

# AC Library, Second Floor Meeting Room and Elevator Upgrades

Invitation For Bids

**Atlantic City Free Public Library, LEGAL NOTICE BID#25-2**

## **Atlantic City Free Public Library, Second Floor Meeting Room and Elevator Upgrades**

PUBLIC NOTICE is hereby given that sealed Bids will be received when called for by the Purchasing Agent of the **Atlantic City Public Library** (hereinafter called the "Library"), at its meeting to be held at **11 AM prevailing time on APRIL 29, 2025, Main Library, Board Room 2nd floor, 1 North Tennessee Avenue, AC NJ 08401**. Bids shall be enclosed in a sealed envelope bearing the name and address of the Bidder and labeled "**Atlantic City Free Public Library, Second Floor Meeting Room and Elevator Upgrades**". Bids may be delivered by mail, messenger, courier, overnight service or by hand. All Bids will be opened publicly and read aloud at that time. The "Library" reserves the right to waive any informalities in bids and to reject any and all bids if it is in the best interest of the "Library" to do so.

Separate sealed bids for: **GENERAL CONTRACT: ATLANTIC CITY FREE PUBLIC LIBRARY, SECOND FLOOR MEETING ROOM AND ELEVATOR UPGRADES**

All work incidental thereto, including but not limited to the **Second Floor Meeting Room and Elevator Upgrades**, and as required in accordance with the Project Manual.

The Bid Documents may be obtained directly from the Architect's office as an electronic PDF document. Bidders must request bid documents via email at [diversen@watg.com](mailto:diversen@watg.com). All questions regarding this project should be directed to the Architect and received in writing **only** via email to: [diversen@watg.com](mailto:diversen@watg.com).

Bidders electing to receive the specifications from a third party, or any other service or entity assume the responsibility of ensuring they receive any issued revisions or addenda.

Bidders shall be required to comply with the requirements of N.J.S.A. 10:5-31 et seq. and N.J.A.C. 17:27, Public Laws of 1977, Chapter 33; and City of Atlantic City Ordinance 24 of 1993, and the Mayor's Executive Order No. 2 of 1994 and the requirements of P.L. 1963. C150 (New Jersey Prevailing Wage Act), and Americans with Disabilities Act of 1990 (42 U.S.C. 12101, et. seq.).

Bids must be accompanied by a **bid guarantee** in the amount of 10% of the bid, but not in excess of \$20,000.00, in the form of a certified check, cashier's check or bid bond; and accompanied by **consent of surety** regardless of whether a check or Bid Bond is submitted. The Successful Bidder will be required to furnish an acceptable Performance and Labor and Material Payment Bond.

Bidders and their subcontractors must be authorized to do business in New Jersey and comply with the New Jersey Business Registration requirements. Any Bidder, which is a corporation not chartered under the laws of the State of New Jersey, must submit an affidavit certifying that said corporation is authorized to do business in the State of New Jersey.

Bidders must be registered with the Department of Labor and are required to comply with the requirements of Public Law 1999, c.238, "The Public Works Contractor Registration Act", which became effective on April 11, 2000.

Bidders shall comply with the requirements of N.J.S.A. 40A:11-2.1 and N.J.S.A. 52:32-55 et seq. (P.L. 2022, c.3) respecting the disclosure of prohibited Russia-Belarus & Iran Investment Activities.

Bidders must comply with the requirements of Public Law 1975, c. 127, which pertains to "Non-Discrimination" and "Affirmative Actions," and Public Law 1977, c. 33, which requires a Statement of Corporate Ownership.

It is strongly recommended that all interested bidders attend a pre-bid meeting & walk through the building on **April 9, 2025, 11 AM, 2nd floor Meeting Room, Main Library, 1 North Tennessee Ave, AC NJ**.

Ana Reyes, Purchasing Agent  
Atlantic City Free Public Library  
Printer Fee: \$110.56  
Pub Date: March 27th, 2025

Order #: #####



# Atlantic City Free Public Library

1 North Tennessee Avenue | Atlantic City, NJ 08401 | 609-345-2269 | www.acfpl.org

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## PROJECT MANUAL

**PROJECT NAME:** Atlantic City Free Public Library, Second Floor Meeting Room and Elevator Upgrades

**ISSUED FOR BID:** March 27, 2025

**BID#:** 25-2

**BID OPENING DATE/TIME:** APRIL 29, 2025, 11AM

**RECOMMENDED PRE-BID MEETING DATE:** APRIL 9, 2025, 11AM

**OWNER:** Atlantic City Free Public Library, 1 North Tennessee Avenue, Atlantic City, NJ 08401

**ARCHITECT:** WATG SOSH ARCHITECTS

**ANY QUESTIONS SHOULD BE DIRECTED TO THE ARCHITECT VIA EMAIL  
DIVERSEN@WATG.COM**

### RESERVATIONS OF THE BOARD OF TRUSTEES

The Board of Trustees of the Atlantic City Free Public Library shall consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all bids as it deems it best for the public interest so to do. The Bidder shall initial any changes, alternations or corrections to the Proposal Form.

**The Board of Trustees of the Atlantic City Free Public Library, through the action of the Library Director, reserve right at any time prior to the above-cited time for receipt of bids, to postpone the time for receipt of bids or to amend the Specifications, Plans or Proposal Form in the interest of the Atlantic City Free Public Library in accordance with the requirements contained in N.J.S.A. 40A:11-1 et seq.**

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# Invitation For Bids

## Atlantic City Free Public Library

LEGAL NOTICE BID#25-2

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Bidders electing to receive the specifications from a third party, or any other service or entity assume the responsibility of ensuring they receive any issued revisions or addenda.

Bidders shall be required to comply with the requirements of N.J.S.A. 10:5-31 et seq. and N.J.A.C. 17:27, Public Laws of 1977, Chapter 33; and City of Atlantic City Ordinance 24 of 1993, and the Mayor's Executive Order No. 2 of 1994 and the requirements of P.L. 1963. C150 (New Jersey Prevailing Wage Act), and Americans with Disabilities Act of 1990 (42 U.S.C. 12101, et. seq.).

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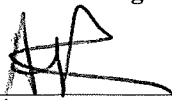
Bidders and their subcontractors must be authorized to do business in New Jersey and comply with the New Jersey Business Registration requirements. Any Bidder, which is a corporation not chartered under the laws of the State of New Jersey, must submit an affidavit certifying that said corporation is authorized to do business in the State of New Jersey.

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It is strongly recommended that all interested bidders attend a pre-bid meeting & walk through the building on **April 9, 2025, 11AM, 2<sup>nd</sup> floor Meeting Room, Main Library, 1 North Tennessee Ave, AC NJ.**

  
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Ana Reyes, Purchasing Agent  
Atlantic City Free Public Library



## Instructions To Bidders And Statutory Requirements

### I. SUBMISSION OF BIDS

- A. Sealed bids shall be received by the contracting unit, hereinafter referred to as "owner," in accordance with public advertisement as required by law, with a copy of said notice being attached hereto and made a part of these specifications.
- B. Sealed bids will be received by the designated representative at the time and location as stated in the Invitation to Bidders, and at such time and place will be publicly opened and read aloud.
- C. The bid shall be submitted in a sealed envelope: (1) addressed to the owner, (2) bearing the name and address of the bidder written on the face of the envelope, and (3) clearly marked "BID" with the contract title and/or bid # being bid.
- D. It is the bidder's responsibility that bids are presented to the owner at the time and at the place designated. Bids may be hand delivered or mailed; however, the owner disclaims any responsibility for bids forwarded by regular or overnight mail. If the bid is sent by express mail service, the designation in sub-section C, above, must also appear on the outside of the express mail envelope. Bids received after the designated time and date will be returned unopened.
- E. Bidders may request that their bids be withdrawn within five business days of bid opening in accordance with N.J.S.A. 40A:11-23-3.
- F. All prices and amounts must be written in ink or preferably machine-printed. Bids containing any conditions, omissions, unexplained erasures or alterations, items not called for in the bid proposal form, attachment of additive information not required by the specifications, or irregularities of any kind, may be rejected by the owner. Any changes, whiteouts, strikeouts, etc. in the bid must be initialed in ink by the person signing the bid.
- G. Each bid proposal form must give the full business address, business phone, fax, e-mail if available, the contact person of the bidder, and be signed by an authorized representative as follows:
- Bids by partnerships must furnish the full name of all partners and must be signed in the partnership name by one of the members of the partnership or by an authorized representative, followed by the signature and designation of the person signing.
  - Bids by corporations must be signed in the legal name of the corporation, followed by the name of the State in which incorporated and must contain the signature and designation of the president, secretary or other person authorized to bind the corporation in the matter.
  - Bids by sole-proprietorship shall be signed by the proprietor.
  - When requested, satisfactory evidence of the authority of the officer signing shall be furnished.
- H. Bidder should be aware of the following statutes that represent "Truth in Contracting" laws:
- N.J.S.A. 2C:21-34, et seq. governs false claims and representations by bidders. It is a serious crime for the bidder to knowingly submit a false claim and/or knowingly make material misrepresentation.
  - N.J.S.A. 2C:27-10 provides that a person commits a crime if said person offers a benefit to a public servant for an official act performed or to be performed by a public servant, which is a violation of official duty.
  - N.J.S.A. 2C:27-11 provides that a bidder commits a crime if said person, directly or indirectly, confers or agrees to confer any benefit not allowed by law to a public servant.
  - Bidder should consult the statutes or legal counsel for further information.

## II. BID SECURITY AND BONDING REQUIREMENTS

The following requirements and forms shall be completed and submitted with your bid package:

**ANY AND ALL BONDS OF ANY TYPE THAT ARE REQUIRED IN THESE SPECIFICATIONS SHALL BE FROM COMPANY AUTHORIZED TO DO BUSINESS IN THE STATE OF NEW JERSEY.**

### A. BID GUARANTEE

Bidder shall submit with the bid a certified check, cashier's check or bid bond in the amount of ten percent (10%) of the total price bid, but not in excess of \$20,000, payable unconditionally to the owner-per Mayor James Whelan's Executive Order No. 2 of 1994 . When submitting a Bid Bond, it shall contain Power of Attorney for the full amount of the Bid Bond from a surety company authorized to do business in the State of New Jersey and acceptable to the owner. The check or bond of the unsuccessful bidder(s) shall be returned pursuant to N.J.S.A. 40A:11-24a. The check or bond of the bidder to whom the contract is awarded shall be retained until a contract is executed and the required performance bond or other security is submitted. The check or bond of the successful bidder shall be forfeited if the bidder fails to enter into a contract pursuant to N.J.S.A. 40A:11-21. In the event the successful bidder fails to execute and deliver such contract within TEN (10) DAYS from the date of the receipt of notice of final award of contract, the certified or cashier's check or bid bond so submitted with bid shall be considered as liquidated damages accruing to the Atlantic City Free Public Library and not as a penalty and the Atlantic City Free Public Library shall retain same in full settlement for any and all damages sustained by it as a result of such default. **Failure to submit a bid guarantee shall result in the rejection of the bid.**

### B. CONSENT OF SURETY

Bidder shall submit with the bid a Certificate (Consent of Surety) with Power of Attorney for full amount of bid price from a Surety Company authorized to do business in the State of New Jersey and acceptable to the owner stating that it will provide said bidder with a Performance Bond in the full amount of the bid. This certificate shall be obtained in order to confirm that the bidder to whom the contract is awarded will furnish Performance and Payment Bonds from an acceptable surety company on behalf of said bidder, any or all subcontractors or by each respective subcontractor or by any combination thereof which results in performance security equal to the total amount of the contract, pursuant to N.J.S.A. 40A:11-22 . **The Consent of Surety shall be submitted with the bid package.**

The successful bidder shall be required to furnish a bond of a surety company authorized to do business in the State of New Jersey, in a sum equal to one hundred percent (100%) of the total contract price. Said bond shall be satisfactory as to form to the Atlantic City Free Public Library and is to be conditioned for the faithful performance of the contract to be entered into and, also, for the payment of lawful claims of subcontractors, material men, laborers, persons, firms or corporations of labor performed or material, provisions, provender, or other supplies or teams, fuels, oils, implements of machinery furnished, used or consumed in the carrying forward, performing or completing of said contract.

Attach Consent of Surety from a Surety Company, meeting the requirements, described herein, stating that if the bidder is Awarded the contract that the surety company shall supply the bonds for the contract.

1. Shall be an irrevocable, unconditional commitment by the surety to issue on behalf of the bidder the bond or bonds set forth in the contract documents upon award of the project in the full amounts specified.
2. Shall include all bonds required by the contract documents i.e. performance, labor and material payment, maintenance, environmental, etc.
3. Certificate (Consent) of Surety is not waivable and shall be considered a material defect resulting in rejection of bid if omitted from bid package.
4. Shall not contain any provision that would serve to limit the surety's liability to the "spread to second" bidder in the event the bidder fails to enter into a contract upon award

### C. PERFORMANCE BOND

Bidder shall simultaneously with the delivery of the executed contract, submit an executed bond in the amount of one hundred percent (100%) of the acceptable bid as security for the faithful performance of this contract pursuant to N.J.S.A. 40A:11-16 (a) (3).

Failure to submit this with the executed contract shall be cause for declaring the contract null and void pursuant to N.J.S.A. 40A:11-22.

### D. LABOR AND MATERIAL (PAYMENT) BOND

Bidder shall with the delivery of the performance bond submit an executed payment bond to guarantee payment to laborers and suppliers for the labor and material used in the work performed under the contract.

Failure to submit a labor and material bond with the performance bond shall be cause for declaring the contract null and void.

### E. MAINTENANCE BOND

Upon acceptance of the work by the owner, the contractor shall submit a maintenance bond (N.J.S.A. 40A:11-16.3) in an amount equal to 100% of the project costs guaranteeing against defective quality of work or materials for the period of 1 year.

The performance bond provided shall not be released until final acceptance of the whole work and then only if any liens or claims have been satisfied. The surety on such bond or bonds shall be a duly authorized surety company authorized to do business in the State of New Jersey pursuant to N.J.S.A. 17:31-5

## III. INTERPRETATION AND ADDENDA

- A. **The bidder understands and agrees that its bid is submitted on the basis of the specifications prepared by the architect. The bidder accepts the obligation to become familiar with these specifications.**
- B. Bidders are expected to examine the specifications and related bid documents with care and observe all their requirements. Ambiguities, errors or omissions noted by bidders should be promptly reported in writing to the appropriate official. **Any prospective bidder who wishes to challenge** a bid specification shall file such challenges in writing with the contracting agent **no less than (3) three business days** prior to the opening of the bids. Challenges filed after that time shall be considered void and having no impact on the contracting unit or the award of a contract pursuant to N.J.S.A. 40A:11-13. In the event the bidder fails to notify the owner of such ambiguities, errors or omissions, the bidder shall be bound by the requirements of the specifications and the bidder's submitted bid.
- No oral interpretation and or clarification of the meaning of the specifications for any goods and services will be made to any bidder. Such request shall be in writing, addressed to the owner's representative stipulated in the specification. In order to be given consideration, a written request must be received **no less than (7) seven business days** prior to the date fixed for the opening of the bid for goods and services.

All questions and requests for interpretation concerning this bid shall be addressed in writing via email to following

**WATG SOSH**  
**Attn: Dan Iversen**  
**1020 Atlantic Avenue**  
**Atlantic City, New Jersey 08401**  
**Email: [diversen@watg.com](mailto:diversen@watg.com)**

- C. All interpretations, clarifications and any supplemental instructions will be in the form of written addenda to the specifications, and will be distributed to all prospective bidders. All addenda so issued shall become part of the specification and bid documents, and shall be acknowledged by the bidder in the bid. The owner's interpretations or corrections thereof shall be final.

When issuing addenda, the owner shall provide required notice prior to the official receipt of bids to any person who has submitted a bid or who has received a bid package pursuant to N.J.S.A. 40A:11-23(c) (2).

D. Discrepancies in Bids

1. If the amount shown in words and its equivalent in figures do not agree, the written words shall be binding. Ditto marks are not considered writing or printing and shall not be used.
2. In the event that there is a discrepancy between the unit prices and the extended totals, the unit prices shall prevail. In the event there is an error of the summation of the extended totals, the computation by the owner of the extended totals shall govern.

E. Optional Pre-Bid Meeting

If stated in the Notice to Bidders and checked below:

An optional pre-bid conference for this proposal will be held on **APRIL 9, 2025, 11 AM, 2ND FLOOR BOARD ROOM, MAIN LIBRARY, 1 NORTH TENNESSEE AVENUE, AC NJ 08401.**

**IV. BRAND NAMES, STANDARDS OF QUALITY AND PERFORMANCE**

- A. Brand names and/or descriptions used in these specifications are to acquaint bidders with the types of goods and services desired and will be used as a standard by which goods and services offered as equivalent will be evaluated.
- B. Variations between the goods and services described and the goods and services offered are to be fully identified and described by the bidder on a separate sheet and submitted with the bid proposal form. Vendor literature **WILL NOT** suffice in explaining exceptions to these specifications. In the absence of any exceptions by the bidder, it will be presumed and required that the goods and services as described in the bid specification be provided or performed.
- C. **It is the responsibility of the bidder to document and/or demonstrate the equivalency of the goods and services offered. The owner reserves the right to evaluate the equivalency of the goods and services.**
- D. In submitting its bid, the bidder certifies that the goods and services to be furnished will not infringe upon any valid patent or trademark and that the successful bidder shall, at its own expense, defend any and all actions or suits charging such infringement, and will save the owner harmless from any damages resulting from such infringement.
- E. **Only manufactured and farm products of the United States, wherever available,** shall be used pursuant to N.J.S.A. 40A:11-18.
- F. The contractor shall guarantee any or all goods and services supplied under these specifications. Defective or inferior goods shall be replaced at the expense of the contractor. The contractor will be responsible for return freight or restocking charges.
- G. It is recommended that inspection be made upon delivery, installation or performance of service. Owner should serve written notice to the vendor/contractor upon discovery of defect or non-performance, a copy of which should be forwarded to the surety if a performance bond has been required. Request for payment should not be processed until the matter is satisfactorily resolved.

**V. INSURANCE AND INDEMNIFICATION**

A. INSURANCE REQUIREMENTS

1. Worker's Compensation Insurance

Workers Compensation insurance shall be maintained in full force during the life of the contract, covering all employees engaged in performance of the contract pursuant to N.J.S.A. 34:15-12(a) and N.J.A.C. 12:235-1.6.

2. General Liability Insurance

General liability insurance shall be provided with limits of not less than \$1,000,000, any one person and \$1,000,000, any one accident for bodily injury and \$1,000,000, aggregate for property damage, and shall be maintained in full force during the life of the contract.

3. Automotive Liability Insurance

Automobile Liability insurance covering the use of all owned, non-owned, hired or leased automobiles with limits of liability not less than \$1,000,000 combined single limit for bodily injury and property damage. Coverage should include uninsured and underinsured motorist at limits no less than the minimum statutory limits.

B. CERTIFICATES OF THE REQUIRED INSURANCE

Certificates of Insurance for those policies required above shall be submitted with the contract. Such coverage shall be with an insurance company authorized to do business in the State of New Jersey and shall name the owner as an additional insured.

Self-insured contractors shall submit an affidavit attesting to their self-insured coverage and shall name the owner as an additional insured.

C. INDEMNIFICATION

Bidder shall indemnify and hold harmless the Library from all claims, suits or actions, and damages or costs of every name and description to which the owner may be subjected or put by reason of injury to the person or property of another, or the property of the owner, resulting from negligent acts or omissions on the part of the contractor, the contractor's agents, servants or subcontractors in the delivery of goods and services, or in the performance of the work under the contract.

VI. PRICING INFORMATION FOR PREPARATION OF BIDS

- A. The owner is exempt from any local, state or federal sales, use or excise tax.
- B. Contractor shall be responsible for obtaining any applicable permits or licenses from any government entity that has jurisdiction to require the same. The Library is responsible for payment of permit fees. All bids submitted shall **not** include this cost.
- C. Bidders shall provide prices for furnishing goods and services required by these specifications. Prices shall be net, including any charges for packing, crating, containers, etc. All transportation charges shall be fully prepaid by the contractor, F.O.B. destination and placement at locations specified by the owner. As specified, placement may require inside deliveries. No additional charges will be allowed for any transportation costs resulting from partial shipments made for the contractor's convenience.
- D. In accordance with NJSA 34:11-56.25 et seq., New Jersey State Prevailing Wage Act, no contract shall be awarded to any contractor, subcontractor, or to any firm, corporation, or partnership in which such contractor or subcontractor has an interest who is debarred from public works.
- E. If and when a contract is awarded for specified item or items, or services rendered, the same shall be awarded to the lowest responsible bidder with the **UNIT PRICE GOVERNING**, except however, that if two or more bidders submit bids in the same amount, the Library shall have the right to award a contract to any or all of such bidders. The Atlantic City Free Public Library is required by the **Local Public Contract Law, N.J.S.A. 40A:11-23**, to make an **award on products or services within sixty (60) days of the bid opening date**. The Library shall either award or reject any or all bids if it deems it in the public interest to do so, within sixty (60) days of

bid opening. Shall the Atlantic City Free Public Library require an additional thirty (30) day extension to make an award of this bid, by signing these documents, you shall grant the Atlantic City Free Public Library, New Jersey, the right to extend this bid up to ninety (90) days, if deemed necessary.

#### RESERVATIONS OF THE BOARD OF TRUSTEES

The Board of Trustees of the Atlantic City Free Public Library shall consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all bids as it deems it best for the public interest so to do. The Bidder shall initial any changes, alternations or corrections to the Proposal Form.

**The Board of Trustees of the Atlantic City Free Public Library, through the action of the Library Director, reserves the right at any time prior to the above cited time for receipt of bids, to postpone the time for receipt of bids or to amend the Specifications, Plans or Proposal Form in the interest of the Atlantic City Free Public Library in accordance with the requirements contained in N.J.S.A. 40A:11-1 et seq.**

#### VII. STATUTORY AND OTHER REQUIREMENTS

##### A. MANDATORY AFFIRMATIVE ACTION CERTIFICATION

No firm may be issued a contract unless it complies with the affirmative action provisions of N.J.S.A. 10:5-31 et seq. and N.J.A.C. 17:27-1 et seq. The following information summarizes the full, required regulatory text, which is included as Exhibit B of this id specification.

##### 1. Goods and Services (including professional services) Contracts

Each contractor shall submit to the public agency, after notification of award but prior to execution of a goods and services contract, one of the following three documents:

1. A photocopy of a valid letter that the contractor is operating under an existing Federally approved or sanctioned affirmative action program (good for one year from the date of the letter); or
2. A photocopy of a Certificate of Employee Information Report approval, issued in accordance with N.J.A.C. 17:27-4; or
3. A photocopy of an Employee Information Report (Form AA 302) provided by the Division and distributed to the public agency to be completed by the contractor in accordance with N.J.A.C. 17:27-4.

##### 2. Maintenance/Construction Contracts

- a. After notification of award, but prior to signing the contract, the contractor shall submit to the public agency compliance officer and the Division of Contract Compliance and Equal Employment Opportunity in Public Contracts (Division) an initial project workforce report (Form AA201) provided to the public agency by the Division for distribution to and completion by the contractor, in accordance with N.J.A.C. 17:27-7.5.
- b. The contractor shall also submit a copy of the Monthly Project Workforce Report once a month thereafter for the duration of the contract to the Division and to the public agency compliance officer. The contractor shall also cooperate with the public agency in the payment of budgeted funds, as is necessary, for on-the-job and/or off-the-job programs for outreach and training of minorities and women.

##### B. NEW JERSEY ANTI-DISCRIMINATION

The contract for this bid shall require that the contractor agrees not to discriminate in employment and agrees to abide by

C. AMERICANS WITH DISABILITIES ACT OF 1990

Discrimination on the basis of disability in contracting for the purchase of goods and services is prohibited. Bidders are required to read Americans With Disabilities language that is included as Appendix A of this specification and agree that the provisions of Title II of the Act are made a part of the contract. The contractor is obligated to comply with the Act and to hold the owner harmless.

D. STATEMENT OF OWNERSHIP DISCLOSURE

N.J.S.A. 52:25-24.2 provides that no corporation or partnership shall be awarded any contract for the performance of any work or the furnishing of any goods and services, unless, prior to the receipt of the bid or accompanying the bid of said corporation or partnership, the Bidder shall submit a statement setting forth the names and addresses of all stockholders in the corporation or partnership who own ten percent or more of its stock of any class, or of all individual partners in the partnership who own a ten percent or greater interest therein. The included Statement of Ownership shall be completed and attached to the bid proposal. This requirement applies to all forms of corporations and partnerships, including, but not limited to, limited partnerships, limited liability corporations, limited liability partnerships and Subchapter S corporations. Failure to submit a stockholder disclosure document shall result in rejection of the bid.

E. PROOF OF BUSINESS REGISTRATION

N.J.S.A. 52:32-44 requires that each bidder (contractor) submit proof of business registration prior to award of contract. Proof of registration shall be a copy of the bidder's Business Registration Certificate (BRC). A BRC is obtained from the New Jersey Division of Revenue. Information on obtaining a BRC is available on the internet at [www.nj.gov/njbgs](http://www.nj.gov/njbgs) or by phone at (609) 292-1730. N.J.S.A. 52:32-44 imposes the following requirements on contractors and all subcontractors that **knowingly** provide goods or perform services for a contractor fulfilling this contract:

- 1) The contractor shall provide written notice to its subcontractors and suppliers to submit proof of business registration to the contractor;
- 2) Prior to receipt of final payment from a contracting agency, a contractor must submit to the contracting agency an accurate list of all subcontractors or attest that none was used;
- 3) During the term of this contract, the contractor and its affiliates shall collect and remit, and shall notify all subcontractors and their affiliates that they must collect and remit to the Director, New Jersey Division of Taxation, the use tax due pursuant to the Sales and Use Tax Act, (N.J.S.A. 54:32B-1 et seq.) on all sales of tangible personal property delivered into this State.

A contractor, subcontractor or supplier who fails to provide proof of business registration or provides false business registration information shall be liable to a penalty of \$25 for each day of violation, not to exceed \$50,000 for each business registration not properly provided or maintained under a contract with a contracting agency. Information on the law and its requirements is available by calling (609) 292-1730.

F. PROHIBITED RUSSIA-BELARUS ACTIVITIES & IRAN INVESTMENT ACTIVITIES – (See Form in bid package)

1. Pursuant to law, any person or entity that is a successful bidder or proposer, or otherwise proposes to enter into or renew a contract, for goods or services must complete the enclosed certification prior to contract award to attest, under penalty of perjury, that neither the person or entity, nor any parent entity, subsidiary, or affiliate, is identified on the Department of Treasury's Russia-Belarus list or Chapter 25 list as a person or entity engaging in prohibited activities in Russia, Belarus or Iran. Before a contract for goods or services can be amended or extended, a person or entity must certify that neither the person or entity, nor any parent entity, subsidiary, or affiliate, is identified on the Department of Treasury's Russia-Belarus list.

G. NEW JERSEY WORKER AND COMMUNITY RIGHT TO KNOW ACT

The manufacturer or supplier of chemical substances or mixtures shall label them in accordance with the N.J. Worker and Community Right to Know Law (N.J.S.A. 34:5A-1 et seq., and N.J.A.C 8:59-2 et seq.,). Containers that the law and rules require to be labeled shall show the Chemical Abstracts Service number of all the

components and the chemical name. Further, all applicable Material Safety Data Sheets (MSDS) - hazardous substance fact sheet - must be furnished.

#### H. PREVAILING WAGE ACT

Pursuant to N.J.S.A. 34:11-56.25 et seq., contractors on projects for public work shall adhere to all requirements of the New Jersey Prevailing Wage Act. The contractor shall be required to submit a certified payroll record to the owner within **ten (10)** days of the payment of the wages. The contractor is also responsible for obtaining and submitting all subcontractors' certified payroll records within the aforementioned time period. The contractor shall submit said certified payrolls. It is the contractor's responsibility to obtain any additional copies of the certified payroll form to be submitted by contacting the New Jersey Department of Labor and Workforce Development, Division of Workplace Standards. Additional information is available at [www.state.nj.us/labor/lsse/lspubcon.html](http://www.state.nj.us/labor/lsse/lspubcon.html). **New legislation was enacted on August 16, 2023, requiring public works contractors to submit certified payroll records online <https://njwages.nj.gov/>**

If a person makes the lowest bid for a contract with a public body for public work subject to the provisions of the "New Jersey Prevailing Wage Act," P.L.1963, c.150 (C.34:11-56.25 et seq.) and that bid is ten percent or more lower than the next lowest bid for the contract, the person making the lowest bid shall certify to the public body that the prevailing wage rates required by that act shall be paid. If the bidder does not provide the certification prior to award of the contract, the public body shall award the contract to the next lowest responsible and responsive bidder. This certification shall be required only when a public body is engaging in competitive bidding for public work.

#### I. THE PUBLIC WORKS CONTRACTOR REGISTRATION ACT

N.J.S.A. 34:11-56.48 et seq. requires that a general or prime contractor and any listed subcontractors named in the contractor's bid proposal shall possess a certificate *at the time the bid proposal is submitted*. After bid proposals are received and prior to award of contract, the successful contractor shall submit a copy of the contractor's certification along with those of all listed subcontractors. All non-listed subcontractors and lower tier sub-subcontractors shall be registered prior to starting work on the project. It is the general contractor's responsibility that all non-listed sub-contractors at any tier have their certificate prior to starting work on the job.

Under the law a "contractor" is "a person, partnership, association, joint stock company, trust, corporation or other legal business entity or successor thereof who enters into a contract" which is subject to the provisions of the New Jersey Prevailing Wage Act N.J.S.A. 34:11-56.25, et seq. It applies to contractors based in New Jersey or in another state.

The law defines "public works projects" as contracts for "public work" as defined in the Prevailing Wage statute [N.J.S.A. 34:11-56.26(5)]. The term means:

- "Construction, reconstruction, demolition, alteration, or repair work, or maintenance work, including painting and decorating, done under contract and paid for in whole or in part out of the funds of a public body, except work performed under a rehabilitation program.
- "Public work" shall also mean construction, reconstruction, demolition, alteration, or repair work, done on any property or premises, whether or not the work is paid for from public funds..."
- "Maintenance work" means the repair of existing facilities when the size, type or extent of such facilities is not thereby changed or increased. While "maintenance" includes painting and decorating and is covered under the law, it does not include work such as routine landscape maintenance or janitorial services.

To register, a contractor must provide the State Department of Labor with a full and accurately completed application form. The form is available online at [www.state.nj.us/labor/lsse/lspubcon.html](http://www.state.nj.us/labor/lsse/lspubcon.html).

N.J.S.A. 34:11-56.55 specifically prohibits accepting applications for registration as a substitute for a certificate of registration.



J. NON-COLLUSION AFFIDAVIT

The Affidavit shall be properly executed and submitted with the bid proposal.

K. PAY TO PLAY

1. All business entities are advised of their responsibility to file an annual disclosure statement of political contributions with the New Jersey Election Law Enforcement Commission (ELEC) pursuant to N.J.S.A. 19:44A-20.27 if they receive contracts in excess of \$50,000 from public entities in a calendar year.
2. Business entities are responsible for determining if filing is necessary. Additional information on this requirement is available from ELEC at 888-313-3532 or at [www.elec.state.nj.us](http://www.elec.state.nj.us).

L. CERTIFICATION OF NON-DEBARMENT FOR FEDERAL GOVERNMENT CONTRACTS

N.J.S.A. 52:32-44.1 (P.L. 2019, c.406) provides that any natural person, company, firm, association, corporation, or other entity prohibited, or "debarred," from contracting with the federal government agencies shall also be prohibited from contracting for public work in the state of New Jersey. This prohibition also extends to any affiliate organization(s) held by or subject to the control of an entity of that prohibited person or entity.

M. REPORTING TO THE OFFICE OF THE STATE COMPTROLLER

Office of the NJ State Comptroller (OSC): N.J.S.A. 52:15C-10 requires contracts exceeding \$2,000,000 but below \$10,000,000 to be reported to the OSC within twenty (20) days after award, and that proposed contracts exceeding \$10,000,000 must be approved by the OSC prior to awarding the contract. Contracts awarded under a national cooperative agreement are subject to these requirements. In addition, the OSC may audit or review contracts of any amount or type and may audit or review the records of the vendor as well.

OSC has adopted a regulation, N.J.A.C. 17:44-2.2, which requires contracting units to insert the following language into all contracts:

The vendor shall maintain all documentation related to products, transactions or services under this contract for a period of five (5) years from the date of final payment. Such records shall be made available to the New Jersey Office of the State Comptroller upon request.

N. DISCLOSURE OF CONTRIBUTIONS TO ELEC

Bidder/Contractor is advised of the responsibility to file an annual disclosure statement on political contributions with the New Jersey Election Law Enforcement Commission pursuant to N.J.S.A. 19:44A-20.13 (P.L. 2005, c.271, s.3) if the Bidder/Contractor receives contracts in excess of \$50,000 (in the aggregate) from public entities in a calendar year. It is the Bidder/Contractor responsibility to determine if filing is necessary. Additional information on this requirement is available from ELEC at 888-313-3532 or at [www.elec.state.nj.us](http://www.elec.state.nj.us)."

VIII. METHOD OF CONTRACT AWARD

- a. Pursuant to requirements of N.J.A.C. 5:30-5.1 et seq., any contract resulting from this bid shall be subject to the availability and appropriation of sufficient funds annually. Please see Section X, Termination of Contract, Sub-section E, for additional information.
- b. If the award is to be made on the basis of a base bid only, it shall be made to that **responsible bidder submitting the lowest base bid**.
- c. If the award is to be made on the basis of a combination of a base bid with selected options, it shall be made to that responsible bidder submitting the lowest net bid.

- d. The owner may also elect to award the contract on the basis of unit prices.
- e. The form of contract shall be submitted by the owner to the successful bidder. Terms of the specifications/bid package prevail. Bidder exceptions must be formally accepted by the owner.

**IX. CAUSES FOR REJECTING BIDS**

Bids may be rejected for any of the following reasons:

- A. All bids pursuant to N.J.S.A. 40A:11-13.2;
- B. If more than one bid is received from an individual, firm or partnership, corporation or association under the same name;
- C. Multiple bids from an agent representing competing bidders;
- D. The bid is inappropriately unbalanced;
- E. The bidder is determined to possess, pursuant to N.J.S.A. 40A:11-4(b), Prior Negative Experience; or,
- F. If the successful bidder fails to enter into a contract within 21 days, Sundays and holidays excepted, or as otherwise agreed upon by the parties to the contract. In this case at its option, the owner may accept the bid of the next lowest responsible bidder. (N.J.S.A. 40A:11-24b)

**X. LIBRARY'S RIGHT TERMINATION OF CONTRACT**

- A. If, through any cause, the contractor shall fail to fulfill in a timely and proper manner obligations under the contract or if the contractor shall violate any of the requirements of the contract, the provisions of P.L. 1971 c. 198 (C:40A:11-1 et seq., Local Public Contracts Law), or any other Federal, State or Local law, the **Library shall at any time during the contract period upon have the right to terminate the contract by giving THIRTY (30) DAYS notice** in writing to the other party of its intention to do so, and specifying the effective date of termination. Such termination shall relieve the Library of any obligation for balances to the contractor of any sum or sums set forth in the contract. The Library will pay only for goods and services accepted prior to termination.
- B. Notwithstanding the above, the contractor shall not be relieved of liability to the Library for damages sustained by the Library by virtue of any breach of the contract by the contractor and the Library may withhold any payments to the contractor for the purpose of compensation until such time as the exact amount of the damage due the Library from the contractor is determined.
- C. The contractor agrees to indemnify and hold the Library harmless from any liability to subcontractors/suppliers concerning payment for work performed or goods supplied arising out of the lawful termination of the contract by the Library under this provision.
- D. In case of default by the contractor, the Library may procure the goods or services from other sources and hold the contractor responsible for any excess cost.
- E. Continuation of the terms of the contract beyond the fiscal year is contingent on availability of funds in the following year's budget. In the event of the unavailability of such funds, the Library reserves the right to cancel the contract.
- F. **ACQUISITION, MERGER, SALE AND/OR TRANSFER OF BUSINESS, ETC.**

It is understood by all parties that if, during the life of the contract, the contractor disposes of his/her business concern by acquisition, merger, sale and or/transfer or by any means convey his/her interest(s) to another party, all obligations are transferred to that new party. In this event, the new owner(s) will be required to submit all documentation/legal instruments that were required in the original bid/contract. Any change shall be approved by the Library.

