.7.1, an approved change order or a Construction Change Directive.

1.4 PROPOSAL REQUESTS

- A. In the event the Contractor believes that any change directed by the Owner or Architect would entitle it to additional compensation to complete its work under this contract, **the Contractor shall immediately notify the Owner's Project Manager of this fact WITHIN 48 HOURS OF RECEIPT OF THE CHANGE REQUESTED.** The contractor shall then prepare and submit an original of the Change Order Request (COR) with all supporting documentation to the Owner's Project Manager and submit two (2) copies of the Change Order Request (COR) with all supporting documentation to the Architect and University within five (5) calendar days of its receipt of the directive by the Owner and/or Architect.

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- B. Owner-Initiated Proposal Requests: Owner may issue proposal requests or may have the Architect issue such requests. In any event a detailed description of proposed changes in the Work will be submitted to the contractor that may require adjustment to the Contract Sum. THERE WILL BE NO ADJUSTMENTS TO TIME FOR ANY GIVEN CHANGE ORDER REQUESTED. If necessary, the description will include supplemental or revised Drawings and Specifications.
1. Proposal Requests issued by Architect are for information only. For ASI's resulting in adjustments to the contract sum, do not consider them instructions either to stop work in progress or to execute the proposed change without first obtaining written authorization from the Owner.
 2. If the contractor feels the ASI or proposal request requires a change to the contract sum then the contractor shall notify the Owner's Project Manager of this fact within 48 hours of receipt of the ASI or OIPR directive.
 3. Within five (5) business days after receipt of directive, ASI or proposal request from the Owner, submit a Change Order Request estimating cost adjustments to the Contract Sum necessary to execute the change. The contractor shall then prepare and submit an original of the Change Order Request (COR) with all supporting documentation to the Owner's Project Manager and submit two (2) copies of the COR with all supporting documentation to the architect.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include costs of labor directly attributable to the change.
 - 1) Labor shall be broken down by man-hours, hourly wages, fringe benefits per hour and any other benefits payable.
 - d. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float however the date of Substantial and Final Completion cannot be extended.
- C. In the event that the Contractor encounters a condition that it considers a change, the Contractor shall immediately notify the Owner's Project Manager prior to disturbing the condition and shall then prepare and submit an original of the COR with all supporting documentation to the Owner's Project Manager and two (2) copies of a Change Order Request with all required supporting documentation to the architect within five (5) calendar days of encountering the condition. The condition shall not be disturbed until the Owner's Project Manager has inspected the condition.
- D. Contractor-Initiated Proposals: If latent or unforeseen conditions require modifications to the Contract, Contractor may propose changes by submitting a Change Order Request (COR) to Owner's Project Manager. The contractor shall prepare and submit one (1) original of the COR with all supporting documentation to the Owner's Project Manager and submit two (2) copies of the COR with all supporting documentation to the architect.
1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum.
 2. Include a list of quantities of products required or eliminated and unit costs, with total

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amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.

3. Indicate applicable delivery charges, equipment rental, and amounts of trade discounts.
4. Include costs of labor and supervision directly attributable to the change.
5. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float however the date of Substantial and Final Completion cannot be extended.
6. Comply with requirements in General Conditions Article 4.15 if the proposed change requires substitution of one product or system for product or system specified.

E. Proposal Request Form: Use AIA Document G709 for Proposal Requests.

1.5 ALLOWANCES (**IF APPLICABLE ON A GIVEN PROJECT**)

A. Allowance Adjustment: To adjust allowance amounts, base each Allowance Request Proposal on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, and similar margins. **Only allowances included as part of the Bid Price will be considered for an Allowance Authorization. All other Proposals must be hard costed.**

1. Include installation costs in purchase amount only where indicated as part of the allowance.
2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other margins claimed.
3. Submit substantiation of a change in scope of work, if any, claimed in Change Orders related to allowances.
4. Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.

B. Submit claims for increased costs because of a change in scope or nature of the allowance described in the Contract Documents, whether for the Purchase Order amount or Contractor's handling, labor, installation, overhead, and profit. Submit claims within ten (10) business days of receipt of the Change Order or Construction Change Directive authorizing work to proceed. Owner will reject claims submitted later than ten (10) business days after such authorization.

1. Do not include Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of work has changed from what could have been foreseen from information in the Contract Documents.
2. No change to Contractor's indirect expense is permitted for selection of higher- or lower- priced materials or systems of the same scope and nature as originally indicated.

C. ***Use the same procedure(s) followed for handling Change Order Requests (COR's) and Change Orders with Allowances (except use Allowance Forms rather than Change Order Forms).***

1.6 CHANGE ORDER PROCEDURES

A. Upon the Owner's approval of a Change Order Request (COR), the Owner will direct the Architect to issue a Change Order for signatures of the Contractor and Owner on AIA

Document G701.

1. The Change Order breakdown shall be in sufficient detail to permit an analysis of all material, labor, equipment, sub-contract and overhead costs as well as profit. Any amount proposed for sub-contracts shall be supported by a similar price breakdown.
- B. Each Change Order must contain a detailed description of the change and the amount by which the Contract Price will be increased or decreased.
- C. COMPUTATION OF ADDITIONAL COMPENSATION
 1. In connection with any request for additional compensation the Contractor shall furnish a price breakdown, as follows:
 - a. Labor shall be broken down by the man-hour, hourly wages, fringe benefits per hour and any other benefits payable by the Contractor;
 - b. Materials shall be broken down by quantity and unit prices.
 2. Unless otherwise directed, the breakdown shall cover all work involved in the change whether such work was deleted, added or changed.
 3. The breakdown shall be in sufficient detail to permit an analysis of all material, labor, equipment, sub-contract and overhead costs as well as profit. Any amount proposed for sub-contracts shall be supported by a similar price breakdown.
 4. The following rates shall apply in computing indirect costs and profit for the negotiation of additional compensation under all provisions of this contract, which provide for such adjustments that do not exceed twenty-five thousand dollars (\$25,000.00). The resulting change in the contract amount will include the indirect impact cost of extended performance computed in accordance with the terms of this article and no further consideration of such costs arising from the specific modification will be given. The percentages for overhead and profit shall be negotiated and may vary according to the nature, extent and complexity of the work involved. If not negotiated prior to the start of construction then the rates herein designated shall apply. The percentages shall be applicable for deleted work as well as additional work. When a change consists of both added and deleted work, the applicable percentages shall be applied to the net cost or credit. In any event, the percentages shall not exceed the sum of the following:
 - a. Overhead will be the sum of ten percent (10%) of direct labor costs.
 - 1) For the purpose of the article, the term direct labor shall include all labor by contractor's employees necessary to perform the actual work on site. Foremen, equipment operators and skilled, semi-skilled and common laborers directly assigned to the specific operation are direct labor; project managers, superintendents, office personnel, and subcontractors are not direct labor.
 - 2) The term direct labor costs shall consist of the contract or actual payroll rate of wage per hour and fringe benefits paid for each and every hour that such employees are actually engaged in the performance of the work. Overhead will be the sum of ten percent (10) % of direct material costs.
 - b. Overhead will be the sum of ten percent (10%) of direct material costs.
 - 1) For the purpose of the article, the term direct material costs shall consist

- of the actual costs of the materials, including applicable tax and transportation charges
- c. For rented equipment, an hourly rental rate will be used which will be determined by using the monthly rental rates taken from the current edition of the rental rate blue book for construction equipment and dividing it by one hundred seventy-six (176). An allowance will be made for operating costs for each and every hour the equipment is actually operating in accordance with the rate listed in the aforesaid rental book. The contractor will be allowed only sixty-five percent (65%) of the rental rate on contractor owned equipment.
 - d. Bond premiums, insurance, payroll taxes and travel subsistence, if applicable, will be allowed at actual cost (only) for the equitable adjustment allowed. No mark-up will be allowed for overhead on these indirect cost items.
 - e. The contractor's profit on the sub-contractor's work will be five percent (5%) of the sub-contractor's costs. Sub-contractor indirect costs will be computed in the same manner as for the contractor. The contractor agrees to incorporate this article in each of its sub-contracts.
 - f. A profit of six percent (6%) where profit is allowable by the terms of the applicable contract provision shall be added to the contractor's total cost for the equitable adjustment allowed for the work conducted by the contractor's own workforce. Indirect costs will not be duplicated in direct costs.
 - g. When more than one (1) tier of sub-contractors exists, they shall be treated as one (1) sub-contractor for the purpose of mark-ups.
- D. ANY CONTRACTOR PERFORMING CHANGE ORDER WORK WITHOUT **WRITTEN** APPROVAL FROM THE OWNER DOES SO AT ITS OWN RISK.
- 1. Only the signature of an Assistant Vice President or above is authorized to give approval of a Change Order Request (COR) or Change Order (CO). The Owner's Project Manager is not authorized to approve change orders. The Owner's Project Manager is only authorized to verify the work in question is in addition to or outside the scope of work delineated on the original contract documents.

1.7 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Architect at the direction of the Owner's Project Manager may issue a Construction Change Directive on AIA Document G714. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
 - 1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
 - 1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost adjustments to the Contract.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 PERFORMANCE OF CHANGE ORDER WORK

- A. A contractor who performs any scope of work associated with a change order or allowance (if allowances are applicable on a given project) without receiving proper approval in accordance with all contract document requirements hereof does so at its own risk. The Contractor shall have waived any and all claims for additional compensation related to said changes or conditions encountered.

END OF SECTION 012500

SECTION 012900 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section. In the event of any conflicts between the requirements of these Sections, the more stringent requirement shall apply.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Sections include the following:
 - 1. Division 01 Section "Allowances" for procedural requirements governing handling and processing of allowances.
 - 2. Division 01 Section "Unit Prices" for administrative requirements governing use of unit prices.
 - 3. Division 01 Section "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
 - 4. Division 01 Section "Construction Progress Documentation" for administrative requirements governing preparation and submittal of Contractor's Construction Schedule and Submittals Schedule.

1.3 DEFINITIONS

- A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.4 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule.
 - 1. Correlate line items in the Schedule of Values with other required administrative forms and schedules, including the following:
 - a. Application for Payment forms with Continuation Sheets.
 - b. Submittals Schedule.
 - 2. Submit the Schedule of Values submission to Architect and Owners Construction Manager in accordance with the general conditions and general conduct of work.
 - 3. Sub schedules: Where the Work is separated into phases requiring separately phased payments, provide sub schedules showing values correlated with each phase of payment.

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- B. Format and Content: Use the Project Manual table of contents as a guide to establish line items for the Schedule of Values. Provide at least one line item for each Specification Section.
1. Identification: Include the following Project identification on the Schedule of Values:
 - a. Project name and location.
 - b. Name of Architect.
 - c. Architect's project number.
 - d. Contractor's name and address.
 - e. Date of submittal.
 2. Arrange the Schedule of Values in tabular form with separate columns to indicate the following for each item listed:
 - a. Related Specification Section or Division.
 - b. Description of the Work.
 - c. Name of subcontractor.
 - d. Name of manufacturer or fabricator.
 - e. Name of supplier.
 - f. Change Orders (numbers) that affect value.
 - g. Dollar values
 - h. Cost totals.
 - 1) Percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.
 3. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Provide several line items for principal subcontract amounts, where appropriate.
 - a. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed.
 4. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
 5. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
 - a. Differentiate between items stored on-site and items stored off-site.
 - b. The University may, in its sole discretion, pay the Contractor for material delivered on the site and preparatory work done to be taken into consideration. Material delivered to the contractor at locations other than the site may also be taken into consideration if (1) such consideration is specifically authorized by the contract and (2) the contractor furnishes a form entitled "Contractor's Summary of Stored Materials" and agreement and bill of sale certification, respectively, for stored materials and (3) the contractor furnishes evidence of insurance for said materials or a bonded warehousing agreement.
 6. Provide separate line items in the Schedule of Values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.

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7. Allowances: Provide a separate line item in the Schedule of Values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities. Allowances will only be accepted for items listed in the Bid Documents.
8. Each item in the Schedule of Values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
 - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place must be shown as separate line items in the Schedule of Values.
9. Schedule Updating: Update and resubmit the Schedule of Values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.
 - a. List each authorized Change Order as a separate line item, listing Change Order number and dollar amount as for an original item of work.

1.5 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.
 1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
 2. Submit three (3) copies of each Application for Payment, at least five (5) business days prior to the actual submission date as specified. This Application will be reviewed and adjusted by all parties (Architect, Owner and Contractor) at a **"PENCIL COPY REVIEW"** meeting prior to final approval.
- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction Work covered by each Application for Payment is the period indicated in the Agreement.
- C. Payment Application Times: The date for each progress payment is per the General Conditions. The period covered by each Application for Payment starts on the day following the end of the preceding period and ends 15 days before the date for each progress payment.
- D. Payment Application Forms: Use AIA Document G702 and AIA Document G703 Continuation Sheets
- E. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Owner's Project Manager will return incomplete applications without action.
 1. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
 2. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
- F. Transmittal: Submit 3 (three) signed and notarized original copies of each Application for

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Payment to Owner's Project Manager by a method ensuring receipt within 24 hours. All copy's shall include 'Attachment to G702- Certification for Payment', Release of Liens Forms (included in the Contract Documents) entirely completed for the contractor, all subcontractors and anyone else whose payment is listed in the Schedule of Values for the application being requested, AIA G706 A-Contractors Affidavit..., Certified Payrolls and Monthly Work Force Reports, updated and current Construction Schedule, updated and current Submittal Log, and current Project Photograph's.

1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- G. Release of Mechanic's Lien: With each Application for Payment, submit partial or final releases of mechanic's lien (as may apply) from every entity that is lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.
1. Submit partial waivers on each item for amount requested, before deduction for retainage, on each item.
 2. When an application shows completion of an item, submit final or full waivers.
 3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
 4. Submit final Application for Payment with or proceeded by final waivers from every entity involved with performance of the Work covered by the application that is lawfully entitled to a lien.
 5. Release Forms: Submit release of lien on forms, executed in a manner acceptable to Owner. (Use Form listed in Division 0 of the Specifications).
- H. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors.
 2. Schedule of Values.
 3. Contractor's Construction Schedule (preliminary if not final).
 - a) A final schedule must be submitted prior to Owners payment of the second (2nd) progress payment.
 4. Products list.
 5. Schedule of unit prices.
 6. Submittals Schedule (preliminary if not final).
 7. List of Contractor's staff assignments.
 8. List of Contractor's principal consultants.
 9. Copies of building permits.
 10. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
 11. Initial progress report.
 12. Report of preconstruction conference.
 13. Certificates of insurance and insurance policies.
 14. Performance and payment bonds.
 15. Data needed to acquire Owner's insurance.
 16. Initial settlement survey and damage report if required.
 17. Current construction photographs as specified herein.
- I. Application for Payment at Substantial Completion: After issuing the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion

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for portion of the Work claimed as substantially complete.

1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
 2. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- J. Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
 5. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
 6. AIA Document G707, "Consent of Surety to Final Payment."
 7. Evidence that claims have been settled.
 8. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
 9. Final, liquidated damages settlement statement.
- K. When Owner or Architect/Engineer requires substantiating information, submit data justifying dollar amounts in question. Provide one (1) copy of data with cover letter for each copy of submittal. Show application number and date, and line item by number and description.
1. Any other information or documentation required by other provisions of the contract documents shall be supplied.
- L. In order to be proper an Application for Payment must include the following as applicable:
1. Total amount, payee name and address, department/agency, payee declaration, payee reference number and identification number.
 2. contract number, contractor's name, period of the Application, completion date, number of sheets, amount due this period, amount to date, retainage, certification by payee, certification signed by the Project Manager and Architect and approval of payment signed by the contracting officer or his/her designee, previous payment requests, total deductions and additions.
 3. In making progress payments for work, the University will retain ten percent (10%) of the approved invoice of payment until final acceptance and completion of all work covered by the contract.
 4. After fifty percent (50%) of the work has been completed, upon written request by the contractor and provided the contracting officer determines that the contractor's performance and progress have been satisfactory, the University will make partial payments thereafter in full of the approved payment amount. If, however, progress is not maintained in accordance with the approved schedule, the contracting officer may elect to reinstitute retainage of ten percent (10%) of amounts due to the contractor. The contracting officer shall have the sole authority to determine whether contractor's performance and progress warrant waiver of ten percent (10%) retainage.
- M. Upon acceptance and completion of each building or other clearly definable severable portion of the contract work for which the price is stated separately within the contract,

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payment may be made in full at the discretion of the contracting officer including retained percentages thereon less authorized deductions.

- N. All authorized Applications are to be sent to the Owners authorized representative at the address provided at the pre-construction conference. Receipt shall start the prompt payment clock unless returned to the contractor for correction within thirty (30) calendar days after receipt. Reference section 10.2.4 (d) of the General Conditions.

1.6 FINAL PAYMENT

- A. Upon final acceptance, the amount due the contractor under this contract shall be paid upon satisfactory completion by the contractor of all contract close-out requirements as required by the University, completion of a University audit on all contract values and payments and after the contractor shall have furnished the University with a final release of liens from the contractor and all subcontractors, sub-subcontractors, vendors, suppliers and any other entity affiliated with the contractor for completion of this project of any and all claims against the University arising by virtue of this contract other than claims in stated amounts as may be specifically excepted by the contractor from the release.
- B. Upon satisfying the above conditions, the contractor shall submit a properly executed Application for Final Payment to the University through the Owner's Project Manager. The University Controller shall date stamp the Application. This action by the University Controller shall constitute receipt of a properly executed State invoice application.
- C. If, for any reason, the contractor refuses final payment, the project shall be closed-out by the University unilaterally processing a final acceptance certificate. The University will hold all residual funds in escrow until all claims of the University and all contractors are satisfied.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 012900

SECTION 013100 – COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, General Conduct of the Work and Special Requirements, Supplementary Conditions, and other Division 01 Specification Sections, apply to this Section. In the event of any conflicts between the requirements of these Sections, the more stringent requirement shall apply.

1.2 SUMMARY

- A. This Section includes administrative and supervisory requirements necessary for coordinating construction operations including, but not necessarily limited to, the following:
1. General project coordination procedures.
 2. Conservation.
 3. Coordination Drawings.
 4. Administrative and supervisory personnel.
 5. Cleaning and protection.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
1. Division 01 Section "Field Engineering" specifies procedures for field engineering services, including establishment of benchmarks and control points.
 2. Division 01 Section "Submittals" for preparing and submitting the Contractor's Construction Schedule.
 3. Division 01 Section "Contract Closeout" for coordinating contract closeout.

1.3 COORDINATION

- A. Coordinate construction operations included in various Sections of these Specifications to assure efficient and orderly installation of each part of the Work. Coordinate construction operations included under different Sections that depend on each other for proper installation, connection, and operation.
1. Schedule construction operations in the sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 2. Coordinate installation of different components to assure maximum accessibility for required maintenance, service, and repair.
 3. Make provisions to accommodate items scheduled for later installation.
- B. The mechanical, electrical and fire protection drawings are diagrammatic only and are not intended to show the alignment, physical locations or configurations of such work. Such work shall be coordinated by the Contractor and shall be installed to clear all obstructions, permit proper clearances for the work of other trades, satisfy all code requirements and present an orderly appearance where exposed at no additional cost to the Owner.