- G. The contractor will not assign any interest in the contract and shall not transfer any interest in the same without the prior written consent of the Library.
- H. A receiver or liquidator shall be appointed for the Contractor or for any of his property and shall not be dismissed within 20 days after such appointment or the proceedings in connection therewith shall not be stayed on appeal within the said 20 days, or
- I. The Contractor shall be adjudged bankrupt or make an assignment for the benefit of creditors, or
- J. The Contractor shall refuse or fail, after notice or warning from the Library, to supply enough properly skilled workmen or proper materials, or
- K. The Contractor shall refuse or fail to prosecute to work or any part thereof with such diligence as shall ensure its completion within the period herein specified (or any duly authorized extension thereof) or shall fail to complete the work within said period, or
- L. The Contractor shall fail to make prompt payment to persons supplying labor for the work
- M. The Library may terminate the contract for convenience.

**XI. BID PROPOSAL FORM**

All proposals shall be submitted on the Proposal Form of the Atlantic City Free Public Library. No alterations in the wording of the Proposal Form or no interpolations shall be permitted, and any proposal submitted in disregard of this requirement shall be regarded as informal and need not be considered by the Library in making this award. The bid submitted shall cover the entire cost of the contemplated services as described in the specifications.

**XII. PAYMENT**

- A. No payment will be made unless duly authorized by the Library's authorized representative and accompanied by proper certified documentation from the architect field.
- B. Payment will be made in accordance with the Library's policy and procedures.
- C. The Atlantic City Free Public Library DOES NOT PAY taxes.
- D. Bills are publicly approved every third Monday of each month at the regular Board of Trustees meetings. All meetings begin at 10:30 am in the Library's Board Room unless otherwise noted. In case of any change, the information will be posted on the library's public bulletin board on the 1st floor and on our website.
- E. All bills approved at that meeting are paid by check and mailed from the Administrative Office within five days.
- F. All vouchers submitted for payment must be in the **Administrative Office by 10:00 a.m. on the Friday preceding the Monday meeting.**

No deposits or pre-payments will be accepted as a condition of acceptance of the award.

All prices are to be FOB Destination. Unless specifically noted on the exception sheet, no shipping or freight charges will be assumed.

**XIII. CONTRACT TIME**

- A. Contract Time shall be **one hundred fifty (150) calendar days.**

**XIV. LIQUIDATED DAMAGES**

A. Liquidated Damages: **\$350.00 per day.**

If the successful bidder fails to complete said services within the time stated, said successful bidder shall pay the Library of the sum of THREE HUNDRED FIFTY DOLLARS (\$350) for each and every day the time consumed in the completion of the contract to be awarded hereunder may exceed the time allowed for such purpose. Such amounts or sums may be deemed and taken into all courts to be liquidated damages for nonperformance of the aforesaid contract within the limit aforesaid and not as a penalty. The Director of the requesting agency may determine and certify the amount and sums thus claimed by the Library as such liquidated damages to the Library's Business Manager, who may deduct and retain the same out of any monies due or which may become due under the contract.

**XV. CONDITION OF WORK SPECIFICATIONS & INSTRUCTIONS**

Each bidder shall inform themselves fully of the conditions relative to the services under which the work is now being or shall be performed. Failure to do so shall not relieve a successful bidder of his obligation to furnish all materials and labor necessary to carry out the provisions of the contract documents and to complete the contemplated work/services as set forth in his bid. The Contractor in the carrying out of their work shall employ such methods or means that shall not cause any interruptions or interference with the work of any other contractor (if applicable).

**XVI. OBLIGATIONS OF BIDDERS**

At the time of the opening of bids each bidder shall be presumed to have inspected the areas as described herein and to have read and to be thoroughly familiar with the specifications & all addenda. The failure or omission of any bidder to receive or examine any form, instrument or documents, shall in no way relieve any bidder from any obligations contained therein.

**XVII. REPRESENTATION OF CONTRACTOR**

The Contractor represents and warrants: (a) That they are financially solvent and that experienced in and competent to perform the type of work to furnish the labor and equipment to be so performed or furnished and; (b) (c) (d) That they are familiar with all Federal, State, County, Municipal and Department Laws, Ordinances and Regulations, which shall in any way affect the work or those employed therein, including, but not limited to, any special Acts relating to the work or to the project of which it is a part, and That such work required by the contract documents and is to be done by them shall be satisfactorily constructed and used for the purpose for which it is intended, and that such construction shall not injure any persons or damage any property, and That they have carefully examined the drawings, specifications, and the site of the work, and that from their own investigations have satisfied themselves as to the nature and location of the work, the character, the character of equipment and other facilities needed for the performance of the work, the general and local conditions and all other items which may in any way affect the work or its performance.

**Bid Proposal Form**

A. PROJECT TITLE: Atlantic City Free Public Library, Second Floor Meeting Room and Elevator Upgrades

B. PROJECT TITLE: **Atlantic City Free Public Library**  
One North Tennessee Avenue  
Atlantic City, NJ 08401

C. PROPOSAL:

Authorized Name & Title: \_\_\_\_\_

Firm Name: \_\_\_\_\_

Federal Tax ID #: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_

Fax: \_\_\_\_\_

Email Address: \_\_\_\_\_

Pursuant to the Project Manual relating to the “**Atlantic City Free Public Library, Second Floor Meeting Room and Elevator Upgrades**” project, and in compliance with the Bid Documents, the undersigned Bidder, having become thoroughly familiar with the terms and conditions of the Bid and Contract Documents, which include the Instructions to Bidders, the Bid Forms, the Project Manual, all as prepared by the Library Purchasing Agent, as well as the Technical specifications and drawings, prepared by the architect and Addenda acknowledged below, having understood the local conditions affecting performance and cost of the Work at this site, hereby proposes and agrees to fully perform the Work in strict accordance with the Contract Documents. The bid will be awarded to the **lowest responsible and responsive bidder**.

To wit, all labor, materials, services and equipment, including tools, machinery and supplies, permit fees, if any, and all taxes, if any, and specified insurance necessary to perform and complete the entire Work as set forth in and in accordance with the said Documents, for the sum of:

\_\_\_\_\_ Dollars  
(Written)

(\$ \_\_\_\_\_) (Figure)

D. ADDENDA: Receipt of the following Addenda acknowledged:

Addendum No. \_\_\_\_\_ Dated \_\_\_\_\_

Addendum No. \_\_\_\_\_ Dated \_\_\_\_\_

a. ATTACHMENTS: Enclosed within the Project Manual are the following attachments to this Bid Form. **These attachments are to be executed fully and submitted with this Bid Form:**

- i. Bid Proposal Form
- ii. Acknowledgement of Receipt of Addenda
- iii. Bid Security Form
- iv. Consent of Surety
- v. Bidder's Qualification Form
- vi. Plan and Equipment Questionnaire
- vii. List of Subcontractors
- viii. Non-Collusion Affidavit
- ix. Statement of Disclosure Certification
- x. Prohibited Russia-Belarus Activities & Iran Investment Activities
- xi. Certification of Non-Debarment for Federal Government Contracts
- xii. Certification by Bidder Regarding Equal Employment Opportunity
- xiii. Affidavit for Affirmative Action Plan
- xiv. Schedule of Minority Business Enterprise (MBE), Female Business Enterprise (FBE), Contractors/ Suppliers
- xv. NJ Business Registration Requirements
- xvi. Prevailing Wage Act Certification
- xvii. Public Works Contractor Registration Act Statement
- xviii. Request for Insurance Certificates
- xix. Request for W-9 Taxpayer Identification Form
- xx. Bid Document Submission Checklist

b. EXECUTION:

The undersigned Bidder further represents that the above Bid remains in full force and effect for not less than **Sixty (60)** calendar days after the submission date, and that, should the Bidder be awarded the Contract, the Bidder will enter into an Owner - Contractor Agreement, and will start and complete the Work per the time set in the Agreement.

The undersigned hereby declares that only the person or persons interested in the Proposal as principal or principals, is or are named below, and that no other person than herein below named has any interest in the Proposal. The Proposal is made without any connection with any other person or persons making a proposal for the same purpose. The Proposal is in all respects fair and without collusion or fraud and that no officer of the **Atlantic City Free Public Library** is, shall be, or will become directly or indirectly, interested as a contracting party, partner, stockholder, surety or otherwise in the performance of the contract, or in the supplies, work, or business to which it relates.

It is further declared that the site of the work and the Contract Documents have been examined by the undersigned and it is also agreed that the work will be carried out and completed, if this Proposal is accepted, as specified and the undersigned will provide all the Superintendents, Labor, Material, Tools and Equipment, all Taxes, Specified Insurance, and all else necessary therefore, and incidental thereto for the items in the Proposal, complete in place, at the price per unit of measure for each scheduled item of work stated in the Schedule of Prices following.

Accompanying this Proposal is a Consent of Surety and a certified check, cashier's check, or bid bond for a minimum of ten (10%) percent of the amount of bid but not greater than \$20,000 payable to the Owner, which is agreed by the undersigned to be forfeited as liquidated damages, and not as a penalty, if the Contract is awarded to the undersigned, and the undersigned shall fail to execute the Contract for the work within the stipulated time, otherwise, the bid security shall be returned to the undersigned as specified in the Contract Documents.

Signed \_\_\_\_\_  
(Bidder's Signature) (Date)

(Corporate Seal)

ACKNOWLEDGEMENT OF RECEIPT OF ADDENDA

**Atlantic City Free Public Library**

*(Name of Local Contracting Unit)*

**Atlantic City Free Public Library,  
Second Floor Meeting Room and  
Elevator Upgrades**

*(Name of Local Contracting Unit)*

**Bid#25-2**

*(Project or Bid Number)*

Pursuant to N.J.S.A. 40A: 11-23(c.)(1),(2), & (3), the undersigned Contractor hereby acknowledges receipt of the following notices, revisions, or addenda to the quote advertisement, specifications or quote documents. By indicating date of receipt, Contractor acknowledges the submitted quotation takes into account the provisions of the notice, revision or addendum. Note that the local unit's record of notice to Contractor's shall take precedence and that failure to include provisions of changes in a quote proposal may be subject for rejection of the quote.

If no notices, revisions or addenda have been received the undersigned bidder must acknowledge so by writing 'NONE' in the box below.

<b>Local Unit Reference Number or Title of Notice, Revision or Addenda</b>	<b>How Received (mail, fax, pick-up, etc.)</b>	<b>Date Received</b>

No addenda were received

**Acknowledgement by Contractor:**

Name of Bidder: \_\_\_\_\_

By Authorized Representative:

Signature: \_\_\_\_\_

Printed Name and Title: \_\_\_\_\_

Date: \_\_\_\_\_

# Bid Security Form

This proposal is accompanied by a bid security in the form of a guarantee cashier's check, certified check, or bid bond on the **Atlantic City Free Public Library, Second Floor Meeting Room and Elevator Upgrades** project in the amount of \_\_\_\_\_ Dollars in accordance with the conditions named in the foregoing Instruction to Bidders.

The undersigned Bidder hereby agrees that if this proposal shall be accepted by the Owner and the undersigned shall fail to execute and deliver the Contract and Contract Bond in accordance with the terms of this proposal and with the requirements of the foregoing Instruction to Bidders, then the undersigned shall be deemed to have abandoned the contract, and thereupon the proposal and its acceptance shall be null and void and the bid security shall be payable thereunder to the Owner as liquidated damages, otherwise and said guarantee, or the amount thereof, shall be returned to the undersigned.

\_\_\_\_\_  
Signature of Bidder

\_\_\_\_\_  
Date



# Consent of Surety

\_\_\_\_\_ (hereinafter called Surety), organized and existing (Name of Insurance Company) under the laws of the State of \_\_\_\_\_ and duly authorized and qualified to transact business in the State of New Jersey, in consideration of the sum of one Dollar (\$1.00), lawful money of the United States of America, to it in hand paid, receipt whereof is hereby acknowledged, and in consideration of other valuable consideration, hereby certifies and agrees that if the contract for which the attached Proposal is made be awarded to

\_\_\_\_\_ (hereinafter called Contractor) for the performance of certain work or the supplying of certain materials, or both, as more particularly set forth in said Proposal and described for purposes of this instrument as a Proposal to the **Atlantic City Free Public Library**, and if Contractor shall enter into the contract, Surety will become bound as surety for its faithful performance and will provide the Contractor with a bond in the full amount of the contract price.

\_\_\_\_\_  
(Name of Insurance Company)

\_\_\_\_\_  
(Address)

\_\_\_\_\_

\_\_\_\_\_  
Signature of  
Attorney-In-Fact  
for Insurance  
Company

Note: **Proof of authority of officers of surety company to execute this document must be submitted.**

# Bidder's Qualification Form

All questions must be answered and the data given must be clear and comprehensive. This statement must be notarized:

1. Name of Bidder: \_\_\_\_\_

2. Business Address: \_\_\_\_\_

3. Business Registration Certificate Number \_\_\_\_\_

4. If a corporation, answer the following:

a. Date of Incorporation: \_\_\_\_\_ Federal ID #: \_\_\_\_\_

b. State of Incorporation: \_\_\_\_\_

c. President's name(s): \_\_\_\_\_

d. Vice President's name(s): \_\_\_\_\_

5. If individual or partnership answer the following:

a. Date of Organization: \_\_\_\_\_

b. Type of Organization: \_\_\_\_\_

c. Name and address of all partners: \_\_\_\_\_

6. List number of years of experience Bidder has with work of similar nature to this project being bid: \_\_\_\_\_

7. Have you ever refused to sign a contract at your original bid: \_\_\_\_\_

If yes, Why: \_\_\_\_\_

8. Have you ever defaulted on a contract: \_\_\_\_\_

If yes, Why: \_\_\_\_\_

9. Are there any liens, of any character, filed against your company at this time? \_\_\_\_\_ If

yes, specify the nature and amount of lien: \_\_\_\_\_

10. Contracts now in hand: \_\_\_\_\_ Gross Amount: \_\_\_\_\_

11. Give bank references: \_\_\_\_\_

12. Status of Contracts on Hand: Give full information about all your current contracts, whether private or government contracts, whether prime or sub-contracts, whether in progress or awarded but not yet begun, or where you are low bidder pending formal award of contract. Submit additional copies as necessary to describe all current contracts.

**Contract #1**

Owner: \_\_\_\_\_ Contact/Phone: \_\_\_\_\_  
Project Location: \_\_\_\_\_  
Description: \_\_\_\_\_  
Contract Amount: \_\_\_\_\_  
Amount Completed and Billed: \_\_\_\_\_  
Estimated Date of Completion: \_\_\_\_\_

**Contract #2**

Owner: \_\_\_\_\_ Contact/Phone: \_\_\_\_\_  
Project Location: \_\_\_\_\_  
Description: \_\_\_\_\_  
Contract Amount: \_\_\_\_\_  
Amount Completed and Billed: \_\_\_\_\_  
Estimated Date of Completion: \_\_\_\_\_

**Contract #3**

Owner: \_\_\_\_\_ Contact/Phone: \_\_\_\_\_  
Project Location: \_\_\_\_\_  
Description: \_\_\_\_\_  
Contract Amount: \_\_\_\_\_  
Amount Completed and Billed: \_\_\_\_\_  
Estimated Date of Completion: \_\_\_\_\_

**Contract #4**

Owner: \_\_\_\_\_ Contact/Phone: \_\_\_\_\_  
Project Location: \_\_\_\_\_  
Description: \_\_\_\_\_  
Contract Amount: \_\_\_\_\_  
Amount Completed and Billed: \_\_\_\_\_  
Estimated Date of Completion: \_\_\_\_\_

13. Please list at least four projects completed in the past three years. Include all information requested below, filling in all blanks. **PROJECTS LISTED SHOULD BE OF A SIMILAR NATURE TO THIS PROJECT BEING BID ON.**

**Project #1**

Owner: \_\_\_\_\_

Street: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_

Contact: \_\_\_\_\_ Position: \_\_\_\_\_ Phone: \_\_\_\_\_

Project Name: \_\_\_\_\_ Type: \_\_\_\_\_

Contract Amount: \_\_\_\_\_ Date Completed: \_\_\_\_\_

Street: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_

Architect / Engineer: \_\_\_\_\_

Street: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_

Contact: \_\_\_\_\_ Position: \_\_\_\_\_ Phone: \_\_\_\_\_

**Project #2**

Owner: \_\_\_\_\_

Street: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_

Contact: \_\_\_\_\_ Position: \_\_\_\_\_ Phone: \_\_\_\_\_

Project Name: \_\_\_\_\_ Type: \_\_\_\_\_

Contract Amount: \_\_\_\_\_ Date Completed: \_\_\_\_\_

Street: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_

Architect / Engineer: \_\_\_\_\_

Street: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_

Contact: \_\_\_\_\_ Position: \_\_\_\_\_ Phone: \_\_\_\_\_

**Project #3**

Owner: \_\_\_\_\_

Street: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_

Contact: \_\_\_\_\_ Position: \_\_\_\_\_ Phone: \_\_\_\_\_

Project Name: \_\_\_\_\_ Type: \_\_\_\_\_

Contract Amount: \_\_\_\_\_ Date Completed: \_\_\_\_\_

Street: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_

Architect / Engineer: \_\_\_\_\_

Street: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_

Contact: \_\_\_\_\_ Position: \_\_\_\_\_ Phone: \_\_\_\_\_

**Project #4**

Owner: \_\_\_\_\_

Street: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_

Contact: \_\_\_\_\_ Position: \_\_\_\_\_ Phone: \_\_\_\_\_

Project Name: \_\_\_\_\_ Type: \_\_\_\_\_

Contract Amount: \_\_\_\_\_ Date Completed: \_\_\_\_\_

Street: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_

Architect / Engineer: \_\_\_\_\_

Street: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_

Contact: \_\_\_\_\_ Position: \_\_\_\_\_ Phone: \_\_\_\_\_

14. The undersigned hereby authorizes and requests any person to furnish any information requested by the Owner in verification of the recitals comprising this Statement of Bidder's Qualifications.

\_\_\_\_\_  
(Name of Bidder)

By: \_\_\_\_\_  
Title: \_\_\_\_\_

Subscribed and sworn to before me

this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_

Notary Public \_\_\_\_\_

My commission expires \_\_\_\_\_

# Plan and Equipment Questionnaire

Submitted to **Atlantic City Free Public Library**, Atlantic County, New Jersey

By (Company Name) \_\_\_\_\_

Principal Office Address \_\_\_\_\_

The signatory of this questionnaire guarantees the truth and accuracy of all statements and of all answers to interrogatories hereinafter made.

1. In what manner have you inspected the proposed Work? Explain in detail.

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2. Explain your plan or layout for performing the proposed Work.

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3. The Work, if awarded to you, will have the personal supervision of whom? \_\_\_\_\_

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4. What percent of the proposed work do you intend to do with subcontractors? \_\_\_\_\_ %

5. What equipment do you own that is available for and intended to be used on the proposed project? \_\_\_\_\_

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7. Have you received firm offers of all materials utilized within prices used in preparing your proposal? Do not give name of dealers or manufacturers.

\_\_\_\_\_ Yes \_\_\_\_\_ No The Undersigned hereby declare(s) that the items of equipment in Table #1 are Owned by \_\_\_\_\_

\_\_\_\_\_, and are available for and intended to be used on the Project if awarded the Contract, and that (he) (she) (they) propose(s) to purchase or lease for the Project the additional items of equipment stated in Table #2.

If awarded the Contract, the Undersigned will furnish certificates from the owners of leased equipment to affect that, in case of default of contract, as set forth in the General Conditions the Governing Body has the right to take over the leased equipment for use in completing the Work.

Dated at \_\_\_\_\_ this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

\_\_\_\_\_  
(Name of Organization)

By \_\_\_\_\_

State of \_\_\_\_\_

County of \_\_\_\_\_

\_\_\_\_\_, Being duly sworn, deposed and says that he

is \_\_\_\_\_ of the above \_\_\_\_\_  
(Title) (Name of Organization)

and that the answers to the foregoing questions and all statements therein contained are true and correct.

Subscribed and Sworn to before me

this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_

\_\_\_\_\_  
Notary Public

My Commission Expires \_\_\_\_\_



# Subcontractor List Certificate

This certificate shall set forth the Scope of Work for which these subcontractors have submitted a price quote and which the Contractor has agreed to award to each subcontractor, should the Contractor be awarded the contract. This certificate must be submitted as part of the required quote forms. (N.J.S.A. 40A:11-16) Make additional copies as needed.

Subcontractor #1 (Plumbing and gas fitting and all kindred work)

Name: \_\_\_\_\_ License #: \_\_\_\_\_

Address: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

Business Registration Certificate Number \_\_\_\_\_

Subcontractor #2 (Steam power plants, steam and hot water heating and ventilating apparatus and all kindred work)

Name: \_\_\_\_\_ License #: \_\_\_\_\_

Address: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

Business Registration Certificate Number \_\_\_\_\_

Subcontractor #3 (Electrical Work)

Name: \_\_\_\_\_ License #: \_\_\_\_\_

Address: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

Business Registration Certificate Number \_\_\_\_\_

Subcontractor #4 (Structural steel and ornamental

iron work) Name: \_\_\_\_\_

Address: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_

Business Registration Certificate Number \_\_\_\_\_

Signed \_\_\_\_\_

(Bidder's Signature)

(Date)

Subscribed and sworn to before me

this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

\_\_\_\_\_

Notary Public

My commission expires \_\_\_\_\_

# Non-collusion Affidavit

State of New Jersey

County of \_\_\_\_\_

ss:

I, \_\_\_\_\_ residing in \_\_\_\_\_  
(name of affiant) (name of municipality)  
in the County of \_\_\_\_\_ and State of \_\_\_\_\_ of full  
age, being duly sworn according to law on my oath depose and say that:

I am \_\_\_\_\_ of the firm of \_\_\_\_\_  
(title or position) (name of firm)

\_\_\_\_\_ the bidder making this Proposal

for the bid entitled \_\_\_\_\_, and that I executed the said

proposal with

(title of bid proposal)

full authority to do so that said bidder has not, directly or indirectly entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free, competitive bidding in connection with the above named project; and that all statements contained in said proposal and in this affidavit are true and correct, and made with full knowledge that the \_\_\_\_\_

\_\_\_\_\_ relies upon the truth of the statements contained in said Proposal  
(name of contracting unit)

and in the statements contained in this affidavit in awarding the contract for the said project.

I further warrant that no person or selling agency has been employed or retained to solicit or secure such contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, except bona fide employees or bona fide established commercial or selling agencies maintained by \_\_\_\_\_.

Subscribed and sworn to

before me  
this day

\_\_\_\_\_  
Signature

\_\_\_\_\_, 2 \_\_\_\_\_

\_\_\_\_\_  
(Type or print name of affiant under signature)

\_\_\_\_\_  
Notary public of

My Commission expires \_\_\_\_\_

(Seal)

**STATEMENT OF OWNERSHIP DISCLOSURE**

N.J.S.A. 52:25-24.2 (P.L. 1977, c.33, as amended by P.L. 2016, c.43)

**This statement shall be completed, certified to, and included with all bid and proposal submissions. Failure to submit the required information is cause for automatic rejection of the bid or proposal.**

**Name of Organization:**

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**Organization Address:**

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**Part I Check the box that represents the type of business organization:**

- Sole Proprietorship (skip Parts II and III, execute certification in Part IV)
- Non-Profit Corporation (skip Parts II and III, execute certification in Part IV)
- For-Profit Corporation (any type)     Limited Liability Company (LLC)
- Partnership         Limited Partnership         Limited Liability Partnership (LLP)
- Other (be specific): \_\_\_\_\_

**Part II**

- The list below contains the names and addresses of all stockholders in the corporation who own 10 percent or more of its stock, of any class, or of all individual partners in the partnership who own a 10 percent or greater interest therein, or of all members in the limited liability company who own a 10 percent or greater interest therein, as the case may be. **(COMPLETE THE LIST BELOW IN THIS SECTION)**

**OR**

- No one stockholder in the corporation owns 10 percent or more of its stock, of any class, or no individual partner in the partnership owns a 10 percent or greater interest therein, or no member in the limited liability company owns a 10 percent or greater interest therein, as the case may be. **(SKIP TO PART IV)**

(Please attach additional sheets if more space is needed):

Name of Individual or Business Entity	Address

**Part III DISCLOSURE OF 10% OR GREATER OWNERSHIP IN THE STOCKHOLDERS, PARTNERS OR LLC MEMBERS LISTED IN PART II**

If a bidder has a direct or indirect parent entity which is publicly traded, and any person holds a 10 percent or greater beneficial interest in the publicly traded parent entity as of the last annual federal Security and Exchange Commission (SEC) or foreign equivalent filing, ownership disclosure can be met by providing links to the website(s) containing the last annual filing(s) with the federal Securities and Exchange Commission (or foreign equivalent) that contain the name and address of each person holding a 10% or greater beneficial interest in the publicly traded parent entity, along with the relevant page numbers of the filing(s) that contain the information on each such person. **Attach additional sheets if more space is needed.**

Website (URL) containing the last annual SEC (or foreign equivalent) filing	Page #'s

Please list the names and addresses of each stockholder, partner or member owning a 10 percent or greater interest in any corresponding corporation, partnership and/or limited liability company (LLC) listed in Part II **other than for any publicly traded parent entities referenced above.** The disclosure shall be continued until names and addresses of every noncorporate stockholder, and individual partner, and member exceeding the 10 percent ownership criteria established pursuant to N.J.S.A. 52:25-24.2 has been listed. **Attach additional sheets if more space is needed.**

Stockholder/Partner/Member and Corresponding Entity Listed in Part II	Address

**Part IV Certification**

I, being duly sworn upon my oath, hereby represent that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I acknowledge: that I am authorized to execute this certification on behalf of the bidder/proposer; that the **Atlantic City Free Public Library** is relying on the information contained herein and that I am under a continuing obligation from the date of this certification through the completion of any contracts with the **Library** to notify the **Library** in writing of any changes to the information contained herein; that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I am subject to criminal prosecution under the law and that it will constitute a material breach of my agreement(s) with the, permitting the **Library** to declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print):		Title:	
Signature:		Date:	

## Prohibited Russia-Belarus Activities & Iran Investment Activities

**Person or Entity**

### Part 1: Certification

COMPLETE PART 1 BY CHECKING **ONE OF THE THREE BOXES BELOW**

Pursuant to law, any person or entity that is a successful bidder or proposer, or otherwise proposes to enter into or renew a contract, for goods or services must complete the certification below prior to contract award to attest, under penalty of perjury, that neither the person or entity, nor any parent entity, subsidiary, or affiliate, is identified on the Department of Treasury's Russia-Belarus list or Chapter 25 list as a person or entity engaging in prohibited activities in Russia, Belarus or Iran. Before a contract for goods or services can be amended or extended, a person or entity must certify that neither the person or entity, nor any parent entity, subsidiary, or affiliate, is identified on the Department of Treasury's Russia-Belarus list. Both lists are found on Treasury's website at the following web addresses:

**<https://www.nj.gov/treasury/administration/pdf/RussiaBelarusEntityList.pdf>**  
**[www.state.nj.us/treasury/purchase/pdf/Chapter25List.pdf](http://www.state.nj.us/treasury/purchase/pdf/Chapter25List.pdf)**

As applicable to the type of contract, the above-referenced lists must be reviewed prior to completing the below certification.

A person or entity unable to make the certification must provide a detailed, accurate, and precise description of the activities of the person or entity, or of a parent entity, subsidiary, or affiliate, engaging in prohibited activities in Russia or Belarus and/or investment activities in Iran. The person or entity must cease engaging in any prohibited activities and provide an updated certification before the contract can be entered into.

If a vendor or contractor is found to be in violation of law, action may be taken as appropriate and as may be provided by law, rule, or contract, including but not limited to imposing sanctions, seeking compliance, recovering damages, declaring the party in default, and seeking debarment or suspension of the party.

### CONTRACT AWARDS AND RENEWALS



*I certify, pursuant to law, that neither the person or entity listed above, nor any parent entity, subsidiary, or affiliate appears on the N.J. Department of Treasury's lists of entities engaged in prohibited activities in Russia or Belarus pursuant to P.L. 2022, c. 3 or in investment activities in Iran pursuant to P.L. 2012, c. 25 ("Chapter 25 List"). I further certify that I am the person listed above, or I am an officer or representative of the entity listed above and am authorized to make this certification on its behalf. (Skip Part 2 and sign and complete the Certification below.)*

**CONTRACT AMENDMENTS AND EXTENSIONS**



*I certify, pursuant to law, that neither the person or entity listed above, nor any parent entity, subsidiary, or affiliate is listed on the N.J. Department of the Treasury's lists of entities determined to be engaged in prohibited activities in Russia or Belarus pursuant to P.L. 2022, c. 3. I further certify that I am the person listed above, or I am an officer or representative of the entity listed above and am authorized to make this certification on its behalf. (Skip Part 2 and sign and complete the Certification below.)*

**IF UNABLE TO CERTIFY**



*I am unable to certify as above because the person or entity and/or a parent entity, subsidiary, or affiliate is listed on the Department's Russia-Belarus list and/or Chapter 25 Iran list. I will provide a detailed, accurate, and precise description of the activities as directed in Part 2 below, and sign and complete the Certification below. Failure to provide such will prevent the award of the contract to the person or entity, and appropriate penalties, fines, and/or sanctions will be assessed as provided by law.*

**Part 2: Additional Information**

**PLEASE PROVIDE FURTHER INFORMATION RELATED TO PROHIBITED ACTIVITIES IN RUSSIA OR BELARUS AND/OR INVESTMENT ACTIVITIES IN IRAN.**

You must provide a detailed, accurate, and precise description of the activities of the person or entity, or of a parent entity, subsidiary, or affiliate, engaging in prohibited activities in Russia or Belarus and/or investment activities in Iran in the space below and, if needed, on additional sheets provided by you.

### Part 3: Certification of True and Complete Information

*I, being duly sworn upon my oath, hereby represent and state that the foregoing information and any attachments there, to the best of my knowledge, are true and complete. I attest that I am authorized to execute this certification on behalf of the above-referenced person or entity.*

*I acknowledge that the **Atlantic City Free Public Library** is relying on the information contained herein and hereby acknowledge that I am under a continuing obligation from the date of this certification through the completion of any contracts with the **Library** to notify the **Library** in writing of any changes to the answers of information contained herein.*

*I acknowledge that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification. If I do so, I recognize that I am subject to criminal prosecution under the law and that it will also constitute a material breach of my agreement(s) with the **Library** and that the **Library** at its option may declare any contract(s) resulting from this certification void and unenforceable.*

<b>Full Name (Print)</b>		<b>Title</b>	
<b>Signature</b>		<b>Date</b>	

**CERTIFICATION OF NON-  
DEBARMENT FOR FEDERAL  
GOVERNMENT CONTRACTS**

N.J.S.A. 52:32-44.1 (P.L. 2019, c.406)

**This certification shall be completed, certified to, and submitted to the contracting unit prior to contract award, except for emergency contracts where submission is required prior to payment.**

PART I: VENDOR INFORMATION	
Individual or Organization Name	
Address of Individual or Organization	
DUNS Code (if applicable)	
CAGE Code (if applicable)	
<b>Check the box that represents the type of business organization:</b>	

- Sole Proprietorship (skip Parts III and IV)   
 Non-Profit Corporation (skip Parts III and IV)  
 For-Profit Corporation (any type)   
 Limited Liability Company (LLC)   
 Partnership  
 Limited Partnership   
 Limited Liability Partnership (LLP)  
 Other (be specific): \_\_\_\_\_

PART II – CERTIFICATION OF NON-DEBARMENT: Individual or Organization			
<p>I hereby certify that the <b>individual or organization listed above in Part I</b> is not debarred by the federal government from contracting with a federal agency. I further acknowledge: that I am authorized to execute this certification on behalf of the above-named organization; that the <b>Atlantic City Free Public Library</b> is relying on the information contained herein and that I am under a continuing obligation from the date of this certification through the date of contract award by the <b>Library</b> to notify the <b>Library</b> in writing of any changes to the information contained herein; that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I am subject to criminal prosecution under the law and that it will constitute a material breach of my agreement(s) with the <b>Library</b>, permitting the <b>Library</b> to declare any contract(s) resulting from this certification void and unenforceable.</p>			
Full Name (Print):		Title:	
Signature:		Date:	



**PART III – CERTIFICATION OF NON-DEBARMENT: Individual or Entity Owning Greater than 50 Percent of Organization**

**Section A (Check the Box that applies)**

<input type="checkbox"/>	Below is the name and address of the stockholder in the corporation who owns more than 50 percent of its voting stock, or of the partner in the partnership who owns more than 50 percent interest therein, or of the member of the limited liability company owning more than 50 percent interest therein, as the case may be.
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<b>Name of Individual or Organization</b>	
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<b>Home Address (for Individual) or Business Address</b>	
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**OR**

<input type="checkbox"/>	No one stockholder in the corporation owns more than 50 percent of its voting stock, or no partner in the partnership owns more than 50 percent interest therein, or no member in the limited liability company owns more than 50 percent interest therein, as the case may be.
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**Section B (Skip if no Business entity is listed in Section A above)**

<input type="checkbox"/>	Below is the name and address of the stockholder in the corporation who owns more than 50 percent of the voting stock of the organization’s parent entity, or of the partner in the partnership who owns more than 50 percent interest in the organization’s parent entity, or of the member of the limited liability company owning more than 50 percent interest in organization’s parent entity, as the case may be.
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<b>Stockholder/Partner/Member Owning Greater Than 50 Percent of Parent Entity</b>	
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<b>Home Address (for Individual) or Business Address</b>	
--	--

**OR**

<input type="checkbox"/>	No one stockholder in the parent entity corporation owns more than 50 percent of its voting stock, no partner in the parent entity partnership owns more than 50 percent interest therein, or no member in the parent entity limited liability company owns more than 50 percent interest therein, as the case may be.
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**Section C – Part III Certification**

I hereby certify that no individual or organization that is debarred by the federal government from contracting with a federal agency owns greater than 50 percent of the **Organization listed above in Part I** or, if applicable, owns greater than 50 percent of a parent entity of **name of organization**. I further acknowledge: that I am authorized to execute this certification on behalf of the above-named organization; that the **Atlantic City Free Public Library** is relying on the information contained herein and that I am under a continuing obligation from the date of this certification through the date of contract award by the **Library** to notify the **Library** in writing of any changes to the information contained herein; that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I am subject to criminal prosecution under the law and that it will constitute a material breach of my agreement(s) with the **Library**, permitting the **Library** to declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print):		Title:	
Signature:		Date:	

**Part IV – CERTIFICATION OF NON-DEBARMENT: Contractor – Controlled Entities**

**Section A**

Below is the name and address of the corporation(s) in which the **Organization listed in Part I** owns more than 50 percent of voting stock, or of the partnership(s) in which the **Organization listed in Part I** owns more than 50 percent interest therein, or of the limited liability company or companies in which the **Organization listed above in Part I** owns more than 50 percent interest therein, as the case may be.

**Name of Business Entity**

**Business Address**

Name of Business Entity	Business Address

\*\*Add additional sheets if necessary\*\*

**OR**

The **Organization listed above in Part I** does not own greater than 50 percent of the voting stock in any corporation and does not own greater than 50 percent interest in any partnership or any limited liability company.

**Section B (skip if no business entities are listed in Section A of Part IV)**

Below are the names and addresses of any entities in which an entity listed in Part III A owns greater than 50 percent of the voting stock (corporation) or owns greater than 50 percent interest (partnership or limited liability company).

Name of Business Entity Controlled by Entity Listed in Section A of Part IV		Business Address	
**Add additional Sheets if necessary**			
<b>OR</b>			
<input type="checkbox"/>	No entity listed in Part III A owns greater than 50 percent of the voting stock in any corporation or owns greater than 50 percent interest in any partnership or limited liability company.		
<b>Section C – Part IV Certification</b>			
<p>I hereby certify that the <b>Organization</b> listed above in Part I does not own greater than 50 percent of any entity that that is debarred by the federal government from contracting with a federal agency and, if applicable, does not own greater than 50 percent of any entity that in turns owns greater than 50 percent of any entity debarred by the federal government from contracting with a federal agency. I further acknowledge: that I am authorized to execute this certification on behalf of the above-named organization; that the <b>Atlantic City Free Public Library</b> is relying on the information contained herein and that I am under a continuing obligation from the date of this certification through the date of contract award by the <b>Library</b> to notify the <b>Library</b> in writing of any changes to the information contained herein; that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I am subject to criminal prosecution under the law and that it will constitute a material breach of my agreement(s) with the <b>Library</b>, permitting the <b>Library</b> to declare any contract(s) resulting from this certification void and unenforceable.</p>			
Full Name (Print):		Title:	
Signature:		Date:	

STATE OF NEW JERSEY DEBARRED LIST AFFIDAVIT

STATE NEW JERSEY

SS

COUNTY OF \_\_\_\_\_

I, \_\_\_\_\_ of the City/Town/Township/Borough, etc. \_\_\_\_\_ in the County of \_\_\_\_\_ and the State of \_\_\_\_\_ full age, being duly sworn according to law on my oath depose and say that:

I am \_\_\_\_\_ an officer of the firm of \_\_\_\_\_ the bidder making the bid for the above named work, and that I executed said bid with full authority to do so; that said bidder at the time of making of this bid is not included on the State of New Jersey, State Treasurer's List of Debarred, Suspended and Disqualified Bidders; and that all statements contained in said bid and in this affidavit are true and correct, and made with the full knowledge that the \_\_\_\_\_, as the City relies upon the truth of the statements contained in said bid and in the statements contained in this affidavit in awarding the contract for said work.

The undersigned further warrants that should the name of the firm making this bid appear on the State Treasurer's List of Debarred, Suspended and Disqualified Bidders at anytime prior to, and during the life of this Contract, including Guarantee Period, that the Local Unit shall be immediately so notified by the signatory of this Eligibility Affidavit.

The undersigned understands that the firm making the bid as Contractor is subject to debarment, suspension and/or disqualification in contracting with the State of New Jersey, if the Contractor, pursuant to NJAC 12:60-7.1 et seq, commits any of the acts listed therein, and as determined according to applicable law and regulation.

\_\_\_\_\_  
\_\_\_\_\_

(Insert Name, Telephone No., Fax No. and Address of Contractor)

\_\_\_\_\_  
(Insert Name and Title of Affiant)

Subscribed and sworn

before me this \_\_\_\_ day

of \_\_\_\_\_ 20 \_\_.

\_\_\_\_\_  
Notary Public of \_\_\_\_\_

My Commission Expires \_\_\_\_\_, 20 \_\_.

**EXHIBIT B**  
**MANDATORY EQUAL EMPLOYMENT OPPORTUNITY LANGUAGE**  
**N.J.S.A. 10:5-31 et seq. (P.L. 1975, C. 127)**  
**N.J.A.C. 17:27**  
**CONSTRUCTION CONTRACTS**

(REVISED 4/10)

During the performance of this contract, the contractor agrees as follows:

The contractor or subcontractor, where applicable, will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Except with respect to affectional or sexual orientation and gender identity or expression, the contractor will ensure that equal employment opportunity is afforded to such applicants in recruitment and employment, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Such equal employment opportunity shall include, but not be limited to the following: employment, up-grading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Public Agency Compliance Officer setting forth provisions of this nondiscrimination clause.

The contractor or subcontractor, where applicable will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex.

The contractor or subcontractor will send to each labor union, with which it has a collective bargaining agreement, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under this act and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The contractor or subcontractor, where applicable, agrees to comply with any regulations promulgated by the Treasurer, pursuant to N.J.S.A. 10:5-31 et seq., as amended and supplemented from time to time and the Americans with Disabilities Act.

When hiring or scheduling workers in each construction trade, the contractor or subcontractor agrees to make good faith efforts to employ minority and women workers in each construction trade consistent with the targeted employment goal prescribed by N.J.A.C. 17:27-7.2; provided, however, that the Division may, in its discretion, exempt a contractor or subcontractor from compliance with the good faith procedures prescribed by the following provisions, A, B and C, as long as the Division is satisfied that the contractor or subcontractor is employing workers provided by a union which provides evidence, in accordance with standards prescribed by the Division, that its percentage of active "card carrying" members who are minority and women workers is equal to or greater than the targeted employment goal established in accordance with N.J.A.C. 17:27-7.2. The contractor or subcontractor agrees that a good faith effort shall include compliance with the following procedures:

(A) If the contractor or subcontractor has a referral agreement or arrangement with a union for a construction trade, the contractor or subcontractor shall, within three business days of the contract award, seek assurances from the union that it will cooperate with the contractor or subcontractor as it fulfills its affirmative action obligations under this contract and in accordance with the rules promulgated by the Treasurer pursuant to N.J.S.A. 10:5-31 et. seq., as supplemented and amended from time to time and the Americans with Disabilities Act. If the contractor or subcontractor is unable to obtain said assurances from the construction trade union at least five business days prior to the commencement of construction work, the contractor or subcontractor agrees to afford equal employment opportunities minority and women workers directly, consistent with this chapter. If the contractor's or subcontractor's prior experience with a construction trade union, regardless of whether the union has provided said assurances, indicates a significant possibility that the trade union will not refer sufficient minority and women workers consistent with affording equal employment opportunities as specified in this chapter, the contractor or subcontractor agrees to be prepared to provide such opportunities to minority and women workers directly, consistent with this chapter, by complying with the hiring or scheduling procedures prescribed under (B) below; and the contractor or subcontractor further agrees to take said action immediately if it determines that the union is not referring minority and women workers consistent with the equal employment opportunity goals set forth in this chapter.

(B) If good faith efforts to meet targeted employment goals have not or cannot be met for each construction trade by adhering to the procedures of (A) above, or if the contractor does not have a referral agreement or arrangement with a union for a construction trade, the contractor or subcontractor agrees to take the following actions:

(1) To notify the public agency compliance officer, the Division, and minority and women referral organizations listed by the Division pursuant to N.J.A.C. 17:27- 5.3, of its workforce needs, and request referral of minority and women workers;

(2) To notify any minority and women workers who have been listed with it as awaiting available vacancies;

(3) Prior to commencement of work, to request that the local construction trade union refer minority and women workers to fill job openings, provided the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade;

(4) To leave standing requests for additional referral to minority and women workers with the local construction trade union, provided the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade, the State Training and Employment Service and other approved referral sources in the area;

(5) If it is necessary to lay off some of the workers in a given trade on the construction site, layoffs shall be conducted in compliance with the equal employment opportunity and non-discrimination standards set forth in this regulation, as well as with applicable Federal and State court decisions;

(6) To adhere to the following procedure when minority and women workers apply or are referred to the contractor or subcontractor:

(i) The contractor or subcontractor shall interview the referred minority or women worker.

(ii) If said individuals have never previously received any document or certification signifying a level of qualification lower than that required in order to perform the work of the construction trade, the contractor or subcontractor shall in good faith determine the qualifications of such individuals. The contractor or subcontractor shall hire or schedule those individuals who satisfy appropriate qualification standards in conformity with the equal employment opportunity and non-discrimination principles set forth in this

chapter. However, a contractor or subcontractor shall determine that the individual at least possesses the requisite skills, and experience recognized by a union, apprentice program or a referral agency, provided the referral agency is acceptable to the Division. If necessary, the contractor or subcontractor shall hire or schedule minority and women workers who qualify as trainees pursuant to these rules. All of the requirements, however, are limited by the provisions of (C) below.

(iii) The name of any interested women or minority individual shall be maintained on a waiting list, and shall be considered for employment as described in (i) above, whenever vacancies occur. At the request of the Division, the contractor or subcontractor shall provide evidence of its good faith efforts to employ women and minorities from the list to fill vacancies.

(iv) If, for any reason, said contractor or subcontractor determines that a minority individual or a woman is not qualified or if the individual qualifies as an advanced trainee or apprentice, the contractor or subcontractor shall inform the individual in writing of the reasons for the determination, maintain a copy of the determination in its files, and send a copy to the public agency compliance officer and to the Division.

(7) To keep a complete and accurate record of all requests made for the referral of workers in any trade covered by the contract, on forms made available by the Division and submitted promptly to the Division upon request.

(C) The contractor or subcontractor agrees that nothing contained in (B) above shall preclude the contractor or subcontractor from complying with the union hiring hall or apprenticeship policies in any applicable collective bargaining agreement or union hiring hall arrangement, and, where required by custom or agreement, it shall send journeymen and trainees to the union for referral, or to the apprenticeship program for admission, pursuant to such agreement or arrangement. However, where the practices of a union or apprenticeship program will result in the exclusion of minorities and women or the failure to refer minorities and women consistent with the targeted county employment goal, the contractor or subcontractor shall consider for employment persons referred pursuant to (B) above without regard to such agreement or arrangement; provided further, however, that the contractor or subcontractor shall not be required to employ women and minority advanced trainees and trainees in numbers which result in the employment of advanced trainees and trainees as a percentage of the total workforce for the construction trade, which percentage significantly exceeds the apprentice to journey worker ratio specified in the applicable collective bargaining agreement, or in the absence of a collective bargaining

agreement, exceeds the ratio established by practice in the area for said construction trade. Also, the contractor or subcontractor agrees that, in implementing the procedures of (B) above, it shall, where applicable, employ minority and women workers residing within the geographical jurisdiction of the union.

After notification of award, but prior to signing a construction contract, the contractor shall submit to the public agency compliance officer and the Division an initial project workforce report (Form AA 201) electronically provided to the public agency by the Division, through its website, for distribution to and completion by the contractor, in accordance with N.J.A.C. 17:27-7. The contractor also agrees to submit a copy of the Monthly Project Workforce Report once a month thereafter for the duration of this contract to the Division and to the public agency compliance officer.

The contractor agrees to cooperate with the public agency in the payment of budgeted funds, as is necessary, for on-the-job and/or off-the-job programs for outreach and training of minorities and women.

- (D) The contractor and its subcontractors shall furnish such reports or other documents to the Division of Public Contracts Equal Employment Opportunity Compliance as may be requested by the Division from time to time in order to carry out the purposes of these regulations, and public agencies shall furnish such information as may be requested by the Division of Public Contracts Equal Employment Opportunity Compliance for conducting a compliance investigation pursuant to Subchapter 10 of the Administrative Code (NJAC 17:27)



ATTACHMENT B  
APPENDIX A  
NEW JERSEY ANTI-DISCRIMINATION PROVISIONS  
N. J. S. A. 10:2-1 ET SEQ.

Pursuant to N.J.S.A. 10:2-1, if awarded a contract, 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
- 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. No provision in this section shall be construed to prevent a board of education from designating that a contract, subcontract or other means of procurement of goods, services, equipment or construction shall be awarded to a small business enterprise, minority business enterprise or a women's business enterprise pursuant to P.L.1985, c.490 (C.18A:18A-51 et seq.).

ATTACHMENT C

APPENDIX A

AMERICANS WITH DISABILITIES ACT OF 1990

Equal Opportunity for Individuals with Disability

The contractor and the **Atlantic City Free Public Library** (hereafter "owner") do hereby agree that the provisions of Title 11 of the Americans With Disabilities Act of 1990 (the "Act") (*42 U.S.C. § 12101 et seq.*), which prohibits discrimination on the basis of disability by public entities in all services, programs, and activities provided or made available by public entities, and the rules and regulations promulgated pursuant there unto, are made a part of this contract. In providing any aid, benefit, or service on behalf of the owner pursuant to this contract, the contractor agrees that the performance shall be in strict compliance with the Act. In the event that the contractor, its agents, servants, employees, or subcontractors violate or are alleged to have violated the Act during the performance of this contract, the contractor shall defend the owner in any action or administrative proceeding commenced pursuant to this Act. The contractor shall indemnify, protect, and save harmless the owner, its agents, servants, and employees from and against any and all suits, claims, losses, demands, or damages, of whatever kind or nature arising out of or claimed to arise out of the alleged violation. The contractor shall, at its own expense, appear, defend, and pay any and all charges for legal services and any and all costs and other expenses arising from such action or administrative proceeding or incurred in connection therewith. In any and all complaints brought pursuant to the owner's grievance procedure, the contractor agrees to abide by any decision of the owner which is rendered pursuant to said grievance procedure. If any action or administrative proceeding results in an award of damages against the owner, or if the owner incurs any expense to cure a violation of the ADA which has been brought pursuant to its grievance procedure, the contractor shall satisfy and discharge the same at its own expense.

The owner shall, as soon as practicable after a claim has been made against it, give written notice thereof to the contractor along with full and complete particulars of the claim. If any action or administrative proceeding is brought against the owner or any of its agents, servants, and employees, the *owner shall* expeditiously forward or have forwarded to the contractor every demand, complaint, notice, summons, pleading, or other process received by the owner or its representatives.

It is expressly agreed and understood that any approval by the owner of the services provided by the contractor pursuant to this contract will not relieve the contractor of the obligation to comply with the Act and to defend, indemnify, protect, and save harmless the owner pursuant to this paragraph.

It is further agreed and understood that the owner assumes no obligation to indemnify or save harmless the contractor, its agents, servants, employees and subcontractors for any claim which may arise out of their performance of this Agreement. Furthermore, the contractor expressly understands and agrees that the provisions of this indemnification clause shall in no way limit the contractor's obligations assumed in this Agreement, nor shall they be construed to relieve the contractor from any liability, nor preclude the owner from taking any other actions available to it under any other provisions of the Agreement or otherwise at law.

# STATE OF NEW JERSEY

DEPARTMENT OF LABOR & WORKFORCE DEVELOPMENT  
CONSTRUCTION EEO COMPLIANCE MONITORING PROGRAM

FORMAA-201  
Revised 11/11

## INITIAL PROJECT WORKFORCE REPORT CONSTRUCTION

**Official Use Only**

Assignment \_\_\_\_\_

Code \_\_\_\_\_

For instructions on completing the form, go to:  
[https://www.nj.gov/treasury/contract\\_compliance/documents/pdf/forms/aa201ins.pdf](https://www.nj.gov/treasury/contract_compliance/documents/pdf/forms/aa201ins.pdf)

1. FID NUMBER	2. CONTRACTOR ID NUMBER	5. NAME AND ADDRESS OF PUBLIC AGENCY AWARDED CONTRACT Name: Address:	
3. NAME AND ADDRESS OF PRIME CONTRACTOR  (Name)  (Street Address)  (City) (State) (Zip Code)		CONTRACT NUMBER      DATE OF AWARD      DOLLAR AMOUNT OF AWARD	
4. IS THIS COMPANY MINORITY OWNED [ J OR WOMAN OWNED [ J		6. NAME AND ADDRESS OF PROJECT Name: Address:  COUNTY	7. PROJECT NUMBER
		8. IS THIS PROJECT COVERED BY A PROJECT LABOR AGREEMENT (PLA)? YES	

9. TRADE OR CRAFT	PROJECTED TOTAL EMPLOYEES				PROJECTED MINORITY EMPLOYEES				PROJECTED PHASE-IN DATE	PROJECTED COMPLETION DATE
	MALE		FEMALE		MALE		EMALE			
	J	AP	J	AP	J	AP	J	AP		
1. ASBESTOS WORKFR										
2. BRICKLAYER OR MASON										
3. CARPENTER										
4. ELECTRICIAN										
5. GLAZIER										
6. HVAC MECHANIC										
7. IRONWORKER										
8. OPERATING ENGINEER										
9. PAINTER										
10. PLUMBER										
11. ROOFER										
12. SHEET METAL WORKER										
13. SPRINKLER FITTER										
14. STEAMFITTER										
15. SURVEYOR										
16. TILER										
17. TRUCK DRIVER										
18. LABORER										
19. OTHER										
20. OTHER										

I hereby certify that the foregoing statements made by me are true. I am aware that if any of the foregoing statements are willfully false, I am subject to punishment.

\_\_\_\_\_  
(Signature)

10. (Please Print Your Name)

(Title)

(Area Code)

(Telephone Number)

(Ext.)

(Date)

Atlantic City Free Public Library, Second Floor Meeting Room & Elevator Upgrades, BID #25-2

# Certification By Bidder Regarding Equal Employment Opportunity

## INSTRUCTIONS

The Bidder represents that he ( ) has, ( ) has not, participated in a previous Contract or subcontract subject to the Equal Opportunity clause prescribed by Executive Orders 10925, 11114, or 121256 or the Secretary of Labor; that he ( ) has, ( ) has not, filed all required compliance reports, signed by proposed subcontractors, will be obtained prior to subcontract awards. (The above representation need not be submitted in connection with Contracts or Subcontractors which are exempt from the clause.)

Certification of Nonsegregated Facilities. By signing this bid, the bidder certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. He certifies further that he will not maintain or provide for his employees any segregated facilities at any of his establishments, and that he will not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The bidder agrees that a breach of this certification is a violation of the Equal Opportunity clause in this Contract. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, or national origin, because of habit, local custom or otherwise. He further agrees that (except where he has obtained identical certifications from proposed subcontractors for specified time periods) he will obtain identical certifications from proposed subcontracts prior to the award of subcontract exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity clause; that he will forward a notice to his proposed subcontractors as provided in the Instructions to Bidders.

**NOTE:** The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

**AFFIRMATIVE ACTION/CONTRACT COMPLIANCE REQUIREMENTS**

**BIDDERS ARE REQUIRED TO COMPLY WITH THE REQUIREMENTS OF  
N.J.S.A. 10:5-31 et seq. AND N.J.A.C. 17:27 AND ORDINANCE NO. 24 OF 1993**

ALL BIDDERS are required to submit the Schedule of Good Faith Effort for Utilization of Minority and Women Business Enterprise Program for Contractors and/or supplies.

ALL BIDDERS are encouraged to hire Atlantic City residents and use Atlantic City Contractor, Sub-Contractors and Merchants if awarded this contract.

ALL BIDDERS shall write the following office's for technical assistance before submission of this bid package, if assistance is needed. All requests for assistance & responses thereto shall be in writing.

ALL BIDDERS that have received a NJ Certificate of Employee Information Report shall enclose a copy of same with this qualifications package. All others shall contact the Public Agency Compliance Officer (P.A.C.O.)

**CONTACT INFORMATION:**

**Human Resources Office**

Mona Tally, Affirmative Action Officer

Public Agency Compliance Officer

Telephone (609) 347-5425

[mtally@cityofatlanticcity.org](mailto:mtally@cityofatlanticcity.org)

If awarded this contract your company/firm shall be required to comply with the requirement of N.J.S.A. 10:5-31 et seq. and N.J.A.C. 17:27 Law against Discrimination in Public Contracts.

**SCHEDULE OF MINORITY BUSINESS ENTERPRISE (MBE)**  
**FEMALE BUSINESS ENTERPRISE (FBE)**  
**CONTRACTORS/SUPPLIERS**

ALL BIDDERS shall write to the Public Agency Compliance Officer for technical assistance before submission of this bid, if assistance is needed. All requests for assistance & responses thereto shall be in writing to Human Resources Office, Attn: Mona Tally, City Hall, Room 416, 1301 Bacharach Blvd, Atlantic City, NJ 08401.

**BIDDER SHALL COMPLETE THIS FORM AND SUBMIT WITH BID PACKAGE.**

FMBE STATUS: FBE \_\_\_\_\_ MBE \_\_\_\_\_ DBE \_\_\_\_\_ OTHER \_\_\_\_\_  
 CERTIFICATION NO \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Other \_\_\_\_\_  
 (If FMBE Status exclude Part I and Part II)

**PART I: SCHEDULE OF MINORITY CONTRACTORS AND/OR SUPPLIERS**

Contractor to insert Name of Minority Business Addresses and Telephone Numbers	Specify type of work Break-down segments of work	Total Contract Dollar Amount to MFBEs w/minimum of 10%
_____	_____	_____
_____	_____	_____
_____	_____	_____

Any substitution of a MFBE identified on this schedule shall be for good cause and on written notice to the Public Agency Compliance Officer. Any substitution for MFBE Sub Contractors and/or suppliers shall be by a certified MFBE Sub Contractor and/or Suppliers with the written prior approval of the Public Agency Compliance Officer.

**PART II: GOOD FAITH EFFORT EXTENDED**  
 (Complete in event the above 10% minimum MFBE  
 Contractors/Suppliers participation is not met)

**INSTRUCTION:** Fully explain all efforts taken to meet the minimum minority contractors and/or suppliers participation which shall include: letters, phone calls, communications sent to minority firms, sources and/or contracts, etc. Documentation of all efforts shall be required.

**MINIMUM GOOD FAITH CONDITIONS**

\_\_\_\_\_  
 \_\_\_\_\_

CERTIFICATION BY BIDDER:

Bidder's Name: \_\_\_\_\_

Address and Zip Code: \_\_\_\_\_

1. Bidder has participated in a previous contract or subcontract subject to the Equal Opportunity clause: Yes\_\_\_ No\_\_\_\_\_ (If answer is yes, identify the most recent contract)

---

2. Compliance reports were required to be filed in connection with such contract or subcontract. Yes\_\_\_\_\_ No\_\_\_\_\_ (If answer is yes, identify the most recent contract)

---

3. Bidder has filed all compliance reports due under applicable instruction, including AA-302, Equal Employment Opportunity Employee Information Report Yes\_\_\_\_\_ No\_\_\_\_\_ (If answer is yes, identify the most recent contract)

---

4. If answer to Item 3 is "No" please explain in detail on reverse side of this certification.

Certification - The information above is true and complete to the best of my knowledge and belief.

\_\_\_\_\_  
Name and Title of Signer (Please Type)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

# Affidavit for Affirmative Action Plan

STATE OF \_\_\_\_\_)

SS

COUNTY OF \_\_\_\_\_)

\_\_\_\_\_ being first duly sworn  
(Individual's Name)

deposes and says:

THAT he is \_\_\_\_\_ the  
(Partner or Officer of the Firm of, Etc.)

party making a certain proposal or bid dated \_\_\_\_\_ 20\_\_\_\_ for work in

connection with the construction of \_\_\_\_\_  
(Indicate Job Name)

at Project No. \_\_\_\_\_, located at

\_\_\_\_\_, New Jersey that such proposal or bid is submitted with full knowledge and understanding of the Affirmative Action Plan (AAP) requirements contained herein; that in submitting such proposal or bid the bidder acknowledges that he must and will fulfill these requirements and that all statements in said proposal or bid are true.

SIGNATURE OF:

Bidder, if the bidder is  
an individual; Officer, if  
the bidder is a  
Corporation, Partner, if  
the bidder is a  
Partnership

\_\_\_\_\_  
(Signature of Contractor)

Subscribed and Sworn to before me

this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

\_\_\_\_\_  
Notary Public

My Commission Expires \_\_\_\_\_



# New Jersey Business Registration Requirements

**Proof of New Jersey Business Registration must be provided prior to bid award for contractors and all subcontractors.** Failure to submit said registration is mandatory cause for the proposal not to be awarded.

For Owner's convenience, attach proof of said registration with your bid, if available at this time.

This is to certify that the firm of \_\_\_\_\_ is registered with the State of New Jersey, Division of Taxation, and will comply with the requirements as noted above.

I understand that this registration is mandatory for public works contracts and proof of said registration is to be forwarded to the **Atlantic City Free Public Library** prior to Proposal award.

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

Contractor: \_\_\_\_\_

Business Registration Certificate Number: \_\_\_\_\_

# Prevailing Wage Act Certification

This is to certify that the firm of \_\_\_\_\_ is following the guidelines of the New Jersey Prevailing Wage Act, P.L. 1963, c.150 (C.34:11-56.25 et seq) which states:

“If a person makes the lowest bid for a contract with a public body for public work subject to the provisions of the "New Jersey Prevailing Wage Act," P.L.1963, c.150 (C.34:11-56.25 et seq.) and that bid is ten percent or more lower than the next lowest bid for the contract, the person making the lowest bid shall certify to the public body that the prevailing wage rates required by that act shall be paid. If the bidder does not provide the certification prior to award of the contract, the public body shall award the contract to the next lowest responsible and responsive bidder. This certification shall be required only when a public body is engaging in competitive bidding for public work.”

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

Subscribed and sworn to before me  
this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_

\_\_\_\_\_  
Notary Public

My commission expires \_\_\_\_\_

# Public Works Contractor Registration Act Statement

This is to certify that the firm of \_\_\_\_\_ is registered with the Department of Labor and complies with the requirements of N.J.S.A. 34:11 – 56.48 et seq.

I understand that this registration is mandatory for public works contracts and that all named contractors must be registered with the Department of Labor’s Division of Wage and Hour Compliance at the time proposals are received. Proof of said registration is to be submitted prior to Proposal award.

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

Bidder

# Insurance Certificates

Name of Bidder: \_\_\_\_\_

Address: \_\_\_\_\_

**The Bidder is required to submit actual Certificate(s) of Liability Insurance establishing Insurance coverage of the type and amount required in accordance with the procedure set forth by the Contract Documents. (Documents to be submitted prior to the resolution of the award)**

**\*The Atlantic City Free Public Library and the City of Atlantic City are to be listed as Certificate Holders\***

(a) STATE LAW AND REGULATIONS AND INSURANCE

(b) The Contractor shall assume all risks connected with their work. The Contractor shall comply with all State Laws and Regulations concerning Workmen's Compensation and shall maintain such insurance as shall protect them against all claims for damages for personal injury, including death which may arise during prosecution of the contract, either by themselves or by any Subcontractor or anyone directly or indirectly employed by either of them.

(c) CONTRACTOR'S INSURANCE

(d) Before commencing work, and as a condition precedent for payment, the Contractor shall purchase and maintain insurance, in conformance with the provisions contained in this Contract. This insurance will provide a defense and indemnify the City of Atlantic City (City) and the Atlantic City Free Public Library against any such claim, damage, loss or expense that is attributable to bodily injury, sickness, disease or death or to injury to or destruction of tangible property (other than the work itself) including the loss of use, which arises out of the Contractor's operations under this agreement.

(e) This insurance shall apply regardless of whether the operations, actions, derelictions or failures to act from which the claim arises, are attributable to the Contractor, any of its Contractors, officers, agents, subcontractors, employees, anyone directly or indirectly employed by any of them including anyone for whose acts of the aforementioned may be liable by operation of statute, government regulation, or applicable case law and the Atlantic City (City) and the Atlantic City Free Public Library, unless, caused by the sole negligence of the Atlantic City (City) and the Atlantic City Free Public Library.

(f) Proof of this insurance shall be provided to the Atlantic City (City) and the Atlantic City Free Public Library before the work commences as set forth below. In no event shall the failure to provide this proof, prior to the commencement of work, be deemed a waiver by the Atlantic City (City) and the Atlantic City Free Public Library of the Contractor's insurance obligations set forth herein.

(g) In the event that the insurance company (ies) issuing the policy (ies) required by this section deny coverage to the City, the Contractor will defend and indemnify the Atlantic City (City) and the Atlantic City Free Public Library at the Contractor's expense.

(h) The Contractor must obtain the required insurance with the carrier rated A-VII or better by A. M. Best. The Contractor shall maintain at least the limits of liability as set forth below:

(i) COMMERCIAL GENERAL LIABILITY INSURANCE

\$ 1,000,000.00 Each Occurrence (Bodily Injury and Property Damage) \$ 2,000,000.00 General Aggregate \$ 2,000,000.00 Products/Completed Operations Aggregate \$ 1,000,000.00 Personal and Advertising Injury Contractual liability that will respond to Section Nineteen, Indemnification, shall be included in the policy. The General Aggregate Limit shall apply separately to the work as defined in Section I. Project Description and II. Scope of Services. As an alternative, the Contractor may provide Commercial General Liability Insurance with no General Aggregate.

- (j) **Protection and Indemnity Insurance (only required if boats, barges or other sea vessels are used)**
- (k) \$2,000,000 Each Occurrence Limit (Limit may be reduced to \$1,000,000 if this policy included in the Umbrella Liability Insurance). Pollution Liability in an additional amount of \$1,000,000 must be included in the policy for the Each Occurrence Limit.
- (l) ***Builders Risk***
- (m) The Contractor must obtain the required insurance with the carrier rated A-VII or better by A. M. Best. The Contractor shall provide such coverage as to protect the Atlantic City (City) and the Atlantic City Free Public Library's insurable interest in materials, fixtures and equipment being used in the construction or renovation of a building or structure. Coverage must apply to property of every kind or description intended to become a permanent part of the project including materials, supplies, fixtures, machinery, foundations, sidewalks and pavements.
- (n) **COMPREHENSIVE AUTOMOBILE LIABILITY INSURANCE**
- (o) \$ 1,000,000.00 Combined Single Limit Bodily Injury and Property Damage. Coverage must include all owned, non-owned and hired vehicles used by the Contractor.
- (p) **WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY INSURANCE**
- (q) \$ 500,000.00 Each Accident
- (r) \$ 500,000.00 Each Employee for Injury by Disease
- (s) \$ 500,000.00 Aggregate for Injury by Disease
- (t) If the Contractor is a Sole Proprietor, Partnership or LLC, Insurance Policy and Certificate must indicate that the proprietor/partners/members are "included". This requirement does not apply if inclusion is not allowed by law.
- (u) If any employees of the Contractor are subject to the United States Longshoremen's and Harbor Workers Act or the Jones Act, such coverage will be included either by endorsement to the policy or by separate policy.
- (v) **UMBRELLA LIABILITY**
- (w) \$ 5,000,000 Each Occurrence
- (x) \$ 5,000,000 Aggregate
- (y) Coverage will provide Contractual Liability on the same basis as the Commercial General Liability and apply the General Aggregate separately to this project.
- (z)
- (aa) The Atlantic City Free Public Library, City of Atlantic City, along with their respective elected or appointed officials, officers, agents and
- (bb) Employees and all property owners granting right of way or right of entry shall be named as Additional Insureds for Operations and Products/Completed Operations on the Contractor's Commercial General Liability Policy and Additional Insureds on the Contractor's Comprehensive Automobile Liability and Umbrella Liability which must be primary and noncontributory with respect to the Additional Insureds.
- (cc) It is expressly understood by the parties to this Contract that it is the intent of the parties that any insurance obtained by the Atlantic City (City) and the Atlantic City Free Public Library is deemed excess, noncontributory and not co-primary in relation to the coverage (s) procured by the Contractor, any of its Contractor's, officers, agents, subcontractors, employees or anyone directly or indirectly employed by any of them or by anyone for whose acts any of the aforementioned may be liable by operations of statute, government regulation or applicable case law.
- (dd) A Waiver of Subrogation clause shall be added to the Commercial General Liability, Comprehensive Automobile Liability, Umbrella Liability and Professional Liability policies in favor of the City and this clause shall apply to the Atlantic City (City) and the Atlantic City Free Public Library's elected or appointed officials, officers, agents and employees.
- (ee) It should also apply to the Contractor's Worker's Compensation policy if allowed by state law. If the Contractor's policy limits are greater than the minimum limits noted above, the minimum limits required are automatically adjusted to those greater limits.

- (ff) Prior to commencement of work, Contractor shall submit a Certificate of Insurance in favor of the Atlantic City (City) and the Atlantic City Free Public Library and as an Additional Insured Endorsement (in a form acceptable to the City) as required hereunder.
- (gg) In any and all claims against the Additional Insureds by any employee of the Contractor, anyone directly or indirectly employed by the Contractor or anyone for whose acts the Contractor may be liable, the indemnification obligation shall not be limited by any limitation on the amount or type of damage, compensation or benefits payable by or for the Contractor under Workers' Compensation acts, disability benefit acts or other employee benefit acts.
- (hh) If the Contractor subcontracts any parts of this project, those Subcontractors will comply with all insurance requirements detailed in these specifications.
- (ii) The Contractor shall maintain in effect all insurance coverages required under this Contract at the Contractor's sole expense and with insurance companies acceptable to the Atlantic City (City) and the Atlantic City Free Public Library. In the event the Contractor fails to obtain or maintain any insurance coverage required under this Contract, the Atlantic City (City) and the Atlantic City Free Public Library may, at its sole discretion, purchase such coverage as desired for the Atlantic City (City) and the Atlantic City Free Public Library's benefit and charge the expense to the Contractor, or, in the alternative, terminate this Contract. In the event the coverage is cancelled or non-renewed, the insurance carrier(s) will provide 30 days advance notice of the cancellation or non-renewal.



## BID DOCUMENT SUBMISSION CHECKLIST

Atlantic City Free Public Library,  
Second Floor Meeting Room and Elevator Upgrades  
*(Name of Construction/Public Works Project)*

Bid#25-2  
*(Project or Bid Number)*

Applicable to Bid if marked "X"	DOCUMENTATION REQUIRED OR REVIEWED	Initial Each Item	When Due
X	Bid Proposal Form		With Bid Submission
X	If applicable, bidder's acknowledgement of receipt of any notice(s) or revision(s) or addenda to an advertisement, specifications or bid document(s)		With Bid Submission
X	A bid guarantee as required by N.J.S.A. 40A:11-21		With Bid Submission
X	A certificate from a surety company, pursuant to N.J.S.A. 40A:11-22		With Bid Submission
X	Performance Bond and Labor and Material Payment Bond (Required from the Awarded Contractor)		At signing of contract
X	Maintenance Bond in the Amount of 100 % for a period indicated in "General Conditions" Required from the Awarded Contractor Upon Acceptance of Project		Upon Acceptance of Project
X	Bidders Qualification Form		With Bid Submission
X	Certification of Bidder showing that Bidder owns, leases or controls any necessary equipment.		With Bid Submission
X	A listing of subcontractors as required by N.J.S.A. 40A:11-16		With Bid Submission
X	Submission of a Non-Collusion Affidavit		With Bid Submission
X	A Statement of corporate ownership (Stockholder Disclosure), pursuant to N.J.S.A. 52:25-24.2		With Bid Submission
X	Prohibited Russia-Belarus Activities & Iran Investment Activities		Prior to Contract Award
X	Certification of Non-Debarment for Federal Government Contracts		Prior to Contract Award
X	State of New Jersey debarred list affidavit (must be notarized)		With Bid Submission
X	Certification By Bidder EEO/AA FormAA-201		After Notice of Award, Prior to Signing Contract
X	Affidavit for Affirmative Action Plan-EEO/AA FormAA-302 or Letter of Federal Approval or Certificate of Employee Information Report,		After Notice of Award, Prior to Signing Contract
X	Schedule of Minority Business Enterprise (MBE), Female Business Enterprise (FBE), Contractors/ Suppliers		With Bid Submission
X	New Jersey Business Registration Requirements Form-Bidder & all Sub Contractors		Prior to Contract Award
X	Prevailing Wage Act Certification Form		Prior to Contract Award
X	Public Works Contractor Registration Act Statement-Bidder & all Sub Contractors		Prior to Award, but effective at time of bid
X	Request for Insurance Certificates		Prior to Contract Award
X	Request for W-9 Taxpayer Identification Form (number and certification)		Prior to Contract Award
X	Bid Document Submission Checklist		With Bid Submission

**Failure to submit any of the following documents may be a cause for the bid to be rejected.**

**Signature: The undersigned hereby acknowledges and has submitted the above requirements.**

Name of Bidder \_\_\_\_\_

Authorized Representative Signature \_\_\_\_\_

Printed Name and Title \_\_\_\_\_



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# Sample Agreement

## **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  
(In words, indicate day, month and year.)

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

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

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

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

The Owner and Contractor agree as follows.

### **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. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

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

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.

**TABLE OF ARTICLES**

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

**EXHIBIT A INSURANCE AND BONDS**

**ARTICLE 1 THE CONTRACT DOCUMENTS**

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

**ARTICLE 2 THE WORK OF THIS CONTRACT**

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

**ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION**

§ 3.1 The date of commencement of the Work shall be:

*(Check one of the following boxes.)*

The date of this Agreement.

A date set forth in a notice to proceed issued by the Owner.

Established as follows:

*(Insert a date or a means to determine the date of commencement of the Work.)*

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.

**§ 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:

Init.

(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
-----------------	-----------------------------

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

#### ARTICLE 4 CONTRACT SUM

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

#### § 4.2 Alternates

§ 4.2.1 Alternates, if any, included in the 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 Contract Sum:  
(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.)

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

## 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, or as follows:

§ 5.1.3 Provided that an Application for Payment is received by the Architect not later than the day of a month, the Owner shall make payment of the amount certified to the Contractor not later than the day of the 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 ( ) days after the Architect receives the Application for Payment.

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

§ 5.1.4 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Architect may require. This schedule 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 A201TM-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.)*

§ 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.)

§ 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.)

§ 5.1.7.3 Except as set forth in this Section 5.1.7.3, upon Substantial Completion of the Work, the Contractor may submit an Application for Payment that includes the retainage withheld from prior Applications for Payment pursuant to this Section 5.1.7. The Application for Payment submitted at Substantial Completion shall not include retainage as follows:  
(Insert any other conditions for release of retainage upon Substantial Completion.)