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- C. Where necessary, prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and attendance at meetings.
 - 1. Prepare similar memoranda for the Owner and separate contractors where coordination of their work is required.

- D. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and assure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
 - 1. Prepare and coordinate scheduling, delivery and processing of submittals, and work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
 - 2. Verify that utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
 - 3. Coordinate space requirements, supports, and installation of mechanical and electrical work, which are indicated diagrammatically on the Drawings. Follow routing shown for pipes, ducts and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance and for repairs.
 - 4. Installation and removal of temporary facilities.
 - 5. Progress meetings.
 - 6. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
 - 7. Coordinate completion and clean-up of work of separate sections.
 - 8. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.
 - 9. Project closeout activities.

- E. Conservation: Coordinate construction operations to assure that operations are carried out with consideration given to conservation of energy, water, and materials.
 - 1. Salvage materials and equipment involved in performance of, but not actually incorporated in, the Work.

1.4 SUBMITTALS

- A. Coordination Drawings: Prepare coordination drawings where careful coordination is needed for installation of products and materials fabricated by separate entities. Prepare coordination drawings where limited space availability necessitates maximum utilization of space for efficient installation of different components.
 - 1. Show the relationship of components shown on separate Shop Drawings.
 - 2. Indicate required installation sequences.
 - 3. Comply with requirements contained in Section "Submittals."
 - a. Note the coordination drawing submittal requirements under Section 013300 "Submittals", paragraph 2.3.9

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- B. Staff Names: Within fifteen (15) days of commencement of construction operations, submit a list of the Contractor's principal staff assignments, including the superintendent and other personnel in attendance at the Project Site. Identify individuals and their duties and responsibilities. List their addresses and telephone numbers.
 - 1. Post copies of the list in the Project meeting room, and the temporary field office.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 GENERAL COORDINATION PROVISIONS

- A. Inspection of Conditions: Require the Installer of each major component to inspect both the substrate and conditions under which Work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.
- B. Coordinate temporary enclosures with required inspections and tests to minimize the necessity of uncovering completed construction for that purpose.

3.2 CLEANING AND PROTECTION

- A. Clean and protect construction in progress and adjoining materials in place, during handling and installation. Apply protective covering where required to assure protection from damage or deterioration at Substantial Completion.
- B. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to assure operability without damaging effects.
- C. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

END OF SECTION 013100

SECTION 013200 – CONSTRUCTION PROGRESS SCHEDULE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions (Contract Administration Division Section D), General Conduct of the Work and Special Requirements, and other Division 01 Specification Sections, apply to this Section. In the event of any conflicts between the requirements of these Sections, the more stringent requirement shall apply.

1.2 SUBMITTALS

- A. Within three (3) days after the date established in the Notice to Proceed, University Contract and/or purchase order submit preliminary schedule indicating the scope of work for the duration of the project. A Gantt chart format will be acceptable however the final approved schedule must be in both a Gantt chart and CPM schedule format. If another method other than CPM is used the critical path and float time must be established and programmed into the schedule.
- B. Initial Working CPM Schedule Submittal: To the extent necessary for the Contractor to reflect in the arrow diagram the plan for completion of this contract, the contractor shall meet with and furnish all necessary information for the preparation of the scheduling system within ten (10) calendar days after award of this contract. This information shall include, but not necessarily be limited to, logical sequencing of work operations; activity time estimated, intended crew flow, activity costs and estimated manpower requirements of each activity.
 - 1. The contractor shall be responsible to reflect all sub-contractor work as well as his/her own work in proper coordinated sequence on the network diagram. The contractor shall be prepared to meet as many times as necessary with the Owner's Project Manager for the timely development of the project schedule.

1.3 SCHEDULE FORMAT

- A. Listings: In chronological order according to the start date for each activity. Identify each activity with the applicable specification section number. At a minimum provide the following.
 - 1. Include a separate bar for each portion of work or operation.
 - 2. Identify the first workday of each week.
 - 3. Identify each critical path task or portion of work.
 - 4. Identify task durations, predecessors and dependent tasks.
 - 5. Identify milestone dates for completion/start of each critical path element.
- B. The contractor shall utilize the earliest scheduled start and finish dates in planning, coordinating and performing the work under this contract including all activities of sub-contractors, equipment vendors and suppliers.

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PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 CONTENT

- A. Construction logic and activity time durations shall be established by the contractor subject to approval by the Owner's Project Manager consistent with contract requirements and reflective of proper coordination between trades.
- B. The Owner's Project Manager shall establish the specific level of detail to be reflected in the scheduling system.
- C. Seasonal weather conditions shall be considered in the planning and scheduling of all work influenced by high or low ambient temperatures for the completion of all contract work within the allotted contract time. In addition, appropriate allowances shall be made for anticipated time losses due to normal rain and snow conditions by statistically expanding the estimated time durations for weather sensitive activities with the constraint that the substantial completion deadline cannot change.
- D. The coordinated combined Progress Schedule the Contractor will develop shall incorporate the schedules of all Prime Contractors engaged on the project. The Schedule shall be in a form as specified herein and elsewhere in the contract documents and in sufficient detail to satisfy the Architect/Engineer and the University.
- E. If applicable, the Contractor shall submit copies of his initial draft of this Schedule to all Prime Contractors. Each Prime Contractor shall then prepare a Progress Schedule for his own work, properly coordinated with the General Construction Contractor's initial draft and then submit it to the General Construction Contractor for his preparation of the final draft of a Single Coordinated Progress Schedule. Contract Requisitions will not be processed by the University until and unless such a single coordinated Progress Schedule shall have been submitted to and approved by the Owner's Project Manager and/or Contracting Officer. This submission shall be no later than thirty (30) calendar days after the award of the Contract. If any Prime Contractor delays his submission, the Project Schedule will be submitted without his input and any payments otherwise due him will be withheld until he complies.
- F. The Progress Schedule based upon the Contractor's logic and time estimates shall indicate, in suitable detail for display, all significant features of the Work of each Contractor, including the placing of orders and anticipated delivery dates for critical items and all other critical path activities, submissions and approvals of Shop Drawings, all work activities to be performed by each Contractor and the beginning and time durations thereof, float time and the dates of substantial and final completion of the various branches of the Work.
 - 1. Show complete sequence of construction activity, with dates for beginning and completion of each element of construction.
 - 2. Identify each item by specification section number or per bid form breakdown.
 - 3. Show accumulated percentage of completion of each item, and total percentage of Work completed, as of the first day of each month.
 - 4. Indicate delivery dates as milestones for Owner-furnished items and any critical path items.
 - 5. Provide legend for symbols and abbreviations used.
 - 6. Show critical path tasks; differentiate them from other construction tasks.
 - 7. Schedule will be based upon a five-day workweek.

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3.2 REVIEW AND EVALUATION OF SCHEDULE

- A. Review and Approval of Initial Working Schedule: Within ten (10) calendar days after receipt of the initial arrow diagram and computer produced schedule, the University's representative shall meet with the contractor and for joint review, correction or adjustment of the proposed plan and schedule to evaluate the cost values assigned to each activity. Within ten (10) calendar days after the joint review, the Contractor will revise the arrow diagram and the computer- produced schedule in accordance with agreement reached during the joint review and shall submit two (2) copies each of the revised arrow diagram, computer produced schedule and cost requisition to the University. The resubmission will be reviewed by the University and, if found to be as previously agreed upon, will be approved. An approved copy of each will be returned to the Contractor. The contractor shall review the schedule to insure that it reflects all changes agreed to and, if all changes have been made, the contractor shall approve and sign the network diagrams, computer produced schedule and cost requisition listing at that time. Approval will be without reservation and the contractor will be deemed to have accepted the schedule as adequate, proper and binding in all respects and shall not raise objections to the schedule. After the network diagrams, computer-produced schedule and cost requisition listing have been signed, the Contractor shall forward one (1) set of signed copies of all scheduling documents to the Owner's Project Manager. The arrow diagram and the computer-produced schedule with approved signatures shall constitute the project work schedule until subsequently revised in accordance with the requirements of this section.
- B. Evaluate project status to determine work behind schedule and work ahead of schedule. Submit revised recovery schedule with action plan to bring "behind schedule" tasks and milestones back into original timeline.

3.3 UPDATING SCHEDULES

- A. Maintain schedules to record actual start and finish dates of completed activities.
1. Updated schedules must be submitted at each progress meeting and with each application for payment or as required by Architect or Owner. These schedules must include the following:
- approved changes in activity sequencing;
 - changes in activity durations for unstarted or partially completed activities where agreed upon;
 - the effect to the network of any delays in any activities in progress and/or the impact of known delays, which are expected to affect future work;
 - the effect of contractor modifications; i.e., activity durations, logic and cost estimates; to the network;
 - changes to activity logic where agreed upon to reflect revision in the contractor's work plan; i.e., changes in activity duration, cost estimates and activity sequences for the purpose of regaining lost time or improving progress;
 - changes to milestones, and due dates (except substantial completion) which have been agreed upon by the University since the last revision of the schedule.
- B. At the same time the network is updated, the contractor and the University's representative shall jointly make entries on the preceding network diagram schedule to show actual progress, to identify those activities started by date and those completed by date during the previous period to show the estimated time required to complete each activity started but not yet completed, to show activity percent completed and to reflect any changes in the arrow

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diagram approved in accordance with the preceding paragraph. After completion of the joint review and the University's approval of all entries, the Contractor will submit updated network diagrams and an updated computer produced calendar dated schedule to the University and the contractor.

1. The resultant computer print-out and network diagrams shall be recognized by the contractor as solely his/her updated construction schedule to complete all remaining contractor work except that portion affected by interim University decisions.

3.4 DISTRIBUTION OF SCHEDULES

- A. Upon approval at each level of schedule development (preliminary, final for Contractors work and Single Coordinated including all Prime Contractors work) the Contractor shall prepare and distribute (10) copies of the schedule at each level to the University. The Contractor shall also prepare and distribute two (2) copies of the final schedule showing Prime Contractors work to each Prime Contractor. In the event a new Prime Contractor is added to the job the General Construction Contractor shall furnish a revised schedule immediately with copies as indicated. The final coordinated schedule shall be signed and dated by all Prime Contractors involved and shall become part of the contract documents.
- B. Distribute copies of updated (current) schedules to Contractors project site file, subcontractors, suppliers, Architect and Owner at each bi-weekly progress meeting. Also submit an updated (current) schedule with each Application for Payment or more often as required by the Architect and/or Owner.

3.5 SCHEDULE ADJUSTMENTS

- A. Upon Owner and/or Architects request, if Contractor falls behind the approved schedule, the Contractor must submit a revised schedule to show how the Contractor intends to accomplish the completion of the work within the original contract time.
 1. Within seven (7) days after receipt of notice from the Owner, the contractor shall submit to the University in writing an explanation of corrective action taken or proposed. The contracting officer shall make a decision binding on all parties after reviewing the written submissions.
- B. Responsibility for Completion: The contractor agrees that whenever it becomes apparent from the current monthly computer produced calendar dated schedule that any contract completion date will not be met, he/she will take some or all of the following actions at no additional cost to the University.
 1. increase construction manpower in such trades and numbers as will substantially eliminate the backlog of work in the opinion of the Construction Manager and contracting officer
 2. increase the number of working hours per shift, shifts per working days, working days per week or the amount of construction equipment of any combination of the foregoing sufficiently to substantially eliminate the backlog of work in the judgment of the Construction Manager and contracting officer
 3. reschedule activities to achieve maximum practical concurrence of accomplishment of activities
- C. Lost time due to weather conditions will not accrue nor be credited to Contractor for weather delays with time added to the Substantial Completion milestone deadline. No weather delays will be granted once the building is under roof.

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3.6 BI-WEEKLY REPORTING

- A. Upon request from the Owner, the Contractor shall furnish for approval, his proposed operating schedule for the next immediate two-week period of time. This schedule will be submitted at each bi-weekly progress meeting along with the overall updated schedule.
1. Every two (2) weeks, the Architect will conduct a coordination and scheduling meeting on the job site. At this meeting, the contractor shall provide detailed information in the form of a bar chart schedule regarding the work schedule to be performed during the upcoming two (2) weeks. Bi-weekly scheduling by the contractor shall be in accordance with the priorities and degree of concurrent work required by the official schedule for the project. The contractor shall be prepared to explain a difference between the contractor's bi-weekly schedules and the priorities required by the latest updating of the official schedule.
 2. At the bi-weekly scheduling meeting, the Owner and Architect shall review the bar charts for the preceding two (2) weeks and the contractor shall report the progress actually achieved for each activity, which was scheduled to be performed during the two (2) weeks, including the actual dates on which the work was performed. The contractor agrees that this information shall constitute the official historical record of project progress. At each bi-weekly scheduling meeting, the contractor shall document any current delays to work operations. In addition, the contractor shall provide any available information regarding any potential delays, which they anticipate; i.e., procurement delays, expected strikes, etc.
 3. Following the bi-weekly scheduling meeting, the Contractor shall issue to the Owner and Architect a new set of bi-weekly bar charts as developed at the meeting, which shall constitute the construction schedule for the upcoming two (2) weeks. The Contractor shall also issue a narrative bi-weekly progress analysis documenting progress achieved during the preceding two (2) weeks and analyze delays reported to constitute current or anticipated impacts to timely construction. The revised bar chart schedule and progress narrative shall agree with the meeting minutes and items discussed and agreed to at the bi-weekly meeting.
 4. The contractor shall be represented at the bi-weekly scheduling meeting by their Construction Manager who shall have complete authority to provide the information required for the development of the next two (2) weeks bar chart schedule, documentation of past progress and documentation of delays. The contractor representatives shall also be authorized to discuss correction action planned to overcome delaying conditions at these meetings.

3.7 DAILY REPORTS

- A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at the Project site:
1. List of subcontractors at Project site.
 2. List of separate contractors at Project site.
 3. Approximate count of personnel at Project site.
 4. Equipment at Project site.
 5. Material deliveries.
 6. High and low temperatures and general weather conditions.
 7. Accidents.
 8. Meetings and significant decisions.
 9. Unusual events (refer to special reports).
 10. Stoppages, delays, shortages, and losses.
 11. Meter readings and similar recordings.

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12. Emergency procedures.
 13. Orders and requests of authorities having jurisdiction.
 14. Change Orders received and implemented.
 15. Construction Change Directives received and implemented.
 16. Services connected and disconnected.
 17. Equipment or system tests and startups.
 18. Partial Completions and occupancies.
 19. Substantial Completions authorized.
- B. Field Condition Reports: Immediately on discovery of a difference between field conditions and the Contract Documents prepare and submit a detailed report. Submit with requests for interpretation. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

END OF SECTION 013200

SECTION 013300 SUBMITTAL PROCEDURES

PART 1 - PRODUCTS

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, General Conduct of the Work, Supplementary Conditions, and other Division 01 Specification Sections, apply to this Section. In the event of any conflicts between the requirements of these Sections, the more stringent requirement shall apply.

1.2 SUMMARY

- A. This Section augments requirements set forth in the General Conditions and specifies administrative and procedural requirements for submittals required for performance of the Work, including:
 - 1. Contractor's Use of Architect's CAD Files.
 - 2. Shop Drawings.
 - 3. Product Data.
 - 4. Samples.
 - 5. Informational Submittals.
 - 6. Delegated Design.
- B. Administrative Submittals: Refer to General Conditions, other Division 01 Sections and other Contract Documents for requirements for administrative submittals. Such submittals include, but are not limited to:
 - 1. Permits.
 - 2. Contractor's Construction Schedule.
 - 3. Submittal Schedule.
 - 4. Schedule of Values.
 - 5. Applications for payment.
 - 6. List of Subcontractors.
- C. Related Sections include the following:
 - 1. Division 01 Section "Project Management and Coordination" for submitting and distributing meeting and conference minutes and for submitting Coordination Drawings.
 - 2. Division 01 Section "Quality Requirements" for submitting test and inspection reports and for mockup requirements.
 - 3. Division 01 Section "Closeout Procedures" for submitting warranties.
 - 4. Division 01 Section "Operation and Maintenance Data" for submitting operation and maintenance manuals.
 - 5. Division 01 Section "Demonstration and Training" for submitting videotapes of demonstration of equipment and training of Owner's personnel.
 - 6. Divisions 2 through 48 Sections for specific requirements for submittals in those Sections.

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1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information that requires Architect and Construction Manager's responsive action.
- B. Informational Submittals: Written information that does not require Architect and Construction Manager's responsive action. Submittals may be rejected for not complying with requirements.
- C. Concurrent Review: Simultaneous review by Architect and other discipline(s).
- D. Shop Drawings: Original fabrication drawings.
- E. Product Data: Manufacturer's standard product literature and samples.

1.4 SUBMITTAL PROCEDURES

- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- B. Submittals Schedule: Comply with General Conditions and other requirements of the Contract Administration Division. A submittal schedule will be developed by the Contractor within 10 working days of Notice to Proceed and approved by the Architect within 10 working days after receipt for review.
 - 1. **Follow the submittal requirements listed in this Section and elsewhere throughout the Contract Documents however and in addition to submittals required in other specification sections, one (1) copy of all HVAC, sprinkler, plumbing, electrical, and control system submittal must be forwarded to the Owner's Project Manager. At minimum, for submittals other than those listed under this item a transmittal must be forwarded to the Owner's Project Manager.**
- C. Contractor shall record all submittal information on the required "Submittal Log". Distribute Log at each progress meeting.
- D. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
 - 1. Initial Review: Allow 10 working days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.

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2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 3. Resubmittal Review: Allow 5 working days for review of each resubmittal.
 4. Concurrent Consultant Review: Where the Contract Documents indicate that submittals may be transmitted simultaneously to Architect and to Architect's consultants, allow 10 working days for initial review of each submittal. Submittal will be returned to Contractor, through Architect. Submittals in the following sections require concurrent consultant review:
 - a. Division 03: All Sections.
 - b. Division 05: Sections 05120 "Structural Steel", 05310 "Steel Deck", 05300 "Steel Joists.
 - c. Division 09: Acoustic Sections
 - d. Division 13: All Sections.
 - e. Division 15: All Sections.
 - f. Division 16: All Sections.
 5. Concurrent Transmittal to Consultant: Where indicated above and acceptable to Architect, Contractor may transmit submittals directly to Architect's consultants in the required number of copies, while at the same time transmitting two additional copies of the entire submittal including the transmittal to the Architect.
 6. Concurrent Transmittal to Owner:
 - a. Transmit two (2) additional copies of all shop drawings, product data and coordination drawings and coordination drawings and one (1) set of each sample submittal to Owner's Project Manager.
- E. Identification: Place a permanent label or title block on each submittal for identification.
1. Indicate name of firm or entity that prepared each submittal on label or title block.
 2. Provide a space approximately 4 by 5 inches on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
 3. Include the following information on label for processing and recording action taken:
 - a. Project name.
 - b. Date.
 - c. Name and address of Architect.
 - d. Name and address of Contractor.
 - e. Name and address of subcontractor.
 - f. Name and address of supplier.
 - g. Name of manufacturer.
 - h. Submittal number or other unique identifier, including revision identifier.
 - 1) Architect will assign own numbers to each submittal, which may be different than those assigned by the Contractor.
 - i. Number and title of appropriate Specification Section, and Keynote reference where applicable.
 - j. Drawing number and detail references, as appropriate.
 - k. Other necessary identification.
- F. Deviations: Encircle or otherwise specifically identify deviations from the Contract Documents on submittals.