§ 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 30 days after the issuance of the Architect's final Certificate for Payment, or as follows:

## § 5.3 Interest

Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

(Insert rate of interest agreed upon, if any.)

%

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

**§ 6.2 Binding Dispute Resolution**

For any Claim subject to, but not resolved by, mediation pursuant to 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 a court of competent jurisdiction

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.

**§ 7.1.1** If the Contract is terminated for the Owner's convenience in accordance with Article 14 of AIA Document A201-2017, then the Owner shall pay the Contractor a termination fee as follows:  
*(Insert the amount of, or method for determining, the fee, if any, payable to the Contractor following a termination for the Owner's convenience.)*

**§ 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)*

**§ 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 A101TIL 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 A101TIL2017 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 E203TIL2013, 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:

**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 A101TIL2017, Exhibit A, Insurance and Bonds
- .3 AIA Document A201TIL2017, General Conditions of the Contract for Construction
- .4 AIA Document E203TIL2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:  
*(Insert the date of the E203-2013 incorporated into this Agreement.)*

.5 Drawings

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

.6 Specifications

Section	Title	Date	Pages
---------	-------	------	-------

.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.)*

Init.



] 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 A20JHL2017 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.)*

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

\_\_\_\_\_  
OWNER (Signature)

\_\_\_\_\_  
CONTRACTOR (Signature)

\_\_\_\_\_  
(Printed name and title)

\_\_\_\_\_  
(Printed name and title)

# Sample

# AIA Document A201 - 2017

## ***General Conditions of the Contract for Construction***

for the following PROJECT:

*(Name and location or address)*

**THE OWNER:**

*(Name, legal status and address)*

**THE ARCHITECT:**

*(Name, legal status and address)*

### TABLE OF ARTICLES

- 1 GENERAL PROVISIONS
- 2 OWNER
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- 13 MISCELLANEOUS PROVISIONS
- 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. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

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

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

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{Topics and numbers in bold are Section headings.)

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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, 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. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding or proposal requirements.

#### **§ 1.1.2 The Contract**

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

#### **§ 1.1.3 The Work**

The term "Work" means 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.

#### **§ 1.1.4 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 person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2. 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.

## **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.

**§ 2.1.2** The Owner shall furnish to the Contractor, within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of, or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.

### **§ 2.2 Evidence of the Owner's Financial Arrangements**

**§ 2.2.1** Prior to commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence. If commencement of the Work is delayed under this Section 2.2.1, the Contract Time shall be extended appropriately.

**§ 2.2.2** Following commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract only if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due; or (3) a change in the Work materially changes the Contract Sum. If the Owner fails to provide such evidence, as required, within fourteen days of the Contractor's request, the Contractor may immediately stop the Work and, in that event, shall notify the Owner that the Work has stopped. However, if the request is made because a change in the Work materially changes the Contract Sum under (3) above, the Contractor may immediately stop only that portion of the Work affected by the change until reasonable evidence is provided. If the Work is stopped under this Section 2.2.2, 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 in the Contract Documents.

**§ 2.2.3** After the Owner furnishes evidence of financial arrangements under this Section 2.2, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

**§ 2.2.4** Where the Owner has designated information furnished under this Section 2.2 as "confidential," the Contractor shall keep the information confidential and shall not disclose it to any other person. However, the Contractor may disclose "confidential" information, after seven (7) days' notice to the Owner, where disclosure is required by law, including a subpoena or other form of compulsory legal process issued by a court or governmental entity, or by court or arbitrator(s) order. The Contractor may also disclose "confidential" information to its employees, consultants, sureties, Subcontractors and their employees, Sub-subcontractors, and others who need to know the content of such information solely and exclusively for the Project and who agree to maintain the confidentiality of such information.

### **§ 2.3 Information and Services Required of the Owner**

**§ 2.3.1** Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements,

assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

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

§ 2.3.3 If the employment of the Architect terminates, the Owner shall employ a successor to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Architect.

§ 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 Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

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

§ 2.3.6 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, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

**§ 2.5 Owner's Right to Carry Out the Work**

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and 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. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

**§ 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.

**§ 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.

**§ 3.4 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 correction.

### § 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;
- .2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- .3 whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

§ 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 competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. 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.

### § 3.14 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** To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the 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 that would otherwise exist as to a party or person described in this Section 3.18.

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

**§ 4.2.2** The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that 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 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.

§ 7.1.2 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.

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

### § 7.2 Change Orders

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

### § 7.3 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.

## **ARTICLE 8 TIME**

### **§ 8.1 Definitions**

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

**§ 8.1.2** The date of commencement of the Work is the date established in the Agreement.

**§ 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.

### **§ 8.3 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.

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

## **ARTICLE 9 PAYMENTS AND COMPLETION**

### **§ 9.1 Contract Sum**

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

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

### **§ 9.2 Schedule of Values**

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

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

### **§ 9.5 Decisions to Withhold Certification**

**§ 9.5.1** The Architect 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.

**§ 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.

## 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.

### § 10.2 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.

§ 10.2.3 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 of the safeguards.

§ 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.

#### **§ 10.3 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.

**§ 10.3.3** To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, 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), except to the extent that such damage, loss, or expense is due to the fault or negligence of the party seeking indemnity.

**§ 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. The Owner shall be responsible for hazardous materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

**§ 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.

**§ 10.3.6** If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall reimburse the Contractor for all cost and expense thereby incurred.

#### **§ 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.

### § 11.2 Owner's Insurance

§ 11.2.1 The Owner 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 Owner 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.

§ 11.2.2 **Failure to Purchase Required Property Insurance.** If the Owner fails to purchase and maintain the required property insurance, with all of the coverages and in the amounts described in the Agreement or elsewhere in the Contract Documents, the Owner shall inform the Contractor in writing prior to commencement of the Work. Upon receipt of notice from the Owner, the Contractor may delay commencement of the Work and may obtain insurance that will protect the interests of the Contractor, Subcontractors, and Sub-Subcontractors in the Work. When the failure to provide coverage has been cured or resolved, the Contract Sum and Contract Time shall be equitably adjusted. In the event the Owner fails to procure coverage, the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent the loss to the Owner would have been covered by the insurance to have been procured by the Owner. The cost of the insurance shall be charged to the Owner by a Change Order. If the Owner does not provide written notice, and the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain the required insurance, the Owner shall reimburse the Contractor for all reasonable costs and damages attributable thereto.

§ 11.2.3 **Notice of Cancellation or Expiration of Owner's Required Property Insurance.** Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any property insurance required by the Contract Documents, the Owner shall provide notice to the Contractor of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice from the Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent any loss to the Owner would have been covered by the insurance had it not expired or been cancelled. If the Contractor purchases replacement coverage, the cost of the insurance shall be charged to the Owner by an appropriate Change Order. The furnishing of notice by the Owner shall not relieve the Owner of any contractual obligation to provide required insurance.



### **§ 11.3 Waivers of Subrogation**

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

**§ 11.3.2** 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. The Owner waives all rights of action against the Contractor and Architect for loss of use of the Owner's property, due to fire or other hazards however caused.

### **§ 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.

### **§ 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 Substantial Completion 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. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. 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 Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

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

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

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

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

## **§ 12.3 Acceptance of Nonconforming Work**

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

## **ARTICLE 13 MISCELLANEOUS PROVISIONS**

### **§ 13.1 Governing Law**

The Contract shall be governed by the law of the place where the Project is located, excluding that jurisdiction's choice of law rules. If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

### § 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

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at the rate the parties agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

## **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 within the time stated in the Contract Documents; or
- .4 The Owner has failed to furnish to the Contractor reasonable evidence as required by Section 2.2.

§ 14.1.2 The Contractor may terminate the Contract if, 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, repeated suspensions, delays, or interruptions of the entire Work by the Owner as described in Section 14.3, constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, as well as reasonable overhead and profit on Work not executed, and costs incurred by reason of such termination.

§ 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 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make 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 otherwise is guilty of substantial breach of a provision of the Contract Documents.

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

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

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

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance,

the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

#### **§ 14.3 Suspension by the Owner for Convenience**

**§ 14.3.1** The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work, in whole or in part for such period of time as the Owner may determine.

**§ 14.3.2** The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay, or interruption under Section 14.3.1. Adjustment of the Contract Sum shall include profit. 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 Owner shall pay the Contractor for Work properly executed; costs incurred by reason of the termination, including costs attributable to termination of Subcontracts; and the termination fee, if any, set forth in the Agreement.

### **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**

The Owner and Contractor shall commence all Claims and causes of action against the other and arising out of or related to the Contract, whether in contract, tort, breach of warranty or otherwise, in accordance with the requirements of the binding dispute resolution method selected in the Agreement and within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all Claims and causes of action not commenced in accordance with this Section 15.1.2.

##### **§ 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.

**§ 15.1.7 Waiver of Claims for Consequential Damages**

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit, except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.7 shall be deemed to preclude assessment of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

**§ 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.

§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.

§ 15.2.6.1 Either party may, within 30 days from the date of receipt of an initial decision, demand in writing that the other party file for mediation. If such a demand is made and the party receiving the demand fails to file for mediation within 30 days after receipt thereof, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

§ 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.

### § 15.3 Mediation

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract, except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.7, shall be subject to mediation as a condition precedent to binding dispute resolution.

§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 15.3.3 Either party may, within 30 days from the date that mediation has been concluded without resolution of the dispute or 60 days after mediation has been demanded without resolution of the dispute, demand in writing that the other party file for binding dispute resolution. If such a demand is made and the party receiving the demand fails to file for binding dispute resolution within 60 days after receipt thereof, then both parties waive their rights to binding dispute resolution proceedings with respect to the initial decision.

**§ 15.3.4** The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

**§ 15.4 Arbitration**

**§ 15.4.1** If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. The Arbitration shall be conducted in the place where the Project is located, unless another location is mutually agreed upon. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

**§ 15.4.1.1** A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

**§ 15.4.2** The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

**§ 15.4.3** The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement, shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

**§ 15.4.4 Consolidation or Joinder**

**§ 15.4.4.1** Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

**§ 15.4.4.2** Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

**§ 15.4.4.3** The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as those of the Owner and Contractor under this Agreement.



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SECTION 011000

SUMMARY

PART 1 GENERAL

1.1 PROJECT

- A. Project Name: Atlantic City Public Library 2nd Floor Meeting Room and Elevator.
- B. Owner's Name: Atlantic City Free Public Library.
- C. The Project is primarily a renovation to existing Civic/AV room and associated spaces (kitchen, storage room and previous projector room on the second floor). Two pods are to be installed on the first floor and a two stop elevator is to be modernized.

1.2 CONTRACT DESCRIPTION

- A. Contract Type: A single prime contract based on a Stipulated Price.

1.3 DESCRIPTION OF ALTERATIONS WORK

- A. Scope of demolition and removal work is indicated on drawings and specified in Section 024100.

1.4 WORK BY OWNER

- A. Owner will supply the following for installation by Contractor:
  - 1. Refer to the drawings.

1.5 OWNER OCCUPANCY

- A. Owner intends to continue to occupy adjacent portions of the existing building during the entire construction period during library opening hours.
- B. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.
- C. Schedule the Work to accommodate Owner occupancy.

1.6 CONTRACTOR USE OF SITE AND PREMISES

- A. Construction Operations: Limited to areas noted on Drawings.
  - 1. Locate and conduct construction activities in ways that will limit disturbance to site.
- B. Arrange use of site and premises to allow:

1. Owner occupancy.
  2. Use of site and premises by the public.
- C. Provide access to and from site as required by law and by Owner:
1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
    - a. Any operations that would block means of egress are to be scheduled off hours.
  2. Do not obstruct roadways, sidewalks, or other public ways without permit.
- D. Existing building spaces may not be used for storage.
- E. Utility Outages and Shutdown:
1. Coordinate any outage with Owner/library 2 weeks ahead of any shut down.
  2. Limit disruption of utility services to hours the building is unoccupied.
  3. Do not disrupt or shut down life safety systems, including but not limited to fire sprinklers and fire alarm system, without 7 days notice to Owner and authorities having jurisdiction.
  4. Prevent accidental disruption of utility services to other facilities.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

## SECTION 012000

### PRICE AND PAYMENT PROCEDURES

#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. Procedures for preparation and submittal of applications for progress payments.
- B. Documentation of changes in Contract Sum and Contract Time.
- C. Change procedures.
- D. Correlation of Contractor submittals based on changes.
- E. Procedures for preparation and submittal of application for final payment.

##### 1.2 RELATED REQUIREMENTS

- A. Section 017800 - Closeout Submittals: Project record documents.

##### 1.3 SCHEDULE OF VALUES

- A. Use Schedule of Values Form: AIA G703, edition stipulated in the Agreement.
- B. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit draft to Architect for approval.
- C. Forms filled out by hand will not be accepted.
- D. Submit Schedule of Values within 15 days after date of Owner-Contractor Agreement.
- E. Format: Utilize the Table of Contents of this Project Manual. Identify each line item with number and title of the specification section.
- F. Include separately from each line item, a direct proportional amount of Contractor's overhead and profit.
- G. Revise schedule to list approved Change Orders, with each Application For Payment.

##### 1.4 APPLICATIONS FOR PROGRESS PAYMENTS

- A. Payment Period: Submit at intervals stipulated in the Agreement.
- B. Use Form AIA G702 and Form AIA G703, edition stipulated in the Agreement.
- C. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to Architect for approval.

- D. Forms filled out by hand will not be accepted.
- E. For each item, provide a column for listing each of the following:
  - 1. Item Number.
  - 2. Description of work.
  - 3. Scheduled Values.
  - 4. Previous Applications.
  - 5. Work in Place and Stored Materials under this Application.
  - 6. Authorized Change Orders.
  - 7. Total Completed and Stored to Date of Application.
  - 8. Percentage of Completion.
  - 9. Balance to Finish.
  - 10. Retainage.
- F. Execute certification by signature of authorized officer.
- G. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored products.
- H. List each authorized Change Order as a separate line item, listing Change Order number and dollar amount as for an original item of work.
- I. Submit electronic copy of each Application for Payment.
- J. Include the following with the application:
  - 1. Transmittal letter as specified for submittals in Section 013000.
  - 2. Construction progress schedule, revised and current as specified in Section 013000.
  - 3. Partial release of liens from major subcontractors and vendors.
- K. When Architect requires substantiating information, submit data justifying dollar amounts in question. Provide one copy of data with cover letter for each copy of submittal. Show application number and date, and line item by number and description.

#### 1.5 MODIFICATION PROCEDURES

- A. Submit name of the individual authorized to receive change documents and who will be responsible for informing others in Contractor's employ or subcontractors of changes to Contract Documents.
- B. For minor changes not involving an adjustment to the Contract Sum or Contract Time, Architect will issue instructions directly to Contractor.
- C. For other required changes, Architect will issue a document signed by Owner instructing Contractor to proceed with the change, for subsequent inclusion in a Change Order.
  - 1. The document will describe the required changes and will designate method of determining any change in Contract Sum or Contract Time.
  - 2. Promptly execute the change.

- D. Computation of Change in Contract Amount: As specified in the Agreement and Conditions of the Contract.
    - 1. For change requested by Architect for work falling under a fixed price contract, the amount will be based on Contractor's price quotation.
    - 2. For change requested by Contractor, the amount will be based on the Contractor's request for a Change Order as approved by Architect.
    - 3. For change ordered by Architect without a quotation from Contractor, the amount will be determined by Architect based on the Contractor's substantiation of costs as specified for Time and Material work.
  - E. Substantiation of Costs: Provide full information required for evaluation.
    - 1. On request, provide the following data:
      - a. Quantities of products, labor, and equipment.
      - b. Taxes, insurance, and bonds.
      - c. Overhead and profit.
      - d. Justification for any change in Contract Time.
      - e. Credit for deletions from Contract, similarly documented.
    - 2. Support each claim for additional costs with additional information:
      - a. Origin and date of claim.
      - b. Dates and times work was performed, and by whom.
      - c. Time records and wage rates paid.
      - d. Invoices and receipts for products, equipment, and subcontracts, similarly documented.
    - 3. For Time and Material work, submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract.
  - F. Execution of Change Orders: Architect will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.
  - G. After execution of Change Order, promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum.
  - H. Promptly revise progress schedules to reflect any change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.
  - I. Promptly enter changes in Project Record Documents.
- 1.6 APPLICATION FOR FINAL PAYMENT
- A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Sum, previous payments, and sum remaining due.
  - B. Application for Final Payment will not be considered until the following have been accomplished:
    - 1. All closeout procedures specified in Section 017000.



WATG SOSH Architects  
Atlantic City, NJ 08401

Atlantic City Public Library  
2<sup>nd</sup> Floor Meeting Room and Elevator  
Atlantic City, NJ  
Bid Set - 1/16/2025

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 012300

ALTERNATES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Description of Alternates.
- B. Procedures for pricing Alternates.
- C. Documentation of changes to Contract Price and Contract Time.

1.2 ACCEPTANCE OF ALTERNATES

- A. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at Owner's option. Accepted Alternates will be identified in the Owner-Contractor Agreement.
- B. Coordinate related work and modify surrounding work to integrate the Work of each Alternate.

1.3 SCHEDULE OF ALTERNATES

- A. Alternate No. 1: Existing Elevator Hydraulic Jack Cylinder.
  - 1. Base Bid:
    - a. The existing hydraulic jack cylinder will be removed and replaced with a new hydraulic jack cylinder, compliant with current code, and include a safety bulkhead and PVC outer casing protective liner as per specification sections 3.1.O and 3.1.Q.
    - b. The existing cylinder hole will be retained, however, until the jack cylinder is removed, it is unknown as to whether the existing hole is of adequate plumb diameter for the new jack cylinder with the PVC liner. If not, the existing hole casing will need to be removed, the hole reamed, and new outer casing installed
  - 2. Alternate: Re-drill the hydraulic jack hole if required to provide the proper plumb depth to install the new sealed PVC system as per specification Section 3.1.P. Complete the installation of the new jack cylinder as per specification Sections 3.1.O and 3.1.Q. Provide a schedule in days as to the additional time required to complete the jack hole redrill work.

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Atlantic City, NJ 08401

Atlantic City Public Library  
2<sup>nd</sup> Floor Meeting Room and Elevator  
Atlantic City, NJ  
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PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

## SECTION 012500

### SUBSTITUTION PROCEDURES

#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. Procedural requirements for proposed substitutions.

##### 1.2 RELATED REQUIREMENTS

- A. Section 013000 - Administrative Requirements: Submittal procedures, coordination.
- B. Section 016000 - Product Requirements: Fundamental product requirements, product options, delivery, storage, and handling.

##### 1.3 DEFINITIONS

- A. Substitutions: Changes from Contract Documents requirements proposed by Contractor to materials, products, assemblies, and equipment.
  - 1. Substitutions for Cause: Proposed due to changed Project circumstances beyond Contractor's control.
    - a. Unavailability.
  - 2. Substitutions for Convenience: Proposed due to possibility of offering substantial advantage to the Project.
    - a. Substitution requests offering advantages solely to the Contractor will not be considered.

#### PART 2 PRODUCTS - NOT USED

#### PART 3 EXECUTION

##### 3.1 GENERAL REQUIREMENTS

- A. A Substitution Request for products, assemblies, materials, and equipment constitutes a representation that the submitter:
  - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product, equipment, assembly, or system.
  - 2. Agrees to provide the same warranty for the substitution as for the specified product.
  - 3. Agrees to provide same or equivalent maintenance service and source of replacement parts, as applicable.

4. Agrees to coordinate installation and make changes to other work that may be required for the work to be complete, with no additional cost to Owner.
  5. Waives claims for additional costs or time extension that may subsequently become apparent.
  6. Agrees to reimburse Owner and Architect for review or redesign services associated with re-approval by authorities.
- B. A Substitution Request for specified installer constitutes a representation that the submitter:
1. Has acted in good faith to obtain services of specified installer, but was unable to come to commercial, or other terms.
- C. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents. Burden of proof is on proposer.
1. Note explicitly any non-compliant characteristics.
- D. Content: Include information necessary for tracking the status of each Substitution Request, and information necessary to provide an actionable response.
1. Forms indicated in the Project Manual are adequate for this purpose, and must be used.
- E. Limit each request to a single proposed substitution item.
1. Submit an electronic document, combining the request form with supporting data into single document.

### 3.2 SUBSTITUTION PROCEDURES DURING PROCUREMENT

- A. Submittal Time Restrictions:
1. Owner will consider requests for substitutions only if submitted at least 10 days prior to the date for receipt of bids.
- B. Submittal Form (before award of contract):
1. Submit substitution requests by completing CSI/CSC Form 1.5C - Substitution Request. See this form for additional information and instructions. Use only this form; other forms of submission are unacceptable.

### 3.3 RESOLUTION

- A. Architect may request additional information and documentation prior to rendering a decision. Provide this data in an expeditious manner.
- B. Architect will notify Contractor in writing of decision to accept or reject request.
1. Architect's decision following review of proposed substitution will be noted on the submitted form.

3.4 ACCEPTANCE

- A. Accepted substitutions change the work of the Project. They will be documented and incorporated into work of the project by Change Order, Construction Change Directive, Architectural Supplementary Instructions, or similar instruments provided for in the Conditions of the Contract.

3.5 CLOSEOUT ACTIVITIES

- A. See Section 017800 - Closeout Submittals, for closeout submittals.
- B. Include completed Substitution Request Forms as part of the Project record. Include both approved and rejected Requests.

3.6 ATTACHMENTS

- A. CSI Form 1.5C - Substitution Request (During the Bidding/Negotiating Stage).

END OF SECTION

## SECTION 013000

### ADMINISTRATIVE REQUIREMENTS

#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. General administrative requirements.
- B. Electronic document file sharing service.
- C. Preconstruction meeting.
- D. Progress meetings.
- E. Construction progress schedule.
- F. Contractor's daily reports.
- G. Coordination drawings.
- H. Submittals for review, information, and project closeout.
- I. Number of copies of submittals.
- J. Requests for (RFI) procedures.
- K. Submittal procedures.

##### 1.2 RELATED REQUIREMENTS

- A. Section 016000 - Product Requirements: General product requirements.
- B. Section 017000 - Execution and Closeout Requirements: Additional coordination requirements.
- C. Section 017800 - Closeout Submittals: Project record documents; operation and maintenance data; warranties and bonds.

##### 1.3 GENERAL ADMINISTRATIVE REQUIREMENTS

- A. Comply with requirements of Section 017000 - Execution and Closeout Requirements for coordination of execution of administrative tasks with timing of construction activities.
- B. Make the following types of submittals to Architect:
  - 1. Requests for Information (RFI).
  - 2. Requests for substitution.
  - 3. Shop drawings, product data, and samples.

4. Test and inspection reports.
5. Design data.
6. Manufacturer's instructions and field reports.
7. Applications for payment and change order requests.
8. Progress schedules.
9. Coordination drawings.
10. Correction Punch List and Final Correction Punch List for Substantial Completion.
11. Closeout submittals.

## PART 2 PRODUCTS - NOT USED

## PART 3 EXECUTION

### 3.1 ELECTRONIC DOCUMENT FILE SHARING SERVICE

- A. All documents transmitted for purposes of administration of the contract are to be in electronic (PDF, MS Word, or MS Excel) format, as appropriate to the document, and transmitted via an Internet-based file sharing service that receives, logs and stores documents, provides electronic stamping and signatures, and notifies addressees via email.
  1. Besides submittals for review, information, and closeout, this procedure applies to Requests for Information (RFIs), progress documentation, contract modification documents (e.g. supplementary instructions, change proposals, change orders), applications for payment, field reports and meeting minutes, Contractor's correction punchlist, and any other document any participant wishes to make part of the project record.
  2. Contractor and Architect are required to use this service.
  3. It is Contractor's responsibility to submit documents in allowable format.
  4. Subcontractors, suppliers, and Architect's consultants are to be permitted to use the service at no extra charge.
  5. Users of the service need an email address, internet access, and PDF review software that includes ability to mark up and apply electronic stamps (such as Adobe Acrobat, [www.adobe.com](http://www.adobe.com), or Bluebeam PDF Revu, [www.bluebeam.com](http://www.bluebeam.com)), unless such software capability is provided by the service provider.
  6. Paper document transmittals will not be reviewed; emailed electronic documents will not be reviewed.
  7. All other specified submittal and document transmission procedures apply, except that electronic document requirements do not apply to samples or color selection charts.
- B. Cost: The cost of the service is to be paid by Contractor; include the cost of the service in the Contract Sum.
- C. File Sharing Site Service: Use one of the following:
  1. Basecamp Site hosted by the Architect.
  2. Dropbox (tel: 1-800-620-5395): [www.dropbox.com/](http://www.dropbox.com/).
  3. ShareFile (tel: 1-800-441-3453): [www.sharefile.com/](http://www.sharefile.com/).
  4. Box (tel: 1-877-729-4269): [www.box.com/](http://www.box.com/).



5. Or contractor selected method.

D. Project Closeout: Architect will determine when to terminate the service for the project and is responsible for obtaining archive copies of files for Owner.

### 3.2 PRECONSTRUCTION MEETING

A. Schedule meeting after Notice of Award.

B. Attendance Required:

1. Owner.
2. Architect.
3. Contractor.

C. Agenda:

1. Execution of Owner-Contractor Agreement.
2. Submission of executed bonds and insurance certificates.
3. Distribution of Contract Documents.
4. Submission of list of subcontractors, list of products, schedule of values, and progress schedule.
5. Submission of initial Submittal schedule.
6. Designation of personnel representing the parties to Contract and Architect.
7. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
8. Scheduling.

D. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

### 3.3 SITE MOBILIZATION MEETING

A. Schedule meeting at the Project site prior to Contractor occupancy.

B. Attendance Required:

1. Contractor.
2. Owner.
3. Architect.
4. Contractor's superintendent.
5. Major subcontractors.

C. Agenda:

1. Use of premises by Owner and Contractor.
2. Owner's requirements.
3. Construction facilities and controls provided by Owner.
4. Temporary utilities provided by Owner.
5. Security and housekeeping procedures.

6. Schedules.
7. Application for payment procedures.
8. Procedures for testing.
9. Procedures for maintaining record documents.
10. Requirements for start-up of equipment.
11. Inspection and acceptance of equipment put into service during construction period.

- D. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

### 3.4 PROGRESS MEETINGS

- A. Schedule and administer meetings throughout progress of the work at maximum bi-weekly intervals.

- B. Attendance Required:

1. Contractor.
2. Owner.
3. Architect.
4. Contractor's superintendent.
5. Major subcontractors.

- C. Agenda:

1. Review minutes of previous meetings.
2. Review of work progress.
3. Field observations, problems, and decisions.
4. Identification of problems that impede, or will impede, planned progress.
5. Review of submittals schedule and status of submittals.
6. Review of RFIs log and status of responses.
7. Review of off-site fabrication and delivery schedules.
8. Maintenance of progress schedule.
9. Corrective measures to regain projected schedules.
10. Planned progress during succeeding work period.
11. Coordination of projected progress.
12. Maintenance of quality and work standards.
13. Effect of proposed changes on progress schedule and coordination.
14. Other business relating to work.

- D. Record minutes and distribute copies within **two** days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

### 3.5 CONSTRUCTION PROGRESS SCHEDULE

- A. Within 10 days after date established in Notice to Proceed, submit preliminary schedule defining planned operations for the first 60 days of work, with a general outline for remainder of work.

- B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.
- C. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
  - 1. Include written certification that major contractors have reviewed and accepted proposed schedule.
- D. Within 10 days after joint review, submit complete schedule.
- E. Submit updated schedule with each Application for Payment.

### 3.6 COORDINATION DRAWINGS

- A. Provide information required by Project Coordinator for preparation of coordination drawings.
- B. Review drawings prior to submission to Architect.

### 3.7 REQUESTS FOR INFORMATION (RFI)

- A. Definition: A request seeking one of the following:
  - 1. An information, amplification, or clarification of some requirement of Contract Documents arising from inability to determine from them the exact material, process, or system to be installed; or when the elements of construction are required to occupy the same space (interference); or when an item of work is described differently at more than one place in Contract Documents.
  - 2. A resolution to an issue which has arisen due to field conditions and affects design intent.
- B. Whenever possible, request clarifications at the next appropriate project progress meeting, with response entered into meeting minutes, rendering unnecessary the issuance of a formal RFI.
- C. Preparation: Prepare an RFI immediately upon discovery of a need for information of Contract Documents. Failure to submit a RFI in a timely manner is not a legitimate cause for claiming additional costs or delays in execution of the work.
  - 1. Prepare a separate RFI for each specific item.
    - a. Review, coordinate, and comment on requests originating with subcontractors and/or materials suppliers.
    - b. Do not forward requests which solely require internal coordination between subcontractors.
  - 2. Prepare using software provided by the Electronic Document File Sharing Service.
  - 3. Combine RFI and its attachments into a single electronic file. PDF format is preferred.
- D. Reason for the RFI: Prior to initiation of an RFI, carefully study all Contract Documents to confirm that information sufficient for their information is definitely not included.
  - 1. Include in each request Contractor's signature attesting to good faith effort to determine from Contract Documents information requiring information.
  - 2. Unacceptable Uses for RFIs: Do not use RFIs to request the following::

- a. Approval of submittals (use procedures specified elsewhere in this section).
  - b. Approval of substitutions (see Section - 016000 - Product Requirements)
  - c. Changes that entail change in Contract Time and Contract Sum (comply with provisions of the Conditions of the Contract).
  - d. Different methods of performing work than those indicated in the Contract Drawings and Specifications (comply with provisions of the Conditions of the Contract).
3. Improper RFIs: Requests not prepared in compliance with requirements of this section, and/or missing key information required to render an actionable response. They will be returned without a response, with an explanatory notation.
  4. Frivolous RFIs: Requests regarding information that is clearly indicated on, or reasonably inferable from, Contract Documents, with no additional input required to clarify the question. They will be returned without a response, with an explanatory notation.
    - a. The Owner reserves the right to assess the Contractor for the costs (on time-and-materials basis) incurred by the Architect, and any of its consultants, due to processing of such RFIs.
- E. Content: Include identifiers necessary for tracking the status of each RFI, and information necessary to provide an actionable response.
1. Official Project name and number, and any additional required identifiers established in Contract Documents.
  2. Owner's, Architect's, and Contractor's names.
  3. Discrete and consecutive RFI number, and descriptive subject/title.
  4. Issue date, and requested reply date.
  5. Reference to particular Contract Document(s) requiring additional information/information. Identify pertinent drawing and detail number and/or specification section number, title, and paragraph(s).
  6. Annotations: Field dimensions and/or description of conditions which have engendered the request.
  7. Contractor's suggested resolution: A written and/or a graphic solution, to scale, is required in cases where clarification of coordination issues is involved, for example; routing, clearances, and/or specific locations of work shown diagrammatically in Contract Documents. If applicable, state the likely impact of the suggested resolution on Contract Time or the Contract Sum.
- F. Attachments: Include sketches, coordination drawings, descriptions, photos, submittals, and other information necessary to substantiate the reason for the request.
- G. RFI Log: Prepare and maintain a tabular log of RFIs for the duration of the project.
1. Indicate current status of every RFI. Update log promptly and on a regular basis.
  2. Note dates of when each request is made, and when a response is received.
  3. Highlight items requiring priority or expedited response.
  4. Highlight items for which a timely response has not been received to date.
  5. Identify and include improper or frivolous RFIs.

- H. Review Time: Architect will respond and return RFIs to Contractor within seven calendar days of receipt. For the purpose of establishing the start of the mandated response period, RFIs received after 12:00 noon will be considered as having been received on the following regular working day.
- I. Responses: Content of answered RFIs will not constitute in any manner a directive or authorization to perform extra work or delay the project. If in Contractor's belief it is likely to lead to a change to Contract Sum or Contract Time, promptly issue a notice to this effect, and follow up with an appropriate Change Order request to Owner.
  - 1. Response may include a request for additional information, in which case the original RFI will be deemed as having been answered, and an amended one is to be issued forthwith. Identify the amended RFI with an R suffix to the original number.
  - 2. Do not extend applicability of a response to specific item to encompass other similar conditions, unless specifically so noted in the response.
  - 3. Upon receipt of a response, promptly review and distribute it to all affected parties, and update the RFI Log.
  - 4. Notify Architect within seven calendar days if an additional or corrected response is required by submitting an amended version of the original RFI, identified as specified above.

### 3.8 SUBMITTAL SCHEDULE

- A. Submit to Architect for review a schedule for submittals in tabular format.
  - 1. Submit at the same time as the preliminary schedule.
  - 2. Coordinate with Contractor's construction schedule and schedule of values.
  - 3. Format schedule to allow tracking of status of submittals throughout duration of construction.
  - 4. Arrange information to include scheduled date for initial submittal, specification number and title, submittal category (for review or for information), description of item of work covered, and role and name of subcontractor.
  - 5. Account for time required for preparation, review, manufacturing, fabrication and delivery when establishing submittal delivery and review deadline dates.
    - a. For assemblies, equipment, systems comprised of multiple components and/or requiring detailed coordination with other work, allow for additional time to make corrections or revisions to initial submittals, and time for their review.

### 3.9 SUBMITTALS FOR REVIEW

- A. When the following are specified in individual sections, submit them for review:
  - 1. Product data.
  - 2. Shop drawings.
  - 3. Samples for selection.
  - 4. Samples for verification.

- B. Submit to Architect for review for the limited purpose of checking for compliance with information given and the design concept expressed in Contract Documents.
- C. Samples will be reviewed for aesthetic, color, or finish selection.
- D. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below and for record documents purposes described in Section 017800 - Closeout Submittals.

### 3.10 SUBMITTALS FOR INFORMATION

- A. When the following are specified in individual sections, submit them for information:
  - 1. Design data.
  - 2. Certificates.
  - 3. Test reports.
  - 4. Inspection reports.
  - 5. Manufacturer's instructions.
  - 6. Manufacturer's field reports.
  - 7. Other types indicated.
- B. Submit for Architect's knowledge as contract administrator or for Owner.

### 3.11 SUBMITTALS FOR PROJECT CLOSEOUT

- A. Submit Correction Punch List for Substantial Completion.
- B. Submit Final Correction Punch List for Substantial Completion.
- C. When the following are specified in individual sections, submit them at project closeout in compliance with requirements of Section 017800 - Closeout Submittals:
  - 1. Project record documents.
  - 2. Operation and maintenance data.
  - 3. Warranties.
  - 4. Bonds.
  - 5. Other types as indicated.
- D. Submit for Owner's benefit during and after project completion.

### 3.12 NUMBER OF COPIES OF SUBMITTALS

- A. Electronic Documents: Submit one electronic copy in PDF format; an electronically-marked up file will be returned. Create PDFs at native size and right-side up; illegible files will be rejected.
- B. Samples: Submit the number specified in individual specification sections; one of which will be retained by Architect.
  - 1. After review, produce duplicates.

2. Retained samples will not be returned to Contractor unless specifically so stated.

### 3.13 SUBMITTAL PROCEDURES

#### A. General Requirements:

1. Use a separate transmittal for each item.
2. Submit separate packages of submittals for review and submittals for information, when included in the same specification section.
3. Transmit using approved form.
  - a. Submit through Electronic Document File Sharing Service.
4. Sequentially identify each item. For revised submittals use original number and a sequential numerical suffix.
5. Identify: Project; Contractor; subcontractor or supplier; pertinent drawing and detail number; and specification section number and article/paragraph, as appropriate on each copy.
6. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of the work and Contract Documents.
  - a. Submittals from sources other than the Contractor, or without Contractor's stamp will not be acknowledged, reviewed, or returned.
7. Deliver each submittal on date noted in submittal schedule, unless an earlier date has been agreed to by all affected parties, and is of the benefit to the project.
  - a. Upload submittals in electronic form to Electronic Document Submittal Service.
8. Schedule submittals to expedite the Project, and coordinate submission of related items.
  - a. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor.
  - b. For sequential reviews involving Architect's consultants, Owner, or another affected party, allow an additional 7 days.
  - c. For sequential reviews involving approval from authorities having jurisdiction (AHJ), in addition to Architect's approval, allow an additional 30 days.
9. Identify variations from Contract Documents and product or system limitations that may be detrimental to successful performance of the completed work.
10. Provide space for Contractor and Architect review stamps.
11. When revised for resubmission, identify all changes made since previous submission.
12. Distribute reviewed submittals. Instruct parties to promptly report inability to comply with requirements.
13. Incomplete submittals will not be reviewed, unless they are partial submittals for distinct portion(s) of the work, and have received prior approval for their use.
14. Submittals not requested will not be recognized or processed.

#### B. Product Data Procedures:

1. Submit only information required by individual specification sections.
2. Collect required information into a single submittal.
3. Submit concurrently with related shop drawing submittal.
4. Do not submit (Material) Safety Data Sheets for materials or products.

C. Shop Drawing Procedures:

1. Prepare accurate, drawn-to-scale, original shop drawing documentation by interpreting Contract Documents and coordinating related work.
2. Do not reproduce Contract Documents to create shop drawings.
3. Generic, non-project-specific information submitted as shop drawings do not meet the requirements for shop drawings.

D. Samples Procedures:

1. Transmit related items together as single package.
2. Identify each item to allow review for applicability in relation to shop drawings showing installation locations.
3. Include with transmittal high-resolution image files of samples to facilitate electronic review and approval. Provide separate submittal page for each item image.

3.14 SUBMITTAL REVIEW

A. Submittals for Review: Architect will review each submittal, and approve, or take other appropriate action.

B. Submittals for Information: Architect will acknowledge receipt and review. See below for actions to be taken.

C. Architect's actions will be reflected by marking each returned submittal using virtual stamp on electronic submittals.

1. Notations may be made directly on submitted items and/or listed on appended Submittal Review cover sheet.

D. Architect's and consultants' actions on items submitted for review:

1. Authorizing purchasing, fabrication, delivery, and installation:
  - a. "Approved", or language with same legal meaning.
  - b. "Approved as Noted, Resubmission not required", or language with same legal meaning.
    - 1) At Contractor's option, submit corrected item, with review notations acknowledged and incorporated.
  - c. "Approved as Noted, Resubmit for Record", or language with same legal meaning.
    - 1) Resubmit corrected item, with review notations acknowledged and incorporated. Resubmit separately, or as part of project record documents.
    - 2) Non-responsive resubmittals may be rejected.
2. Not Authorizing fabrication, delivery, and installation:
  - a. "Revise and Resubmit".
    - 1) Resubmit revised item, with review notations acknowledged and incorporated.
    - 2) Non-responsive resubmittals may be rejected.
  - b. "Rejected".
    - 1) Submit item complying with requirements of Contract Documents.



- E. Architect's and consultants' actions on items submitted for information:
1. Items for which no action was taken:
    - a. "Received" - to notify the Contractor that the submittal has been received for record only.
  2. Items for which action was taken:
    - a. "Reviewed" - no further action is required from Contractor.

END OF SECTION

## SECTION 014000

### QUALITY REQUIREMENTS

#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. Submittals.
- B. Quality assurance.
- C. References and standards.
- D. Testing and inspection agencies and services.
- E. Control of installation.
- F. Tolerances.
- G. Manufacturers' field services.
- H. Defect Assessment.

##### 1.2 RELATED REQUIREMENTS

- A. Section 013000 - Administrative Requirements: Submittal procedures.
- B. Section 016000 - Product Requirements: Requirements for material and product quality.

##### 1.3 DEFINITIONS

- A. Contractor's Quality Control Plan: Contractor's management plan for executing the Contract for Construction.

##### 1.4 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Certificates: When specified in individual specification sections, submit certification by the manufacturer and Contractor or installation/application subcontractor to Architect, in quantities specified for Product Data.
  - 1. Indicate material or product complies with or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
  - 2. Certificates may be recent or previous test results on material or product, but must be acceptable to Architect.

- C. **Manufacturer's Instructions:** When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for the Owner's information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.
- D. **Manufacturer's Field Reports:** Submit reports for Architect's benefit as contract administrator or for Owner.
  - 1. Submit report in duplicate within 30 days of observation to Architect for information.
  - 2. Submit for information for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents.

## 1.5 QUALITY ASSURANCE

- A. **Contractor's Quality Control (CQC) Plan:**
  - 1. Prior to start of work, submit a comprehensive plan describing how contract deliverables will be produced. Tailor CQC plan to specific requirements of the project. Include the following information:
    - a. **Management Structure:** Identify personnel responsible for quality. Include a chart showing lines of authority.
      - 1) Include qualifications (in resume form), duties, responsibilities of each person assigned to CQC function.
    - b. **Management Approach:** Define, describe, and include in the plan specific methodologies used in executing the work.
      - 1) Management and control of documents and records relating to quality.
      - 2) Communications.
      - 3) Coordination procedures.
      - 4) Resource management.
      - 5) Process control.
      - 6) Inspection and testing procedures and scheduling.
      - 7) Control of noncomplying work.
      - 8) Tracking deficiencies from identification, through acceptable corrective action, and verification.
      - 9) Control of testing and measuring equipment.
      - 10) Project materials certification.
      - 11) Managerial continuity and flexibility.
    - c. Owner will not make a separate payment for providing and maintaining a Quality Control Plan. Include associated costs in Bid price.
    - d. Acceptance of the plan is required prior to start of construction activities not including mobilization work. Owner's acceptance of the plan will be conditional and predicated on continuing satisfactory adherence to the plan. Owner reserves the right to require Contractor to make changes to the plan and operations, including removal of personnel, as necessary, to obtain specified quality of work results.
- B. **Quality-Control Personnel Qualifications.** Engage a person with requisite training and experience to implement and manage quality assurance (QA) and quality control (QC) for the

project.

## 1.6 REFERENCES AND STANDARDS

- A. For products and workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Comply with reference standard of date of issue current on date of Contract Documents, except where a specific date is established by applicable code.
- C. Obtain copies of standards where required by product specification sections.
- D. Maintain copy at project site during submittals, planning, and progress of the specific work, until Substantial Completion.
- E. Should specified reference standards conflict with Contract Documents, request clarification from Architect before proceeding.
- F. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of Architect shall be altered from Contract Documents by mention or inference otherwise in any reference document.

## PART 2 PRODUCTS - NOT USED

## PART 3 EXECUTION

### 3.1 CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding.
- D. Comply with specified standards as minimum quality for the work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Have work performed by persons qualified to produce required and specified quality.
- F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.
- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

### 3.2 TOLERANCES

- A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Architect before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.

### 3.3 TESTING AND INSPECTION

- A. See individual specification sections for testing and inspection required.

### 3.4 MANUFACTURERS' FIELD SERVICES

- A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust, and balance equipment as applicable, and to initiate instructions when necessary.
- B. Submit qualifications of observer to Architect 30 days in advance of required observations.
- C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

### 3.5 DEFECT ASSESSMENT

- A. Replace Work or portions of the Work not complying with specified requirements.
- B. If, in the opinion of Architect, it is not practical to remove and replace the work, Architect will direct an appropriate remedy or adjust payment.

END OF SECTION

SECTION 015000

TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Temporary utilities.
- B. Temporary telecommunications services.
- C. Temporary sanitary facilities.
- D. Temporary Controls: Barriers and enclosures.
- E. Security requirements.
- F. Vehicular access and parking.
- G. Waste removal facilities and services.
- H. Field offices.

1.2 TEMPORARY UTILITIES

- A. Owner will provide the following:
  - 1. Electrical power, consisting of connection to existing facilities.
  - 2. Water supply, consisting of connection to existing facilities.
- B. Existing facilities may be used.

1.3 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public, to allow for owner's use of site and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing building.
- C. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

#### 1.4 INTERIOR ENCLOSURES

- A. Provide temporary partitions and ceilings as where indicated onto separate work areas from Owner-occupied areas, to prevent penetration of dust and moisture into Owner-occupied areas, and to prevent damage to existing materials and equipment.
- B. Construction: Framing and reinforced polyethylene sheet materials with closed joints and sealed edges at intersections with existing surfaces:
  - 1. STC rating of 35 in accordance with ASTM E90.
  - 2. Maximum flame spread rating of 75 in accordance with ASTM E84.
- C. Paint surfaces exposed to view from Owner-occupied areas.

#### 1.5 SECURITY

- A. Coordinate with Owner's security program.

#### 1.6 VEHICULAR ACCESS AND PARKING

- A. Comply with regulations relating to use of streets and sidewalks, access to emergency facilities, and access for emergency vehicles.
- B. Coordinate access and haul routes with governing authorities and Owner.
- C. Provide and maintain access to fire hydrants, free of obstructions.
- D. Existing on-site roads may be used for construction traffic. Comply with governing authorities.

#### 1.7 WASTE REMOVAL

- A. See Section 017419 - Construction Waste Management and Disposal, for additional requirements.
- B. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.
- C. Provide containers with lids. Remove trash from site daily.
- D. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure unless otherwise approved by the authorities having jurisdiction.
- E. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

#### 1.8 FIELD OFFICES

- A. Office: Owner/Library will provide a modest room for use.

1.9 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Clean and repair damage caused by installation or use of temporary work.
- B. Restore existing facilities used during construction to original condition.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION



## SECTION 015210

### AV SYSTEMS GENERAL CONTRACTOR RESPONSIBILITIES

#### PART 1 GENERAL

##### 1.1 SUMMARY AND RELATED DOCUMENTS

###### A. General.

1. This specification section defines the responsibilities of the general contractor/construction manager with respect to the audio video system requirements for the Atlantic City Free Public Library located in Atlantic City, NJ.
2. The objective of this Section is to identify the general contractor's role, responsibilities and activities required to successfully provide the Owner with professionally implemented, first-class, Audio Video Systems.
3. The AV System Contractor will be hired by the General Contractor. Detailed specifications for the AV Integrator's work will be defined within Specification Section 115201. This specification section will be prepared and released to qualified, owner selected AV integration companies.
4. With respect to the Audio Video Systems, the General Contractor's responsibilities shall also include the following:
  - a. Coordination of electrical contractor work relevant to the AV systems as described within specification Section 267610.
  - b. Coordination of low-voltage contractor work relevant to the AV systems as described within specification Section 277610.
  - c. Coordination with the AV Contractor.
  - d. Coordination of other millwork, carpentry, mechanical and other trade contractor work that may be relevant to the AV systems.
  - e. Coordination of custom color requirements associated with the AV contractor.
  - f. Coordination of schedules relevant to all of the above.

###### B. Stipulations.

1. The specifications section "General Conditions" or other correspondence provided by the owner with this document and related amendments, form a part of this specification by this reference thereto and shall have the same force and effect as if printed herewith in full.

###### C. Construction Documents.

1. The construction documents for the project include all drawings prepared by the project architect, engineers, and related design professionals as well as the AV System Drawings.
2. Section 115201 Audio Video Systems Specifications.
3. Section 267610 AV Systems Electrical and Rough-In Requirements.
4. Section 277610 AV Cabling Requirements for AV Systems.

## 1.2 SCOPE OF SPECIFICATION

- A. The Audio Video Systems requirements for this project consist of multiple AV systems. Refer to Section 115201 for AV system details.

## 1.3 SYSTEM DESCRIPTIONS

- A. Refer to Paragraph 1.3 within Section 115201.

## 1.4 SUBSTITUTIONS

- A. Products specified within Section 115201 have been carefully selected and coordinated with the Owner as required to fulfill the Owner's established expectations and as required to comply with Owner's technology standards. Therefore, any and all contractor requests for substitutions must adhere to the substitution requirements defined within paragraph 1.4 of Section 115201.
- B. Refer to paragraph 1.4 of Section 115201.

## 1.5 REFERENCES

- A. All work included in this specification is to be performed within the guidelines of the following standards:
  1. NEC (National Electric Code).
  2. ASTM (American Society of Tests and Measurements).
  3. IEEE (Institute of Electrical and Electronic Engineers).
  4. AES (Audio Engineering Society).
  5. NAB (National Association of Broadcasters).
  6. AVIXA (Audiovisual and Integrated Experience Association).
  7. ADA (Americans with Disabilities Act).
  8. ANSI (American National Standards Institute).

## 1.6 DEFINITION OF TERMS

- A. The term "Audio Video Systems Contractor" refers to the Audio Video System contractor who has been awarded the contract for providing the goods and services specified and defined within specification Section 115201.
- B. The term "Qualified AV Contractor" refers to a business entity that at a minimum meets the following requirements:
  1. Routinely provides Audio Video System materials and services similar to and typical of, those described within this section.
  2. Has completed and can readily demonstrate the successful completion of not less than three Audio Video System projects comparable in size, scope and complexity to the systems covered by Section 115201 within the last three years.

3. Currently maintains and has maintained the expertise, physical plant and fiscal capacity required to successfully complete a project of the size, scope and complexity of the project covered by Section 115201 for a minimum of five years prior to submission of a proposal for the work covered by this section.
  4. Maintains authorized re-seller agreements for the products specified herein.
  5. Currently maintains the expertise, staffing, certifications, and related capabilities as required to fulfill the Quality Assurance requirements and project process described within paragraph 1.8 of Section 115201.
  6. Provide written confirmation with bid/proposal affirming that if awarded the audio video system project described within this section, the contractor is prepared to and agrees to, fulfill all requirements described within this section specifically including those defined within paragraph 1.8 of Section 115201, the project general conditions, the project construction documents and all applicable codes.
- C. The term "or equivalent" when mentioned in regard to a specified product or device shall mean that the contractor may provide a functional and technical equivalent product in place of the listed item or device. Determination of equivalent models or products shall be at discretion of the owner following the guidelines defined in paragraph 1.4 above.
- D. The term "Work by Others" shall mean any work required by the project but not required of the contractor or subcontractor responsible for this section. Assignment of and Execution of, "Work by Others" as defined within this section shall be the responsibility of the owner, the owner's general contractor or the project electrical contractor.
- E. The term "Furnish" shall mean: Supply the referenced device, item or system including all applicable warranties to the owner.
- F. The term "Install" shall mean: Deliver the referenced item to the project, physically install the item including all terminations, mounting or other labor necessary to successfully integrate the referenced device, item or system into the project including all applicable warranties.
- G. The term "Provide" shall mean: Furnish and Install the referenced device, item, or system.
- H. The term AV System, Audio Video System or Audio Video Systems shall mean the complete systems as defined within this section including audio equipment, video equipment, lighting equipment, control system equipment, digital conversion equipment and related items that are described herein, mentioned herein, shown on the referenced AV drawing set or as necessary to fulfill the design intent.
- I. The abbreviation AV shall mean Audio Video.
- J. The term CTS shall mean Certified Technology Specialist. The CTS certification program is ANSI certified, industry recognized certification program developed and administered by AVIXA that confirms an individual's general knowledge of AV products, systems, and generally accepted practices of the AV industry.
- K. The term CTS-I shall mean Certified Technology Specialist with Installation Specialty. The CTS-I certification program is ANSI certified, industry recognized certification program

developed and administered by AVIXA that confirms an individual's specific knowledge and experience with respect to the installation and implementation processes, technical requirements and best practices associated with the installation and implementation of AV systems typical of those described within this section.

- L. The term CTS-D shall mean Certified Technology Specialist with Design Specialty. The CTS-D certification program is ANSI certified, industry recognized certification program developed and administered by AVIXA an individual's specific knowledge and experience with respect to the engineering, design, installation and implementation processes, technical requirements and best practices associated with the implementation of AV systems typical of those described within this section including the professional services and related integrities required to assure that a system of the type defined within this section is properly coordinated with all members of the project team and respective trade groups serving the project.

## 1.7 SUBMITTALS

- A. Pre-Bid.
  - 1. All AV Contractor pre-bid questions pertaining to the AV System specifications and the scope of work described within those sections shall be reviewed by, signed, and submitted by an experienced and qualified staff member of the bidding contractor.
  - 2. Qualifications and experience for the person who shall review, sign, and submit pre-bid AV questions shall be as described within paragraph 1.8.B of Sections 115201.
- B. With Bid.
  - 1. AV System proposals must be provided in compliance with paragraph 1.7 of sections 115201 including the specified unit and lump sum price information.
- C. Shop Drawings & Related Submittals.
  - 1. Refer to paragraph 1.7 of Sections 115201.
- D. As-Built Drawings.
  - 1. Refer to paragraph 1.7 of Sections 115201.

## 1.8 QUALITY ASSURANCE

- A. Oversee and manage the work covered by this section, sections 115201, 267610, and 277610 and other trades as necessary to ensure that the AV Systems are properly provided.
- B. General: As described within paragraph 1.1 above.
- C. Blocking and Attachment: Provide all blocking and physical support as required for proper and safe installation of signage displays, television displays, direct view LED displays, and any other AV Systems devices as shown on the AV Systems drawings.
- D. Millwork and Related Finishes: Provide all millwork and related finish items that may be associated with and/or required for signage displays, projection screens, direct view LED displays, and any other AV Systems devices as shown on the AV Systems drawings.

- E. Plumb and Square: Provide all oversight, management, direction or work as required to ensure that all rough-in, junction boxes and related work is provided level, plumb and square prior to the start of the owner's AV contractor's installation work.

#### 1.9 SCOPE OF WORK

- A. General: As described within paragraph 1.1 above.
- B. Blocking and Attachment: Provide all blocking and physical support as required for proper and safe installation of signage displays, television displays, projection screens, direct view LED displays, and related AV system devices.
- C. Millwork and Related Finishes: Provide all millwork and related finish items that may be associated with and/or required for signage displays, television displays, projection screens, direct view LED displays, tiled LCD displays, loudspeakers, subwoofers, and related AV system devices.
- D. Plumb and Square: Provide all oversight, management, direction or work as required to ensure that all rough-in, junction boxes and related work is provided level, plumb and square prior to the start of the AV contractor's installation work.

#### 1.10 RELATED WORK

- A. Electrical Contractor (Refer to Section 267610): As shown on the AV drawings and as described within this section.
- B. Low Voltage Contractor (Refer to Section 277610).
  - 1. Install all AV System and supports, J-Hooks and related items necessary to provide a complete AV system cabling infrastructure as shown on the AV drawings and as described within Specification Section 277610.
- C. AV System Contractor (Section 115201).

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

**END OF SECTION**

## SECTION 016000

### PRODUCT REQUIREMENTS

#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. General product requirements.
- B. Transportation, handling, storage and protection.
- C. Product option requirements.
- D. Substitution limitations.
- E. Procedures for Owner-supplied products.
- F. Maintenance materials, including extra materials, spare parts, tools, and software.

##### 1.2 RELATED REQUIREMENTS

- A. Section 011000 - Summary: Lists of products to be removed from existing building.
- B. Section 011000 - Summary: Identification of Owner-supplied products.
- C. Section 012500 - Substitution Procedures: Substitutions made during procurement and/or construction phases.
- D. Section 014000 - Quality Requirements: Product quality monitoring.
- E. Section 017419 - Construction Waste Management and Disposal: Waste disposal requirements potentially affecting product selection, packaging and substitutions.

##### 1.3 SUBMITTALS

- A. Proposed Products List: Submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
  - 1. Submit within 15 days after date of Agreement.
  - 2. For products specified only by reference standards, list applicable reference standards.
- B. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- C. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

- D. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
  - 1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

## PART 2 PRODUCTS

### 2.1 EXISTING PRODUCTS

- A. Do not use materials and equipment removed from existing premises unless specifically required or permitted by Contract Documents.
- B. Existing materials and equipment indicated to be removed, but not to be re-used, relocated, reinstalled, delivered to the Owner, or otherwise indicated as to remain the property of the Owner, become the property of the Contractor; remove from site.
- C. Specific Products to be Reused: The reuse of certain materials and equipment already existing on the project site is required.
  - 1. See Section 011000 for list of items required to be salvaged for reuse and relocation.
  - 2. If reuse of other existing materials or equipment is desired, submit substitution request.

### 2.2 NEW PRODUCTS

- A. Provide new products unless specifically required or permitted by Contract Documents.
- B. See Section 014000 - Quality Requirements, for additional source quality control requirements.
- C. Use of products having any of the following characteristics is not permitted:
  - 1. Made using or containing CFC's or HCFC's.
  - 2. Containing lead, cadmium, or asbestos.
- D. Provide interchangeable components by the same manufacture for components being replaced.
- E. Wiring Terminations: Provide terminal lugs to match branch circuit conductor quantities, sizes, and materials indicated. Size terminal lugs to NFPA 70, include lugs for terminal box.
- F. Cord and Plug: Provide minimum 6 foot cord and plug including grounding connector for connection to electric wiring system. Cord of longer length is specified in individual specification sections.

### 2.3 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.

- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions:  
Submit a request for substitution for any manufacturer not named.

#### 2.4 MAINTENANCE MATERIALS

- A. Furnish extra materials, spare parts, tools, and software of types and in quantities specified in individual specification sections.
- B. Deliver to Project site; obtain receipt prior to final payment.

### PART 3 EXECUTION

#### 3.1 SUBSTITUTION LIMITATIONS

- A. See Section 012500 - Substitution Procedures.

#### 3.2 OWNER-SUPPLIED PRODUCTS

- A. See Section 011000 - Summary for identification of Owner-supplied products.
- B. Owner's Responsibilities:
  - 1. Arrange for and deliver Owner reviewed shop drawings, product data, and samples, to Contractor.
  - 2. Arrange and pay for product delivery to site.
  - 3. On delivery, inspect products jointly with Contractor.
  - 4. Submit claims for transportation damage and replace damaged, defective, or deficient items.
  - 5. Arrange for manufacturers' warranties, inspections, and service.
- C. Contractor's Responsibilities:
  - 1. Review Owner reviewed shop drawings, product data, and samples.
  - 2. Receive and unload products at site; inspect for completeness or damage jointly with Owner.
  - 3. Handle, store, install and finish products.
  - 4. Repair or replace items damaged after receipt.

#### 3.3 TRANSPORTATION AND HANDLING

- A. Package products for shipment in manner to prevent damage; for equipment, package to avoid loss of factory calibration.
- B. If special precautions are required, attach instructions prominently and legibly on outside of packaging.
- C. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.



- D. Transport and handle products in accordance with manufacturer's instructions.
- E. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.
- F. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- G. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage, and to minimize handling.
- H. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

### 3.4 STORAGE AND PROTECTION

- A. Provide protection of stored materials and products against theft, casualty, or deterioration.
- B. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication. See Section 017419.
  - 1. Structural Loading Limitations: Handle and store products and materials so as not to exceed static and dynamic load-bearing capacities of project floor areas.
- C. Store and protect products in accordance with manufacturers' instructions.
- D. Store with seals and labels intact and legible.
- E. Arrange storage of materials and products to allow for visual inspection for the purpose of determination of quantities, amounts, and unit counts.
- F. Store sensitive products in weathertight, climate-controlled enclosures in an environment favorable to product.
- G. For exterior storage of fabricated products, place on sloped supports above ground.
- H. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.
- I. Comply with manufacturer's warranty conditions, if any.
- J. Do not store products directly on the ground.
- K. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- L. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- M. Prevent contact with material that may cause corrosion, discoloration, or staining.

- N. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- O. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

END OF SECTION

## SECTION 017000

### EXECUTION AND CLOSEOUT REQUIREMENTS

#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. Examination, preparation, and general installation procedures.
- B. Requirements for alterations work, including selective demolition, except removal, disposal, and/or remediation of hazardous materials and toxic substances if any is discovered coordinate with requirements found in Section 024100.
- C. Pre-installation meetings.
- D. Cutting and patching.
- E. Cleaning and protection.
- F. Starting of systems and equipment.
- G. Demonstration and instruction of Owner personnel.
- H. Closeout procedures, including Contractor's Correction Punch List, except payment procedures.
- I. General requirements for maintenance service.

##### 1.2 RELATED REQUIREMENTS

- A. Section 011000 - Summary: Limitations on working in existing building; continued occupancy; work sequence; identification of salvaged and relocated materials.
- B. Section 013000 - Administrative Requirements: Submittals procedures, Electronic document submittal service.
- C. Section 014000 - Quality Requirements: Testing and inspection procedures.
- D. Section 015000 - Temporary Facilities and Controls: Temporary interior partitions.
- E. Section 017419 - Construction Waste Management and Disposal: Additional procedures for trash/waste removal, recycling, salvage, and reuse.
- F. Section 017800 - Closeout Submittals: Project record documents, operation and maintenance data, warranties, and bonds.
- G. Section 017900 - Demonstration and Training: Demonstration of products and systems to be commissioned and where indicated in specific specification sections

- H. Section 024100 - Demolition: Demolition of whole structures and parts thereof; site utility demolition.

### 1.3 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Demolition Plan: Submit demolition plan as specified by OSHA and local authorities.
  - 1. Indicate extent of demolition, removal sequence, bracing and shoring, and location and construction of barricades and fences. Include design drawings and calculations for bracing and shoring.
  - 2. Identify demolition firm and submit qualifications.
  - 3. Include a summary of safety procedures.
- C. Cutting and Patching: Submit written request in advance of cutting or alteration that affects:
  - 1. Structural integrity of any element of Project.
  - 2. Integrity of weather exposed or moisture resistant element.
  - 3. Efficiency, maintenance, or safety of any operational element.
  - 4. Visual qualities of sight exposed elements.
  - 5. Work of Owner or separate Contractor.
  - 6. Include in request:
    - a. Identification of Project.
    - b. Location and description of affected work.
    - c. Necessity for cutting or alteration.
    - d. Description of proposed work and products to be used.
    - e. Alternatives to cutting and patching.
    - f. Effect on work of Owner or separate Contractor.
    - g. Written permission of affected separate Contractor.
    - h. Date and time work will be executed.
- D. Project Record Documents: Accurately record actual locations of capped and active utilities.

### 1.4 PROJECT CONDITIONS

- A. Use of explosives is not permitted.
- B. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.
- C. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere and over adjacent property.
  - 1. Provide dust-proof barriers between construction areas and areas continuing to be occupied by Owner.

- D. Noise Control: Provide methods, means, and facilities to minimize noise produced by construction operations.
  - 1. Indoors: Limit conduct of especially noisy interior work to:
    - a. Monday through Wednesday: 9:30 am to 5 pm.
    - b. Thursday: 9:30 am to 8 pm.
    - c. Friday and Saturday: 9:30 am to 5 pm.

## 1.5 COORDINATION

- A. See Section 011000 for occupancy-related requirements.
- B. Coordinate scheduling, 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.
- C. Notify affected utility companies and comply with their requirements.
- D. Verify that utility requirements and characteristics of new 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.
- E. Coordinate space requirements, supports, and installation of mechanical and electrical work that are indicated diagrammatically on drawings. Follow routing indicated 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.
- F. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
- G. Coordinate completion and clean-up of work of separate sections.
- H. 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.

## PART 2 PRODUCTS

### 2.1 PATCHING MATERIALS

- A. New Materials: As specified in product sections; match existing products and work for patching and extending work.
- B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.
- C. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 016000 - Product Requirements.

### PART 3 EXECUTION

#### 3.1 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.
- E. Verify that utility services are available, of the correct characteristics, and in the correct locations.
- F. 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.

#### 3.2 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.
- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

#### 3.3 PREINSTALLATION MEETINGS

- A. When required in individual specification sections, convene a preinstallation meeting at the site prior to commencing work of the section.
- B. Require attendance of parties directly affecting, or affected by, work of the specific section.
- C. Notify Architect four days in advance of meeting date.
- D. Prepare agenda and preside at meeting:
  - 1. Review conditions of examination, preparation and installation procedures.
  - 2. Review coordination with related work.
- E. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

### 3.4 GENERAL INSTALLATION REQUIREMENTS

- A. In addition to compliance with regulatory requirements, conduct construction operations in compliance with NFPA 241, including applicable recommendations in Appendix A.
- B. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.
- C. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
- D. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
- E. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
- F. Make neat transitions between different surfaces, maintaining texture and appearance.

### 3.5 ALTERATIONS

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
  - 1. Verify that construction and utility arrangements are as indicated.
  - 2. Report discrepancies to Architect before disturbing existing installation.
  - 3. Beginning of alterations work constitutes acceptance of existing conditions.
- B. Keep areas in which alterations are being conducted separated from other areas that are still occupied.
  - 1. Provide, erect, and maintain temporary dustproof partitions of construction specified in Section 015000 in locations indicated on drawings.
  - 2. Provide sound retardant partitions of construction indicated on drawings in locations indicated on drawings.
- C. Remove existing work as indicated and as required to accomplish new work.
  - 1. Remove items indicated on drawings.
  - 2. Relocate items indicated on drawings.
  - 3. Where new surface finishes are to be applied to existing work, perform removals, patch, and prepare existing surfaces as required to receive new finish; remove existing finish if necessary for successful application of new finish.
  - 4. Where new surface finishes are not specified or indicated, patch holes and damaged surfaces to match adjacent finished surfaces as closely as possible.
- D. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications): Remove, relocate, and extend existing systems to accommodate new construction.
  - 1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components; if necessary, modify installation to allow access

- or provide access panel.
  - 2. Where existing systems or equipment are not active and Contract Documents require reactivation, put back into operational condition; repair supply, distribution, and equipment as required.
  - 3. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
    - a. Disable existing systems only to make switchovers and connections; minimize duration of outages.
    - b. See Section 011000 for other limitations on outages and required notifications.
    - c. Provide temporary connections as required to maintain existing systems in service.
  - 4. Verify that abandoned services serve only abandoned facilities.
  - 5. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification; patch holes left by removal using materials specified for new construction.
- E. Protect existing work to remain.
- 1. Prevent movement of structure; provide shoring and bracing if necessary.
  - 2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
  - 3. Repair adjacent construction and finishes damaged during removal work.
- F. Adapt existing work to fit new work: Make as neat and smooth transition as possible.
- G. Patching: Where the existing surface is not indicated to be refinished, patch to match the surface finish that existed prior to cutting. Where the surface is indicated to be refinished, patch so that the substrate is ready for the new finish.
- H. Refinish existing surfaces as indicated:
- 1. Where rooms or spaces are indicated to be refinished, refinish all visible existing surfaces to remain to the specified condition for each material, with a neat transition to adjacent finishes.
  - 2. If mechanical or electrical work is exposed accidentally during the work, re-cover and refinish to match.
- I. Clean existing systems and equipment.
- J. Remove demolition debris and abandoned items from alterations areas and dispose of off-site; do not burn or bury.
- K. Do not begin new construction in alterations areas before demolition is complete.
- L. Comply with all other applicable requirements of this section.
- 3.6 CUTTING AND PATCHING
- A. Whenever possible, execute the work by methods that avoid cutting or patching.
  - B. See Alterations article above for additional requirements.



- C. Perform whatever cutting and patching is necessary to:
  - 1. Complete the work.
  - 2. Fit products together to integrate with other work.
  - 3. Provide openings for penetration of mechanical, electrical, and other services.
  - 4. Match work that has been cut to adjacent work.
  - 5. Repair areas adjacent to cuts to required condition.
  - 6. Repair new work damaged by subsequent work.
  - 7. Remove samples of installed work for testing when requested.
  - 8. Remove and replace defective and non-complying work.
- D. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to specified condition.
- E. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
- F. Restore work with new products in accordance with requirements of Contract Documents.
- G. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- H. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material in accordance with Section 078400, to full thickness of the penetrated element.
- I. Patching:
  - 1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
  - 2. Match color, texture, and appearance.
  - 3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

### 3.7 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- 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 trash/rubbish from site daily and dispose off-site; do not burn or bury.

### 3.8 PROTECTION OF INSTALLED WORK

- A. Protect installed work from damage by construction operations.
- B. Provide special protection where specified in individual specification sections.
- C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- F. Protect work from spilled liquids. If work is exposed to spilled liquids, immediately remove protective coverings, dry out work, and replace protective coverings.
- G. Prohibit traffic from landscaped areas.
- H. Remove protective coverings when no longer needed; reuse or recycle coverings if possible.

### 3.9 SYSTEM STARTUP

- A. Coordinate schedule for start-up of various equipment and systems.
- B. Notify Architect and Owner seven days prior to start-up of each item.
- C. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions that may cause damage.
- D. Verify tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.
- E. Verify that wiring and support components for equipment are complete and tested.
- F. Execute start-up under supervision of applicable Contractor personnel and manufacturer's representative in accordance with manufacturers' instructions.
- G. When specified in individual specification Sections, require manufacturer to provide authorized representative to be present at site to inspect, check, and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.
- H. Submit a written report that equipment or system has been properly installed and is functioning correctly.

### 3.10 DEMONSTRATION AND INSTRUCTION

- A. See Section 017900 - Demonstration and Training.

3.11 ADJUSTING

- A. Adjust operating products and equipment to ensure smooth and unhindered operation.

3.12 FINAL CLEANING

- A. Execute final cleaning prior to Substantial Completion.
- B. Use cleaning materials that are nonhazardous.
- C. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
- D. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.
- E. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.
- F. Replace filters of operating equipment.
- G. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.
- H. Clean Owner-occupied areas of work if necessary.

3.13 CLOSEOUT PROCEDURES

- A. Make submittals that are required by governing or other authorities.
  - 1. Provide copies to Architect and Owner.
- B. Accompany Project Coordinator on preliminary inspection to determine items to be listed for completion or correction in the Contractor's Correction Punch List for Contractor's Notice of Substantial Completion.
- C. Notify Architect when work is considered ready for Architect's Substantial Completion inspection.
- D. Submit written certification containing Contractor's Correction Punch List, that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Architect's Substantial Completion inspection.
- E. Owner will occupy all of the building as specified in Section 011000.
- F. Conduct Substantial Completion inspection and create Final Correction Punch List containing Architect's and Contractor's comprehensive list of items identified to be completed or corrected and submit to Architect.

- G. Correct items of work listed in Final Correction Punch List and comply with requirements for access to Owner-occupied areas.
- H. Accompany Project Coordinator on Contractor's preliminary final inspection.
- I. Notify Architect when work is considered finally complete and ready for Architect's Substantial Completion final inspection.
- J. Complete items of work determined by Architect listed in executed Certificate of Substantial Completion.

3.14 MAINTENANCE

- A. Provide service and maintenance of components indicated in specification sections.
- B. Maintenance Period: As indicated in specification sections or, if not indicated, not less than one year from the Date of Substantial Completion or the length of the specified warranty, whichever is longer.
- C. Examine system components at a frequency consistent with reliable operation. Clean, adjust, and lubricate as required.
- D. Include systematic examination, adjustment, and lubrication of components. Repair or replace parts whenever required. Use parts produced by the manufacturer of the original component.
- E. Maintenance service shall not be assigned or transferred to any agent or subcontractor without prior written consent of the Owner.

END OF SECTION

SECTION 017419

CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 GENERAL

1.1 WASTE MANAGEMENT REQUIREMENTS

- A. Employ processes that ensure the generation of as little waste as possible due to error, poor planning, breakage, mishandling, contamination, or other factors.
- B. Minimize trash/waste disposal in landfills; reuse, salvage, or recycle as much waste as economically feasible.
- C. Contractor Reporting Responsibilities: Submit periodic Waste Disposal Reports; report landfill disposal and recycling regardless of to whom the cost or savings accrues; use the same units of measure on required reports.
- D. Develop and follow a Waste Management Plan designed to implement these requirements.
- E. The following sources may be useful in developing the Waste Management Plan:
  - 1. State Recycling Department.
- F. Methods of trash/waste disposal that are not acceptable are:
  - 1. Burning on the project site.
  - 2. Burying on the project site.
  - 3. Dumping or burying on other property, public or private.
  - 4. Other illegal dumping or burying.
  - 5. Incineration, either on- or off-site.
- G. Regulatory Requirements: Contractor is responsible for knowing and complying with regulatory requirements, including but not limited to Federal, state and local requirements, pertaining to legal disposal of all construction and demolition waste materials.

1.2 RELATED REQUIREMENTS

- A. Section 012500 - Substitution Procedures.
- B. Section 013000 - Administrative Requirements: Additional requirements for project meetings, reports, submittal procedures, and project documentation.
- C. Section 015000 - Temporary Facilities and Controls: Additional requirements related to trash/waste collection and removal facilities and services.
- D. Section 016000 - Product Requirements: Waste prevention requirements related to product substitutions.

- E. Section 016000 - Product Requirements: Waste prevention requirements related to delivery, storage, and handling.
- F. Section 017000 - Execution and Closeout Requirements: Trash/waste prevention procedures related to cutting and patching, installation, protection, and cleaning.