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1. No deviation or substitutions will be considered without a credit value, and subsequent approval from the Owner's Project Manager.
- G. Additional Copies: Unless additional copies are required for final submittal, and unless Architect observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.
1. Submit specified number of copies of submittal to concurrent reviewer in addition to one complete copy and transmittal to Architect.
 2. Additional copies submitted for maintenance manuals will not be marked with action taken and will be returned.
- H. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will return submittals, without review, received from sources other than Contractor.
1. Transmittal Form: Provide locations on form for the following information:
 - a. Project name.
 - b. Date.
 - c. Destination (To:).
 - d. Source (From:).
 - e. Names of subcontractor, manufacturer, and supplier.
 - f. Category and type of submittal.
 - g. Submittal purpose and description.
 - h. Specification Section number and title.
 - i. Drawing number and detail references, as appropriate.
 - j. Submittal and transmittal distribution record.
 - k. Remarks.
 - l. Signature of transmitter.
 2. 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.
- I. Contractor's Certification: All scale and full-size shop, erection or setting drawings, roughing drawings, sleeve and opening drawings, product data, and samples shall be examined and checked by qualified technical employees of Contractor as to accuracy, completeness and compliance with all contract documents prior to submission to the Architect for his review. These drawings, data and samples shall be stamped and signed by Contractor certifying to such examination and compliance. Any drawings, data and samples not checked, stamped, and signed by Contractor will be returned unchecked, to Contractor. Contractor will be held responsible for any delay in the progress of the work due to his failure to observe these requirements, and the time for the completion of his contract will not be extended on account of his failure to submit drawings, data and samples promptly in accordance herewith.
- J. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
1. Note date and content of previous submittal.
 2. Note date and content of revision in label or title block and clearly indicate extent of revision.
 3. Resubmit submittals until they are marked "No Exceptions Taken", or "Make Corrections Noted".

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- K. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, and authorities having jurisdiction, and others as necessary for performance of construction activities. Furnish one (1) copy of final submittals to Owner. Show distribution on transmittal forms.
- L. Use for Construction: Use only final submittals with mark indicating "No Exceptions Taken" or "Make Corrections Noted" by Architect.
- M. In instances where sepias, shop drawings and/or erection of drawings of a scale larger than the contract drawings are prepared by a contract, such drawings and sepias will be accepted in lieu of marked-up contract drawings provided they are updated according to the contract documents. A master sheet of the same dimensions as the contract drawings shall be prepared by the contractor on a tracing which shall indicate, sheet by sheet, a cross-reference to all shop drawings pertaining to that drawing. All drawings and sepias as required by Section 2.8 F below, shall be labeled "as-built" and dated above the tile block.

1.5 CONTRACTOR'S USE OF ARCHITECT'S CAD FILES

- A. General: Architect may provide electronic copies of CAD files of the Contract Drawings for Contractor's use in preparing submittals subject to execution by the Contractor of a waiver and payment to the Architect for this service in the amount of \$250. In accordance with the language of the waiver, the agreement is non-transferable by the Contractor to any Subcontractor, from any Subcontractor to the Contractor or from any Subcontractor to another Subcontractor. A separate waiver and payment is required for each individual contractor or subcontractor requesting electronic copies of CAD Drawings.
 - 1. A sample copy of the waiver is included at the end of this Section. Upon request, Architect will provide an original.
 - 2. This service is not available prior to the award of the contract.
 - 3. Architect's consultants may or may not provide CAD files under the above agreement. Such consultants reserve the right to refuse to provide CAD files, regardless of whether or not the aforementioned waiver and fee agreement is executed. Consultants may, if they agree to provide CAD files, attach additional conditions to those listed above and below. Architect's consultants include the following disciplines: civil, landscape, structural, mechanical, electrical, plumbing, and fire protection. Architect will advise Contractor if any consultants will not provide CAD files prior to executing above agreement.
 - 4. CAD files will be provided in AutoCad 2002 format or newer version only.
 - 5. CAD files will be provided in Architect's office standard conventions for file structure, file names, layering standards, drafting standards, etc. Architect will not make revisions to these standards for the convenience of the Contractor.
 - 6. CAD files may or may not contain differences from the Contract Documents, including work and information related, but not limited to, alternate designs, obsolete designs, addenda, bulletins, construction sketches, and informational sketches. Such differences may or may not be clearly indicated. Where such differences are found, they do not supersede the Contract Documents.

PART 2 - PRODUCTS

2.1 ACTION SUBMITTALS

- A. General: Prepare and submit Action Submittals required by individual Specification Sections.

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- B. When the following are specified in individual sections, submit them for review:
 - 1. Shop drawings.
 - 2. Samples for selection.
 - 3. Samples for verification.
 - 4. HVAC Test and Balance Reports.
- C. Submit to Architect for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.
- D. Architect will consult with the Owner prior to rendering a decision or approval.

2.2 PRODUCT DATA

- A. Collect information into a single submittal for each element of construction and type of product or equipment.
 - 1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
 - 2. Mark each copy of each submittal to show which products and options are applicable.
 - 3. Include the following information, as applicable:
 - a. Manufacturer's written recommendations.
 - b. Manufacturer's product specifications.
 - c. Manufacturer's installation instructions.
 - d. Standard color charts.
 - e. Manufacturer's catalog cuts.
 - f. Wiring diagrams showing factory-installed wiring.
 - g. Printed performance curves.
 - h. Operational range diagrams.
 - i. Mill reports.
 - j. Standard product operation and maintenance manuals.
 - k. Compliance with specified referenced standards.
 - l. Testing by recognized testing agency.
 - m. Application of testing agency labels and seals.
 - n. Notation of coordination requirements.
 - 4. Submit Product Data before or concurrent with Samples. Each item of materials listed shall be marked "as specified" or "unspecified" as the case may be.
 - 5. Number of Copies: Submit one original and three copies. For color charts submit four original color charts. One original and one copy will be returned. Reproduction for distribution to subcontractors, manufacturers, fabricators and suppliers is the responsibility of the Contractor.
 - a. Concurrent Submittals to Consultants: Submit one original and three copies to concurrent reviewer and two copies to Architect. In the case of color charts and other non-reproducible information, submit four originals to concurrent reviewer and two original to Architect.
 - b. Concurrent Submittals to Owner: Submit one (1) copy.
 - c. Copy Owner with any transmittals for Product data sent to Architect or Consultants.

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2.3 SHOP DRAWINGS:

A. Shop Drawings:

1. Shop Drawings are required all new work. Do not use Shop Drawings without an appropriate final stamp indicating action taken.
2. Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
3. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Dimensions.
 - b. Identification of products.
 - c. Fabrication and installation drawings.
 - d. Roughing-in and setting diagrams.
 - e. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
 - f. Shopwork manufacturing instructions.
 - g. Templates and patterns.
 - h. Schedules.
 - i. Design calculations.
 - j. Compliance with specified standards.
 - k. Notation of coordination requirements.
 - l. Notation of dimensions established by field measurement.
 - m. Relationship to adjoining construction clearly indicated.
 - n. Seal and signature of professional engineer if specified.
 - o. Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.
4. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 36 by 48 inches.
5. Number of Copies: Submit one original (Contractor's option of bond print or correctable translucent reproducible print) and three additional copies. One original and one copy will be returned. Reproduction for distribution to subcontractors, manufacturers, fabricators and suppliers is the responsibility of the Contractor.
 - a. Concurrent Submittals: Submit one original and three copies to concurrent reviewer and two copies to Architect.
 - b. Concurrent Submittals to Owner: Submit one (1) copy to Owner
 - c. Copy Owner with any transmittals for Product data sent to Architect or Consultants.
6. Special Types of Shop Drawings:
 - a. Sleeve and Opening Drawings: Comply with requirements set forth in the General Conditions.
 - 1) Comply with shop drawing requirements for submittal and review as specified in this Section.
 - b. Roughing Drawings: Furnish manufacturers certified roughing drawings, indicating accurate locations and sizes of all service utility connections, for machinery and equipment requiring such connections. Submit roughing drawings together with shop drawings for respective machinery and equipment.

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7. Mechanical/Electrical Shop Drawing Minimum Requirements: Shop Drawings prepared by mechanical specialty trades shall comply with the following minimum requirements:
 - a. The accurate dimensions locate all horizontal ducts from column centerline. Locate all offsets, transitions, elbows, fire dampers, registers, grilles and diffusers.
 - b. All components shall be located to avoid recessed lighting, piping, conduits, cable trays and other in-plenum assemblies and where required shall be located so as to provide access to the component through removable ceiling material panels or access doors.
 - c. Vertical riser ducts shall be located and dimensioned from column centerlines in two (2) directions. Each vertical duct riser shall be shown in its total length when concealed inside of a shaft.
 - d. Each horizontal duct run shall be drawn to scale and size (width and depth noted) and an ELEVATION (bottom of duct) be clearly noted. This elevation shall clear all beams in the floor above and the ceiling construction below.
 - e. Sheet metal shop drawings shall be made using not less than 1/4" scale per foot; increase scale as required in congested areas or as directed by the Contractor.

8. All piping, including fire protection, storm, sanitary, domestic, heating and cooling systems.
 - a. Give location of lines from column centerlines, indicate size, indicate centerline ELEVATION of piping and indicate drainage pitch as required.
 - b. Where a piping line is indicated locate centerline ELEVATION and pitch at intervals not to exceed twenty (20) feet.
 - c. Priority status shall be accorded preparation of dimensioned piping drawings for all piping below slabs-on-grade. Show all line pitches, critical inverts, in-slab fixtures as drains, floor sinks, troughs, cleanouts, etc. and outfall tie-in to site plumbing. Coordinate under slab piping with arrangement(s) of equipment furnished by others where applicable.

9. Electrical Trade:
 - a. Plan layouts, not less than 1/4" scale, of transformer vaults, main electrical rooms, satellite electrical and/or communications closets, emergency generator spaces showing equipment to scale and locations thereof.
 - b. Main feeder distribution routing, horizontal and vertical sweep transitions to scale, of conduit over 1" showing ceiling plenum to scale.

10. Coordination:
 - a. Coordination of the work of the several trades and the fitting and routing of the systems within concealed areas to avoid conflicts is the responsibility of the contractor(s). The Architect reserves the right to request coordinated drawings of congested areas showing all systems in plan and section to appropriate scale to insure the proper fitting of the work. The Contractor shall comply if so requested by the Architect.
 - b. Provide coordinated drawings of all main mechanical, electrical, communications, and other rooms listed below showing equipment required by all trades including structure, piping, hanger assemblies, HVAC ductwork, conduit, electrical devices, fire alarm devices, control centers, pipe grids, acoustic enclosures, other devices. Drawings dimensioned in both plan and

section(s); not less than 3/8"=1'-0" scale.

2.4 COORDINATION DRAWINGS

- A. Prepare and submit Coordination Drawings where close and careful coordination is required for installation of products and materials fabricated off-site by separate entities, and where limited space availability necessitates maximum utilization of space for efficient installation of different components. See paragraph 2.3.9 above.
1. Show the interrelationship of components shown on separate Shop Drawings.
 2. Indicate required installation sequences.
 3. Refer to "General Provisions" Sections for specific Composite Drawing requirements for mechanical and electrical installations.
- B. Role of Expediter: Contractor shall be responsible for expediting the preparation of the Coordination Drawings. Actual preparation of the drawings is described below. Contractor shall meet with subcontractors to develop a format for the Coordination Drawings (e.g. CAD, pin-register drafting, conventional drafting on Mylar using multiple pencil colors, etc.) such that reproductions obtained from the final Coordination Drawings can distinguish between the work of the various trades. Contractor shall resolve all conflicts arising in the coordination process.
- C. Preparation Responsibility: Preparation of Coordination Drawings is the responsibility of the Contractor and all subcontractors principally involved. Production of the drawings shall proceed as follows:
1. HVAC subcontractor shall initiate the drawings by indicating his work, drawn at a scale of 3/8" per foot, showing dimensions, layouts, elevations and sections, all in relation to building construction (all steel structure, floor / roof slabs, ceilings, beams and columns).
 2. Where applicable, the GWB subcontractor shall indicate the layout of all acoustic ceiling construction extent including all hanger devices and locations. AC ceiling construction indicated as well.
 3. Fire Protection subcontractor shall then indicate the layout, sizes, dimensions and elevations of his work, using the HVAC subcontractor's drawings as a base, with dimensions in reference to fixed building construction.
 4. Electrical subcontractor shall add his work to the base drawings begun by HVAC and Fire Protection subcontractors. Indicate locations and dimensions of light fixtures and electrical equipment conduit/cable-tray infrastructure, fire alarm equipment with reference to fixed building construction.
 5. Plumbing subcontractor shall then add layouts, sizes and elevations of his work to the drawings of the above-mentioned trades, also dimensioned with reference to building structure.
- D. Conflicts arising between the work of several trades shall be resolved between the respective trades, with the assistance of the General Contractor as expeditor; and the drawings revised. Final Coordination Drawings shall be submitted by the Contractor to the Architect as required for submittals.

2.5 SAMPLES:

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

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1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
2. Identification: Attach label on unexposed side of Samples that includes the following:
 - a. Generic description of Sample.
 - b. Product name and name of manufacturer.
 - c. Sample source.
 - d. Number and title of appropriate Specification Section.
3. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
 - a. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
4. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
 - a. Number of Samples: Submit three full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.
5. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
 - a. Number of Samples: Submit four sets of Samples. Architect will retain one Sample sets; remainder will be returned. Mark up and retain one returned Sample set as a Project Record Sample.
 - 1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
 - 2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.

2.6 INFORMATIONAL SUBMITTALS

- A. General: Prepare and submit Informational Submittals required by other Specification Sections.
 1. Number of Copies: Submit two copies of each submittal, unless otherwise indicated. Architect will not return copies.
 2. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. An officer shall sign certificates and certifications or other individual authorized to sign documents on behalf of that entity.
 3. Test and Inspection Reports: Comply with requirements specified in Division 01

Section "Quality Requirements."

- B. Coordination Drawings: Comply with requirements specified in Division 01 Section "Coordination."
- C. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names.
- D. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification (WPS) and Procedure Qualification Record (PQR) on AWS forms. Include names of firms and personnel certified.
- E. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- F. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- G. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- H. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- I. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- J. Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- K. Research/Evaluation Reports: Prepare written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
 - 1. Name of evaluation organization.
 - 2. Date of evaluation.
 - 3. Time period when report is in effect.
 - 4. Product and manufacturers' names.
 - 5. Description of product.
 - 6. Test procedures and results.
 - 7. Limitations of use.
- L. Schedule of Tests and Inspections: Comply with requirements specified in Division 01 Section "Quality Requirements."
- M. Preconstruction Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before

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installation of product, for compliance with performance requirements in the Contract Documents.

- N. Compatibility Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- O. Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- P. Maintenance Data: Prepare written and graphic instructions and procedures for operation and normal maintenance of products and equipment. Comply with requirements specified in Division 01 Section "Operation and Maintenance Data."
- Q. Design Data: Prepare written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.
- R. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer. Include the following, as applicable:
 - 1. Preparation of substrates.
 - 2. Required substrate tolerances.
 - 3. Sequence of installation or erection.
 - 4. Required installation tolerances.
 - 5. Required adjustments.
 - 6. Recommendations for cleaning and protection.
- S. Manufacturer's Field Reports: Prepare written information documenting factory-authorized service representative's tests and inspections. Include the following, as applicable:
 - 1. Name, address, and telephone number of factory-authorized service representative making report.
 - 2. Statement on condition of substrates and their acceptability for installation of product.
 - 3. Statement that products at Project site comply with requirements.
 - 4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
 - 5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 - 6. Statement whether conditions, products, and installation will affect warranty.
 - 7. Other required items indicated in individual Specification Sections.
- T. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.

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2.7 DELEGATED DESIGN

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
 - 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.
- B. Delegated-Design Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit three copies of a statement, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
 - 1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

2.8 ADMINISTRATIVE SUBMITTALS

- A. Contractor's Construction Schedule: Comply with the General Conditions and other requirements of the Contract Administration Division.
 - 1. If preliminary schedule requires revision after review, submit revised schedule within 5 business days.
 - 2. Submit updated schedule with each Application for Payment.
- B. Submittals Schedule: Comply with the General Conditions and other requirements of the Contract Administration Division.
 - 1. Submit updated Submittal Log with each Application for Payment.
- C. Application for Payment: Comply with the General Conditions and other requirements of the Contract Administration Division.
- D. Schedule of Values: Comply with the General Conditions and other requirements of the Contract Administration Division.
- E. Subcontract List: Comply with the General Conditions and other requirements of the Contract Administration Division. Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
 - 1. Name, address, and telephone number of entity performing subcontract or supplying products.
 - 2. Number and title of related Specification Section(s) covered by subcontract.
 - 3. Drawing number and detail references, as appropriate, covered by subcontract.
 - 4. Number of Copies: Submit three copies of subcontractor list, unless otherwise indicated. Architect will return two copies.
 - a. Mark up and retain one returned copy as a Project Record Document.

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5. Submit one (1) copy of initial subcontractor list to Owner within (10) business days after Owner's Notice to Proceed. No portion of the work shall be started until the Contractor has furnished the Owner with a list showing the sub-contractor and/or material supplier responsible for the portion of the actual work needing to be started. The list will be updated until the list reflects the complete group of all subcontractors, suppliers, vendors, etc. employed to carry out the work.
- F. The contractor shall keep one (1) set of drawings on the project at all times which are to be marked "as-built". During the course of the project, they shall mark these drawings with colored pencils to reflect any changes as well as dimension, the location of all pipe runs, conduits, traps, footing depths or any other information not already shown on the drawings or differing there from. All buried utilities outside the building shall be located by a metes and bounds survey performed by a licensed surveyor who shall certify as to its accuracy. These marked-up drawings and surveys shall be made available to the contracting officer, the Construction Manager and the Architect/Engineer at any time during the progress of the work upon their request. These shall include the drawings of principal sub-contractors as well. The Owner's Project Manager as well as the Architect on a monthly basis as a prerequisite to the review of the contractor's payment applications will review as-built drawings.

2.9 SUBMITTALS FOR PROJECT CLOSE OUT

- A. When the following are specified in individual sections, submit them at project closeout:
 1. Project record documents.
 2. Operation and maintenance data
 3. Warranties.
 4. Bonds (if and when required by the Owner).
 5. Other types as indicated.
- B. Manufacturers' Instructions, Product Literature, Certificates, and Reports.
 1. All instructions, literature, certificates, test reports, other technical data and correspondence shall be submitted in four (4) copies. The Owner shall retain Two (2) copies, and the other two (2) returned to the Contractor.
- C. Written Certifications
 1. Provide written certifications where required, in the following formats:
 - a. Manufacturer's Written Certifications: Shall be submitted in letter form on the manufacturer's letterhead, signed by an authorized representative, indicating that all required components and elements of their manufacture are in conformity with the requirements so stated under the individual sections of these Specifications. Technical data, additional support material, or other information may be submitted with the certification letter.
 - b. Installer's Written Certifications: Shall be submitted in letter form on the installer's company letterhead, signed by a legal authorized company officer, indicating that their respective installation and/or Work are in conformity with the requirements so stated under the individual sections of these Specifications.
- D. Submit all of the above items in this Section for the Owner's benefit during and after project completion.

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PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect. The Architect / Consultants will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ARCHITECT'S ACTION

- A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or modifications required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:
 - 1. Final Unrestricted Release: When submittals are marked "No Exceptions Taken" (NET), that part of the Work covered by the submittal may precede provided it complies with requirements of the Contract Documents; final acceptance will depend upon compliance.
 - 2. Final-But-Restricted Release: When submittals are marked "Make Corrections Noted" (MCN), that part of the Work covered by the submittal may precede provided it complies with notations or corrections on the submittal and requirements of the Contract Documents; final acceptance will depend on that compliance.
 - 3. Returned for Resubmittal: When submittal is marked "Amend and Resubmit" (AR), do not proceed with that part of the Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal in accordance with the notations; resubmit without delay. Repeat if necessary to obtain a different action mark.
 - a. Do not permit submittals marked "Amend and Resubmit" to be used at the Project site, or elsewhere where Work is in progress.
 - 4. Disapproved for Non-Compliance: When submittal is marked "Rejected - See Remarks" (R), Architect's explanation for rejection will be included. Do not proceed with the work. Prepare a completely new submission.
 - 5. 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".
- C. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- D. Partial submittals are not acceptable, will be considered nonresponsive, and will be returned without review.

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- E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

- F. Architect's Review: Review of shop and setting drawings, roughing drawings, sleeve and opening drawings, product data and samples by Architect will be a general review for conformance with design concept and compliance with information given in contract documents only, and shall not relieve Contractor of responsibility for accuracy of such submissions, nor for proper fitting, construction of work, or for furnishings of materials or work required by the contract and not indicated on submissions. Field dimensions, fabrication details, and job fitting are entirely Contractor's responsibility. Review shall not be construed as approving departures from contract requirements. Any proposed deviations from contract requirements, together with Contractor's explanations thereof, shall be stated in the letter of transmittal. Approval of a specific item shall not indicate approval of an entire assembly of which the item is a component. Should contractor check and certify submissions which indicate changes or deviations from the contract documents, and such changes are found acceptable to Architect, any and all additional costs resulting therefrom, including any cost for changes required to adjacent work or the work of other trades shall be the sole responsibility of Contractor.

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RELEASE AGREEMENT – DIGITAL INFORMATION – **SAMPLE**

Architects and sub-consultants have prepared design documents for the project identified as:

These design documents are instruments of the Architect's and sub-consultants' service and they retain all rights to such work. The design documents requested have been issued in hard copy form, which is the basis of a contract with the project Owner.

The undersigned has requested copies of these design documents in digital format.

Architect provides the digital files under the following understandings and conditions:

1. The digital files provided are not the contract documents. The digital files provided may differ from the contract documents and have not been verified against the actual (hard-copy) contract documents.
2. The digital files can deteriorate undetected or be altered without the knowledge of Architect. The use of the digital information is wholly at the risk of the undersigned.
3. Architect is under no obligation to provide any software, hardware, any supplemental files, linked data or operational support required to read and/or manipulate the digital files.
4. Architect is under no obligation to correct, modify, update or to notify the undersigned of the need to correct, modify or update the digital files.
5. The undersigned agrees to indemnify, release and hold Architect and their consultants and the Owner harmless from any responsibility or obligation as to the accuracy or completeness of the digital information and further waives any claim it may have for compensation for additional work, delay costs, losses, consequential damages, and expenses including but not limited to attorney fees resulting from the undersigned relying upon or utilizing the digital information.
6. The digital files are provided for the exclusive use of the undersigned personnel only. The information will not be transferable or transmitted by the undersigned for use by others.
7. The above shall constitute an agreement between Architect and the undersigned for providing a service.
8. This agreement does not constitute a waiver of copyright or transfer of ownership of the said information and documents.

This agreement accepted by:

By: _____

Witness: _____

Title: _____

Date: _____

Company: _____

Address: _____

END OF SECTION 013300

SECTION 014000 - QUALITY CONTROL REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, general conduct of the Work and Special Requirements, Supplementary Conditions, and other Division 01 Specification Sections, apply to this Section. In the event of any conflicts between the requirements of these Sections, the more stringent requirement shall apply.

1. In Divisions 01 through 48 Sections:

- a. The term "Architect" shall be synonymous with the term "Professional".
- b. The terms "Subcontractor", "Sub-subcontractor", "Installer", "Applicator", "Erector" and similar terms are synonymous with the term "Trade Contractor".

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for quality-control services.
- B. Quality-control services include inspections, tests, and related actions, including reports performed by Contractor, by independent agencies, and by governing authorities. They do not include contract enforcement activities performed by Architect.
- C. Inspection and testing services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with Contract Document requirements.
- D. Requirements of this Section relate to fabrication and installation procedures.
1. Specific quality-control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 2. Specified inspections, tests, and related actions do not limit Contractor's quality-control procedures that facilitate compliance with Contract Document requirements.
 3. Requirements for Contractor to provide quality-control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
- E. Related Sections: The following Sections contain requirements that relate to this Section:
1. Division 01 Section "Coordination".
 2. Division 01 Section "Testing and Inspections".
 3. Division 01 Section "Testing Laboratory Services".
 4. Testing by the Contractor of installed materials and equipment is specified in the Technical Sections (Divisions 02 through 48) of these Specifications.
- F. Testing requirements for real property installed equipment (RPIE) to be furnished by the contractor when such testing is required by code, contract or the manufacturer shall be performed in a pre-approved testing laboratory or in the absence of such by the

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manufacturer or its authorized representative at its place of business. The contractor shall provide a five (5) days' notice to the University and Architect/Engineer through the Owner's Project Manager. The University and the Architect/Engineer shall have the right to witness all tests.

- G. The contractor will hire and pay for a qualified testing agency.

1.3 DEFINITIONS

- A. **Quality-Assurance Services:** Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and ensure that proposed construction complies with requirements.
- B. **Quality-Control Services:** Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that completed construction complies with requirements. Services do not include contract enforcement activities performed by Architect.
- C. **Mockups:** Full-size, physical example assemblies to illustrate finishes and materials. Mockups are used to verify selections made under Sample submittals, to demonstrate aesthetic effects and, where indicated, qualities of materials and execution, and to review construction, coordination, testing, or operation; they are not Samples. Mockups establish the standard by which the Work will be judged.
- D. **Testing Agency:** An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

1.4 RESPONSIBILITIES

- A. **Contractor Responsibilities: Unless otherwise indicated as the responsibility of another identified entity, Contractor shall provide inspections, tests, and other quality-control services specified elsewhere in the Contract Documents and/or required by authorities having jurisdiction. Costs for these services are included in the Contract Sum.**
 - 1. Where individual Sections specifically indicate that certain inspections, tests, and other quality-control services are to be done these services will be the Contractor's responsibility. The Contractor shall employ and pay a qualified independent testing agency to perform quality-control services. Costs for these services are included in the Contract Sum.
- B. **Retesting:** The Contractor is responsible for retesting where results of inspections, tests, or other quality-control services prove unsatisfactory and indicate noncompliance with Contract Document requirements, regardless of whether the original test was Contractor's responsibility.
 - 1. The cost of retesting construction, revised or replaced by the Contractor, is the Contractor's responsibility where required tests performed on original construction indicated noncompliance with Contract Document requirements. The contractor shall pay for all costs including administrative cost incurred by the University.
 - 2. When the University and/or Architect/Engineer require special or additional inspections, testing or approvals due to Contractor's failure to comply with contract specifications, industry standards, good building practices, any applicable code procedures including but not limited to ASIC, ASTM, etc., whether or not testing is

required by the contract documents for any individual component, entire system or process, the Contractor will secure the service of such special or additional inspections, testing or approvals. In the event such special or additional inspections and testing reveal a failure of the work to comply with the terms and conditions of the contract, the contractor shall also bear all costs necessary to repair or replace the work as required by the Architect/Engineer.

- C. Associated Services: Cooperate with agencies performing required inspections, tests, and similar services, and provide reasonable auxiliary services as requested. Notify the agency sufficiently in advance of operations to permit assignment of personnel. Auxiliary services required include, but are not limited to, the following:
1. Provide access to the Work.
 2. Furnish incidental labor and facilities necessary to facilitate inspections and tests.
 3. Take adequate quantities of representative samples of materials that require testing or assist the agency in taking samples.
 4. Provide facilities for storage and curing of test samples.
 5. Deliver samples to testing laboratories.
 6. Provide the agency with a preliminary design mix proposed for use for materials mixes that require control by the testing agency.
 7. Provide security and protection of samples and test equipment at the Project Site.
- D. Duties of the Testing Agency: The independent agency engaged to perform inspections, sampling, and testing of materials and construction specified in individual Sections shall cooperate with the Architect, the Contractor and the Owner in performance of the agency's duties. The testing agency shall provide qualified personnel to perform required inspections and tests.
1. The agency shall notify the Architect, the Contractor, and the Owner promptly of irregularities or deficiencies observed in the Work during performance of its services.
 2. The agency is not authorized to release, revoke, alter, or enlarge requirements of the Contract Documents or approve or accept any portion of the Work.
 3. The agency shall not perform any duties of the Contractor.
- E. Coordination: Coordinate the sequence of activities to accommodate required services with a minimum of delay. Coordinate activities to avoid the necessity of removing and replacing construction to accommodate inspections and tests.
1. The Contractor is responsible for scheduling times for inspections, tests, taking samples, and similar activities.

1.5 SUBMITTALS

- A. Submit a certified written report of each inspection, test, or similar service.
1. Distribute copies of each report to Owner, Architect and Engineer. Distribution of reports shall be made promptly, upon the completion of each test or inspection. **A field report will be distributed to the Owner's Project Manager prior to the Inspector leaving the jobsite on any day during which a test or inspection has been done. A final inspection report will be required from the inspection agency to all parties within five (5) business days following the inspection. Test reports will be required within (5) business days following the actual test date.**
 2. Submit additional copies of each written report directly to the governing authority, when the authority so directs.

3. Report Data: Refer to specification sections of Divisions 02 through 48 for submittal requirements applicable to inspection and test reports. In general, each report shall include:
 - a. Date of issue.
 - b. Project title and number.
 - c. Name, address, and telephone number of testing agency.
 - d. Dates and locations of samples and tests or inspections.
 - e. Names of individuals making the inspection or test.
 - f. Designation of the Work and test method.
 - g. Identification of product and Specification Section.
 - h. Complete inspection or test data.
 - i. Test results and an interpretation of test results.
 - j. Ambient conditions at the time of sample taking and testing.
 - k. Comments or professional opinion on whether inspected or tested Work complies with Contract Document requirements.
 - l. Name and signature of laboratory inspector.
 - m. Recommendations on retesting.

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4. All submittals of inspections and test reports or requests for approval shall be accompanied by a certification signed by the contractor attesting to his/her knowledge of the submittal, acceptance of its findings and acknowledgement that material tested meets the required standards and certify the report's representation of the facts. Failure to provide the written certification shall be grounds for rejection of the submittal.

1.6 QUALITY ASSURANCE

- A. Qualifications for Service Agencies: Engage inspection and testing service agencies, including independent testing laboratories, that are prequalified as complying with the American Council of Independent Laboratories' "Recommended Requirements for Independent Laboratory Qualification" and that specialize in the types of inspections and tests to be performed.
 1. Each independent inspection and testing agency engaged on the Project shall be authorized by authorities having jurisdiction to operate in the state where the Project is located.
 2. Each independent inspection and testing agency engaged on the Project shall be pre-qualified by the Division of Building and Construction of the State of New Jersey to perform the types of tests and inspections required.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 REPAIRS AND PROTECTION

- A. General: Upon completion of inspection, testing, sample taking and similar services, repair damaged construction and restore substrates and finishes.
 1. Comply with Contract Document requirements for Division 01 Section "Cutting and Patching."
 2. Provide materials and comply with installation requirements specified in other Sections of these Specifications.
 3. Restore patched areas and extended restoration into adjoining areas in a manner that eliminates evidence of patching.
- B. Protect construction exposed by or for quality control service activities, and protect repaired construction.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for inspection, testing, or similar services.

END OF SECTION 014000

SECTION 014100 - TESTING LABORATORY SERVICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the contract, including general conditions, general conduct of the work and special requirements, supplementary conditions, and other Division 01 specification sections, apply to this section. In the event of any conflicts between the requirements of these sections, the more stringent requirement shall apply.

1.2 SECTION INCLUDES

- A. Selection and payment.
- B. Contractor submittals.
- C. Laboratory responsibilities.
- D. Laboratory reports.
- E. Limits on testing laboratory authority.
- F. Contractor responsibilities.

1.3 RELATED SECTIONS

- A. General Conditions: Inspections, testing, and approvals required by public authorities.
- B. Individual Specification Sections: Inspections and tests required, and standards for testing.
- C. Drawings and general provisions of the Contract, including General Conditions, General Conduct of the Work and Special Requirements, Supplementary Conditions, and other Division 01 Specification Sections, apply to this Section. In the event of any conflicts between the requirements of these sections, the more stringent requirement shall apply.

1.4 REFERENCE STANDARDS

- A. American Society for Testing and Materials (ASTM): ASTM C802 - Practice for Conducting an Interlaboratory Test Program to Determine the Precision of Test Methods for Construction.
- B. ASTM C1077 - Practice for Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation.
- C. ASTM D290 - Recommended Practice for Bituminous Mixing Plant Inspection.
- D. ASTM D3740 - Practice for Evaluation of Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.

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- E. ASTM D4561 - Practice for Quality Control Systems or an Inspection and Testing Agency for Bituminous Paving Materials.
- F. ASTM E329 - Practice for Use in the Evaluation of Inspection and Testing Agencies as Used in Construction.
- G. ASTM E548 - Practice for Preparation of Criteria for Use in the Evaluation of Testing Laboratories and Inspection Bodies.
- H. Testing, Quality Assurance, and Evaluating Building Components in Accordance with Test Methods Promulgated by ASTM Committee E6.

1.5 SELECTION AND PAYMENT

- A. Contractor shall employ and pay for services of an independent Testing Laboratory, and Balancing Laboratory/Organization, approved by Owner and Architect/Engineer, to perform all specified inspecting and testing.
- B. Employment of testing laboratory in NO WAY relieves Contractor of obligation to perform Work in accordance with requirements of Contract Documents.

1.6 QUALITY ASSURANCE

- A. Comply with requirements of ASTM C802, ASTM C1077, ASTM D290, ASTM D3740, ASTM D4561, ASTM E329, ASTM E548, and ASTM E699.
- B. Testing Laboratory Qualifications: Shall have been inspected by a nationally recognized inspection agency, acceptable to Owner and Architect/Engineer. Evidence of such inspection and current status shall be provided to Owner and Architect/Engineer. In addition, the approved lab shall document participation in a nationally recognized soils and concrete reference testing program during the twelve (12) months preceding the start of work on this project. Results of reference testing shall indicate an acceptable rating for the laboratory to be considered by the Owner and Architect/Engineer.
- C. Laboratory: Authorized to operate in the State in which Project is located.
- D. Laboratory Staff: Maintain a full time registered Professional Engineer on staff to review services.
- E. Testing Equipment: Shall be calibrated at reasonable intervals with devices of accuracy traceable to either National Bureau of Standards or accepted values of natural physical constants.

1.7 CONTRACTOR SUBMITTALS

- A. PRIOR TO START OF WORK, submit testing laboratory name, address, and telephone number, and names of full time registered Engineer and responsible officer.
- B. Submit copy of report of laboratory facilities inspection made by Materials Reference Laboratory of National Bureau of Standards during most recent inspection, with memorandum of remedies of any deficiencies reported by the inspection.

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1.8 LABORATORY RESPONSIBILITIES

- A. Test samples of required items submitted by Contractor.
- B. Provide qualified personnel at site. Cooperate with Architect/Engineer and Contractor in performance of services.
- C. Perform specified inspecting, sampling, and testing of Products in accordance with specified standards.
- D. Ascertain compliance of materials and mixes with requirements of Contract Documents.
- E. Promptly notify Architect/Engineer and Contractor of observed irregularities or non-conformance of Work or Products.
- F. Perform additional inspection and tests required by Architect/Engineer.

1.9 LABORATORY REPORTS

- A. After each inspection and test within five (5) business days, promptly submit three (3) copies of laboratory report to Owner, Architect/ Engineer, and to Contractor. Include:
 - 1. Date issued
 - 2. Project title and number
 - 3. Name of inspector
 - 4. Date and time of sampling or inspection
 - 5. Identification of product and specifications section
 - 6. Location in the Project
 - 7. Type of inspection or test
 - 8. Date of test
 - 9. Results of tests
 - 10. Conformance with Contract Documents.
- B. When requested by Architect/Engineer, provide interpretation of test results.

1.10 LIMITS ON TESTING LABORATORY AUTHORITY

- A. Laboratory MAY NOT release, revoke, alter, or enlarge on requirements of Contract Documents.
- B. Laboratory MAY NOT approve or accept any portion of the Work.
- C. Laboratory MAY NOT assume any duties of Contractor.
- D. Laboratory HAS NO authority to stop the Work.

1.11 CONTRACTOR RESPONSIBILITIES

- A. Deliver to laboratory at designated location, adequate samples of materials proposed to be used, which require testing.

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- B. Cooperate with laboratory personnel, and provide access to the Work and to manufacturers' facilities.
- C. Provide incidental labor and facilities:
 - 1. to provide access to Work to be tested,
 - 2. to obtain and handle samples at the site or at source of Products to be tested,
 - 3. to facilitate tests and inspections,
 - 4. to provide storage and curing of test samples.
- D. Notify Architect/Engineer, Owner and laboratory 24 hours prior to expected time for operations requiring inspecting and testing services.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 014100

SECTION 014523 – TESTING AND INSPECTIONS

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. Work of this Section, as shown or specified, shall be in accordance with the requirements of the Contract Documents.