### 1.3 DEFINITIONS

- A. Clean: Untreated and unpainted; not contaminated with oils, solvents, caulk, or the like.
- B. Construction and Demolition Waste: Solid wastes typically including building materials, packaging, trash, debris, and rubble resulting from construction, remodeling, repair and demolition operations.
- C. Hazardous: Exhibiting the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity or reactivity.
- D. Nonhazardous: Exhibiting none of the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity, or reactivity.
- E. Nontoxic: Neither immediately poisonous to humans nor poisonous after a long period of exposure.
- F. Recyclable: The ability of a product or material to be recovered at the end of its life cycle and remanufactured into a new product for reuse by others.
- G. Recycle: To remove a waste material from the project site to another site for remanufacture into a new product for reuse by others.
- H. Recycling: The process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for the purpose of using the altered form. Recycling does not include burning, incinerating, or thermally destroying waste.
- I. Return: To give back reusable items or unused products to vendors for credit.
- J. Source Separation: The act of keeping different types of waste materials separate beginning from the first time they become waste.
- K. Toxic: Poisonous to humans either immediately or after a long period of exposure.
- L. Trash: Any product or material unable to be reused, returned, recycled, or salvaged.
- M. Waste: Extra material or material that has reached the end of its useful life in its intended use. Waste includes salvageable, returnable, recyclable, and reusable material.

### 1.4 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Submit Waste Management Plan within 10 calendar days after receipt of Notice to Proceed, or prior to any trash or waste removal, whichever occurs sooner; submit projection of all trash and waste that will require disposal and alternatives to landfilling.

- C. Waste Management Plan: Include the following information:
1. Analysis of the trash and waste projected to be generated during the entire project construction cycle, including types and quantities.
  2. Landfill Options: The name, address, and telephone number of the landfill(s) where trash/waste will be disposed of, the applicable landfill tipping fee(s), and the projected cost of disposing of all project trash/waste in the landfill(s).
  3. Landfill Alternatives: List all waste materials that will be diverted from landfills by reuse, salvage, or recycling.
  4. Meetings: Describe regular meetings to be held to address waste prevention, reduction, recycling, salvage, reuse, and disposal.
  5. Materials Handling Procedures: Describe the means by which materials to be diverted from landfills will be protected from contamination and prepared for acceptance by designated facilities; include separation procedures for recyclables, storage, and packaging.
  6. Transportation: Identify the destination and means of transportation of materials to be recycled; i.e. whether materials will be site-separated and self-hauled to designated centers, or whether mixed materials will be collected by a waste hauler.
- D. Waste Disposal Reports: Submit at specified intervals, with details of quantities of trash and waste, means of disposal and costs; show both totals to date and since last report.
1. Submit updated Report with each Application for Progress Payment; failure to submit Report will delay payment.
  2. Submit Report on a form acceptable to Owner.
  3. Landfill Disposal: Include the following information:
    - a. Identification of material.
    - b. Amount, in tons or cubic yards, of trash/waste material from the project disposed of in landfills.
    - c. State the identity of landfills, total amount of tipping fees paid to landfill, and total disposal cost.
    - d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
  4. Incinerator Disposal: Include the following information:
    - a. Identification of material.
    - b. Amount, in tons or cubic yards, of trash/waste material from the project delivered to incinerators.
    - c. State the identity of incinerators, total amount of fees paid to incinerator, and total disposal cost.
    - d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
  5. Recycled Materials: Include the following information for each:
    - a. Identification of material, including those retrieved by installer for use on other projects.
    - b. Amount, in tons or cubic yards, date removed from the project site, and receiving party.

- c. Transportation cost, amount paid or received for the material, and the net total cost or savings of recycling each material.
    - d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
    - e. Certification by receiving party that materials will not be disposed of in landfills or by incineration.
  6. Material Reused on Project: Include the following information for each:
    - a. Identification of material and how it was used in the project.
  7. Other Disposal Methods: Include information similar to that described above, as appropriate to disposal method.
- E. Recycling Incentive Programs:
  1. Where revenue accrues to Contractor, submit copies of documentation required to qualify for incentive.

## PART 2 PRODUCTS

### 2.1 PRODUCT SUBSTITUTIONS

- A. See Section 016000 and Section 012500.
- B. For each proposed product substitution, submit the following information in addition to requirements specified in Section 016000:
  1. Relative amount of waste produced, compared to specified product.
  2. Cost savings on waste disposal, compared to specified product, to be deducted from the Contract Price.
  3. Proposed disposal method for waste product.
  4. Markets for recycled waste product.

## PART 3 EXECUTION

### 3.1 WASTE MANAGEMENT PROCEDURES

- A. See Section 013000 for additional requirements for project meetings, reports, submittal procedures, and project documentation.
- B. See Section 015000 for additional requirements related to trash/waste collection and removal facilities and services.
- C. See Section 016000 for waste prevention requirements related to delivery, storage, and handling.
- D. See Section 017000 for trash/waste prevention procedures related to demolition, cutting and patching, installation, protection, and cleaning.



### 3.2 WASTE MANAGEMENT PLAN IMPLEMENTATION

- A. **Manager:** Designate an on-site person or persons responsible for instructing workers and overseeing and documenting results of the Waste Management Plan.
- B. **Communication:** Distribute copies of the Waste Management Plan to job site foreman, each subcontractor, Owner, and Architect.
- C. **Instruction:** Provide on-site instruction of appropriate separation, handling, and recycling, salvage, reuse, and return methods to be used by all parties at the appropriate stages of the project.
- D. **Meetings:** Discuss trash/waste management goals and issues at project meetings.
  - 1. Prebid meeting.
  - 2. Preconstruction meeting.
  - 3. Regular job-site meetings.
  - 4. Job safety meetings.
- E. **Facilities:** Provide specific facilities for separation and storage of materials for recycling, return, and trash disposal, for use by all contractors and installers.
  - 1. Provide containers as required.
  - 2. Provide temporary enclosures around piles of separated materials to be recycled.
  - 3. Provide materials for barriers and enclosures that are nonhazardous, recyclable, or reusable to the maximum extent possible; reuse project construction waste materials if possible.
  - 4. Locate enclosures out of the way of construction traffic.
  - 5. Provide adequate space for pick-up and delivery and convenience to subcontractors.
  - 6. If an enclosed area is not provided, clearly lay out and label a specific area on-site.
  - 7. Keep recycling and trash/waste bin areas neat and clean and clearly marked in order to avoid contamination of materials.
- F. **Hazardous Wastes:** Separate, store, and dispose of hazardous wastes according to applicable regulations.
- G. **Recycling:** Separate, store, protect, and handle at the site identified recyclable waste products in order to prevent contamination of materials and to maximize recyclability of identified materials. Arrange for timely pickups from the site or deliveries to recycling facility in order to prevent contamination of recyclable materials.

END OF SECTION

SECTION 017800

CLOSEOUT SUBMITTALS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Project record documents.
- B. Operation and maintenance data.
- C. Materials transparency manual.
- D. Warranties and bonds.

1.2 RELATED REQUIREMENTS

- A. Section 013000 - Administrative Requirements: Submittals procedures, shop drawings, product data, and samples.
- B. Section 017000 - Execution and Closeout Requirements: Contract closeout procedures.
- C. Individual Product Sections: Specific requirements for operation and maintenance data.
- D. Individual Product Sections: Warranties required for specific products or Work.

1.3 SUBMITTALS

- A. Project Record Documents: Submit documents to Architect with claim for final Application for Payment.
- B. Operation and Maintenance Data:
  - 1. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Architect will review draft and return one copy with comments.
  - 2. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit completed documents within ten days after acceptance.
  - 3. Submit one copy of completed documents 15 days prior to final inspection. This copy will be reviewed and returned after final inspection, with Architect comments. Revise content of all document sets as required prior to final submission.
  - 4. Submit two sets of revised final documents in final form within 10 days after final inspection.
- C. Materials Transparency Manual:
  - 1. Compile and submit a digital and a printed version of information disclosing materials content for interior finishes, furnishings (including workstations), built-in furniture. Meet

IWBI (BS) requirements for format and content.

D. Warranties and Bonds:

1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within 10 days after acceptance.
2. Make other submittals within 10 days after Date of Substantial Completion, prior to final Application for Payment.
3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within 10 days after acceptance, listing the date of acceptance as the beginning of the warranty period.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.1 PROJECT RECORD DOCUMENTS

A. Maintain on site one set of the following record documents; record actual revisions to the Work:

1. Drawings.
2. Specifications.
3. Addenda.
4. Change Orders and other modifications to the Contract.
5. Reviewed shop drawings, product data, and samples.
6. Manufacturer's instruction for assembly, installation, and adjusting.

B. Ensure entries are complete and accurate, enabling future reference by Owner.

C. Store record documents separate from documents used for construction.

D. Record information concurrent with construction progress.

E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:

1. Manufacturer's name and product model and number.
2. Product substitutions or alternates utilized.
3. Changes made by Addenda and modifications.

F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:

1. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
2. Field changes of dimension and detail.
3. Details not on original Contract drawings.

### 3.2 OPERATION AND MAINTENANCE DATA

- A. Source Data: For each product or system, list names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.
- B. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.
- C. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.
- D. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

### 3.3 OPERATION AND MAINTENANCE DATA FOR MATERIALS AND FINISHES

- A. For Each Product, Applied Material, and Finish:
  - 1. Product data, with catalog number, size, composition, and color and texture designations.
  - 2. Information for re-ordering custom manufactured products.
- B. Instructions for Care and Maintenance: Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental cleaning agents and methods, and recommended schedule for cleaning and maintenance.
- C. Moisture protection and weather-exposed products: Include product data listing applicable reference standards, chemical composition, and details of installation. Provide recommendations for inspections, maintenance, and repair.
- D. Additional information as specified in individual product specification sections.
- E. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.

### 3.4 OPERATION AND MAINTENANCE DATA FOR EQUIPMENT AND SYSTEMS

- A. For Each Item of Equipment and Each System:
  - 1. Description of unit or system, and component parts.
  - 2. Identify function, normal operating characteristics, and limiting conditions.
  - 3. Include performance curves, with engineering data and tests.
  - 4. Complete nomenclature and model number of replaceable parts.
- B. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.

- C. Panelboard Circuit Directories: Provide electrical service characteristics, controls, and communications; typed.
- D. Include color coded wiring diagrams as installed.
- E. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.
- F. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and trouble shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
  - 1. Include HVAC outdoor and exhaust air damper calibration strategy.
    - a. Include provisions which ensure that full closure of dampers can be achieved.
  - 2. Include Carbon Dioxide Monitoring Protocol.
  - 3. Include Carbon Monoxide Monitoring Protocol.
  - 4. Include Frost Mitigation Strategy for ventilation heat-recovery system.
- G. Provide servicing and lubrication schedule, and list of lubricants required.
- H. Include manufacturer's printed operation and maintenance instructions.
- I. Include sequence of operation by controls manufacturer.
- J. Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- K. Provide control diagrams by controls manufacturer as installed.
- L. Provide Contractor's coordination drawings, with color coded piping diagrams as installed.
- M. Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
- N. Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
- O. Include test and balancing reports.
- P. Additional Requirements: As specified in individual product specification sections.

### 3.5 ASSEMBLY OF OPERATION AND MAINTENANCE MANUALS

- A. Assemble operation and maintenance data into durable manuals for Owner's personnel use, with data arranged in the same sequence as, and identified by, the specification sections.
- B. Where systems involve more than one specification section, provide separate tabbed divider for each system.
- C. Binders: Commercial quality, 8-1/2 by 11 inch three D side ring binders with durable plastic covers; 2 inch maximum ring size. When multiple binders are used, correlate data into related

consistent groupings.

- D. Cover: Identify each binder with typed or printed title OPERATION AND MAINTENANCE INSTRUCTIONS; identify title of Project; identify subject matter of contents.
- E. Project Directory: Title and address of Project; names, addresses, and telephone numbers of Architect, Consultants, Contractor and subcontractors, with names of responsible parties.
- F. Tables of Contents: List every item separated by a divider, using the same identification as on the divider tab; where multiple volumes are required, include all volumes Tables of Contents in each volume, with the current volume clearly identified.
- G. Dividers: Provide tabbed dividers for each separate product and system; identify the contents on the divider tab; immediately following the divider tab include a description of product and major component parts of equipment.
- H. Text: Manufacturer's printed data, or typewritten data on 20 pound paper.
- I. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
- J. Arrangement of Contents: Organize each volume in parts as follows:
  - 1. Project Directory.
  - 2. Table of Contents, of all volumes, and of this volume.
  - 3. Operation and Maintenance Data: Arranged by system, then by product category.
    - a. Source data.
    - b. Product data, shop drawings, and other submittals.
    - c. Operation and maintenance data.
    - d. Field quality control data.
    - e. Photocopies of warranties and bonds.
  - 4. Design Data: To allow for addition of design data furnished by Architect or others, provide a tab labeled "Design Data" and provide a binder large enough to allow for insertion of at least 20 pages of typed text.

### 3.6 WARRANTIES AND BONDS

- A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within 10 days after completion of the applicable item of work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until Date of Substantial completion is determined.
- B. Verify that documents are in proper form, contain full information, and are notarized.
- C. Co-execute submittals when required.
- D. Retain warranties and bonds until time specified for submittal.
- E. Manual: Bind in commercial quality 8-1/2 by 11 inch three D side ring binders with durable plastic covers.

- F. Cover: Identify each binder with typed or printed title WARRANTIES AND BONDS, with title of Project; name, address and telephone number of Contractor and equipment supplier; and name of responsible company principal.
- G. 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 product or work item.
- H. Separate each warranty or bond with index tab sheets keyed to the Table of Contents listing. Provide full information, using separate typed sheets as necessary. List Subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.

END OF SECTION

## SECTION 017900

### DEMONSTRATION AND TRAINING

#### PART 1 GENERAL

##### 1.1 SUMMARY

- A. Demonstration of products and systems where indicated in specific specification sections.
- B. Training of Owner personnel in operation and maintenance is required for:
  - 1. All software-operated systems.
  - 2. HVAC systems and equipment.
  - 3. Plumbing equipment.
  - 4. Electrical systems and equipment.
  - 5. Items specified in individual product Sections.
- C. Training of Owner personnel in care, cleaning, maintenance, and repair is required for:
  - 1. Items specified in individual product Sections.

##### 1.2 RELATED REQUIREMENTS

- A. Section 017800 - Closeout Submittals: Operation and maintenance manuals.
- B. Other Specification Sections: Additional requirements for demonstration and training.

##### 1.3 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Training Plan: Owner will designate personnel to be trained; tailor training to needs and skill-level of attendees.
  - 1. Submit to Architect for transmittal to Owner.
  - 2. Submit not less than four weeks prior to start of training.
  - 3. Revise and resubmit until acceptable.
  - 4. Provide an overall schedule showing all training sessions.
  - 5. Include at least the following for each training session:
    - a. Identification, date, time, and duration.
    - b. Description of products and/or systems to be covered.
    - c. Name of firm and person conducting training; include qualifications.
    - d. Intended audience, such as job description.
    - e. Objectives of training and suggested methods of ensuring adequate training.
    - f. Methods to be used, such as classroom lecture, live demonstrations, hands-on, etc.



- g. Media to be used, such as slides, hand-outs, etc.
    - h. Training equipment required, such as projector, projection screen, etc., to be provided by Contractor.
- C. Training Manuals: Provide training manual for each attendee; allow for minimum of two attendees per training session.
  - 1. Include applicable portion of O&M manuals.
  - 2. Include copies of all hand-outs, slides, overheads, etc., that are not included in O&M manuals.
  - 3. Provide one extra copy of each training manual to be included with operation and maintenance data.
- D. Training Reports:
  - 1. Identification of each training session, date, time, and duration.
  - 2. Sign-in sheet showing names and job titles of attendees.
  - 3. List of attendee questions and written answers given, including copies of and references to supporting documentation required for clarification; include answers to questions that could not be answered in original training session.

#### 1.4 QUALITY ASSURANCE

- A. Instructor Qualifications: Familiar with design, operation, maintenance and troubleshooting of the relevant products and systems.
  - 1. Provide as instructors the most qualified trainer of those contractors and/or installers who actually supplied and installed the systems and equipment.
  - 2. Where a single person is not familiar with all aspects, provide specialists with necessary qualifications.

#### PART 2 PRODUCTS - NOT USED

#### PART 3 EXECUTION

##### 3.1 DEMONSTRATION - GENERAL

- A. Demonstrations conducted during system start-up do not qualify as demonstrations for the purposes of this section, unless approved in advance by Owner.
- B. Demonstration may be combined with Owner personnel training if applicable.
- C. Operating Equipment and Systems: Demonstrate operation in all modes, including start-up, shut-down, seasonal changeover, emergency conditions, and troubleshooting, and maintenance procedures, including scheduled and preventive maintenance.
  - 1. Perform demonstrations not less than two weeks prior to Substantial Completion.
  - 2. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.

- D. Non-Operating Products: Demonstrate cleaning, scheduled and preventive maintenance, and repair procedures.
  - 1. Perform demonstrations not less than two weeks prior to Substantial Completion.

### 3.2 TRAINING - GENERAL

- A. Conduct training on-site unless otherwise indicated.
- B. Provide training in minimum two hour segments.
- C. Training schedule will be subject to availability of Owner's personnel to be trained; re-schedule training sessions as required by Owner; once schedule has been approved by Owner failure to conduct sessions according to schedule will be cause for Owner to charge Contractor for personnel "show-up" time.
- D. Review of Facility Policy on Operation and Maintenance Data: During training discuss:
  - 1. The location of the O&M manuals and procedures for use and preservation; backup copies.
  - 2. Typical contents and organization of all manuals, including explanatory information, system narratives, and product specific information.
  - 3. Typical uses of the O&M manuals.
- E. Product- and System-Specific Training:
  - 1. Review the applicable O&M manuals.
  - 2. For systems, provide an overview of system operation, design parameters and constraints, and operational strategies.
  - 3. Review instructions for proper operation in all modes, including start-up, shut-down, seasonal changeover and emergency procedures, and for maintenance, including preventative maintenance.
  - 4. Provide hands-on training on all operational modes possible and preventive maintenance.
  - 5. Emphasize safe and proper operating requirements; discuss relevant health and safety issues and emergency procedures.
  - 6. Discuss common troubleshooting problems and solutions.
  - 7. Discuss any peculiarities of equipment installation or operation.
  - 8. Discuss warranties and guarantees, including procedures necessary to avoid voiding coverage.
  - 9. Review recommended tools and spare parts inventory suggestions of manufacturers.
  - 10. Review spare parts and tools required to be furnished by Contractor.
  - 11. Review spare parts suppliers and sources and procurement procedures.
- F. Be prepared to answer questions raised by training attendees; if unable to answer during training session, provide written response within three days.

END OF SECTION

## SECTION 024100

### DEMOLITION

#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. Selective demolition of building elements for alteration purposes.

##### 1.2 DEFINITIONS

- A. Demolition: Dismantle, raze, destroy or wreck any building or structure or any part thereof.
- B. Remove: Detach or dismantle items from existing construction and dispose of them off site, unless items are indicated to be salvaged or reinstalled.
- C. Remove and Salvage: Detach or dismantle items from existing construction in a manner to prevent damage. Clean, package, label and deliver salvaged items to Owner in ready-for-reuse condition.
- D. Remove and Reinstall: Detach or dismantle items from existing construction in a manner to prevent damage. Clean and prepare for reuse and reinstall where indicated.
- E. Existing to Remain: Designation for existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled.

##### 1.3 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Site Plan: Indicate:
  - 1. Areas for temporary construction and field offices.
  - 2. Areas for temporary and permanent placement of removed materials.
- C. Demolition Plan: Submit demolition plan as required by OSHA and local AHJs.
  - 1. Indicate extent of demolition, removal sequencing, bracing and shoring, and location and construction of barricades and fences.
- D. Demolition firm qualifications.
- E. Project Record Documents: Accurately record actual locations of capped and active utilities.

##### 1.4 QUALITY ASSURANCE

- A. Demolition Firm Qualifications: Company specializing in the type of work required.

1. Minimum of five years of documented experience.

## PART 2 PRODUCTS

### 2.1 MATERIALS - NOT USED

## PART 3 EXECUTION

### 3.1 DEMOLITION

- A. Remove interior portions of existing building systems, equipment, and components as indicated on drawings.
- B. Notify Architect of discrepancies between existing conditions and drawings before proceeding with selective demolition.
- C. Remove other items indicated, for salvage, relocation, and recycling.

### 3.2 GENERAL PROCEDURES AND PROJECT CONDITIONS

- A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
  1. Obtain required permits.
  2. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
  3. Provide, erect, and maintain temporary barriers and security devices.
  4. Use physical barriers to prevent access to areas that could be hazardous to workers or the public.
  5. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
  6. Do not close or obstruct roadways or sidewalks without permits from authority having jurisdiction.
  7. Conduct operations to minimize obstruction of public and private entrances and exits. Do not obstruct required exits at any time. Protect persons using entrances and exits from removal operations.
  8. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon, or limit access to their property.
- B. Do not begin removal until receipt of notification to proceed from Owner.
- C. Do not begin removal until built elements to be salvaged or relocated have been removed.
- D. Protect existing structures and other elements to remain in place and not removed.
  1. Provide bracing and shoring.
  2. Prevent movement or settlement of adjacent structures.

3. Stop work immediately if adjacent structures appear to be in danger.
- E. Minimize production of dust due to demolition operations.
- F. Perform demolition in a manner that maximizes salvage and recycling of materials.
  1. Dismantle existing construction and separate materials.
  2. Set aside reusable, recyclable, and salvageable materials; store and deliver to collection point or point of reuse.

### 3.3 EXISTING UTILITIES

- A. Coordinate work with utility companies. Notify utilities before starting work, comply with their requirements, and obtain required permits.
- B. Protect existing utilities to remain from damage.
- C. Do not disrupt public utilities without permit from authority having jurisdiction.
- D. Do not close, shut off, or disrupt existing life safety systems that are in use without at least 7 days prior written notification to Owner.
- E. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 3 days prior written notification to Owner.
- F. Locate and mark utilities to remain; mark using highly visible tags or flags, with identification of utility type; protect from damage due to subsequent construction, using substantial barricades if necessary.
- G. Remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities.

### 3.4 SELECTIVE DEMOLITION FOR ALTERATIONS

- A. Existing construction and utilities indicated on drawings are based on casual field observation and existing record documents only.
  1. Verify construction and utility arrangements are as indicated.
  2. Report discrepancies to Architect before disturbing existing installation.
  3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.
- B. Separate areas in which demolition is being conducted from areas that remain occupied.
  1. Provide, erect, and maintain temporary dustproof partitions of construction specified in Section 015000 in locations indicated on drawings.
- C. Remove existing work as indicated and required to accomplish new work.
  1. Remove items indicated on drawings.

- D. Services including, but not limited to, HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications: Remove existing systems and equipment as indicated.
  - 1. Maintain existing active systems to remain in operation, and maintain access to equipment and operational components.
  - 2. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
  - 3. Verify that abandoned services serve only abandoned facilities before removal.
  - 4. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings. Remove back to source of supply where possible, otherwise cap stub and tag with identification.
  
- E. Protect existing work to remain.
  - 1. Prevent movement of structure. Provide shoring and bracing as required.
  - 2. Perform cutting to accomplish removal work neatly and as specified for cutting new work.
  - 3. Repair adjacent construction and finishes damaged during removal work.
  - 4. Patch to match new work.

### 3.5 DEBRIS AND WASTE REMOVAL

- A. Remove debris, junk, and trash from site.
- B. Remove materials not to be reused on site; comply with Section 017419 - Construction Waste Management and Disposal.
- C. Leave site in clean condition, ready for subsequent work.
- D. Clean up spillage and wind-blown debris from public and private lands.

END OF SECTION

SECTION 061053

MISCELLANEOUS ROUGH CARPENTRY

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Preservative treated wood materials.
- B. Fire retardant treated wood materials.
- C. Communications and electrical room mounting boards.
- D. Concealed wood blocking, nailers, and supports.

1.2 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide technical data on wood preservative materials and application instructions.

1.3 DELIVERY, STORAGE, AND HANDLING

- A. General: Cover wood products to protect against moisture. Support stacked products to prevent deformation and to allow air circulation.
- B. Fire Retardant Treated Wood: Prevent exposure to precipitation during shipping, storage, and installation.

PART 2 PRODUCTS

2.1 GENERAL REQUIREMENTS

- A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
  - 1. Species: Southern Pine, unless otherwise indicated.
  - 2. If no species is specified, provide species graded by the agency specified; if no grading agency is specified, provide lumber graded by grading agency meeting the specified requirements.
  - 3. Grading Agency: Grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee ([www.alsc.org](http://www.alsc.org)) and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.

4. Lumber of other species or grades is acceptable provided structural and appearance characteristics are equivalent to or better than products specified.

## 2.2 DIMENSION LUMBER FOR CONCEALED APPLICATIONS

- A. Grading Agency: Southern Pine Inspection Bureau, Inc; SPIB (GR).
- B. Sizes: Nominal sizes as indicated on drawings, S4S.
- C. Moisture Content: S-dry or MC19.
- D. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
  1. Lumber: S4S, No.2 or Standard Grade.
  2. Boards: Standard or No.3.

## 2.3 CONSTRUCTION PANELS

- A. TV Mounting Boards: PS 1, A-D plywood; 3/4 inch thick; flame spread index of 25 or less, smoke developed index of 450 or less, when tested in accordance with ASTM E84.

## 2.4 ACCESSORIES

- A. Fasteners and Anchors:
  1. Metal and Finish: Hot-dipped galvanized steel complying with ASTM A153/A153M for high humidity and preservative-treated wood locations, unfinished steel elsewhere.

## 2.5 FACTORY WOOD TREATMENT

- A. Treated Lumber and Plywood: Comply with requirements of AWWA U1 - Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.
  1. Fire-Retardant Treated Wood: Mark each piece of wood with producer's stamp indicating compliance with specified requirements.
  2. Preservative-Treated Wood: Provide lumber and plywood marked or stamped by an ALSC-accredited testing agency, certifying level and type of treatment in accordance with AWWA standards.
- B. Fire Retardant Treatment:
  1. Interior Type A: AWWA U1, Use Category UCFA, Commodity Specification H, low temperature, low hygroscopic type, chemically treated and pressure impregnated; capable of providing a maximum flame spread index of 25 when tested in accordance with ASTM E84, with no evidence of significant combustion when test is extended for an additional 20 minutes.
    - a. Kiln dry wood after treatment to a maximum moisture content of 19 percent for lumber and 15 percent for plywood.
    - b. Treat rough carpentry items as indicated.



- c. Do not use treated wood in applications exposed to weather or where the wood may become wet.
- C. Preservative Treatment:
  - 1. Preservative Pressure Treatment of Lumber Above Grade: AWWA U1, Use Category UC3B, Commodity Specification A using waterborne preservative.
    - a. Kiln dry lumber after treatment to maximum moisture content of 19 percent.
    - b. Treat lumber in contact with masonry or concrete.
    - c. Treat lumber less than 18 inches above grade.
  - 2. Preservative Pressure Treatment of Plywood Above Grade: AWWA U1, Use Category UC2 and UC3B, Commodity Specification F using waterborne preservative.
    - a. Kiln dry plywood after treatment to maximum moisture content of 19 percent.
    - b. Treat plywood in contact with masonry or concrete.
    - c. Treat plywood less than 18 inches above grade.

### PART 3 EXECUTION

#### 3.1 PREPARATION

- A. Where wood framing bears on cementitious foundations, install full width sill flashing continuous over top of foundation, lap ends of flashing minimum of 4 inches and seal.
- B. Coordinate installation of rough carpentry members specified in other sections.

#### 3.2 INSTALLATION - GENERAL

- A. Select material sizes to minimize waste.
- B. Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as accessory components, including: shims, bracing, and blocking.
- C. Where treated wood is used on interior, provide temporary ventilation during and immediately after installation sufficient to remove indoor air contaminants.

#### 3.3 BLOCKING, NAILERS, AND SUPPORTS

- A. Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty items, and trim.
- B. In framed assemblies that have concealed spaces, provide solid wood fireblocking as required by applicable local code, to close concealed draft openings between floors and between top story and roof/attic space; other material acceptable to code authorities may be used in lieu of solid wood blocking.
- C. In metal stud walls, provide continuous blocking around door and window openings for anchorage of frames, securely attached to stud framing.
- D. In walls, provide blocking attached to studs as backing and support for wall-mounted items, unless item can be securely fastened to two or more studs or other method of support is

explicitly indicated.

- E. Where ceiling-mounting is indicated, provide blocking and supplementary supports above ceiling, unless other method of support is explicitly indicated.

### 3.4 INSTALLATION OF CONSTRUCTION PANELS

- A. Communications and Electrical Room Mounting Boards: Secure with screws to studs with edges over firm bearing; space fasteners at maximum 24 inches on center on edges and into studs in field of board.
  - 1. At fire-rated walls, install board over wall board indicated as part of the fire-rated assembly.
  - 2. Where boards are indicated as full floor-to-ceiling height, install with long edge of board parallel to studs.
  - 3. Install adjacent boards without gaps.

### 3.5 CLEANING

- A. Waste Disposal: See Section 017419 - Construction Waste Management and Disposal.
  - 1. Comply with applicable regulations.
  - 2. Do not burn scrap on project site.
  - 3. Do not burn scraps that have been pressure treated.
  - 4. Do not send materials treated with pentachlorophenol, CCA, or ACA to co-generation facilities or “waste-to-energy” facilities.
- B. Do not leave wood, shavings, sawdust, etc. on the ground or buried in fill.
- C. Prevent sawdust and wood shavings from entering the storm drainage system.

END OF SECTION

SECTION 062000

FINISH CARPENTRY

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Finish carpentry items.
- B. Hardware and attachment accessories.

1.2 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate the work with installation of associated and adjacent components.

1.3 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, and accessories.
  - 1. Provide information as required by AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS).
- C. Samples: Submit two samples of wood trim 12 inch long.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Store finish carpentry items under cover, elevated above grade, and in a dry, well-ventilated area not exposed to heat or sunlight.
- B. Protect from moisture damage.
- C. Handle materials and products to prevent damage to edges, ends, or surfaces.

PART 2 PRODUCTS

2.1 FINISH CARPENTRY ITEMS

- A. Quality Standard: Custom Grade, in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), unless noted otherwise.
- B. Surface Burning Characteristics: Provide materials having fire and smoke properties as required by applicable code.

C. Interior Woodwork Items:

1. Moldings, Bases, Casings, and Miscellaneous Trim: Clear white pine; prepare for paint finish.

2.2 FASTENINGS

- A. Fasteners: Of size and type to suit application.

2.3 ACCESSORIES

- A. Lumber for Shimming: Softwood lumber of cedar species.
- B. Primer: See 099123 - Interior Painting.
- C. Wood Filler: Solvent base, tinted to match surface finish color.

2.4 WOOD TREATMENT

- A. Factory-Treated Lumber: Comply with requirements of AWPA U1 - Use Category System for pressure impregnated wood treatments determined by use categories, expected service conditions, and specific applications.
- B. Fire Retardant Treatment (FR-S Type): Chemically treated and pressure impregnated; capable of providing flame spread index of 25, maximum, and smoke developed index of 450, maximum, when tested in accordance with ASTM E84.
- C. Shop pressure treat wood materials requiring fire rating.
- D. Provide identification on fire retardant treated material.

2.5 SITE FINISHING MATERIALS

- A. Field Finishing: See Section 099123.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify adequacy of backing and support framing.
- B. Verify mechanical, electrical, and building items affecting work of this section are placed and ready to receive this work.

3.2 INSTALLATION

- A. Install custom fabrications in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS) requirements for grade indicated.

- B. Set and secure materials and components in place, plumb and level.
- C. Carefully scribe work abutting other components, with maximum gaps of 1/32 inch. Do not use additional overlay trim to conceal larger gaps.

### 3.3 PREPARATION FOR SITE FINISHING

- A. Set exposed fasteners. Apply wood filler in exposed fastener indentations. Sand work smooth.
- B. Site Finishing: See Section 099123.
- C. Before installation, prime paint surfaces of items or assemblies to be in contact with cementitious materials.

### 3.4 TOLERANCES

- A. Maximum Variation from True Position: 1/16 inch.
- B. Maximum Offset from True Alignment with Abutting Materials: 1/32 inch.

END OF SECTION

SECTION 064100

ARCHITECTURAL WOOD CASEWORK

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Specially fabricated cabinet units.
- B. Hardware.

1.2 ADMINISTRATIVE REQUIREMENTS

- A. Preinstallation Meeting: Convene a preinstallation meeting not less than one week before starting work of this section; require attendance by all affected installers.

1.3 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, and accessories.
- C. Samples: Submit actual samples of architectural cabinet construction, minimum 12 inches square, illustrating proposed cabinet substrate and finish.

1.4 QUALITY ASSURANCE

- A. Fabricator Qualifications: Company specializing in fabricating the products specified in this section with minimum five years of documented experience.
  - 1. Single Source Responsibility: Provide and install this work from single fabricator.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Protect units from moisture damage.

1.6 FIELD CONDITIONS

- A. During and after installation of custom cabinets, maintain temperature and humidity conditions in building spaces at same levels planned for occupancy.

## PART 2 PRODUCTS

### 2.1 CABINETS

- A. Quality Standard: Custom Grade, in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), unless noted otherwise.

### 2.2 PANEL CORE MATERIALS

- A. Particleboard: Composite panel composed of cellulosic particles, additives, and bonding system; comply with ANSI A208.1.
  - 1. Grade: M-2; moisture resistance: MR10.
  - 2. Panel Thickness: 5/8 inch unless indicated otherwise on drawings.

### 2.3 LAMINATE MATERIALS

- A. Manufacturers and Products: As indicated in the Finish Schedule on the drawings.
  - 1. Colors: As indicated in the Finish Schedule on the drawings.
- B. High Pressure Decorative Laminate (HPDL): NEMA LD 3, types as recommended for specific applications.
- C. Provide specific types as indicated.
  - 1. Horizontal Surfaces: HGS, 0.048 inch nominal thickness, color as indicated on drawings.
  - 2. Vertical Surfaces: VGS, 0.028 inch nominal thickness, color as indicated on drawings.
  - 3. Cabinet Liner: CLS, 0.020 inch nominal thickness, color as indicated on drawings.

### 2.4 COUNTERTOPS

- A. Countertops: See Section 123600.

### 2.5 ACCESSORIES

- A. Adhesive: Type recommended by fabricator to suit application.
- B. Plastic Edge Banding: Extruded PVC, convex shaped; smooth finish; self locking serrated tongue; of width to match component thickness.
- C. Fasteners: Size and type to suit application.
- D. Bolts, Nuts, Washers, Lags, Pins, and Screws: Of size and type to suit application; chrome-plated finish in concealed locations and stainless steel or chrome-plated finish in exposed locations.

2.6 HARDWARE

- A. Hardware: BHMA A156.9, types as scheduled for quality grade specified.

2.7 FABRICATION

- A. Assembly: Shop assemble cabinets for delivery to site in units easily handled and to permit passage through building openings.
- B. Edging: Fit shelves, doors, and exposed edges with specified edging. Do not use more than one piece for any single length.
- C. Fitting: When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide matching trim for scribing and site cutting.
- D. Plastic Laminate: Apply plastic laminate finish in full uninterrupted sheets consistent with manufactured sizes. Fit corners and joints hairline; secure with concealed fasteners.
  - 1. Cap exposed plastic laminate finish edges with material of same finish and pattern.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify adequacy of backing and support framing.

3.2 INSTALLATION

- A. Install work in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS) requirements for grade indicated.
- B. Set and secure custom cabinets in place, assuring that they are rigid, plumb, and level.
- C. Carefully scribe casework abutting other components, with maximum gaps of 1/32 inch. Do not use additional overlay trim for this purpose.
- D. Secure cabinets to floor using appropriate angles and anchorages.

3.3 ADJUSTING

- A. Adjust moving or operating parts to function smoothly and correctly.

3.4 CLEANING

- A. Clean casework, counters, shelves, hardware, fittings, and fixtures.

END OF SECTION



SECTION 079200

JOINT SEALANTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Nonstaining silicone joint sealants.
- B. Urethane joint sealants.
- C. Mildew-resistant joint sealants.
- D. Latex joint sealants.
- E. Spray foam sealants

1.2 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data: Submit manufacturer's technical datasheets for each product to be used; include the following:
- C. Product Data for Accessory Products: Submit manufacturer's technical data sheet for each product to be used, including physical characteristics, installation instructions, and recommended tools.
- D. Color Cards for Selection: Where sealant color is not specified, submit manufacturer's color cards showing standard colors available for selection.
- E. Manufacturer's qualification statement.
- F. Installer's qualification statement.