1.2 SECTION INCLUDES

- A. Work of this Section includes all labor, materials, equipment, and services necessary to complete the testing and inspection requirements as specified herein.

1.3 RELATED SECTIONS

- A. Requirements for testing and inspection shall be described in various Sections of these Specifications. Where no testing and inspection requirements are described but the Owner determines that it is necessary, the Owner may request additional testing and inspection to be performed at his own expense.
- B. Work Not Included
 - 1. Unless otherwise noted in this Section or other Section of work, the Owner will select a pre-qualified independent testing laboratory and inspection professional.
 - 2. Unless otherwise noted in this Section or other Sections of work, the Owner will pay for all initial services of the testing laboratory and inspection professionals as further described in Article 2.1 of this Section of these Specifications.

1.4 QUALITY ASSURANCE

- A. The testing laboratory will be qualified to the Owner's approval in accordance with ASTM E 329-14a "Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection."
- B. Testing, when required, will be in accordance with all pertinent codes and regulations and with selected standards of the American Society for Testing and Materials.

1.5 PRODUCT HANDLING

- A. Promptly process and distribute all required copies of test reports and related instructions to ensure all necessary retesting and/or replacement of materials with the least possible delay in progress of the work.

PART 2 - PRODUCTS

2.1 PAYMENTS FOR TESTING AND INSPECTION SERVICES

- A. Initial Services: The Owner will pay for all initial testing and inspection services.

- B. Retesting: When initial tests and inspections indicate non-compliance with local Codes and the Contract Documents, all subsequent retesting occasioned by the non-compliance shall be performed by the same testing laboratory and inspectors and the costs thereof will be deducted by the Owner from the Contract Sum.

2.2 CODE COMPLIANCE TESTING AND INSPECTION

- A. Inspections and tests required by Codes or Ordinances, or by a plan approval authority, shall be paid for by the Owner unless otherwise noted in this Section or other Sections of work. Retesting or inspection as required shall conform to the requirements of Article 2.1 B of this Section.

2.3 CONTRACTOR'S TESTING

- A. Inspection or testing performed exclusively for the Contractor's convenience shall be the sole responsibility of the Contractor.
- B. Where operating tests are specified, the Contractor shall test his work as it progresses, on his own account, and shall make satisfactory preliminary tests in all cases before applying for official tests.
- C. Tests shall be made in the manner specified, for the different branches of the work. Each test shall be made on the entire system for which such test is required, wherever practical. In case it is necessary to test portions of the work independently, the Contractor shall do so without extra compensation. The Contractor shall furnish all labor, material and apparatus, make corrections and conduct the official test. The test will be conducted in the presence of a representative of the Architect.
- D. All parts of the mechanical and electrical work and associated equipment shall be tested and adjusted to work properly and be left in perfect operating condition. All defects disclosed by these tests shall be corrected to the satisfaction of the Architect and Engineer without any additional cost to the Owner. Tests shall be repeated on this repaired or replaced work if deemed necessary by the Architect. The Architect shall be notified at least forty-eight (48) hours in advance of all tests, and shall be represented at tests that he deems necessary. The Contractor shall furnish all necessary instruments, other equipment, and personnel required for such tests.
- E. Required certificates of inspection, testing or approval shall be secured by the Contractor and promptly delivered by him to the Architect.
- F. If the Architect or Engineer is to observe the inspections, tests or approvals required by the Contract Documents, he will endeavor to do so promptly and, where practicable, at the source of supply.

PART 3 - EXECUTION

3.1 COOPERATION WITH TESTING LABORATORY AND INSPECTORS

- A. Representatives of the testing laboratory and inspectors shall have access to the work at all times. Provide facilities for such access in order that they may properly perform their functions.

3.2 SCHEDULES

- A. Establishing Schedule: By advance discussions with the inspection service and testing laboratory selected by the Owner, determine the time required to perform inspections and tests and to issue each of its findings. Provide all required time within the construction schedule.
- B. Revising Schedule: When changes of construction schedule are necessary during construction, coordinate all such changes of schedule with the inspectors and testing laboratory as required.
- C. Adherence to Schedule: When the testing laboratory is ready to test according to the determined schedule but is prevented from testing or taking specimens due to incompleteness of the work, all extra costs for testing attributable to the delay will be back-charged to the Contractor.

3.3 TAKING SPECIMENS

- A. All specimens and samples for testing, unless otherwise provided in these Contract Documents, will be taken by the testing laboratory; all sampling equipment and personnel will be provided by the testing laboratory; and all deliveries of specimens and samples to the testing laboratory will be performed by the testing laboratory.

END OF SECTION 014523

SECTION 014200- REFERENCE STANDARDS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, General Conduct of the Work and Special Requirements, Supplementary Conditions, and other Division 01 Specification Sections, apply to this Section. In the event of any conflicts between the requirements of these Sections, the more stringent requirement shall apply. In the event of any conflicts between the requirements of these Sections, the more stringent requirement shall apply.

1.2 DEFINITIONS

- A. General: Basic contract definitions are included in the Conditions of the Contract.
- B. "Indicated": The term "indicated" refers to graphic representations, notes, or schedules on the Drawings; or to other paragraphs or schedules in the Specifications and similar requirements in the Contract Documents. Terms such as "shown," "noted," "scheduled," and "specified" are used to help the user locate the reference. Location is not limited.
- C. "Directed": Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean directed by the Architect, requested by the Architect, and similar phrases, unless any item associated with these terms will result in a monetary change order to the project. If the items associated with these terms require a change order the Owner must be notified prior to any action being taken.
- D. "Approved": The term "approved," when used in conjunction with the Architect's action on the Contractor's submittals, applications, and requests, and the Architect's and Owners duties and responsibilities are limited as specified by the Conditions of the Contract.
- E. "Regulations": The term "regulations" includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conversations and agreements within the construction industry that control performance of the Work.
- F. "Furnish": The term "furnish" means to supply and deliver to the Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": The term "install" describes operations at the Project site including the actual unloading, temporary storage, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. "Provide": The term "provide" means to furnish and install, complete and ready for the intended use.

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- I. "Installer": An installer is the Contractor or another entity engaged by the Contractor, either as an employee, subcontractor, or contractor of lower tier, to perform a particular construction activity, including installation, erection, application, or similar operations. Installers are required to be experienced in the operations they are engaged to perform.
 - 1. The term "experienced," when used with the term "installer," means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with the special requirements indicated; and having complied with requirements of authorities having jurisdiction.
 - 2. Trades: Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespersons of the corresponding generic name. However, work resulting from any construction activity performed by a "Trade" must meet all quality standards acceptable to the Architect and Owner
- J. "Project site" is the space available to the Contractor for performing construction activities, either exclusively or in conjunction with others performing other work as part of the Project. The extent of the Project site is shown on the Drawings and may or may not be identical with the description of the land on which the Project is to be built.
- K. "Testing Agencies": A testing agency is an independent entity engaged to perform specific inspections or tests, either at the Project site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests.
- L. If Requested: If requested by the Owner.
- M. Where: Where or when practicable in the judgment of the Owner.
- N. Satisfactory: Acceptable in the judgment of the Owner.
- O. As Required: As required by the Architect, or as field conditions dictate.
- P. Replace: To remove an existing product or service, and furnish and install an indicated product in its place.
- Q. Specifications: The total and complete specifications of this Project as identified by the Architect, and the Architects consultants through the Architect, including referenced standard specifications, the General Specifications and the Technical Specifications as indexed.
- R. System/ Assembly: In the context of this Project, where a 'system' or an 'assembly' as indicated in the Specifications and/or Drawings, it shall consist of the sum of all the relevant parts and/or materials specific to the use of the system or assembly indicated; installed complete, in place, and in working order. All said parts and/or materials required for a complete system indicated, shall be supplied and installed as part of the Base Bid Price for a complete, proper, and fully functional installation, whether specifically detailed or not. All materials for the system or assembly shall be installed completely, all necessary connections to other construction shall be provided. Upon completion of this system or assembly, the sum of all the parts that constitute the make-up of this unit, shall function and/or operate properly according to its intended design.

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- S. **Mandatory:** Means as required by code, any Building Authority, and any and all governing laws. All mandatory requirements for construction shall be included in the Base Bid Price for the Project.
- T. **Functional:** Items(s) installed that are to operate properly or as intended.
- U. **Typical:** A condition, detail, or other item that is common to an identified system, assembly, or any other construction condition where the essential characteristics are the same.

1.3 SPECIFICATION FORMAT AND CONTENT EXPLANATION

- A. **Specification Format:** These Specifications are organized into Divisions and Sections based on the 48-division format and CSI/ICSC's "MasterFormat" numbering system.
- B. **Specification Content:** These Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows.
 - 1. **Abbreviated Language:** Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be interpolated, as the sense requires. Singular words shall be interpreted as plural and plural words interpreted as singular where applicable as the context of the Contract Documents indicates.
 - a. The Technical Specifications are of the abbreviated type and include incomplete sentences. Omissions of words or phrases such as "the Contractor shall"; "in conformance with"; "shall be"; "as noted on the Drawings"; "according to the Plans"; "a" "an"; "the"; and "all" are intentional. Omitted words and phrases shall be supplied by inference in the same manner, as they are when a "note" occurs on the Drawings. Works "shall be" "shall have", and "shall" will be supplied by inference where a colon (:) is used within sentences or phrases.
 - 2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by the Contractor. At certain locations in the Section Text, subjective language is used for clarity to describe responsibilities that must be fulfilled indirectly by the Contractor or by others when so noted.
 - a. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
 - b. Abbreviated references to trade associations, technical societies, recognized authorities and other institutions are included in the contract documents. Any abbreviation or organization not recognized by the Contractors shall be requested from the Architect for interpretation. Failure to request and receive an interpretation shall not relieve the Contractor from performing and/or supplying materials or workmanship in compliance with specified references to the satisfaction of the Architect or Owner
- C. **References:** References to known standard specifications shall mean and intend the latest edition of such specifications adopted and published as of the date of the invitation to bid.
- D. **Divisions:** Divisions of the specifications into sections is done for the convenience of reference and is not intended to control the Contractor in dividing the Work among subcontractors or to limit the scope of work performed by any trade under any section

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1.4 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with standards in effect as of the date of the Contract Documents.
- C. Conflicting Requirements: Where compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to the Architect for a decision before proceeding.
 - 1. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of the requirements. Refer uncertainties to the Architect for a decision before proceeding
- D. Copies of Standards: Each entity engaged in construction on the Project must be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
 - 1. Where copies of standards are needed to perform a required construction activity, the Contractor shall obtain copies directly from the publication source and make them available on request.
- E. Abbreviations and Names: Trade association names and titles of general standards are frequently abbreviated. Where abbreviations and acronyms are used in the Specifications or other Contract Documents, they mean the recognized name of the trade association, standards-producing organization, authorities having jurisdiction, or other entity applicable to the context of the text provision. Refer to Gale Research's "Encyclopedia of Associations" or Columbia Books' "National Trade & Professional Associations of the U.S.," which are available in most libraries.

1.5 GOVERNING REGULATIONS AND AUTHORITIES

- A. Copies of Regulations: Obtain copies of the following regulations and retain at the Project site to be available for reference by parties who have a reasonable need:
 - 1. Any and all Federal, State or Local regulations required by the Agency having jurisdiction to be retained or posted at the project site

1.6 SUBMITTALS

- A. Permits, Licenses, and Certificates: For the Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

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1.7 DRAWINGS

- A. The Contractor shall provide all quantities, items, articles, materials, operations, or methods listed, mentioned, implied, scheduled, or specified, on the Drawings, including all labor, materials, equipment, and incidentals required for their completion.
- B. Intent of the Drawings:
 - 1. As with any plan, the Contractor shall be responsible for verifying all field conditions, whether or not noted in the plans prior to construction. Any discrepancies shall be resolved with the Owner prior to construction. The start of construction will not be delayed due to the Contractor's need to verify all field conditions. Verification of items must be scheduled by the Contractor so as not to impede the progress of the work. The Contractor shall be responsible for correcting damage resulting from Contractor's failure to verify field conditions. Architect/Engineer and Owner liability for accuracy of survey information.
 - 2. The implied intent of the Drawings, includes the overall layout of the Project, inclusive of site structures, site improvements, location of all items required during construction, the extent of construction and the extent of the materials.
 - 3. All such Drawings and Specifications constitute the Project as a whole, and are as a result, directly related to one another. The Drawings and Specifications are not divided into, or are intended to be divided into separate entities according to building trades or local practice. It is the responsibility of the Contractor to disseminate all information represented on the Drawings and Specifications so that all trades and sub-trades will have complete and thorough knowledge of the Project intent. No requests for Change Orders, time extensions, or other considerations will be accepted if the Contractor fails to properly coordinate information to the various trades/sub-trades.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 014200

SECTION 015000 – CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Supplementary Conditions, and other Division 01 Specification Sections, apply to this Section. In the event of any conflicts between the requirements of these Sections, the more stringent requirement shall apply.

1.2 SUMMARY

- A. This Section includes requirements for construction facilities and temporary controls, including temporary utilities, support facilities, and security and protection. Temporary utilities include, but are not limited to, the following:
 - 1. Temporary water service and distribution.
 - 2. Temporary electric power and light.
 - 3. Temporary heat.
 - 4. Telephone service.
 - 5. Sanitary facilities, including drinking water.
 - 6. Storm and sanitary sewer.
- B. Support facilities include, but are not limited to, the following:
 - 1. Field offices and storage sheds.
 - 2. Temporary roads, paving and truck wash-down station.
 - 3. Dewatering facilities and drains.
 - 4. Temporary enclosures.
 - 5. Hoists.
 - 6. Temporary project identification signs and bulletin boards.
 - 7. Waste disposal services.
 - 8. Rodent and pest control.
 - 9. Construction aids and miscellaneous services and facilities.
- C. Security and protection facilities include, but are not limited to, the following:
 - 1. Temporary fire protection.
 - 2. Barricades, warning signs, and lights.
 - 3. Sidewalk bridge or enclosure fence for the site.
 - 4. Environmental protection.
- D. The Contractor is responsible for all costs associated with the supply, maintenance or usage of temporary utilities and construction related facilities unless indicated otherwise in this Section.

1.3 QUALITY ASSURANCE

- A. Regulations: Comply with industry standards and applicable laws and regulations of authorities having jurisdiction including, but not limited to, the following:

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1. Building code requirements.
 2. Health and safety regulations.
 3. Utility company regulations.
 4. Police, fire department, and rescue squad rules.
 5. Environmental protection regulations.
- B. Standards: Comply with NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations," ANSI A10 Series standards for "Safety Requirements for Construction and Demolition," and NECA Electrical Design Library "Temporary Electrical Facilities."
1. Electrical Service: Comply with NEMA, NECA, and UL standards and regulations for temporary electric service. Install service in compliance with NFPA 70 "National Electric Code."
- C. Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.

1.4 PROJECT CONDITIONS

- A. Temporary Utilities: Prepare a schedule indicating dates for implementation and termination of each temporary utility.
- B. Conditions of Use: Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Relocate temporary services and facilities as the Work progresses. Do not overload facilities or permit them to interfere with progress. Take necessary fire-prevention measures. Do not allow hazardous, dangerous, or unsanitary conditions, or public nuisances to develop or persist on-site.
- C. Provide waste removal services as required to maintain the site in a clean and orderly condition.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Provide new materials. If acceptable to the Owner, the Contractor may use undamaged, previously used materials in serviceable condition. Provide materials suitable for use intended.
- B. Paint: Comply with requirements.
1. For job-built temporary offices, shops, sheds, fences, and other exposed lumber and plywood, provide exterior-grade acrylic-latex emulsion over exterior primer.
 2. For sign panels and applying graphics, provide exterior-grade alkyd gloss enamel over exterior primer.
- C. Tarpaulins: Provide waterproof, fire-resistant, UL-labeled tarpaulins with flame-spread rating of 15 or less. For temporary enclosures, provide translucent, nylon-reinforced, laminated polyethylene or polyvinyl chloride, fire-retardant tarpaulins.
- D. Water: Provide potable water approved by local health authorities.

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2.2 EQUIPMENT

- A. General: Provide new equipment. If acceptable to the Owner, the Contractor may use undamaged, previously used equipment in serviceable condition. Provide equipment suitable for use intended.
- B. Water Hoses: Provide 3/4-inch, heavy-duty, abrasion-resistant, flexible rubber hoses 100 feet long, with pressure rating greater than the maximum pressure of the water distribution system. Provide adjustable shutoff nozzles at hose discharge.
- C. Electrical Outlets: Provide properly configured, NEMA-polarized outlets to prevent insertion of 110- to 120-Volt plugs into higher voltage outlets. Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button, and pilot light for connection of power tools and equipment.
- D. Electrical Power Cords: Provide grounded extension cords. Use hard-service cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords if single lengths will not reach areas where construction activities are in progress. Do not exceed safe length-voltage ratio.
- E. Lamps and Light Fixtures: Provide general service incandescent lamps of wattage required for adequate illumination. Provide guard cages or tempered-glass enclosures where exposed to breakage.
- F. Fire Extinguishers: Provide hand-carried, portable, UL-rated; Class A fire extinguishers for temporary offices and similar spaces. In other locations, provide hand-carried, portable, UL-rated, Class ABC, dry-chemical extinguishers or a combination of extinguishers of NFPA-recommended classes for the exposures.
 - 1. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work and the areas adjacent to the Work area. Relocate and modify facilities as required.
- B. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed.

3.2 TEMPORARY UTILITY INSTALLATION

- A. General: Engage the appropriate local utility company to install temporary service or connect to existing service. Where company provides only part of the service, provide the remainder with matching, compatible materials and equipment. Comply with company recommendations.
 - 1. Arrange with company and existing users for a time when service can be interrupted, if necessary, to make connections for temporary services.
 - 2. Provide adequate capacity at each stage of construction. Prior to temporary utility

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- avail- ability, provide trucked-in services.
 3. Obtain easements to bring temporary utilities to the site where the Owner's easements cannot be used for that purpose.
 4. Use Charges: Cost or use charges for temporary facilities are not chargeable to the Owner. Neither the Owner will accept cost or use charges as a basis of claims for Change Orders.
 5. Install services to cause minimum disruption to area's adjacent to the work area.
 6. Add provisions for work not in Contract but served by temporary facilities, if required.
- B. Water Service: Contractor may use existing water service in the area of work.
- C. Temporary Electric Power Service: Provide weatherproof, grounded electric power service and distribution system of sufficient size, capacity, and power characteristics during construction period. Include meters, transformers, overload-protected disconnects, automatic ground-fault interrupters, and main distribution switchgear. **Cost of temporary electric power usage is the Contractors responsibility. Cost shall be included in the bid.**
- D. Initial temporary service shall be three (3) phase, or single phase. Temporary light and power installations, wiring and miscellaneous electrical hardware must meet the electric code. Electrical characteristics shall be provided to meet all temporary light and power reasonably required as herein and hereinafter specified or as included under the general conditions. The contractor shall pay the cost of running temporary services. **All costs shall be included in the bid.**
1. Power Distribution System: Install wiring overhead and rise vertically where least exposed to damage. Where permitted, wiring circuits not exceeding 125 Volts, ac 20 Ampere rating, and lighting circuits may be nonmetallic-sheathed cable where overhead and exposed for surveillance.
- E. Power outlets shall be fed independently of the temporary lighting system. The extension of service shall include the necessary wiring of sufficient capacity to the location of the well for the operation of the well pump in the event a water well is the source of water supply for the project. Where service of a type other than herein mentioned is required, the contractor requiring it shall pay all costs of such special service.
- F. Temporary Lighting: Provide temporary lighting with local switching. **Cost of temporary lighting usage is the contractors' responsibility. Cost shall be included in the bid.**
1. The contractor shall provide double sockets at a maximum of thirty feet (30') on centers in large areas. One (1) socket shall contain a 150-watt lamp and the other socket shall be a grounding type to accept a receptacle plug for small, single-phase loads to be used for short periods of time.
 2. Install and operate temporary lighting that will fulfill security and protection requirements without operating the entire system. Provide temporary lighting that will provide adequate illumination for construction operations and traffic conditions.
- G. The contractor shall observe the requirements of the Federal Occupational Safety and Health Act (OSHA) of 1970 with regard to temporary light and power.
- H. Temporary Heat: Provide temporary heat required by construction activities. Select safe equipment that will not have a harmful effect. **Any cost associated with the supply, maintenance and usage of temporary heat will be the responsibility of the contractor. Cost of temporary heat shall be included in the bid.**

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- I. Use of gasoline-burning space heaters, open flame, or salamander heating units is prohibited.
- J. Should electricians be required to supervise and maintain equipment required for the provision of heat, the payment for the services of the supervisors and/or maintenance personnel shall be the responsibility of the Contractor. The contractor shall pay the cost of all fuel consumed in the operation of the generating unit for supplying temporary heat.
- K. All heating equipment shall be NFPA approved. Heaters shall be approved by a recognized testing laboratory and must be equipped with a positive shut-off safety valve. Notwithstanding the above, all temporary heating equipment will comply with all Federal and State laws and regulations.
- L. Temporary Telephones: Contractor shall utilize their own cell phones for service.
- M. The contractor may utilize the Owner's sanitary/wash facilities, drinking water, etc. if these amenities are available. The contractor shall only use these facilities with Owner's permission. The contractor will be responsible to reimburse the Owner for all Owner provided utilities use by the Contractor. Further, should the contractor elect to utilize Owner provided utilities the contractor will be responsible to repair all damage and replace all damaged items before the project will be considered substantially completed. The Owner will not be required to make final payment to the contractor until such damage is repair or replaced to its original or better than original condition.

3.3 SUPPORT FACILITIES INSTALLATION

- A. Temporary storage sheds are not permitted on the Owner's property.
- B. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities.
 - 1. Where temporary wood or plywood enclosure exceeds 100 sq. ft. in area, use UL-labeled, fire-retardant-treated material for framing and main sheathing.
- C. Temporary Lifts and Hoists: Contractor may utilize the existing elevator for bringing materials to the area of work and disposing materials to the area of work provided that:
 - 1. The Contractor provides temporary protection materials, padding, etc. for the elevator cab.
 - 2. The Contractor observes the weight capacity of the existing elevator cab.
 - 3. The Contractor notify the Owner of the elevator use three (3) business days prior to use.
- D. Project Identification and Temporary Signs: Prepare project identification and other signs of size indicated. Install signs where indicated to inform the public and persons seeking entrance to the Project. Support on posts or framing of preservative-treated wood or steel. Do not permit installation of unauthorized signs.
 - 1. Temporary Signs: Prepare signs to provide directional information to construction personnel and visitors.
- E. Collection and Disposal of Waste: Collect waste from construction areas and elsewhere daily. Comply with requirements of NFPA 241 for removal of combustible waste material and

debris. Enforce requirements strictly. Do not hold materials more than 7 days during normal weather or 3 days when the temperature is expected to rise above 80 deg F. Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material lawfully.

1. Provide containers with lids. Dispose of waste off-site periodically.

F. Individual Project circumstances may require use of other construction aids and miscellaneous facilities, such as walkways, scaffoldings, platforms, swing stages, ramps and bridges, incidental sheeting and shoring, demolition waste chutes, and similar construction aids. Add requirements as necessary to suit Project.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

A. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of the types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 10 "Standard for Portable Fire Extinguishers" and NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations."

1. Locate fire extinguishers where convenient and effective for their intended purpose, but not less than one extinguisher on each floor at or near each usable stair- well.
2. Store combustible materials in containers in fire-safe locations.
3. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire-protection facilities, stairways, and other access routes for fighting fires. Prohibit smoking in hazardous fire-exposure areas.
4. Provide supervision of welding operations, combustion-type temporary heating units, and similar sources of fire ignition.

B. Barricades, Warning Signs, and Lights: Comply with standards and code requirements for erection of structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and the public of the hazard being protected against. Where appropriate and needed, provide lighting, including flashing red or amber lights.

C. Security Enclosure and Lockup: Install substantial temporary enclosure of partially completed areas of construction. Provide locking entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security.

1. 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.

D. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways, and subsoil might be contaminated or polluted or that other undesirable effects might result. Avoid use of tools and equipment that produce harmful noise. Restrict use of noise-making tools and equipment to hours that will minimize complaints from persons or firms near the site.

1. No burning will be permitted on the site.
2. It will be the Contractor's responsibility to control dust by a means acceptable to the Owner. The Contractor shall make due allowance in his bid to cover these non-productive costs.

E. Protection of Utilities:

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1. The Contractor shall exercise special care when working near existing utility installations such as lights, ducts, structures, underground trench laid cables, cable markers, pads, water lines, underground oil lines, railroads and other installations, to ensure that no damage is done to them and that the underground wiring to such utilities is not damaged or rooted out, or pipelines broken or punctured.
 2. If the Contractor damages any installation, the Contractor shall repair at no cost to the Owner the damaged item to the Owner's satisfaction. At the Owners discretion, repairs will be done continuously on a 24-hour per day basis until completed. The Contractor shall submit for approval the name of an electrical contractor and a plumbing contractor who shall be available on a 24 hour a day basis to affect any repairs as may be necessary due to Contractor error.
 3. The Contractor shall obtain (if available) as-built site underground information prior to beginning excavation to minimize the possibility of interruption or damage to existing facilities. The lack of this information shall not excuse damage to the utilities by the contractor or the requirement to make necessary repairs immediately, the Contractor shall pay for Cost of the repair work.
- F. Protection and Restoration of Property and Landscape: The Contractor shall be responsible for the preservation of all public and private property. All land monuments and property markers shall be preserved until the Owner has witnessed and recorded their location.
- G. Protection of Existing Trees, Shrubs, and Vegetation to Remain: Contractor shall take all means necessary to protect existing trees, shrubs, and vegetation. Contractor and its forces shall abide by the boundaries set by the Drawings for the protection of root systems of all designated trees, shrubs and vegetation. Protection shall be completely in place prior to the start of construction work in any area. Contractor shall clearly mark all restricted areas as indicated on the Drawings and prevent the use of the area by all personnel and equipment until final cleanup.
- H. Project Security:
1. The Contractor shall be responsible for monitoring all personnel requiring access to the work site including his personnel, subcontractor's personnel, other contractors working in the same construction area, material delivery trucks, authorized visitors to the site, etc.
 2. The Contractor shall be held responsible for the security and protection of its own, sub- contractors and sub-subcontractors equipment, vehicles, trailers, tools, materials, and all other items necessary for the work under this Contract.
 3. The Contractor shall be held responsible for the admission of any unauthorized personnel into his work area.
 4. In general, provide security and facilities to protect Work, existing facilities, and the Owner's operations from unauthorized entry, vandalism or theft.

3.5 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.
- B. Maintenance: Maintain facilities in good operating condition until removal. Protect from damage by freezing temperatures and similar elements.
1. Protection: Prevent water-filled piping from freezing. Maintain markers for underground lines. Protect from damage during excavation operations.

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- C. Termination and Removal: Unless the Owner requests that it be maintained longer, remove each temporary facility when the need has ended or no later than Substantial Completion. Complete or, if necessary, restore existing permanent construction that may have been damaged as a result of the use, maintenance or operation of temporary facility for this project. Repair damaged new work, repair or replace, as directed by the Owner, existing work and or conditions, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired as a result of the use, maintenance or operation of temporary facilities for the project.
 - 1. Where the area is intended for future landscape development, remove any material, equipment, debris, trash, soil and aggregate fill used as part or in conjunction with the project that do not comply with requirements for fill or subsoil in the area. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks damaged during and as a result of work conducted as part of this project. Replace and/or repair as required and direct by the governing authority and the Owner.

END OF SECTION 015000

SECTION 016000 – PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. Work of this Section, as shown or specified, shall be in accordance with the requirements of the Contract Documents.

1.2 SECTION INCLUDES

- A. Work of this Section includes all labor, materials, equipment, and services necessary to complete product requirements as specified herein, including, but not limited to, the following:

1. Product delivery, storage and handling.
2. Storage and protection.
3. Identifying markings.
4. Temporary use of equipment.
5. General standards.

1.3 RELATED SECTIONS

- A. Substitution Procedures - Section 012500.
- B. Execution Requirements - Section 017300.

1.4 TRANSPORTATION AND HANDLING

- A. Materials, products, and equipment shall be properly containerized, packaged, boxed, and protected to prevent damage during transportation and handling.
- B. More detailed requirements for transportation and handling are specified under the technical Sections.

1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.
- B. Delivery and Handling
 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft,

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and other losses.

3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
4. Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and properly protected.

C. Storage

1. Store products to allow for inspection and measurement of quantity or counting of units.
2. Store materials in a manner that will not endanger Project structure.
3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
4. Store foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
6. Protect stored products from damage and liquids from freezing.
7. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.

1.6 IDENTIFYING MARKINGS

- A. Name plates and other identifying markings shall not be affixed on exposed surfaces of manufactured items installed in finished spaces.

1.7 PRODUCT APPROVAL STANDARDS

- A. Where the words "or approved equal" or other synonymous terms are used, it is expressly understood that they shall mean that the approval of any such submission is vested in the Architect, whose decision shall be final and binding upon all concerned. All submissions are subject to such approval and shall conform to the requirements of Article 1.8 herein.

1.8 TEMPORARY USE OF EQUIPMENT

- A. No equipment intended for permanent installation shall be operated for temporary purposes without the written permission of the Architect.
- B. The temporary or trial usage by the Owner of any mechanical device, machinery, apparatus, equipment or any work or materials supplied under this Contract before final completion and written acceptance by the Architect, shall not be construed as evidence of the acceptance of same by the Owner. The Owner shall have the privilege of such temporary and trial usage, for such reasonable length of time as and when the Architect shall deem to be proper for making a complete and thorough test of same and no claim for damage shall be made by the Contractor for the injury to or breaking of parts of such work which may be caused by weakness or inaccuracy of structural parts or by defective material or workmanship. If the Contractor so elects, he may at his own expense, place a competent person or persons to make such trial usage; such trial usage shall be under the supervision of the Contractor.

1.9 GENERAL REQUIREMENTS

- A. In the event that it is necessary for the Contractor to store any materials offsite, he shall first obtain the approval of the Architect. The Contractor shall be responsible for insurance and warehousing charges of any materials stored offsite. The Contractor shall also be responsible for the cost of delivery to the job site of any materials that have been stored offsite.
- B. Materials delivered to the job site shall be carefully stored and protected from damage. Damaged material shall not be used in the work. The Contractor shall provide, where directed temporary storage facilities as may be required for the storage of all materials which might be damaged by weather.
- C. Manufactured articles, materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned as directed by the representative manufacturers, unless otherwise specified.
- D. Equipment, plant, and appliances, such as hoists, centering, concrete lifts, construction elevators, cranes, rigging, towers, derricks, walks, ramps, chutes, scaffolding, implements, transportation, cartage and other things necessary and required for the adequate execution of the work and as required by law and applicable Union rules shall be provided and shall be maintained in good and safe mechanical working order, be responsible for their safe use, and remove them when no longer required. Applicable requirements of OSHA shall become and form a part of this document.
- E. During handling and installation of work at project site clean and protect work in progress and adjoining work on a basis of perpetual maintenance. Apply suitable protective covering on newly installed work where reasonably required to ensure freedom from damage or deterioration at time of substantial completion; otherwise, clean and perform maintenance on newly installed work as frequently as necessary through remainder of construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- F. To extent possible through reasonable control and protection methods, supervise performance of work in a manner and by means which will ensure that none of the work whether completed or in progress, will be subjected to harmful, dangerous, damaging, or otherwise deleterious exposures during construction period. Such exposures include (where applicable, but not by way of limitation) static loading, dynamic loading, internal pressures, external pressures, high or low temperatures, thermal shock, high or low humidity, air contamination or pollution, water, ice, solvents, chemicals, light, radiation, puncture, abrasion, heavy traffic, soiling, bacteria, insect infestation, combustion, electrical current, high speed operation, improper lubrication, unusual wear, misuse, incompatible interface, destructive testing, misalignment, excessive weathering, unprotected storage, improper shipping/handling, theft and vandalism.
- G. Require installer of each major unit of work to inspect substrate to receive the work, and conditions under which the work will be performed, and to report (in writing to Contractor) unsatisfactory conditions. Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to Installer.
- H. Where installations include manufactured products, comply with manufacturer's applicable instructions and recommendations for installation to whatever extent these are more explicit or more stringent than applicable requirements indicated in the Contract Documents.

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- I. Inspect each item of materials or equipment immediately prior to installation and reject damaged and defective items.
- J. Provide attachment and connection devices and methods for securing work properly as it is installed; true to line and level, and within recognized industry tolerance if not otherwise indicated. Allow for expansions and building movements. Provide uniform joint widths in exposed work, organized for best possible visual effect. Refer questionable visual-effect choices to Architect for final decision.
- K. Recheck measurements and dimensions of the work as an integral step of starting each installation.
- L. Install work during conditions of temperature, humidity, exposure, forecasted weather, and status of project completion which will ensure best possible results for each unit of work in coordination with entire work. Isolate each unit of work from non-compatible work, as required to prevent deterioration.
- M. Coordinate enclosure (closing-in) of work with required inspections and tests, so as to avoid necessity of uncovering work for that purpose.
- N. Mounting Heights: Except as otherwise indicated, mount individual units of work at industry-recognized standard mounting heights, for applications indicated. In CMU walls mount units at height closest to manufacturer's recommendation so as to minimize cutting of block coursings. Refer questionable mounting height choices to Architect for final decision.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 016000

SECTION 017300 – EXECUTION REQUIREMENTS

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. Work of this Section, as shown or specified, shall be in accordance with the requirements of the Contract Documents.

1.2 SECTION INCLUDES

- A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1. General installation of products.
 - 2. Progress cleaning.
 - 3. Starting and adjusting.
 - 4. Protection of installed construction.
 - 5. Correction of the Work.

1.3 RELATED SECTIONS

- A. Cutting and Patching - Section 017329.
- B. Closeout Procedures - Section 017700.

1.4 SUBMITTALS

- A. Landfill Receipts: Submit copy of receipts issued by a landfill facility, licensed to accept hazardous materials, for hazardous waste disposal.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Acceptance of Conditions: Examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
 - 1. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
 - a. Description of the Work.
 - b. List of detrimental conditions, including substrates.
 - c. List of unacceptable installation tolerances.
 - d. Recommended corrections.

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2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
3. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
4. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
5. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Existing Utility Information: Furnish information to local utility that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Architect. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents.

3.3 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
 1. Make vertical work plumb and make horizontal work level.
 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 3. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.
 4. Maintain minimum headroom clearance of 8 feet in spaces without a suspended ceiling.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.

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- F. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.
 - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
 - 2. Allow for building movement, including thermal expansion and contraction.
- G. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- H. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.4 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 - 2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg. F.
 - 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
 - 1. Remove liquid spills promptly.
 - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Cutting and Patching: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials.
 - 1. Thoroughly clean piping, conduit, and similar features before applying paint or other finishing materials. Restore damaged pipe covering to its original condition.

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- H. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.
- I. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- J. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- K. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.5 STARTING AND ADJUSTING

- A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- B. Adjust operating components for proper operation without binding. Adjust equipment for proper operation.
- C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- D. Manufacturer's Field Service: If a factory-authorized service representative is required to inspect field-assembled components and equipment installation, comply with qualification requirements in Section 014000, "Quality Requirements."

3.6 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide continuous protection during construction of all finishes, including taped Masonry joints, and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Comply with manufacturer's written instructions for temperature and relative humidity.

3.1 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes. Comply with requirements in Section 017329, "Cutting and Patching."
 - 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Restore permanent facilities used during construction to their specified condition.
- C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- D. Repair components that do not operate properly.

- E. Remove and replace operating components that cannot be repaired.
- F. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION 017300

SECTION 017700- CONTRACT CLOSEOUT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section. In the event of any conflicts between the requirements of these Sections, the more stringent requirement shall apply.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Inspection procedures.
 - 2. Project record document submittal.
 - 3. Operation and maintenance manual submittal.
 - 4. Submittal of warranties.
 - 5. Final cleaning.
- B. Closeout requirements for specific construction activities are included in the appropriate Drawings.

1.3 SUBSTANTIAL COMPLETION

- A. Substantial Completion: The date of Substantial Completion for the Work, or designated portion thereof, is the date certified by the Architect when the construction is sufficiently complete, in accordance with the Contract Documents, so that the Owner may occupy the project, or the designated portions thereof, for the use for which it was intended PRIOR to the Mandatory Completion Date. Substantial Completion shall be accomplished and the full project and all designated portions thereof, read for use and occupancy by the Owner by the completion milestone deadline listed below. It shall be the responsibility of the Contractor to notify the Architect and Owner in not less than seven (7) calendar days prior to the Substantial Completion Milestone deadline for a "substantial completion" inspection. The University shall issue a Certificate of Substantial Completion (AIA Document G704) at the point in time when the inspection has been fully completed and the appropriate approvals and certificates have been granted by governing authorities and obtained by the Contractor.

- 1. IT IS THE INTENT OF THESE SPECIFICAITONS THAT SUBSTANTIAL COMPLETION IS ACHIEVED NO LATER THAN THE DATES AS OUTLINED IN SECTION 011000 "SUMMARY". **THE CONTRACTOR MUST INCLUDE ANY AND ALL COSTS INCLUDING ANY OVERTIME NECESSARY TO ATTAIN SUBSTANTIAL COMPLETION BY THE DEADLINE LISTED IN SECTION 011000 BASED UPON BEING AWARDED THE PROJECT BY THE DATE LISTED IN SECTION 011000.**

- B. **LIQUIDATED DAMAGES ARE PART OF THIS PROJECT. These will be assessed at the following rates:**

- 1. \$1,000.00 per day beyond substantial completion.