1.3 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.
- B. Installer Qualifications: Company specializing in performing the work of this section and with at least three years of documented experience.

## PART 2 PRODUCTS

### 2.1 NONSTAINING SILICONE JOINT SEALANTS

- A. Nonstaining Joint Sealants: No staining of substrates when tested in accordance with ASTM C1248.
1. Basis-of-Design Product: Provide products by Tremco Incorporated, or equal products by one of the following:
    - a. Dow Corning Corporation.
    - b. GE Construction Sealants; Momentive Performance Materials Inc.
    - c. Pecora Corporation.
    - d. Substitutions: See Section 016000 - Product Requirements.
- B. Silicone, Nonstaining, single-component, nonsag, plus 50 percent and minus 50 percent movement capability, nontraffic-use, neutral-curing silicone joint sealant; ASTM C 920, Type S, Grade NS, Class 50, Use NT.
1. Basis of Design: Tremco Incorporated; Spectrem 3; low modulus.
- C. Joint-Sealant Application: Interior joints in vertical surfaces and horizontal nontraffic surfaces.
1. Joint Locations:
    - a. Joints in natural stone applications; granite, marble, and dimensional stone.
    - b. Joints between different materials listed above.
    - c. Perimeter joints between materials listed above and frames of doors and windows.
    - d. Control and expansion joints in ceilings and other overhead surfaces.
    - e. Other joints as indicated on Drawings.
- D. Joint-Sealant Color: As selected by Architect.

### 2.2 URETHANE JOINT SEALANTS - NONTRAFFIC

- A. Basis-of-Design Product: Provide products by Tremco Incorporated, or equal products by one of the following:
1. BASF Corp. - Construction Chemicals.
  2. Dow Corning Corporation.
  3. GE Construction Sealants; Momentive Performance Materials Inc.
  4. Pecora Corporation.
  5. Sherwin-Williams Company (The).
  6. Substitutions: See Section 016000 - Product Requirements.
- B. Urethane, Single-component, nonsag, plus 25 percent and minus 25 percent movement capability, nontraffic-use, urethane joint sealant; ASTM C920, Type S, Grade NS, Class 25, Use NT.
1. Basis of Design: Tremco Incorporated; Vulkem 116.

- C. Joint-Sealant Application: Interior joints in vertical surfaces and horizontal nontraffic surfaces.
  - 1. Joint Locations:
    - a. Control and expansion joints on exposed interior surfaces of exterior walls.
    - b. Other joints as indicated on Drawings.
- D. Joint-Sealant Color: As selected by Architect.

## 2.3 MILDEW-RESISTANT JOINT SEALANTS

- A. Silicone, Mildew-resistant, single-component, nonsag, plus 25 percent and minus 25 percent movement capability, nontraffic-use, acid-curing silicone joint sealant; ASTM C920, Type S, Grade NS, Class 25, Use NT.
  - 1. Basis-of-Design: Provide products by Tremco Incorporated, or equal products by one of the following:
    - a. BASF Corp. - Construction Chemicals.
    - b. Dow Corning Corporation.
    - c. GE Construction Sealants; Momentive Performance Materials Inc.
    - d. Pecora Corporation.
    - e. Sherwin-Williams Company (The).
    - f. Substitutions: See Section 016000 - Product Requirements.
  - 2. Joint-Sealant Application: Mildew-resistant interior joints in vertical surfaces and horizontal nontraffic surfaces.
    - a. Joint Locations:
      - 1) Joints between plumbing fixtures and adjoining walls, floors, and counters.
      - 2) Other joints as indicated on Drawings.
- B. Joint-Sealant Color: As selected by Architect.

## 2.4 LATEX JOINT SEALANTS

- A. Acrylic Latex: Acrylic latex or siliconized acrylic latex, ASTM C834, Type OP, Grade NF.
  - 1. Basis-of-Design: Provide Tremflex 834 by Tremco Incorporated, or equal products by one of the following:
    - a. BASF Corp. - Construction Chemicals.
    - b. Dow Corning Corporation.
    - c. GE Construction Sealants; Momentive Performance Materials Inc.
    - d. Pecora Corporation.
    - e. Sherwin-Williams Company (The).
    - f. Substitutions: See Section 016000 - Product Requirements.
  - 2. Joint-Sealant Application: Interior joints in vertical surfaces and horizontal nontraffic surfaces not subject to significant movement.
    - a. Joint Locations:
      - 1) Control joints on exposed interior surfaces of exterior walls.

- 2) Perimeter joints between interior wall surfaces and frames of interior doors, windows and elevator entrances.
- 3) Other joints as indicated on Drawings.

B. Joint-Sealant Color: As selected by Architect.

## 2.5 SPRAY FOAM SEALANTS

A. Basis-of-Design: Provide ExoAir LEF Polyurethane Foam Sealant by Tremco Incorporated, or equal products by one of the following:

1. Dow Corning Corporation.
2. Substitutions: See Section 016000 - Product Requirements.

B. Spray Foam Gap and Crack Sealant: AAMA 812; one- or two-component, foamed-in-place, polyurethane foam with the following characteristics:

1. Properties:
  - a. Density: 1.56 PCF maximum.
  - b. Surface Burning Characteristics: ASTM E84.
    - 1) Flame Spread Index: 5, maximum.
    - 2) Smoke Developed Index: 30, maximum.
  - c. Initial R-Value: ASTM C518; 3 per inch thickness, minimum.
2. Joint Locations:
  - a. Gaps and cracks between dissimilar materials concealed in completed construction when no other sealant application is possible.
  - b. Between exterior and interior backer rod and sealant at perimeter of framed openings within doors, windows, and other joint openings.

## 2.6 ACCESSORIES

A. Backer Rod: Cylindrical cellular foam rod with surface that sealant will not adhere to, compatible with specific sealant used, and recommended by backing and sealant manufacturers for specific application.

1. Type for Joints Not Subject to Pedestrian or Vehicular Traffic: ASTM C1330; Type O - Open Cell Polyurethane.
2. Open Cell: 40 to 50 percent larger in diameter than joint width.
3. Products:
  - a. Adfast USA Inc.
  - b. Nomaco, Inc.
  - c. Substitutions: See Section 016000 - Product Requirements.

B. Backing Tape: Self-adhesive polyethylene tape with surface that sealant will not adhere to and recommended by tape and sealant manufacturers for specific application.

C. Masking Tape: Self-adhesive, nonabsorbent, nonstaining, removable without adhesive residue, and compatible with surfaces adjacent to joints and sealants.

- D. Joint Cleaner: Noncorrosive and nonstaining type, type recommended by sealant manufacturer; compatible with joint forming materials.
- E. Primers: Type recommended by sealant manufacturer to suit application; nonstaining.

### PART 3 EXECUTION

#### 3.1 EXAMINATION

- A. Verify that joints are ready to receive work.
- B. Verify that backing materials are compatible with sealants.
- C. Verify that backer rods are of the correct size.

#### 3.2 PREPARATION

- A. Remove loose materials and foreign matter that could impair adhesion of sealant.
- B. Clean joints, and prime as necessary, in accordance with manufacturer's instructions.
- C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.
- D. Mask elements and surfaces adjacent to joints from damage and disfigurement due to sealant work; be aware that sealant drips and smears may not be completely removable.

#### 3.3 INSTALLATION

- A. Install this work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
- B. Measure joint dimensions and size joint backers to achieve width-to-depth ratio, neck dimension, and surface bond area as recommended by manufacturer, except where specific dimensions are indicated.
- C. Measure joint dimensions and size joint backers to achieve the following, unless otherwise indicated:
  - 1. Width/depth ratio of 2:1.
  - 2. Neck dimension no greater than 1/3 of the joint width.
  - 3. Surface bond area on each side not less than 75 percent of joint width.
- D. Install bond breaker backing tape where backer rod cannot be used.
- E. Install sealant free of air pockets, foreign embedded matter, ridges, and sags, and without getting sealant on adjacent surfaces.
- F. Do not install sealant when ambient temperature is outside manufacturer's recommended temperature range, or will be outside that range during the entire curing period, unless manufacturer's approval is obtained and instructions are followed.

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- G. Nonsag Sealants: Tool surface concave, unless otherwise indicated; remove masking tape immediately after tooling sealant surface.

END OF SECTION

SECTION 081113

HOLLOW METAL DOORS AND FRAMES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Fire-rated hollow metal doors and frames.

1.2 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data: Materials and details of design and construction, hardware locations, reinforcement type and locations, anchorage and fastening methods, and finishes; and one copy of referenced standards/guidelines.
- C. Shop Drawings: Details of each opening, showing elevations, glazing, frame profiles, and any indicated finish requirements.
  - 1. Shop Drawings should be project specific and including interface detailing with adjacent dissimilar systems.
- D. Installation Instructions: Manufacturer's published instructions, including any special installation instructions relating to this project.
- E. Manufacturer's Certificate: Certification that products meet or exceed specified requirements.
- F. Manufacturer's Qualification Statement.
- G. Installer's Qualification Statement.

1.3 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years documented experience.
- B. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience.
- C. Maintain at project site copies of reference standards relating to installation of products specified.

1.4 WARRANTY

- A. See Section 017800 - Closeout Submittals for additional warranty requirements.

- B. Manufacturer's Warranty: Provide warranty against defects in material and workmanship for period indicated. Complete forms in Owner's name and register with manufacturer.
  - 1. Closers: Five years, minimum.
  - 2. Locksets and Cylinders: Three years, minimum.
  - 3. Other Hardware: Two years, minimum.

#### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Comply with NAAMM HMMA 840 or ANSI/SDI A250.8 (SDI-100) in accordance with specified requirements.
- B. Protect with resilient packaging; avoid humidity build-up under coverings; prevent corrosion and adverse effects on factory applied painted finish.

### PART 2 PRODUCTS

#### 2.1 MANUFACTURERS

- A. Hollow Metal Doors and Frames:
  - 1. Ceco Door, an Assa Abloy Group company.
  - 2. Mesker, dormakaba Group.
  - 3. Steelcraft, an Allegion brand.
  - 4. Substitutions: See Section 016000 - Product Requirements.

#### 2.2 PERFORMANCE REQUIREMENTS

- A. Requirements for Hollow Metal Doors and Frames:
  - 1. Steel Sheet: Comply with one or more of the following requirements; galvanized steel complying with ASTM A653/A653M, cold-rolled steel complying with ASTM A1008/A1008M, or hot-rolled pickled and oiled (HRPO) steel complying with ASTM A1011/A1011M, commercial steel (CS) Type B, for each.
  - 2. Accessibility: Comply with ICC A117.1 and ADA Standards.
  - 3. Door Edge Profile: Manufacturers standard for application indicated.
  - 4. Typical Door Face Sheets: Flush.
  - 5. Hardware Preparations, Selections and Locations: Comply with NAAMM HMMA 830 and NAAMM HMMA 831 or BHMA A156.115 and ANSI/SDI A250.8 (SDI-100) in accordance with specified requirements.
  - 6. Zinc Coating for Typical Interior and/or Exterior Locations: Provide metal components zinc-coated (galvanized) and/or zinc-iron alloy-coated (galvanized) by the hot-dip process in accordance with ASTM A653/A653M, with manufacturer's standard coating thickness, unless noted otherwise for specific hollow metal doors and frames.
    - a. Based on SDI Standards: Provide at least A40/ZF120 (galvanized) when necessary, coating not required for typical interior door applications, and at least A60/ZF180 (galvanized) for corrosive locations.



- B. Hollow Metal Panels: Same construction, performance, and finish as doors.
- C. Combined Requirements: If a particular door and frame unit is indicated to comply with more than one type of requirement, comply with the specified requirements for each type; for instance, an exterior door that is also indicated as being sound-rated must comply with the requirements specified for exterior doors and for sound-rated doors; where two requirements conflict, comply with the most stringent.

## 2.3 HOLLOW METAL DOORS

- A. Door Finish: Factory primed and field finished.
- B. Fire-Rated Doors:
  - 1. Based on SDI Standards: ANSI/SDI A250.8 (SDI-100).
    - a. Level 2 - Heavy-duty.
    - b. Physical Performance Level B, 500,000 cycles; in accordance with ANSI/SDI A250.4.
    - c. Model 1 - Full Flush.
    - d. Door Face Metal Thickness: 18 gauge, 0.042 inch, minimum.
  - 2. Fire Rating: As indicated on Door Schedule, tested in accordance with UL 10C and NFPA 252 ("positive pressure fire tests").
  - 3. Temperature-Rise Rating (TRR) Across Door Thickness: In accordance with local building code and authorities having jurisdiction.
  - 4. Provide units listed and labeled by UL (DIR) or ITS (DIR).
    - a. Attach fire rating label to each fire rated unit.
  - 5. Door Core Material: Manufacturers standard core material/construction in compliance with requirements.
  - 6. Door Thickness: 1-3/4 inches, nominal.

## 2.4 HOLLOW METAL FRAMES

- A. Comply with standards and/or custom guidelines as indicated for corresponding door in accordance with applicable door frame requirements.
- B. Frame Finish: Factory primed and field finished.
- C. Door Frames, Fire-Rated: Face welded type.
  - 1. Fire Rating: Same as door, labeled.
  - 2. Frame Metal Thickness: 18 gauge, 0.042 inch, minimum.
- D. Mullions for Pairs of Doors: Fixed, with profile similar to jambs.
- E. Frames Wider than 48 inches: Reinforce with steel channel fitted tightly into frame head, flush with top.

## 2.5 FINISHES

- A. Primer: Rust-inhibiting, complying with ANSI/SDI A250.10, door manufacturer's standard.

## 2.6 ACCESSORIES

- A. Astragals and Edges for Double Doors: Pairs of door astragals, and door edge sealing and protection devices.

- B. Hardware: Fire-Rated Applications Comply with NFPA 80.

### 1. Lock Set:

- a. Manufacturers:

- 1) Basis of design as selected by the Architect or comparable product by one of the following:
  - a) Best, dormakaba Group.
  - b) LCN, and Allegion brand.
  - c) Substitutions: See Section 016000 - Product Requirements.

- b. Provide in compliance with BHMA A156.5 at locations indicated.

- c. Provide cylinders from same manufacturer as locking device.

- d. Lock Cylinders: Provide key access on outside of each lock, unless otherwise indicated.

### 2. Hinges: Comply with BHMA A156.1, Grade 1.

- a. Manufacturers: Basis of design as selected by the Architect or comparable product by one of the following:

- 1) Best, dormakaba Group.
- 2) LCN, and Allegion brand.
- 3) Substitutions: See Section 016000 - Product Requirements.

- b. Provide hinges on every swinging door.

- c. Provide following quantity of butt hinges for each door:

- 1) Doors up to 60 inches High: Two hinges.
- 2) Doors From 60 inches High up to 90 inches High: Three hinges.
- 3) Doors 90 inches High up to 120 inches High: Four hinges.

- 3. Provide fasteners of proper type, size, quantity, and finish that comply with commercially recognized standards for proposed applications.

### 4. Closers:

- a. Basis of design as selected by the Architect or comparable product by one of the following:

- 1) DORMA USA, Inc.
- 2) Hager Companies.
- 3) LCN, and Allegion brand.

- b. Closers: Comply with BHMA A156.4, Grade 1.

- c. Provide door closer on each fire-rated and smoke-rated door.

- 1) Spring hinges are not an acceptable self-closing device, unless otherwise indicated.
5. Silencers: Resilient rubber, fitted into drilled hole; provide three on strike side of single door, three on center mullion of pairs, and two on head of pairs without center mullions.

### PART 3 EXECUTION

#### 3.1 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that opening sizes and tolerances are acceptable.
- C. Verify that finished walls are in plane to ensure proper door alignment.

#### 3.2 PREPARATION

- A. Coat inside of frames to be installed in masonry or to be grouted, with bituminous coating, prior to installation.

#### 3.3 INSTALLATION

- A. Install doors and frames in accordance with manufacturer's instructions and related requirements of specified door and frame standards or custom guidelines indicated.
- B. Install fire rated units in accordance with NFPA 80.
- C. Coordinate frame anchor placement with wall construction.
- D. Install door hardware as specified in Section 087100.
  1. Comply with recommended practice for hardware placement of doors and frames in accordance with ANSI/SDI A250.6 or NAAMM HMMA 861.

#### 3.4 TOLERANCES

- A. Clearances Between Door and Frame: Comply with related requirements of specified frame standards or custom guidelines indicated in accordance with SDI 117 or NAAMM HMMA 861.
- B. Maximum Diagonal Distortion: 1/16 inch measured with straight edge, corner to corner.

#### 3.5 ADJUSTING

- A. Adjust for smooth and balanced door movement.

END OF SECTION

SECTION 083313

COILING COUNTER DOORS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Non-fire-rated coiling counter doors and operating hardware.

1.2 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data: Submit manufacturer's standard literature showing materials and details of construction and finish.
- C. Shop Drawings: Indicate rough and actual opening dimensions, anchorage methods, hardware locations, and installation details.
- D. Samples: Two slats, 4 inches long, illustrating shape, color, and finish texture.
- E. Manufacturer's Installation Instructions: Indicate installation sequence and installation, adjustment, and alignment procedures.
- F. Manufacturer's qualification statement.
- G. Installer's qualification statement.
- H. Specimen warranty.
- I. Operation and Maintenance Data: Indicate modes of operation, lubrication requirements and frequency, and periodic adjustments required.

1.3 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.
- B. Installer Qualifications: Company specializing in performing work of type specified and with at least three years documented experience.

1.4 WARRANTY

- A. See Section 017800 - Closeout Submittals for additional warranty requirements.
- B. Manufacturer Warranty: Provide manufacturer's standard one year warranty against defects in material and workmanship. Complete forms in Owner's name and register with manufacturer.

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS

#### A. Coiling Counter Doors:

1. Alpine Overhead Doors, Inc.
2. C.H.I. Overhead Doors.
3. Raynor Garage Doors.
4. Substitutions: See Section 016000 - Product Requirements.

### 2.2 COILING COUNTER DOORS

#### A. Coiling Counter Metal Doors, Non-Fire-Rated: Aluminum slat curtain.

1. Mounting: Between jambs, within prepared opening.
2. Nominal Slat Size: 1-1/4 inches wide.
3. Slat Profile: Flat.
4. Aluminum Finish: One finish coat of polyester paint applied over one coat of primer.
5. Color: As selected by Architect from manufacturer's standard range.
6. Guides: Formed track; same material and finish unless otherwise indicated.
7. Hood Enclosure: Manufacturer's standard; aluminum.
8. Manual push up operation.
9. Locking Bar: For push-up doors and doors operated with hand chain to receive padlock provided by Owner.

### 2.3 COMPONENTS

#### A. Metal Curtain Construction: Interlocking, single-thickness slats.

1. Slat Ends: Alternate slats fitted with end locks to act as wearing surface in guides and to prevent lateral movement.
2. Curtain Bottom: Fitted with angles to provide reinforcement and positive contact in closed position.
3. Aluminum Slats: ASTM B221 (ASTM B221M), aluminum alloy Type 6063; minimum thickness 0.05 inch.

#### B. Guide Construction: Continuous, of profile to retain door in place, with mounting brackets of same metal.

1. Aluminum Guides: Extruded aluminum channel, with wool pile runners along inside.

#### C. Hood Enclosure: Internally reinforced to maintain rigidity and shape.

#### D. Lock Hardware:

1. Slide Bolt: Provide on single-jamb side, extending into slot in guides, with padlock on one side.

- E. Roller Shaft Counterbalance: Steel pipe and torsion steel spring system, capable of producing torque sufficient to ensure smooth operation of curtain from any position and capable of holding position at mid-travel; with adjustable spring tension; requiring 25 lb nominal force to operate.

### PART 3 EXECUTION

#### 3.1 EXAMINATION

- A. Verify that adjacent construction is suitable for door installation.
- B. Verify that door opening is plumb, header is level, and dimensions are correct.
- C. Notify Architect of any unacceptable conditions or varying dimensions.
- D. Commencement of installation indicates acceptance of substrate and door opening conditions.

#### 3.2 INSTALLATION

- A. Install units in accordance with manufacturer's instructions.
- B. Use anchorage devices to securely fasten assembly to wall construction and building framing without distortion or stress.
- C. Securely and rigidly brace components suspended from structure.
- D. Fit and align assembly including hardware; level and plumb, to provide smooth operation.

#### 3.3 TOLERANCES

- A. Maintain dimensional tolerances and alignment with adjacent work.
- B. Maximum Variation From Plumb: 1/16 inch.
- C. Maximum Variation From Level: 1/16 inch.
- D. Longitudinal or Diagonal Warp: Plus or minus 1/8 inch per 10 ft straight edge.

#### 3.4 ADJUSTING

- A. Adjust operating assemblies for smooth and noiseless operation.

#### 3.5 CLEANING

- A. Clean installed components.
- B. Remove labels and visible markings.

END OF SECTION

SECTION 092116

GYPSUM BOARD ASSEMBLIES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Acoustic insulation.
- B. Gypsum wallboard.
- C. Joint treatment and accessories.

1.2 ADMINISTRATIVE REQUIREMENTS

- A. Coordination: Coordinate the installation of gypsum board assemblies with size, location, and installation of service utilities.

1.3 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data:
  - 1. Provide data on gypsum board, accessories, and joint finishing system.
- C. Installer's Qualification Statement.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store gypsum products and accessories indoors and keep above freezing. Elevate boards above floor, on nonwicking supports, in accordance with manufacturer's recommendations.

PART 2 PRODUCTS

2.1 BOARD MATERIALS

- A. Gypsum Wallboard: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.

1. Application: Use for vertical surfaces and ceilings, unless otherwise indicated.
  2. At Assemblies Indicated with Fire-Resistance Rating: Use type required by indicated tested assembly; if no tested assembly is indicated, use Type X board, UL or WH listed.
  3. Thickness:
    - a. Vertical Surfaces: 1/2 inch unless indicated otherwise on drawings.
    - b. Ceilings: 1/2 inch unless indicated otherwise on drawings.
    - c. Multi-Layer Assemblies: Thicknesses as indicated on drawings.
  4. Manufacturers:
    - a. American Gypsum Company.
    - b. CertainTeed Corporation.
    - c. Georgia-Pacific Gypsum.
    - d. USG Corporation.
    - e. Substitutions: See Section 016000 - Product Requirements.
- B. Backing Board For Non-Wet Areas: Water-resistant gypsum backing board as defined in ASTM C1396/C1396M; sizes to minimum joints in place; ends square cut.
1. Application: Vertical surfaces behind thinset tile, except in wet areas.
  2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
  3. Type: Regular and Type X, in locations indicated.
  4. Type X Thickness: 5/8 inch.
  5. Regular Board Thickness: 1/2 inch.
  6. Edges: Tapered.
  7. Manufacturers:
    - a. American Gypsum Company.
    - b. Georgia-Pacific Gypsum.
    - c. Gold Bond Building Products, LLC.
    - d. Substitutions: See Section 016000 - Product Requirements.
- C. Ceiling Board: Special sag resistant gypsum ceiling board as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
1. Application: Ceilings, unless otherwise indicated.
  2. Thickness: 1/2 inch unless indicated otherwise on drawings.
  3. Edges: Tapered.
  4. Manufacturers:
    - a. CertainTeed Corporation.
    - b. Georgia-Pacific Gypsum.
    - c. Gold Bond Building Products, LLC.
    - d. USG Corporation.
    - e. Substitutions: See Section 016000 - Product Requirements.

## 2.2 GYPSUM BOARD ACCESSORIES

- A. Acoustic Insulation: ASTM C665; preformed mineral-fiber, friction fit type, unfaced; thickness as required for STC.



- B. Acoustic Sealant: Acrylic emulsion latex or water-based elastomeric sealant; do not use solvent-based non-curing butyl sealant.
  - 1. Manufacturers:
    - a. Franklin International, Inc.
    - b. Liquid Nails, a brand of PPG Architectural Coatings.
    - c. Specified Technologies Inc.
    - d. Substitutions: See Section 016000 - Product Requirements.
- C. Finishing Accessories: ASTM C1047, extruded aluminum alloy (6063 T5) or galvanized steel sheet ASTM A924/A924M G90, unless noted otherwise.
  - 1. Types: As detailed or required for finished appearance.
  - 2. Special Shapes: In addition to conventional corner bead and control joints, provide U-bead at exposed panel edges.
  - 3. Manufacturers:
    - a. Phillips Manufacturing Co.
    - b. Stockton Products.
    - c. Trim-tex, Inc.
    - d. Substitutions: See Section 016000 - Product Requirements.
- D. Joint Materials: ASTM C475/C475M and as recommended by gypsum board manufacturer for project conditions.
  - 1. Paper Tape: 2 inch wide, creased paper tape for joints and corners, except as otherwise indicated.
  - 2. Joint Compound: Drying type, vinyl-based, ready-mixed.
- E. Screws for Fastening of Gypsum Panel Products to Cold-Formed Steel Studs Less than 0.033 inches in Thickness and Wood Members: ASTM C1002; self-piercing tapping screws, corrosion-resistant.
- F. Screws for Fastening of Gypsum Panel Products to Steel Members from 0.033 to 0.112 inch in Thickness: ASTM C954; steel drill screws, corrosion-resistant.

### PART 3 EXECUTION

#### 3.1 EXAMINATION

- A. Verify that project conditions are appropriate for work of this section to commence.

#### 3.2 ACOUSTIC ACCESSORIES INSTALLATION

- A. Acoustic Insulation: Place tightly within spaces, around cut openings, behind and around electrical and mechanical items within partitions, and tight to items passing through partitions.
- B. Acoustic Sealant: Install in accordance with manufacturer's instructions.

1. Seal around all penetrations by conduit, pipe, ducts, and rough-in boxes, except where firestopping is provided.

### 3.3 BOARD INSTALLATION

- A. Comply with ASTM C840, GA-216, and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.
- B. Single-Layer Nonrated: Install gypsum board in most economical direction, with ends and edges occurring over firm bearing.
- C. Fire-Resistance-Rated Construction: Install gypsum board in strict compliance with requirements of assembly listing.

### 3.4 INSTALLATION OF TRIM AND ACCESSORIES

- A. Control Joints: Place control joints consistent with lines of building spaces and as indicated.
- B. Corner Beads: Install at external corners, using longest practical lengths.
- C. Edge Trim: Install at locations where gypsum board abuts dissimilar materials.

### 3.5 JOINT TREATMENT

- A. Paper Faced Gypsum Board: Use paper joint tape, embed with drying type joint compound and finish with drying type joint compound.
- B. Finish gypsum board in accordance with levels defined in ASTM C840, as follows:
  1. Level 4: Walls and ceilings to receive paint finish or wall coverings, unless otherwise indicated.
  2. Level 2: In utility areas, behind cabinetry, and on backing board to receive tile finish.
  3. Level 1: Fire-resistance-rated wall areas above finished ceilings, whether or not accessible in the completed construction.
- C. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
  1. Feather coats of joint compound so that camber is maximum 1/32 inch.

### 3.6 TOLERANCES

- A. Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet in any direction.

3.7 PROTECTION

- A. Protect installed gypsum board assemblies from subsequent construction operations.

END OF SECTION

## SECTION 092216

### NON-STRUCTURAL METAL FRAMING

#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. Metal partition, ceiling, and soffit framing.
- B. Framing accessories.

##### 1.2 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Shop Drawings:
  - 1. Indicate component details, stud layout, framed openings, anchorage to structure, acoustic details, type and location of fasteners, accessories, and items of other related work.
  - 2. Describe method for securing studs to tracks, splicing, and for blocking and reinforcement of framing connections.
- C. Product Data: Provide data describing framing member materials and finish, product criteria, load charts, and limitations.
- D. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.

##### 1.3 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing the work of this section with minimum five years documented experience and approved by manufacturer.

#### PART 2 PRODUCTS

##### 2.1 FRAMING MATERIALS

- A. Non-Loadbearing Framing System Components: AISI S220; sheet steel, of size and properties necessary for the spacing indicated, with maximum deflection of wall framing of L/240 at 5 psf.
  - 1. Studs: C-shaped with flat faces.
    - a. Manufacturers:
      - 1) ClarkDietrich.

- 2) MarinoWARE.
  - 3) MBA Building Supplies.
  - 4) R-stud.
  - 5) Super Stud Building Products, Inc.
  - 6) Substitutions: See Section 016000 - Product Requirements.
2. Studs: C-shaped with triangular-shaped, lipped holes.
  3. Runners: U-shaped, sized to match studs.
  4. Ceiling Channels: C-shaped.
- B. Shaft Wall Studs and Accessories: AISI S220; galvanized sheet steel, of size and properties necessary to comply with ASTM C754 and specified performance requirements.
- C. Partition Head to Structure Connections: Provide track fastened to structure with legs of sufficient length to accommodate deflection, for friction fit of studs cut short and screwed to secondary deflection channel set inside but unattached to top track.
- D. Non-Loadbearing Framing Accessories:
1. Ceiling Hangers: Type and size as specified in ASTM C754 for spacing required.
  2. Bracing and Bridging: ASTM A653/A653M G90 galvanized steel; for lateral bracing of wall studs with slots for engaging on-module studs.
  3. Framing Connectors: ASTM A653/A653M steel clips; secures cold rolled channel to wall studs for lateral bracing.
  4. Fasteners: ASTM C1002 self-piercing self-tapping screws.
  5. Anchorage Devices: Powder actuated.
  6. Acoustic Insulation: See Section 092116.
  7. Acoustic Sealant: See Section 09.

### PART 3 EXECUTION

#### 3.1 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that rough-in utilities are in proper location.

#### 3.2 INSTALLATION OF STUD FRAMING

- A. Comply with requirements of ASTM C1007.
- B. Extend partition framing to structure where indicated and to ceiling in other locations.
- C. Partitions Terminating at Ceiling: Attach ceiling runner securely to ceiling track in accordance with manufacturer's instructions.
- D. Align and secure top and bottom runners with fasteners at 24 inches on center.
- E. At partitions indicated with an acoustic rating:

1. Provide components and install as required to produce STC ratings as indicated, based on published tests by manufacturer conducted in accordance with ASTM E90 with STC rating calculated in accordance with ASTM E413.
- F. Fit runners under and above openings; secure intermediate studs to same spacing as wall studs.
- G. Install studs vertically at spacing indicated on drawings.
- H. Align stud web openings horizontally.
- I. Secure studs to tracks using fastener method. Do not weld.
- J. Fabricate corners using a minimum of three studs.
- K. Install double studs at wall openings, door and window jambs, not more than 2 inches from each side of openings.
- L. Coordinate installation of bucks, anchors, and blocking with electrical, mechanical, and other work to be placed within or behind stud framing.
- M. Blocking: Use wood blocking secured to studs. Provide blocking for support of wall cabinets and opening frames.

### 3.3 CEILING AND SOFFIT FRAMING

- A. Install furring after work above ceiling or soffit is complete. Coordinate the location of hangers with other work.
- B. Install furring independent of walls, columns, and above-ceiling work.
- C. Securely anchor hangers to structural members or embed them in structural slab. Space hangers as required to limit deflection to criteria indicated. Use rigid hangers at exterior soffits.
- D. Space main carrying channels at maximum 72 inches on center, and not more than 6 inches from wall surfaces. Lap splice securely.
- E. Securely fix carrying channels to hangers to prevent turning or twisting and to transmit full load to hangers.
- F. Place furring channels perpendicular to carrying channels, not more than 2 inches from perimeter walls, and rigidly secure. Lap splices securely.

### 3.4 TOLERANCES

- A. Maximum Variation From True Position: 1/8 inch in 10 feet.
- B. Maximum Variation From Plumb: 1/8 inch in 10 feet.

END OF SECTION

SECTION 095100

ACOUSTICAL CEILINGS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Suspended metal grid ceiling system.
- B. Acoustical units.

1.2 ADMINISTRATIVE REQUIREMENTS

- A. Sequence work to ensure acoustical ceilings are not installed until building is enclosed, sufficient heat is provided, dust generating activities have terminated, and overhead work is completed, tested, and approved.
- B. Do not install acoustical units until after interior wet work is dry.

1.3 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Shop Drawings: Indicate grid layout and related dimensioning.
- C. Product Data: Provide data on suspension system components and acoustical units.
- D. Verification Samples: Submit two full size samples illustrating material and finish of acoustical units and exposed suspension system members.
- E. Manufacturer's qualification statement.

1.4 QUALITY ASSURANCE

- A. Suspension System Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.
- B. Acoustical Unit Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

1.5 FIELD CONDITIONS

- A. Maintain uniform temperature of minimum 60 degrees F, and maximum humidity of 40 percent prior to, during, and after acoustical unit installation.

## PART 2 PRODUCTS

### 2.1 ACOUSTICAL UNITS

- A. Manufacturers and Products: As indicated in the Finish Schedule on the drawings.
  - 1. Size: As indicated in the Finish Schedule on the drawings.

### 2.2 SUSPENSION SYSTEM(S)

- A. Metal Suspension Systems - General: Complying with ASTM C635/C635M; die cut and interlocking components, with perimeter moldings, hold down clips, stabilizer bars, clips, and splices as required.
  - 1. Material, size, configuration and finish as indicated in the Finish Schedule on the drawings.

### 2.3 ACCESSORIES

- A. Support Channels and Hangers: Galvanized steel; size and type to suit application, seismic requirements, and ceiling system flatness requirement specified.
- B. Hanger Wire: 12 gauge, 0.08 inch galvanized steel wire.
- C. Hold-Down Clips: Manufacturer's standard clips to suit application.
- D. Perimeter Moldings: Same metal and finish as grid.
- E. Acoustical Insulation: ASTM C665 friction fit type, unfaced batts.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Verify existing conditions before starting work.

### 3.2 PREPARATION

- A. Install after major above-ceiling work is complete.
- B. Coordinate the location of hangers with other work.

### 3.3 INSTALLATION - SUSPENSION SYSTEM

- A. Install suspension system in accordance with ASTM C636/C636M, ASTM E580/E580M, and manufacturer's instructions and as supplemented in this section.



- B. Rigidly secure system, including integral mechanical and electrical components, for maximum deflection of 1:360.
- C. Locate system on room axis according to reflected plan.
- D. Perimeter Molding: Install at intersection of ceiling and vertical surfaces and at junctions with other interruptions.
  - 1. Use longest practical lengths.
- E. Suspension System, Non-Seismic: Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.
- F. Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.
- G. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability.
- H. Support fixture loads using supplementary hangers located within 6 inches of each corner, or support components independently.
- I. Do not eccentrically load system or induce rotation of runners.

### 3.4 INSTALLATION - ACOUSTICAL UNITS

- A. Install acoustical units in accordance with manufacturer's instructions.
- B. Fit acoustical units in place, free from damaged edges or other defects detrimental to appearance and function.
- C. Fit border trim neatly against abutting surfaces.
- D. Install acoustical units level, in uniform plane, and free from twist, warp, and dents.
- E. Cutting Acoustical Units:
  - 1. Make field cut edges of same profile as factory edges.
- F. Lay acoustical insulation for a distance of 48 inches either side of acoustical partitions as indicated.

### 3.5 TOLERANCES

- A. Maximum Variation from Flat and Level Surface: 1/8 inch in 10 feet.
- B. Maximum Variation from Plumb of Grid Members Caused by Eccentric Loads: 2 degrees.

### 3.6 CLEANING

- A. Clean surfaces.

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- B. Replace damaged or abraded components.

END OF SECTION

SECTION 096500

RESILIENT FLOORING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Resilient tile flooring.
- B. Resilient base.
- C. Installation accessories.

1.2 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data on specified products, describing physical and performance characteristics; including sizes, patterns and colors available; and installation instructions.
- C. Shop Drawings: Indicate floor patterns.
- D. Verification Samples: Submit two full size samples illustrating color and pattern for each resilient flooring product indicated.
- E. Concrete Subfloor Test Report: Submit a copy of the moisture and alkalinity (pH) test reports.
- F. Manufacturer's Qualification Statement.
- G. Installer's Qualification Statement.
- H. Maintenance Data: Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning, stripping, and re-waxing.

1.3 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing specified flooring with minimum three years documented experience.
- B. Installer Qualifications: Company specializing in installing specified flooring with minimum three years documented experience.
- C. Testing Agency Qualifications: Independent firm specializing in performing concrete slab moisture testing and inspections of the type specified in this section.

#### 1.4 DELIVERY, STORAGE, AND HANDLING

- A. Upon receipt, immediately remove any shrink-wrap and check materials for damage and the correct style, color, quantity and run numbers.
- B. Store all materials off of the floor in an acclimatized, weather-tight space.
- C. Maintain temperature in storage area between 55 degrees F and 90 degrees F.
- D. Do not double stack pallets.