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- C. Preliminary Procedures: Before requesting inspection for certification of Substantial Completion, complete the following. List items below that are incomplete in request.
1. In the Application for Payment that coincides with, or first follows, the date Substantial Completion is claimed, show 100 percent completion for the portion of the Work claimed as substantially complete.
 - a. Include supporting documentation for completion as indicated in these Contract Documents and a statement showing an accounting of changes to the Contract Sum.
 - b. If 100 percent completion cannot be shown, include a list of incomplete items (a project punch list), the value of incomplete construction, reasons the Work is not complete, and a timeline during which the work must be completed.
 2. Advise Owner of pending insurance changeover requirements.
 3. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications, and similar documents.
 4. Obtain and submit releases enabling the Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 5. Prepare and submit Project Record Documents, operation and maintenance manuals, Final Completion construction photographs, damage or settlement surveys, property surveys, and similar final record information.
 6. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
 7. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
 8. Complete startup testing of systems and instruction of the Owner's operation and maintenance personnel.
 9. Disconnect and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 10. When mechanical, electrical or other equipment is installed, it shall be the responsibility of the contractor to maintain, warrant and operate it for such period of time as required by the contract documents or as necessary for the proper inspecting and testing of the equipment for adequately instructing the University's operating personnel. All costs associated with the maintenance, warranty, operations, inspection and testing of equipment in addition to instructing University personnel shall be borne by the contractor. All tests shall be conducted in the presence of and upon timely notice to the contracting officer, Owner's Project Manager and Architect/Engineer prior to acceptance of the equipment.
 11. Owner's warranties will start at Final Acceptance of the Project.
- D. Pre-final Inspection:
1. When the Contractor has completed all work and is satisfied the Project is in compliance with the Contract Documents, it will notify the Owner and Architect, in writing, that the Project is complete and ready for inspection. The Owner and Architect will arrange for and conduct an inspection of the Project by the Owner, Architect, Engineers and the Contractor. The Owner will be provided with a reasonable time to arrange for and conduct an inspection.

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2. The Owner and Architect will document any deficiencies on a written punch list and will arrange a meeting with the Contractor to review the punch list, explain deficient items and designate a time frame in which the punch list must be completed. The Contractor will correct all the deficiencies within the designated time frame and notify the Owner in writing, when the Project is ready for re-inspection. The Owner will arrange and conduct the re-inspection of the Project to review the corrected items.
3. The formal list of deficiencies found shall not be considered a final list of all deficient items. Any deficiencies found during inspections to the Owner, inspection for Substantial Completion, beneficial occupancy, or inspection for final acceptance, the Contractor will correct all deficient items per the contract documents prior to final acceptance.

E. Substantial Completion:

1. Upon completion of deficient items and instruction to the Owner, the Contractor will arrange for an inspection of the Project with the Owner and the Architect. This inspection may result in a list of additional items to complete after occupancy, but before final payment and/or may require additional correction prior to occupancy by the Owner.
2. Upon formal notice from the Owner, the Contractor shall then arrange for the submission of all outstanding record documents, including: maintenance manuals, guarantees, warranties, maintenance contracts, and any additional instructions necessary for the operation of the project. The Contractor shall acquaint the Owner with acceptance tests, guarantees, warranties, and maintenance manuals. The Contractor shall also obtain a 'Certificate of Occupancy' or similar releases required to permit the Owner's occupancy of the Project.
3. Should the inspection period find deficiencies, the Owner will notify the Contractor in writing of deficient items.
4. If the inspection confirms that the Project is 'substantially complete' and is 'ready for occupancy', the Owner through the Architect/Engineer will issue a "Certificate of Substantial Completion". The Certificate will confirm that the Project can be occupied for its intended use. Attached to the Certificate will be any final punch list to be completed. Prior to issuance of the Certificate, the Contractor shall submit a schedule for completion of remaining deficiencies, approved or amended by the Owner.
5. Inspection Procedures: On receipt of a request for inspection, the Architect will either proceed with inspection or advise the Contractor of unfilled requirements. The Architect 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.
 - a. The Architect will repeat inspection when requested and assured that the Work is substantially complete.
 - b. Results of the completed inspection will form the basis of requirements for final acceptance.

1.4 BENEFICIAL OCCUPANCY

- A. Upon issuance of the 'Certificate of Substantial Completion', the Owner may then occupy the Project (or the designated area of the Project).

1.5 FINAL ACCEPTANCE

- A. Final Inspection: Upon completion of any remaining deficiencies the Contractor shall notify the Owner in writing, that the Project is complete and ready for final inspection. The

Contractor shall arrange for and conduct the final inspection of the Project with the Owner.

- B. Final Acceptance: If the final inspection indicates satisfactory completion of the Work, the Owner through the Architect/Engineer will issue a Change Order adjusting to the final quantities. Following acceptance of the final Change Order, receipt of required affidavits, final release of liens, consent of surety for final payment along with all other documentation required by the contractor documents, the Owner through the Architect will authorize a final Certificate for Payment.
1. Mandatory or Final Completion: Final Completion shall be accomplished and the full project, and all designated portions thereof, completed and ready for use without any further work required within the time frame identified for each phase of work from the date of issuance and as listed on the Certificate of Substantial Completion by the Architect.
 2. The guarantee period for all materials, equipment and workmanship shall start on the date of 'Final Acceptance' unless otherwise noted on the Certificate.
- C. Preliminary Procedures: Before requesting final inspection for certification of final acceptance and final payment, complete the following. List exceptions in the request.
1. Submit the final payment request with releases and supporting documentation not previously submitted and accepted. Include insurance certificates for products and completed operations where required.
 2. Submit an updated final statement, accounting for final additional changes to the Contract Sum.
 3. Submit a certified copy of the Architect's final inspection list of items to be completed or corrected, endorsed and dated by the Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance and shall be endorsed and dated by the Architect.
 4. Submit final meter readings for utilities, a measured record of stored fuel, and similar data as of the date of Substantial Completion or when the Owner took possession of and assumed responsibility for corresponding elements of the Work.
 5. Submit consent of surety to final payment.
 6. Submit a final liquidated damages settlement statement.
 7. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
- D. Re-inspection Procedure: The Architect will re-inspect the Work upon receipt of notice that the Work, including inspection list items from earlier inspections, has been completed, except for items whose completion is delayed under circumstances acceptable to the Owner.
1. Upon completion of re-inspection, the Architect will prepare a certificate of final acceptance. If the Work is incomplete, the Architect will advise the Contractor of Work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.
 2. If necessary, re-inspection will be repeated.
 3. Should the Project require inspections beyond the inspections noted above, i.e. a pre-final and a final inspection only the Owner will reduce from the Contractor's final payment those monies necessary to provide for the cost of the additional inspections. The reduction shall not be considered as a part of any "Liquidated Damages" for failure to complete within the specified Contract Time. The reduction shall not be considered as a penalty to the Contractor; but shall be for the actual cost of monies required for the reimbursement of fees for the Architect, Engineers, Owner and any other specialists necessary for obtaining final approval of the Work.

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1.6 EXCESSIVE DEFICIENCIES

- A. During any inspection for Project completion, if it is determined by the Owner, that the Contractor has not sufficiently completed the Work in compliance with the Contract Documents, the Owner may declare that the Project is not sufficiently complete to continue the inspection of the Work. Within three (3) working days of this declaration, the Owner will issue in writing, a list of excessive deficiencies found. Upon receipt of the Owners notice of excessive deficiencies the Contractor will have ten (10) working days to remove such deficiencies. If such deficiencies have not been corrected in the time frame herein specified the Owner can at its' option complete the Work. Any costs incurred by the Owner as a result of its' assuming the responsibilities of the Contractor in this regard will be deducted from any monies remaining to be paid to the Contractor. Should the costs associated with the Owner having to assume responsibility for the work to correct excessive deficiencies exceed the amount of funds remaining to be paid the Contractor shall be liable to the Owner for the difference.

1.7 RECORD DOCUMENT SUBMITTALS

- A. General: Do not use record documents for construction purposes. Protect record documents from deterioration and loss in a secure, fire-resistant location. Provide access to record documents for the Architect's reference during normal working hours.
- All of the record documentation listed herein shall be provided by the Contractor in hard copy and digitally. Digital copies shall be provided by the Contractor in PDF format, and issued to the Owner via CD. Hard copy shall be provided by the Contractor in an 8-1/2" x 11" binder.**
- 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 from the Work as originally shown. Mark which 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 Owner 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 sets with durable-paper cover sheets; print suitable titles, dates, and other identification on the cover of each set.
- C. Record Specifications: Maintain one complete copy of the Project Manual, including addenda. Include with the Project Manual one copy of other written construction documents, such as Change Orders and modifications issued in printed form during construction.
- Mark these documents to show substantial variations in actual Work performed in comparison with the text of the Specifications and modifications.
 - Give particular attention to substitutions and selection of options and information on concealed construction that cannot otherwise be readily discerned later by direct observation.
 - Note related record drawing information and Product Data.
 - Upon completion of the Work, submit record Specifications to the Architect for the

Owner's records.

- D. Record Product Data: Maintain one copy of each Product Data submittal. Note related Change Orders and markup of record drawings and Specifications.
 - 1. 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.
 - 2. Give particular attention to concealed products and portions of the Work that cannot otherwise be readily discerned later by direct observation.
 - 3. Upon completion of markup, submit complete set of record Product Data to the Architect for the Owner's records.

- E. Record Sample Submitted: Immediately prior to Substantial Completion, the Contractor shall meet with the Architect and the Owner's personnel at the Project Site to determine which Samples are to be transmitted to the Owner for record purposes. Comply with the Owner's instructions regarding delivery to the Owner's Sample storage area.

- F. 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. Identify miscellaneous records properly and bind or file, ready for continued use and reference. Submit to the Architect for the Owner's records.

- G. Maintenance Manuals: Organize operation and maintenance data into suitable sets of manageable size. Bind properly indexed data in individual, heavy-duty, 2-inch (51-mm), 3-ring, vinyl-covered binders, with pocket folders for folded sheet information. Mark appropriate identification on front and spine of each binder. Include the following types of information:
 - 1. Emergency instructions.
 - 2. Spare parts list.
 - 3. Copies of warranties.
 - 4. Wiring diagrams.
 - 5. Recommended "turn-around" cycles.
 - 6. Inspection procedures.
 - 7. Shop Drawings and Product Data.
 - 8. Fixture lamping schedule.

- H. Roughing Drawings and Operating Manuals: Plumbing, HVAC, electrical and other machinery and mechanical equipment items requiring utility service connections shall have their respective shop drawings accompanied by manufacturer's certified roughing drawings indicating accurate locations and sizes of all service utility connections.

- I. Sleeve and Opening Drawings: Prior to installing service utilities or other piping, etc. through structural elements of the building, the contractor shall prepare and submit accurate dimensioned drawings to the Construction Manager for approval of the Architect and/or Structural Engineer for approval indicating the positions and sizes of all sleeves and openings required to accommodate his/her work and installation of his/her piping, equipment, etc. and all with reference to the established dimensional grid of the building. Such drawings must be submitted in sufficient time to allow proper coordination with reinforcing steel shop drawings and proper placing in the field.

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- J. Control Valve and Circuit Location Charts and Diagrams: The contractor shall prepare a complete set of inked or typewritten control valve and circuit location diagrams, charts, diagrams and lists under frame glass in appropriate designed equipment rooms as directed. The contractor shall also furnish one-line diagrams as well as such color-coding of piping and wiring and identifying charges as specified or required. This information is to be framed under glass and installed where directed. The Contractor shall also provide the University a second complete set of the control valve and circuit location diagrams, charts, diagrams and lists not under glass.
- K. Warranties:
1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within the (10) days after completion of the applicable item of work. Leave the date of beginning of time of warranty until the Date of Final Acceptance of the building and prior to receipt of final payment.
 2. Make other submittals within ten (10) days after Date of Substantial Completion, prior to final Application for Payment.
 3. For items of Work for which acceptance is delayed beyond the Date of Substantial Completion, submit within (10) days after written acceptance, listing the date of acceptance as the beginning of the warranty period. Final payment will not be approved until the Owner has received all warranties.
 4. Warranty periods for all items installed as part of the Work under this Contract will start at 'Final Acceptance' of the entire scope of Work on the Project.
 5. Co-execute submittals when required.
 6. Warranty Manual: Bind all warranties and bonds in a commercial type 8 1/2" X 11" three D side ring binder with durable plastic covers.
 - a. Cover: Identify each binder with typed or printed title WARRANTIES AND BONDS, with title of Project; name, address and telephone number of General Contractor and equipment suppliers; and name of responsible company principal.
 - b. Table of Contents: Neatly typed, in the sequence of the Table of Contents of the Project Manual, with each item identified with the number and title of the specification section in which specified, and the name of the product or work item.
 - c. Transmit two (2) copies of the "Warranties Manual" to the University prior to submission of Final Application for Payment.
 7. A certificate of Asbestos shall certify that no asbestos or asbestos-containing products are or have been installed as part of this project.

1.8 CLOSEOUT PROCEDURES

- A. Operation and Maintenance Instructions: Arrange for each Installer of equipment that requires regular maintenance to meet with the Owner's personnel to provide instruction in proper operation and maintenance. Provide instruction by manufacturer's representatives if installers are not experienced in operation and maintenance procedures. Include a detailed review of the following items:
1. Maintenance manuals.
 2. Record documents.
 3. Spare parts and materials.
 4. Tools.
 5. Lubricants.
 6. Fuels.

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7. Identification systems.
 8. Control sequences.
 9. Hazards.
 10. Cleaning.
 11. Warranties and bonds.
 12. Maintenance agreements and similar continuing commitments.
- B. As part of instruction for operating equipment, demonstrate the following procedures:
1. Startup.
 2. Shutdown.
 3. Emergency operations.
 4. Noise and vibration adjustments.
 5. Safety procedures.
 6. Economy and efficiency adjustments.
 7. Effective energy utilization.
- C. Allow a minimum of three (3) hours training for all of the Owners personnel who will be involved with the maintenance or operation for each piece of equipment or system that requires any type of maintenance or operation.
- D. For equipment, or component parts of equipment put into service during construction and operated by the Owner, submit completed documents within ten (10) days after written acceptance and prior to receipt of final payment.
- E. The contractor shall submit the as-built documents to the Owner's Project Manager for review by the Architect/Engineer whether altered or not with a certification as to the accuracy of the information thereon at the time of contract completion and before final payment will be made to the contractor. After acceptance by the Architect/Engineer, the contractor will furnish two (2) sets of all shop and/or erection drawings used for as-built documentation.
1. All as-built drawings as submitted by the contractor shall be labeled "as-built" and dated above the title block. This information shall be checked, edited and certified by the Architect/Engineer who shall then transpose such information from the contractor's as-built drawings to the original tracings and certify that such tracing reflect "as-built" status and deliver said tracings to the University. Where shop drawings have been used by the contractor for as-built documentation the tracing provided shall include cross-reference information, which shall be included in the set of as-built drawings furnished to the University. The Contractor shall be responsible for and shall pay for the cost of erasable transparencies for its as-built drawings.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: The General Conditions require general cleaning during construction. Regular site cleaning is included in Division 01 Section "Construction Facilities and Temporary Controls."
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturer's instructions.
 - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion.
 - a. Remove labels that are not permanent labels.
 - b. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other substances that are vision-detracting materials. Replace chipped or broken glass and other damaged transparent materials.
 - 1) removal of putty stains from glass and mirrors; wash and polish inside and outside;
 - c. Clean exposed exterior and interior hard-surfaced finishes to a dust-free condition, free of stains, films, and similar foreign substances. Restore reflective surfaces to their original condition. Leave concrete floors broom clean and dust free. Vacuum carpeted surfaces.
 - 1) removal of spots, paint and soil from resilient, glaze and unglazed masonry and ceramic flooring and wall work;
 - d. Vacuum as required and advisable and 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 to a mark free condition.
 - e. Clean the site, including landscape development areas, of rubbish, litter, and other foreign substances. Sweep paved areas broom clean; remove stains, spills, mud, stones and other foreign deposits. Rake grounds that are neither paved nor planted to a smooth, even-textured surface.
 - 1) restoration of all landscaping, roadway and walkways to pre-existing condition; damage to trees and plantings shall be repaired in the next planting season and such shall be guaranteed for one (1) year from date of repair and/or replanting;
 - f. removal of marks, undesirable stains, fingerprints, other soil, dust or dirt from painted, decorated or stained woodwork, plaster or plasterboard, metal acoustic tile and equipment surfaces;
 - g. removal of temporary floor protections; clean, wash or otherwise treat and/or polish all finished floors as directed;
 - h. clean exterior and interior metal surfaces, including doors and window frames and hardware, of oil stains, dust, dirt, paint and the like; polish where applicable and leave without fingerprints or blemishes;

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- i. removal of all pollutants of any kind or nature deposited or remaining upon the site or upon the University's property as a result of the construction work on this project;
- C. Pest Control: Engage an experienced, licensed exterminator to make a final inspection and rid the Project of rodents, insects, and other pests.
- D. Removal of Protection: Remove temporary protection and facilities installed for protection of the Work during construction.
- E. Compliance: Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from the site and dispose of lawfully.
 1. Where extra materials of value remain after completion of associated Work, they become the Owner's property. Dispose of these materials as directed by the Owner.

END OF SECTION 017700

SECTION 017820 - OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section. In the event of any conflicts between the requirements of these Sections, the more stringent requirement shall apply.

1.2 SUMMARY

- A. Work of this Section includes all labor, materials, equipment, and services necessary to complete the operation and maintenance data as specified herein.
- B. This Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
 - 1. Operation and maintenance documentation directory.
 - 2. Emergency manuals.
 - 3. Operation manuals for systems, subsystems, and equipment.
 - 4. Maintenance manuals for the care and maintenance of products, materials, and finishes systems and equipment.
- C. Related Sections include the following:
 - 1. Division 01 Section "Summary" for coordinating operation and maintenance manuals covering the Work of multiple contracts.
 - 2. Division 01 Section "Submittal Procedures" for submitting copies of submittals for operation and maintenance manuals.
 - 3. Division 01 Section "Closeout Procedures" for submitting operation and maintenance manuals.
 - 4. Division 01 Section "Project Record Documents" for preparing Record Drawings for operation and maintenance manuals.
 - 5. Divisions 02 through 48 Sections for specific operation and maintenance manual requirements for the Work in those Sections.

1.3 DEFINITIONS

- A. System: An organized collection of parts, equipment, or subsystems united by regular interaction.
- B. Subsystem: A portion of a system with characteristics similar to a system.

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1.4 SUBMITTALS

- A. Initial Submittal: Submit two (2) draft copies of each manual at least fifteen (15) calendar days before requesting inspection for Substantial Completion. Include a complete operation and maintenance directory. Owner will return one copy of draft and mark whether general scope and content of manual are acceptable.
 - 1. In lieu of hard copies, Contractor may submit digital copies in PDF format.
- B. Final Submittal: Submit two copies of each manual in final form at least fifteen (15) calendar days before final inspection. Architect will return copy with comments within 15 days after final inspection.
 - 1. Submit four (4) sets prior to final inspection, bound in 8-1/2" X 11" binders with durable plastic covers, acceptable to the Owner.
 - 2. In addition, Contractor shall submit digital copy in PDF format.
 - 3. Submit final volumes revised, to the authorized representative of the Owner as required in these Contract Documents.

1.5 COORDINATION

- A. Where operation and maintenance documentation includes information on installations by more than one factory-authorized service representative, assemble and coordinate information furnished by representatives and prepare manuals.

PART 2 - PRODUCTS

2.1 OPERATION AND MAINTENANCE DOCUMENTATION DIRECTORY

- A. Organization: Include a section in the directory for each of the following:
 - 1. List of documents.
 - 2. List of systems.
 - 3. List of equipment.
 - 4. Table of contents.
- B. List of Systems and Subsystems: List systems alphabetically. Include references to operation and maintenance manuals that contain information about each system.
- C. List of Equipment: List equipment for each system, organized alphabetically by system. For pieces of equipment not part of system, list alphabetically in separate list.
- D. Tables of Contents: Include a table of contents for each emergency, operation, and maintenance manual.
- E. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the Contract Documents. If no designation exists, assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."

2.2 MANUALS, GENERAL

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- A. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:
1. Title page.
 2. Table of contents.
 3. Manual contents.
- B. Title Page: Enclose title page in transparent plastic sleeve. Include the following information:
1. Subject matter included in manual.
 2. Name and address of Project.
 3. Name and address of Owner.
 4. Date of submittal.
 5. Name, address, and telephone number of Contractor.
 6. Name and address of Architect.
 7. Cross-reference to related systems in other operation and maintenance manuals.
- C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
1. If operation or maintenance documentation requires more than one volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.
- D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.
1. Binders: Heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
 - a. If two or more binders are necessary to accommodate data of a system, organize data in each binder into groupings by subsystem and related components. Cross-reference other binders if necessary to provide essential information for proper operation or maintenance of equipment or system.
 2. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents. Indicate volume number for multiple-volume sets. These manuals shall include a complete description of all systems and equipment, diagrams indicating connectors, oiling requirements, types of lubricants to be used and method of operating equipment. Included within the manuals shall be a list of names, addresses and telephone numbers of sub-contractors involved in the installation and firms capable of performing services for each mechanical item.
 3. Dividers: Heavy-paper dividers with plastic-covered tabs for each section. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual. Internally subdivide the binders contents with permanent page dividers, logically organized as described below and with tab

titling clearly printed under reinforced laminated plastic tabs.

- a. PART 1: Directory, listing names, addresses, contact persons and telephone numbers of Architects, Engineers, Contractors, Subcontractors and suppliers.
 - b. PART 2: Maintenance instructions subdivided by MasterSpec Format Sections as listed within these Contract Documents. For each Section identify names, addresses, contact persons and telephone numbers of Subcontractors and suppliers. Identify the following (in addition to the items listed in "G" above):
 - 1) Significant design criteria
 - 2) List of equipment.
 - 3) Parts list for each component.
 - 4) Maintenance instructions for equipment and systems.
 - 5) Maintenance instructions for special finishes, including recommended cleaning methods and materials and special precautions identifying detrimental agents.
4. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software diskettes for computerized electronic equipment.
 5. Supplementary Text: Prepared on 8-1/2-by-11-inch white bond paper.
 6. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
 - a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
 - b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

2.3 EMERGENCY MANUALS

- A. Content: Organize manual into a separate section for each of the following:
 1. Type of emergency.
 2. Emergency instructions.
 3. Emergency procedures.
- B. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component:
 1. Fire.
 2. Flood.
 3. Gas leak.
 4. Water leak.
 5. Power failure.
 6. Water outage.
 7. System, subsystem, or equipment failure.
 8. Chemical release or spill.
- C. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties.

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D. Emergency Procedures: Include the following, as applicable:

1. Instructions on stopping.
2. Shutdown instructions for each type of emergency.
3. Operating instructions for conditions outside normal operating limits.
4. Required sequences for electric or electronic systems.
5. Special operating instructions and procedures.

2.4 OPERATION MANUALS

A. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:

1. System, subsystem, and equipment descriptions.
2. Performance and design criteria if Contractor is delegated design responsibility.
3. Operating standards.
4. Operating procedures.
5. Operating logs.
6. Wiring diagrams.
7. Control diagrams.
8. Piped system diagrams.
9. Precautions against improper use.
10. License requirements including inspection and renewal dates.

B. Descriptions: Include the following:

1. Product name and model number.
2. Manufacturer's name.
3. Equipment identification with serial number of each component.
4. Equipment function.
5. Operating characteristics.
6. Limiting conditions.
7. Performance curves.
8. Engineering data and tests.
9. Complete nomenclature and number of replacement parts.

C. Operating Procedures: Include the following, as applicable:

1. Startup procedures.
2. Equipment or system break-in procedures.
3. Routine and normal operating instructions.
4. Regulation and control procedures.
5. Instructions on stopping.
6. Normal shutdown instructions.
7. Seasonal and weekend operating instructions.
8. Required sequences for electric or electronic systems.
9. Special operating instructions and procedures.

D. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.

E. Piped Systems: Diagram piping as installed, and identify color-coding where required for identification.

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2.5 PRODUCT MAINTENANCE MANUAL

- A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.
- B. Source Information: List each product included in manual identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.
- C. Product Information: Include the following, as applicable:
 - 1. Product name and model number.
 - 2. Manufacturer's name.
 - 3. Color, pattern, and texture.
 - 4. Material and chemical composition.
 - 5. Reordering information for specially manufactured products.
- D. Maintenance Procedures: Include manufacturer's written recommendations and the following:
 - 1. Inspection procedures.
 - 2. Types of cleaning agents to be used and methods of cleaning.
 - 3. List of cleaning agents and methods of cleaning detrimental to product.
 - 4. Schedule for routine cleaning and maintenance.
 - 5. Repair instructions.
- E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
- F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
 - 1. Include procedures to follow and required notifications for warranty claims.

2.6 SYSTEMS AND EQUIPMENT MAINTENANCE MANUAL

- A. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.
- B. Source Information: List each system, subsystem, and piece of equipment included in manual identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.

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- C. Manufacturers' Maintenance Documentation: Manufacturers' maintenance documentation including the following information for each component part or piece of equipment:
 - 1. Standard printed maintenance instructions and bulletins.
 - 2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
 - 3. Identification and nomenclature of parts and components.
 - 4. List of items recommended to be stocked as spare parts.

- D. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:
 - 1. Test and inspection instructions.
 - 2. Troubleshooting guide.
 - 3. Precautions against improper maintenance.
 - 4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
 - 5. Aligning, adjusting, and checking instructions.
 - 6. Demonstration and training videotape, if available.

- E. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
 - 1. Scheduled Maintenance and Service: Tabulate actions for daily, weekly, monthly, quarterly, semiannual, and annual frequencies.
 - 2. Maintenance and Service Record: Include manufacturers' forms for recording maintenance.

- F. Spare Parts, Extra Materials and Maintenance Materials
 - 1. Provide products, spare parts, maintenance and extra materials in quantities specified in individual specification sections. If there are no quantities specified then provide a minimum of five percent (5%) of:
 - a. all interior finish materials (attic stock).
 - b. the number of lamps and ballast needed for every light fixture.
 - c. the total number of automatic light sensors
 - d. the total number of each filter type required for each Mechanical Unit requiring filters.
 - 2. Provide 100% of all spare parts necessary to operate and maintain all equipment and building systems within the design parameters and/or as recommended by the manufacturer or supplier.
 - 3. Deliver to Owner's Project Manager and obtain receipt prior to final payment.
 - 4. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.

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- G. Special Tools
 - 1. Provide any “special tools” (one of each type) if required as part of the operation and maintenance of any of the systems herein specified. “Special tools” are devices that are considered unique to a specified system and necessary for maintenance and operation of that system, and not normally part of the maintenance department inventory.
- H. Maintenance Service Contracts: Include copies of maintenance agreements with name and telephone number of service agent.
- I. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
 - 1. Include procedures to follow and required notifications for warranty claims.

PART 3 - EXECUTION

3.1 MANUAL PREPARATION

- A. Operation and Maintenance Documentation Directory: Prepare a separate manual that provides an organized reference to emergency, operation, and maintenance manuals.
- B. Emergency Manual: Assemble a complete set of emergency information indicating procedures for use by emergency personnel and by Owner's operating personnel for types of emergencies indicated.
- C. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
- D. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.
 - 1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
 - 2. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.
- E. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
 - 1. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.

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- F. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in Record Drawings to ensure correct illustration of completed installation.
 - 1. Do not use original Project Record Documents as part of operation and maintenance manuals.
 - 2. Comply with requirements of newly prepared Record Drawings in Division 01 Section "Project Record Documents."

- G. Comply with Division 01 Section "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

END OF SECTION 017820

SECTION 018200 - DEMONSTRATION AND TRAINING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section. In the event of any conflicts between the requirements of these Sections, the more stringent requirement shall apply.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for instructing Owner's personnel, including the following:
 - 1. Demonstration of operation of systems, subsystems, and equipment.
 - 2. Training in operation and maintenance of systems, subsystems, and equipment.
 - 3. Demonstration and training videotapes.
- B. Related Sections include the following, as applicable to this project:
 - 1. Division 01 Section "Allowances" for administrative and procedural requirements for demonstration and training allowances.
 - 2. Division 01 Section "Project Management and Coordination" for requirements for pre-instruction conferences.
 - 3. Divisions 02 through 48 Sections for specific requirements for demonstration and training for products in those Sections.
- C. Allowances: Furnish demonstration and training instruction time under the Demonstration and Training Allowance as specified in Division 01 Section "Allowances."
- D. Unit Price for Instruction Time: Length of instruction time will be measured by actual time spent performing demonstration and training in required location. No payment will be made for time spent assembling educational materials, setting up, or cleaning up.

1.3 SUBMITTALS

- A. Instruction Program: Submit two (2) copies of outline of instructional program for demonstration and training, including a schedule of proposed dates, times, length of instruction time, and instructors' names for each training module. Include learning objective and outline for each training module.
 - 1. At completion of training, submit two (2) complete training manual(s) for Owner's use.
- B. Qualification Data: For instructors.
- C. Attendance Record: For each training module, submit list of participants and length of instruction time.
- D. Evaluations: For each participant and for each training module, submit results and

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documentation of performance-based test.

- E. Demonstration and Training Videotapes: Submit two (2) copies within seven (7) days of end of each training module.
 - 1. Identification: On each copy, provide an applied label with the following information:
 - a. Name of Project.
 - b. Name and address of photographer.
 - c. Name of Architect.
 - d. Name of Contractor.
 - e. Date videotape was recorded.
 - f. Description of vantage point, indicating location, direction (by compass point), and elevation or story of construction.
 - 2. Transcript: Prepared on 8-1/2-by-11-inch paper, punched and bound in heavy-duty, 3-ring, vinyl-covered binders. Mark appropriate identification on front and spine of each binder. Include a cover sheet with same label information as the corresponding videotape. Include name of Project and date of videotape on each page.

1.4 QUALITY ASSURANCE

- A. Facilitator Qualifications: A firm or individual experienced in training or educating maintenance personnel in a training program similar in content and extent to that indicated for this Project, and whose work has resulted in training or education with a record of successful learning performance.
- B. Instructor Qualifications: A factory-authorized service representative, complying with requirements in Division 01 Section "Quality Control Requirements," experienced in operation and maintenance procedures and training.
- C. Photographer Qualifications: A professional photographer who is experienced photographing construction projects.
- D. Pre-instruction Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination." Review methods and procedures related to demonstration and training including, but not limited to, the following:
 - 1. Inspect and discuss locations and other facilities required for instruction.
 - 2. Review and finalize instruction schedule and verify availability of educational materials, instructors' personnel, audiovisual equipment, and facilities needed to avoid delays.
 - 3. Review required content of instruction.
 - 4. For instruction that must occur outside, review weather and forecasted weather conditions and procedures to follow if conditions are unfavorable.

1.5 COORDINATION

- A. Coordinate instruction schedule with Owner's operations. Adjust schedule as required to minimize disrupting Owner's operations.
- B. Coordinate instructors, including providing notification of dates, times, length of instruction time, and course content.

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- C. Coordinate content of training modules with content of approved emergency, operation, and maintenance manuals. Do not submit instruction program until operation and maintenance data has been reviewed and approved by Architect.

PART 2 - PRODUCTS

2.1 INSTRUCTION PROGRAM

- A. Program Structure: Develop an instruction program that includes individual training modules for each system and equipment not part of a system, as required by individual Specification Sections, and as follows:
 - 1. Motorized doors, including overhead coiling doors, overhead coiling grilles, and automatic entrance doors.
 - 2. Equipment, including stage equipment, projection screens, loading dock equipment, waste compactors, food-service equipment, residential appliances and laboratory fume hoods, etc.
 - 3. Fire-protection systems, including fire alarm, fire pumps and fire-extinguishing systems.
 - 4. Intrusion detection systems.
 - 5. Conveying systems, including elevators, wheelchair lifts, escalators and cranes.
 - 6. Medical equipment, including medical gas equipment and piping.
 - 7. Laboratory equipment, including laboratory air and vacuum equipment and piping.
 - 8. Heat generation, including boilers, feed water equipment, pumps, steam distribution piping, and water distribution piping.
 - 9. Refrigeration systems, including chillers, cooling towers, condensers, pumps and distribution piping.
 - 10. HVAC systems, including air-handling equipment, air distribution systems and terminal equipment and devices.
 - 11. HVAC instrumentation and controls.
 - 12. Electrical service and distribution, including transformers, switchboards, panel boards, uninterruptible power supplies and motor controls.
 - 13. Packaged engine generators, including transfer switches.
 - 14. Lighting equipment and controls.
 - 15. Communication systems, including intercommunication, surveillance, clocks and programming, voice and data and television equipment.

- B. Training Modules: Develop a learning objective and teaching outline for each module. Include a description of specific skills and knowledge that participant is expected to master. For each module, include instruction for the following:
 - 1. Basis of System Design, Operational Requirements, and Criteria: Include the following:
 - a. System, subsystem, and equipment descriptions.
 - b. Performance and design criteria if Contractor is delegated design responsibility.
 - c. Operating standards.
 - d. Regulatory requirements.
 - e. Equipment function.
 - f. Operating characteristics.
 - g. Limiting conditions.
 - h. Performance curves.

2. Documentation: Review the following items in detail:
 - a. Emergency manuals.
 - b. Operations manuals.
 - c. Maintenance manuals.
 - d. Project Record Documents.
 - e. Identification systems.
 - f. Warranties and bonds.
 - g. Maintenance service agreements and similar continuing commitments.

3. Emergencies: Include the following, as applicable:
 - a. Instructions on meaning of warnings, trouble indications, and error messages.
 - b. Instructions on stopping.
 - c. Shutdown instructions for each type of emergency.
 - d. Operating instructions for conditions outside of normal operating limits.
 - e. Sequences for electric or electronic systems.
 - f. Special operating instructions and procedures.

4. Operations: Include the following, as applicable:
 - a. Startup procedures.
 - b. Equipment or system break-in procedures.
 - c. Routine and normal operating instructions.
 - d. Regulation and control procedures.
 - e. Control sequences.
 - f. Safety procedures.
 - g. Instructions on stopping.
 - h. Normal shutdown instructions.
 - i. Operating procedures for emergencies.
 - j. Operating procedures for system, subsystem, or equipment failure.
 - k. Seasonal and weekend operating instructions.
 - l. Required sequences for electric or electronic systems.
 - m. Special operating instructions and procedures.

5. Adjustments: Include the following:
 - a. Alignments.
 - b. Checking adjustments.
 - c. Noise and vibration adjustments.
 - d. Economy and efficiency adjustments.

6. Troubleshooting: Include the following:
 - a. Diagnostic instructions.
 - b. Test and inspection procedures.

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7. Maintenance: Include the following:
 - a. Inspection procedures.
 - b. Types of cleaning agents to be used and methods of cleaning.
 - c. List of cleaning agents and methods of cleaning detrimental to product.
 - d. Procedures for routine cleaning
 - e. Procedures for preventive maintenance.
 - f. Procedures for routine maintenance.
 - g. Instruction on use of special tools.

8. Repairs: Include the following:
 - a. Diagnosis instructions.
 - b. Repair instructions.
 - c. Disassembly; component removal, repair, and replacement; and reassembly instructions.
 - d. Instructions for identifying parts and components.
 - e. Review of spare parts needed for operation and maintenance.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Assemble educational materials necessary for instruction, including documentation and training module. Assemble training modules into a combined training manual.
- B. Set up instructional equipment at instruction location.

3.2 INSTRUCTION

- A. Facilitator: Engage a qualified facilitator to prepare instruction program and training modules, to coordinate instructors, and to coordinate between Contractor and Owner for number of participants, instruction times, and location.
- B. Engage qualified instructors to instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.
 1. Architect will furnish an instructor to describe basis of system design, operational requirements, criteria, and regulatory requirements.
 2. Owner will furnish an instructor to describe Owner's operational philosophy.
 3. Owner will furnish Contractor with names and positions of participants.
- C. Scheduling: Provide instruction at mutually agreed on times. For equipment that requires seasonal operation, provide similar instruction at start of each season.
 1. Schedule training with Owner with at least seven (7) calendar days' advance notice.
- D. Evaluation: At conclusion of each training module, assess and document each participant's mastery of module by use of an oral and a demonstration performance-based test.
- E. Cleanup: Collect used and leftover educational materials and give to Owner. Remove instructional equipment. Restore systems and equipment to condition existing before initial training use.

3.3 DEMONSTRATION AND TRAINING VIDEOTAPES

- A. General: Engage a qualified commercial photographer to record demonstration and training videotapes. Record each training module separately. Include classroom instructions and demonstrations, board diagrams, and other visual aids, but not student practice.
 - 1. At beginning of each training module, record each chart containing learning objective and lesson outline.
- B. Videotape Format: Provide high-quality VHS color videotape in full-size cassettes.
- C. Recording: Mount camera on tripod before starting recording, unless otherwise necessary to show area of demonstration and training. Display continuous running time.
- D. Narration: Describe scenes on videotape by dubbing audio narration off-site after videotape is recorded. Include description of items being viewed. Describe vantage point, indicating location, direction (by compass point), and elevation or story of construction.
- E. Transcript: Provide a typewritten transcript of the narration. Display images and running time captured from videotape opposite the corresponding narration segment.

END OF SECTION 018200