#### 1.5 FIELD CONDITIONS

- A. Store materials for not less than 48 hours prior to installation in area of installation at a temperature of 70 degrees F to achieve temperature stability. Thereafter, maintain conditions above 55 degrees F.

### PART 2 PRODUCTS

#### 2.1 TILE FLOORING

- A. Vinyl Tile:
  - 1. Manufacturers and Products: As indicated in the Finish Schedule on the drawings.
  - 2. Minimum Requirements: Comply with ASTM F1700.
  - 3. Plank Tile Size: As indicated in the Finish Schedule on the drawings..
  - 4. Total Thickness: Manufacturers standard for product indicated.
  - 5. Color: As indicated on drawings.

#### 2.2 RESILIENT BASE

- A. Resilient Base:
  - 1. Manufacturers and Products: As indicated in the Finish Schedule on the drawings..
  - 2. Height and Thickness: As indicated on drawings.
  - 3. Length: 8 foot sections.
  - 4. Color: To be selected by Architect from manufacturer's full range.

#### 2.3 ACCESSORIES

- A. Subfloor Filler: White premix latex; type recommended by adhesive material manufacturer.
- B. Primers and Adhesives: Waterproof; types recommended by flooring manufacturer.
- C. Moldings, Transition and Edge Strips: Same material as flooring.
- D. Floor Sealer and Wax: Types recommended by flooring manufacturer.

### PART 3 EXECUTION

#### 3.1 EXAMINATION

- A. Verify that surfaces are flat to tolerances acceptable to flooring manufacturer, free of cracks that might telegraph through flooring, clean, dry, and free of curing compounds, surface hardeners, and other chemicals that might interfere with bonding of flooring to substrate.
- B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive resilient base.
- C. Cementitious Subfloor Surfaces: Verify that substrates are ready for resilient flooring installation by testing for moisture and alkalinity (pH).
  - 1. Test as Follows:
    - a. Alkalinity (pH): ASTM F710.
    - b. Internal Relative Humidity: ASTM F2170.
    - c. Moisture Vapor Emission: ASTM F1869.
  - 2. Obtain instructions if test results are not within limits recommended by resilient flooring manufacturer and adhesive materials manufacturer.
- D. Verify that required floor-mounted utilities are in correct location.

#### 3.2 PREPARATION

- A. Prepare floor substrates as recommended by flooring and adhesive manufacturers.
- B. Remove subfloor ridges and bumps. Fill minor low spots, cracks, joints, holes, and other defects with subfloor filler to achieve smooth, flat, hard surface.
- C. Prohibit traffic until filler is fully cured.
- D. Clean substrate.
- E. If required, apply primer as needed to prevent "bleed-through" or interference with adhesion by substances that cannot be removed.

#### 3.3 INSTALLATION - GENERAL

- A. Starting installation constitutes acceptance of subfloor conditions.
- B. Install in accordance with manufacturer's written instructions.
- C. Adhesive-Applied Installation:
  - 1. Spread only enough adhesive to permit installation of materials before initial set.
  - 2. Fit joints and butt seams tightly.
  - 3. Set flooring in place, press with heavy roller to attain full adhesion.

- D. Where type of floor finish, pattern, or color are different on opposite sides of door, terminate flooring under centerline of door.
- E. Install edge strips at unprotected or exposed edges, where flooring terminates, and where indicated.
  - 1. Resilient Strips: Attach to substrate using adhesive.
- F. Scribe flooring to walls, columns, cabinets, floor outlets, and other appurtenances to produce tight joints.

### 3.4 INSTALLATION - TILE FLOORING

- A. Mix tile from container to ensure shade variations are consistent when tile is placed, unless otherwise indicated in manufacturer's installation instructions.
- B. Install plank tile with a random offset of at least 6 inches from adjacent rows.

### 3.5 INSTALLATION - RESILIENT BASE

- A. Fit joints tightly and make vertical. Maintain minimum dimension of 18 inches between joints.
- B. Install base on solid backing. Bond tightly to wall and floor surfaces.
- C. Scribe and fit to door frames and other interruptions.

### 3.6 CLEANING

- A. Remove excess adhesive from floor, base, and wall surfaces without damage.
- B. Clean in accordance with manufacturer's written instructions.

### 3.7 PROTECTION

- A. Prohibit traffic on resilient flooring for 48 hours after installation.

END OF SECTION

SECTION 099123

INTERIOR PAINTING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Surface preparation and the application of paint systems on interior substrates.

1.2 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide complete list of products to be used, with the following information for each:
  - 1. Manufacturer's name, product name and/or catalog number, and general product category (e.g., "alkyd enamel").
  - 2. Manufacturer's installation instructions.
- C. Samples: Submit two paper chip samples, in manufacturers standard size illustrating range of colors and textures available for each surface finishing product scheduled.
- D. Manufacturer's Instructions: Indicate special surface preparation procedures.

1.3 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified, with minimum three years documented experience.
- B. Applicator Qualifications: Company specializing in performing the type of work specified with minimum 3 years experience and approved by manufacturer.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
- B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- C. Paint Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

## 1.5 FIELD CONDITIONS

- A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.
- B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
- C. Minimum Application Temperatures for Paints: 50 degrees F for interiors unless required otherwise by manufacturer's instructions.

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS

- A. Basis-of-Design Product: Provide products as specified within paint Schedule in this Section or product by one of the following:
  - 1. Benjamin Moore & Co.
  - 2. PPG Paints.
  - 3. The Sherwin Williams Co.
  - 4. Substitutions: See Section 016000 - Product Requirements.

### 2.2 PAINTS AND FINISHES - GENERAL

- A. Paints and Finishes: Ready-mixed, unless intended to be a field-catalyzed paint.
- B. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
- C. Provide materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
- D. Supply each paint material in quantity required to complete entire project's work from a single production run.
- E. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.
- F. Flammability: Comply with applicable code for surface burning characteristics.
- G. Colors and Sheens: As indicated on drawings.



### PART 3 EXECUTION

#### 3.1 EXAMINATION

- A. Do not begin application of paints and finishes until substrates have been adequately prepared.
- B. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- C. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.
- D. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- E. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces is below the following maximums:
  - 1. Gypsum Wallboard: 12 percent.
  - 2. Interior Wood: 15 percent, measured in accordance with ASTM D4442.

#### 3.2 PREPARATION

- A. Clean surfaces thoroughly and correct defects prior to application.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Remove or repair existing paints or finishes that exhibit surface defects.
- D. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.
- E. Seal surfaces that might cause bleed through or staining of topcoat.
- F. Gypsum Board: Fill minor defects with filler compound. Spot prime defects after repair.
- G. Galvanized Surfaces:
  - 1. Prepare surface according to SSPC-SP 2.
- H. Ferrous Metal:
  - 1. Shop-Primed Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces.
- I. Wood Surfaces to Receive Opaque Finish: Wipe off dust and grit prior to priming. Seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after primer has dried; sand between coats. Back prime concealed surfaces before installation.

- J. Wood Doors to be Field-Finished: Seal wood door top and bottom edge surfaces with clear sealer.
- K. Metal Doors to be Painted: Prime metal door top and bottom edge surfaces.

### 3.3 SURFACE PREPARATION OF PREVIOUSLY PAINTED SURFACES

- A. Surfaces are to be clean and dry, free of dirt, dust, grease, and contaminants.
- B. Existing painted surfaces: Remove loose and peeling paint. De-gloss surface if recommended by manufacturer. Sand smooth. Clean entire surface as recommended by the paint manufacturer prior to painting.

### 3.4 APPLICATION

- A. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.
- B. Apply paints according to manufacturer's written instructions and to recommendations.
- C. Where adjacent sealant is to be painted, do not apply finish coats until sealant is applied.
- D. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
- E. Apply each coat to uniform appearance in thicknesses specified by manufacturer.
- F. Dark Colors and Deep Clear Colors: Regardless of number of coats specified, apply as many coats as necessary for complete hide.
- G. Sand wood and metal surfaces lightly between coats to achieve required finish.
- H. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
- I. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

### 3.5 CLEANING

- A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

### 3.6 PROTECTION

- A. Protect finishes until completion of project.
- B. Touch-up damaged finishes after Substantial Completion.

3.7 SCHEDULE - INTERIOR SURFACES - LATEX

- A. Tints and colorants required should not add VOCs to the product.
- B. Shop Primed Ferrous Metal: Semi-Gloss Finish:
  - 1. Sherwin-Williams:
    - a. Primer: Pro Industrial Pro-Cryl Universal primer.
    - b. Finish: Two coats Pro Industrial High Performance Acrylic, semi-gloss.
  - 2. PPG Paints:
    - a. Primer: Pitt-Tech Plus Interior DTM Industrial Primer 4020.
    - b. Finish: Two coats Pitt-Tech Plus EP Int/Ext DTM Industrial Enamel, semi-gloss 90-1610.
- C. Ferrous Metal and Galvanized Metals: Semi-Gloss Finish:
  - 1. Sherwin-Williams:
    - a. Primer: Pro Industrial Pro-Cryl Universal primer.
    - b. Finish: Two coats Pro Industrial High Performance Acrylic, semi-gloss.
  - 2. PPG Paints:
    - a. Primer: Pitt-Tech Plus Interior DTM Industrial Primer 4020.
    - b. Finish: Two coats Pitt-Tech Plus EP Int/Ext DTM Industrial Enamel, semi-gloss 90-1610.
- D. Gypsum Board: Flat Finish:
  - 1. Sherwin-Williams:
    - a. Primer: One coat. ProMar 200 Zero VOC Primer.
    - b. Finish: Two coats. ProMar 200 Zero VOC Flat.
      - 1) Contains Anti-Microbial agents.
  - 2. PPG Paints:
    - a. Primer: PPG Speedhide zero Interior Zero-VOC Latex Sealer 6-4900XI..
    - b. Finish: Two coats Speedhide Zero VOC, Flat 6-5110.
- E. Gypsum Board: Eggshell Finish:
  - 1. Sherwin-Williams:
    - a. Primer: One coat ProMar 200 Zero VOC Primer.
    - b. Finish: Two coats ProMar 200 Zero VOC Eg-Shel.
      - 1) Contains Anti-Microbial agents.
  - 2. PPG Paints:
    - a. Primer: PPG Speedhide zero Interior Zero-VOC Latex Sealer 6-4900XI..
    - b. Finish: Two coats Speedhide Zero VOC, Eggshell 6-5310.
- F. Gypsum Board: Semi-Gloss Finish:
  - 1. Sherwin-Williams:
    - a. Primer: One coat ProMar 200 Zero VOC Primer.
    - b. Finish: Two coats ProMar 200 Zero VOC semi-gloss.

- 1) Contains Anti-Microbial.
2. PPG Paints:
  - a. Primer: PPG Speedhide zero Interior Zero-VOC Latex Sealer 6-4900XI..
  - b. Finish: Two coats Speedhide Zero VOC, semi-gloss 6-5510XI.
- G. Gypsum Board Under Vinyl Wall Covering: Latex Primer:
  1. Sherwin-Williams:
    - a. One coat: Multi-Purpose Zero VOC Primer.
  2. PPG Paints:
    - a. SEAL GRIP Int/Ext Acrylic Universal Primer/Sealer 17-921XI series.
- H. Wood: Semi-Gloss Finish – 100% acrylic:
  1. Sherwin-Williams:
    - a. Primer: Not required.
    - b. Finish: Two coats Solo 100% Acrylic, semi-gloss.
  2. PPG Paints:
    - a. Primer: Not required.
    - b. Two Coats Break Through! V62-510 series (2 coats).
    - c. Sand unpainted wood or wood in poor condition smooth, wiped clean, then primed. Any knots or resinous areas must be primed before painting. For non-bleeding or previously painted wood, no primer is required.
- I. Previously Painted Substrates:
  1. Sherwin-Williams:
    - a. Primer: Extreme Bond Primer.
    - b. Finish: TBD.
  2. PPG Paints:
    - a. Primer: PPG Seal Grip Interior/Exterior Acrylic Universal Primer/Sealer 17-921XI.
    - b. Finish: TBD.

END OF SECTION

SECTION 102239

FOLDING PANEL PARTITIONS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Top-supported folding panel partitions, horizontal opening.

1.2 ADMINISTRATIVE REQUIREMENTS

- A. Preinstallation Meeting: Convene at project site seven calendar days prior to scheduled beginning of construction activities of this section to review section requirements.
  - 1. Require attendance by representatives of installer.
  - 2. Notify Architect four calendar days in advance of scheduled meeting date.

1.3 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on partition materials, operation, hardware and accessories, track switching components, and colors and finishes available.
- C. Design Data: Design calculations, bearing seal and signature of structural engineer licensed to practice in the State in which the Project is located, showing loads at points of attachment to the building structure.
- D. Shop Drawings: Indicate opening sizes, track layout, details of track and required supports, static and dynamic loads, location and details of pass door and frame, adjacent construction and finish trim, and stacking depth.
- E. Samples for Review: Submit two samples of surface finish, 12 by 12 inches size, illustrating quality, colors selected, texture, and weight.
- F. Certificates: Certify that partition system meets or exceeds specified acoustic requirements.
- G. Manufacturer's Instructions: Indicate special procedures.
- H. Maintenance Data: Include recommended cleaning methods, cleaning materials, and stain removal methods. Describe cleaning materials detrimental to finish surfaces and hardware finish.

#### 1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified this section with minimum three years of documented experience.
- B. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience.

#### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until installation.

#### 1.6 WARRANTY

- A. See Section 017800 - Closeout Submittals, for additional warranty requirements.
- B. Correct defective Work within five year period after Date of Substantial Completion.
- C. Provide two year manufacturer warranty against defects in material and workmanship, excluding abuse.

### PART 2 PRODUCTS

#### 2.1 MANUFACTURERS

- A. Folding Panel Partitions - Horizontal Opening: Basis of Design Acousti-Seal Premier Single Panel as manufactured by Modernfold, a DORMA Group Company. Unless otherwise approved by the Architect; provide Product indicated or a comparable product by one of the following:
  - 1. Kwik-Wall Company.
  - 2. Moderco, Inc.
  - 3. Substitutions: See Section 016000 - Product Requirements.

#### 2.2 FOLDING PANEL PARTITIONS - HORIZONTAL OPENING

- A. Folding Panel Partitions: Side opening; individual panels; side stacking; manually operated.
- B. Panel Construction:
  - 1. Frame: 18 gauge, 0.0478 inch thick formed sheet steel frame top, bottom, jambs, and intermediates; welded construction.
  - 2. Substrate: Gypsum board.
  - 3. Hinges: Full leaf butt hinges, attached directly to the panel frame with welded hinge anchor plates within panel to further support hinge mounting to frame.
  - 4. Hardware: Manufacturers standard for basis of design system specified.
  - 5. Panel Properties:
    - a. Thickness With Finish: 3 inches.
    - b. Width: Up to 48 inches.

c. Weight: 8 lb/sq ft.

C. Panel Finishes:

1. Facing: 0.50-inch tackable 100 percent recycled gypsum board, Class A rated single material or composite layers continuously bonded to panel frame.

D. Panel Seals:

1. Vertical Interlocking Sound Seals between panels: Roll-formed steel astragals, with reversible tongue and groove configuration in each panel edge for universal panel operation. Rigid plastic or aluminum astragals or astragals in only one panel edge are not acceptable.
2. Horizontal Top Seals: Continuous contact extruded vinyl bulb shape with pairs of non-contacting vinyl fingers to prevent distortion without the need for mechanically operated parts.
3. Horizontal Bottom Floor Seals: Basis of Design: Modernfold SM2 Bottom seal
  - a. Manually activated seals providing nominal 2-inch operating clearance with an operating range of +1/2-inch to -1-1/2-inch. Seal operable from panel edge or face. Extended seal exert nominal 120 pounds downward force to the floor throughout operating range.

E. Suspension System: Basis of Design: RT100 Suspension System: Multi-Directional.

1. Suspension Tracks: Precision heat-treated extruded aluminum. Track to be supported by pairs of 3/8-inch diameter threaded rods.
  - a. Exposed Track Soffit: Track soffit to be integral to track shape and powder-coated off-white paint finish. Track must accommodate termination of plenum sound barriers on both sides of track for maximum sound control.
2. Carriers: Horizontal counter-rotating wheels with heavy duty steel thrust bearings. Carriers permit panels to traverse L, T, or X intersections without mechanical switching.

F. Performance:

1. Acoustic Performance:
  - a. Sound Transmission Class (STC): 50 calculated in accordance with ASTM E413, based on tests conducted in accordance with ASTM E90, on panel size of 100 sq ft.
2. Surface Burning Characteristics of Panel Finish: Flame spread/smoke developed index of 25/50, maximum, when tested in accordance with ASTM E84.
3. Installed partition system track capable of supporting imposed loads, with maximum deflection of 1/360 of span.

G. Accessories:

1. Ceiling Closure: Manufacturers standard; aluminum jamb and head molding, fittings and attachments, and intermediate meeting posts.
2. Pocket Enclosures: Door, frame, and trim to match adjacent walls.
3. Pass Door: Single door; same design and construction as panel; fit door with perimeter acoustic gaskets, concealed closer, keyed lock, and tool operated floor seal.
4. Work Surfaces:

- a. Markerboard: White enamel on steel, bonded to the face of the panel with horizontal trim without exposed fasteners. Trim is not acceptable on vertical edges to provide uninterrupted work surface.
5. Acoustic Sealant: As recommended by partition manufacturer.

### 2.3 MATERIALS

- A. Aluminum Extrusions: ASTM B221 (ASTM B221M), 6063 alloy, T6 temper.
- B. Fire Rated Gypsum Board: ASTM C1396/C1396M, Type X, UL rated; 1/2 inch thick, maximum practical length; ends square cut, square edges.
- C. Markerboard: Porcelain enamel on steel, laminated to core; color as selected.
- D. Acoustic Insulation:
  1. Type: As required for acoustic performance indicated.
  2. Thickness: As required for acoustic performance indicated.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify that required utilities are available, of the correct characteristics, in proper location, and ready for use.
- C. Verify track supports are laterally braced and will permit track to be level within 1/4 inch of required position and parallel to the floor surface.
- D. Verify floor flatness of 1/8 inch in 10 feet, non-cumulative.
- E. Verify wall plumbness of 1/8 inch in 10 feet, non-cumulative.

### 3.2 INSTALLATION

- A. Install partition in accordance with manufacturer's instructions and ASTM E557.
- B. Lubricate moving components.
- C. Install acoustic sealant to achieve required acoustic performance.

### 3.3 ADJUSTING

- A. Adjust partition assembly to provide smooth operation from stacked to full open position. Do not over-compress acoustic seals.
- B. Visually inspect partition in full extended position for light leaks to identify a potential acoustical leak.



- C. Adjust partition assembly to achieve lightproof seal.

#### 3.4 CLEANING

- A. Clean finish surfaces and partition accessories.
- B. Condition markerboard surfaces in accordance with manufacturer's instructions.

#### 3.5 CLOSEOUT ACTIVITIES

- A. Demonstrate operation of partition and identify potential operational problems.

END OF SECTION

## SECTION 113013

### RESIDENTIAL APPLIANCES

#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. Kitchen appliances.

##### 1.2 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's data indicating dimensions, capacity, and operating features of each piece of residential equipment specified.
- C. Copies of Warranties: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

##### 1.3 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years of documented experience.
- B. Electric Appliances: Listed and labeled by UL (DIR) and complying with NEMA Standards (National Electrical Manufacturers Association).
- C. Gas Appliances: Bearing design certification seal of American Gas Association (AGA).

##### 1.4 WARRANTY

- A. See Section 017800 - Closeout Submittals, for additional warranty requirements.
- B. Provide five (5) year manufacturer warranty on refrigeration system of refrigerators.
- C. Provide five (5) year manufacturer warranty on electric cooktop and range.
- D. Provide five (5) year manufacturer warranty on magnetron tube of microwave ovens.
- E. Provide five (5) year manufacturer warranty on tub and door liner of dishwashers.

#### PART 2 PRODUCTS

##### 2.1 KITCHEN APPLIANCES

- A. Manufacturers and Products: As indicated in the Appliance Schedule on the drawings.

### PART 3 EXECUTION

#### 3.1 EXAMINATION

- A. Verify utility rough-ins are provided and correctly located.

#### 3.2 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Anchor built-in equipment in place.

#### 3.3 ADJUSTING

- A. Adjust equipment to provide efficient operation.

#### 3.4 CLEANING

- A. Remove packing materials from equipment and properly discard.
- B. Wash and clean equipment.

END OF SECTION

## SECTION 115201

### AV SYSTEMS

#### PART 1 GENERAL

##### 1.1 GENERAL

###### A. General

1. This specification covers the procurement, installation, and maintenance of Audio Video Systems for the Atlantic City Free Public Library located in Atlantic City, NJ. The objective is to provide a full and professional Audio Video System, completely installed and acceptance-tested for use.

###### B. Stipulations

1. The specifications section "General Conditions" or other correspondence provided by the owner with this document and related amendments, form a part of this specification by this reference thereto and shall have the same force and effect as if printed herewith in full.

###### C. Scope of Specifications

1. These specifications cover the audio video systems for the project. The contractor responsible for this section shall furnish and install all equipment including all cabling as described herein.
2. Electrical rough-in including backboxes, conduit and related appurtenances will be provided by the project electrical contractor.
3. The intent of this section is to define the products, methods and scope of services required to provide a first class, professionally installed, performance tested Audio Video System. This section in conjunction with the project drawings defines the technical, functional and performance requirements for the specified Audio Video Systems.
4. The systems specified herein shall be purchased by the project general contractor from a qualified Audio and Video System contractor whose current business operations and experience, include the successful integration of Audio Video Systems on Construction projects of size and scope similar to the systems specified herein. The Audio Video contractor's proposal shall be provided on a lump sum basis with unit price details.
5. The AV contractor's proposal is to be based on a lump sum price inclusive of all items required to meet the design intent. The design intent is specifically defined within Part 1, 2 and 3 of this Section and on the AV drawings that are referenced to, and part of, this section. Equipment lists as described in part 2 of this section and on the provided Bid Form have been prepared as a convenience to the bidding contractors. The contractor's lump sum price shall include all materials and services as required to fulfill the design intent.
6. The bidder's lump sum price shall include all goods and services as shown on the project drawings and within these specifications.

7. The systems covered by this section include for this project include audio systems, video systems, control systems, equipment racks, portable equipment items, and the installation of certain equipment that will be furnished by the owner and installed by the contractor who is responsible for the work described within this section.

## 1.2 RELATED DOCUMENTS

### A. Construction Documents

1. The project construction documents include construction documents prepared by the project architect, engineers, and related design professionals including the AV documents described below.

### B. AV Drawings Audio Video Systems

1. The work of this section is defined herein and shown within the AV drawings. The AV drawings include the following date 01-22-2025.

## 1.3 SYSTEM DESCRIPTIONS

- ### A.
- With respect to the systems identified within this paragraph as well as any AV systems shown on the drawings, provide all products, racks, subassemblies, equipment racks, cables, connector plates, panels, termination kits, and related items as described herein, as shown on drawings, as defined within Part 2 of this section, and as required to fulfill the design intent.

### B. General AV System Descriptions

1. In general, provide complete audio, video and AV control systems as described within paragraphs 2, 3, and 4 below:
2. Audio Systems
  - a. Flush ceiling mounted full range loudspeakers, for playback of music, live microphone reinforcement, auxiliary line level and/or networked audio sources including mounting hardware and related accessories as described herein, as shown on drawings, and as described in Part 2 of this section and as required to fulfill the design intent.
  - b. Digital input connectivity and associated connections at presentation locations including IP network interface, mounting, related hardware & accessories as described herein, as shown on drawings, and as described in Part 2 of this section and as required to fulfill the design intent.
  - c. A complete UHF wireless microphone system including antenna distribution throughout this space.
  - d. Power amplifiers, equipment racks, power distribution within equipment racks, blank panels, vent panels, brush grommet panels, lacing bars, loudspeaker termination panels, patch panels and related hardware and accessories as described herein, as shown on drawings, and as described in Part 2 of this section and as required to provide first class, professional grade audio system performance.
  - e. Provide DSP programming as required. At a minimum, DSP for each subsystem, venue or area described herein, shall include the following for each amplifier channel served:
    - 1) Four-Band (Bass, Mid, Upper-Mid, High) Tone Control

- a) Each tone control supported by a center frequency selector and “q/width” selector. center frequency and q/width selection provided on secondary screen that is not visible unless activated.
- 2) Matrix Mixer
- 3) Automatic Gain Control (AGC)
- 4) ½ Octave Equalizer
- 5) Hard Limiter / Max Volume Protection
- 6) Variable Threshold, Attack, Release and Reduction
- 7) Soft Limiter
- 8) Variable Threshold, Attack, Release and Reduction
- f. Provide testing, activation, level balancing and demonstration services to the owner no later than 14 days prior to opening of the space.
- g. Full-range measurement and sound level test of each loudspeaker using a microphone extender pole allowing measurement of the performance of each loudspeaker to occur from the ground with the microphone measurement position at 12” from the speaker. Verify that the level and performance of each loudspeaker is equivalent to other loudspeakers within the same circuit/zone.
- h. Document the performance of each loudspeaker zone including confirmation that the operation of all speakers within each zone has been verified.
- i. Demonstrate speaker system performance to the owner using the head-end, owner-furnished music source, a secondary high-quality line level music source and wireless microphone source.
3. Video Systems
  - a. All video system encoding, processing, distribution and related equipment as defined herein, as shown on drawings, and as described in Part 2 of this section and as required to fulfill the design intent.
4. Control Systems
  - a. Provide all touch screen programming as required including:
    - 1) Main Page
      - a) Audio Source Selection
      - b) Head-End Music Feed
      - c) Analog Input
      - d) Bluetooth
    - 2) Level 3 Tech Page (Level 3 Password Protected)
      - a) Gain Setting/Volume Control for each loudspeaker zone.
5. Video Presets
  - a. Video display presets for each touch screen application. Each preset recalls specific video source assignments for each display that is associated with the touch panel.
  - b. Audio source to the local speaker system shall default to the audio associated with the content displayed on the display. Specific details associated with the preset conditions to be coordinated with the owner no later than 30 days prior to opening of the facility.
6. Head-End / Master Control
  - a. Provide all control system features described above for this space at the head-end touch panel and local AV room touch panel.
  - b. Develop and implement all programming as required to provide all head-end and local system control features on owner-furnished IOS or Android tablet devices.

- c. Develop and implement all programming as required to provide all head-end and local system control features on the building network and operable from a properly connected personal computer or laptop devices.
- d. Owner Approval of Control System Programming, Layouts & Operation Refer to paragraph 1.7.D of this section.

C. Specific System Descriptions

- 1. The following provides a specific summary of the various spaces and subsystems covered by this section:
  - a. SY01 - Civic Room 291– Qty. 1
    - 1) This space shall consist of a divisible audio-visual system including (2) large format Direct View LED displays, a distributed speaker system, a ceiling mic array system, (3) Lectern/Workstation input locations, various control panel locations, an assisted listening system, and a control system to control the divisible space.
      - a) Each room shall have the ability to operate independently of each other in which when the air wall is closed, no audio or video source shall have the ability to be shown to the other space.
    - 2) Each divisible space shall have (1) lectern – (2 total).
      - a) Each lectern shall consist of a foldable document camera, an owner-furnished PC, a Blu-ray player, a video monitor, and a network video encoder capable of receiving video from a mobile laptop. The network video encoder shall also be able to provide USB-C connections to the jpst PC or the laptop in order to utilize the various web conferencing equipment within the space. The monitor shall have the ability to show any of the room's sources via the use of the touchpanel.
      - b) Each lectern shall have a flexible gooseneck microphone clip large enough to hold the wireless microphones.
      - c) Each lectern shall be equipped with a cable tether that can be plugged into the I/O locations. The tether shall be able to disconnect easily for removal of the lectern from the space. The cable tether shall be wrapped with flexible snakeskin and shall be clearly identified by large format text or color coding that matches the I/O plate.
      - d) Each lectern shall be equipped with a control touchpanel for easy control of the room.
    - 3) (3) I/O locations are provided for lectern connections
      - a) The I/O locations shall be clearly identified and color coordinated with the lectern connections.
    - 4) Each space shall consist of a large format Direct View LED Display (2 total).
      - a) The DVLED display shall be able to present any of the video sources within the space via control from any of the space touch panels (lectern or wall mounted).
    - 5) Each space shall have (2) PTZ cameras (4 total).
      - a) The PTZ cameras shall be able to be routed to the displays or can be routed to the USB connection for use with Teams, Zoom, or other web conferencing software.

- b) A 5<sup>th</sup> PTZ camera shall be located in the kitchen. This camera shall have the ability to capture the kitchen and be routed to any display on the AV system.
- c) All cameras shall be controlled via any of the control surfaces. There shall be a minimum of 4 position presets for each camera. The user shall have the ability to finely control the PTZ functions as well.
- 6) Each space shall have (1) ceiling beam forming microphone array. (2 Total)
  - a) The microphone array shall have the ability to be routed to the web conferencing system for far end use.
- 7) Each space shall consist of a distributed speaker system:
  - a) The speaker system shall be able to reproduce any of the in-room audio sources, microphones, speech, or far end web conferencing. The speaker system ad DSP shall be programmed using AEC features.
- 8) Each space shall consist of (2) wireless mic systems – (4 total).
  - a) The wireless mics shall be configured so that only (2) systems work in each room unless the room is set to a combined mode.
  - b) Each wireless system shall consist of a handheld microphone and a lapel microphone. (2 total for each space).
- 9) Each space shall consist of an assistive listening system. They shall be configured to independently operate to each separated space unless the room is set to a combined mode. Each ALS receiver shall have the ability to select between (1) of the (2) ALS transmitters. The user shall be handed the receiver paired for that's rooms transmitter.
- 10) A partition sensor shall be provided for the system to recognize if the airwall is closed or open, indicating that the room shall be operated in a "separated" or "combined" mode. In a "combined" mode, the room shall act as one large room and any of the sources shall be available to the user. The speakers and displays shall be able to display or reproduce any of the room sources. In a "separated" mode, only that associated room's AV sources shall be available to the user. Under no circumstance shall an audio or video source from one space be able to be routed to the other space while the spaces are in a separated mode.
- 11) Equipment Room
  - a) Complete equipment rack including all components, wiring, termination, patching and related equipment as described herein, shown within the Part 2 material list, as shown on drawings, and as required to fulfill the design intent.
  - b) Provide power amplifiers, processors, encoders, servers, equipment racks, power distribution within equipment racks, blank panels, vent panels, brush grommet panels, lacing bars, loudspeaker termination panels, patch panels and related hardware and accessories as described herein, as shown on drawings, and as described in Part 2 of this section and as required to provide first class, professional grade audio system performance.
  - c) Provide all loudspeaker terminations using the specified termination kits, lacing bars, mounting panels, and labeling as required to provide finished terminations typical of, or better than those identified in image 1.3.B.7 below:





- d) Provide shielded RJ45 patch cables as required, in compliance with Owner IT standards and where necessary to connect rack mounted AV equipment to the building network.
  - e) Coordinate connections to the building network with Owner's IT team.
  - f) Provide control system including user interfaces operating on touch panels, IOS tablets, Android tablets, laptops, and computer. Control system programming shall be fully integrated with all relevant AV and software components covered by this section.
- 12) Miscellaneous Cables, Connectors & Hardware
- a) Provide all miscellaneous cables, connectors & hardware as required to provide complete systems.
- b. SY02 – Pod/Booth – Qty. 2
- 1) These spaces are small booths in which 2-6 people can have a meeting.
    - a) Each space shall include an owner furnished All-in-one PC with wireless keyboard and mouse installed on the table.
    - b) Each PC shall receive a wired network connection to the building LAN.

#### 1.4 SUBSTITUTIONS

- A. It is intended that the Contractor shall provide materials and labor as necessary for the completion of the Audio Video Systems project and said contractor shall furnish all materials and labor in compliance with this specification.
- B. Where conflict exists with other specifications concerning such materials and labor, this specification takes precedence unless otherwise addressed in writing, by the owner's representative. It shall be understood and agreed by the contractor that the systems herein described, shall be complete in every detail necessary to supply complete, working systems implemented in a professional, workmanlike manner commensurate with professional broadcast quality.
- C. The specification text as well as any drawings provided with the bidding documents are detailed only to the extent necessary to define the design intent and anticipated performance requirements.
- D. Equipment not mentioned herein nor shown in the drawings, but necessary to meet the defined performance requirements shall be provided without claim for additional payment.

- E. Drawings pertaining to this specification shall be considered part of this specification and shall be part of the contract documents. The Contractor shall provide complete and operable systems including all labor and materials required for all assemblies and sub-assemblies either specified or implied within this document.
1. All functions and features specified herein are to be provided by the contractor. Where specific manufacturer's names and model numbers are specified, such identification is to identify the expected performance parameters and to functionally define the specific product requirement.
  2. Where a contractor intends to provide goods other than those specifically identified, such "equivalent" items must be clearly identified in the Post Award Initial Submittal. "Equivalent" items included in the Post Award Initial Submittal must include written certification from the manufacturer of the "equivalent" item stating the equivalency of each and every substituted item relative to the specified items in regard to features, function, performance, and future expansion capability.
  3. Contractors wishing to provide "equivalent" products for specified devices may be required to demonstrate the equivalency of the proposed substitute items to the owner at the contractor's expense. Such proof of equivalency, in addition to the manufacturer's letter as noted above, may include the following:
    - a. An on-site, side-by-side demonstration of both the specified and proposed substitute items.
    - b. A formal bipartisan, laboratory test report comparing the technical performance of each proposed substitute, versus specified item.
    - c. Such test reports for Audio Video System components shall include a spreadsheet comparison of all critical distortion, power, frequency response, noise, and dynamic range measurements.
    - d. All comparison tests for Audio Video System components shall be performed following the established AES and/or ICIA defined testing procedures.
    - e. The responsibility of proving the equivalency of substitute products with respect to the specified products shall lie solely with the contractor.
    - f. All costs associated with providing information or performing the above outlined tests and comparisons required to confirm the equivalency of substitute products shall be at the sole expense of the contractor. Such costs may include but are not limited to:
      - 1) Independent laboratory tests
      - 2) Cost of equipment items for demonstration of specified and proposed substitute items
      - 3) Contractor incurred travel costs and miscellaneous expenses
      - 4) Professional Services Fees (architects, engineers, and consultants) charged to the owner as a result of time charged to participating in the review of proposed substitute items.

## 1.5 REFERENCES

- A. All work included in this specification is to be performed within the guidelines of the following standards:
1. NEC (National Electric Code).
  2. ASTM (American Society of Tests and Measurements).

3. IEEE (Institute of Electrical and Electronic Engineers).
4. AES (Audio Engineering Society).
5. NAB (National Association of Broadcasters)
6. AVIXA (Audiovisual and Integrated Experience Association)
7. ADA (Americans with Disabilities Act)
8. ANSI (American National Standards Institute)

## 1.6 DEFINITION OF TERMS

- A. The terms "Contractor", "Audio Video Systems Contractor" and "AVC," refers to the Audio Video System contractor who has been awarded the contract for providing the goods and services specified and defined within this specification section.
- B. The terms "Electrical Contractor" and "EC," refer to the project electrical contractor. The AV contractor is advised that the project may include more than one electrical contractor. For the sake of this definition of terms, the terms "Electrical Contractor" or "EC" shall refer to the electrical contractor that is responsible for the "project" work.
- C. The terms "Low-Voltage Contractor" and "LVC," refers to the project low-voltage contractor that has been assigned the responsibilities of Division 27 on the project.
- D. The term "Project" refers to overall project identified within paragraph 1.1 above and/or any sub-projects that have been designated within the project documents.
- E. The term "or equivalent" when mentioned in regard to a specified product or device shall mean that the contractor may propose to provide a functional and technical equivalent product in place of the listed item or device. Approval of proposed equivalent models or products shall be at the discretion of the owner following the guidelines defined in paragraph 1.4 above.
- F. The term "Work by Others" shall mean: Any work required by the project but not required of the contractor responsible for this section. Assignment of, and execution of, "Work by Others" as defined within this section shall be the responsibility of the owner, the general contractor or the specific contractor that has been designated within this section.
- G. The term "Furnish" shall mean: Supply the referenced device, item or system including all applicable warranties to the owner.
- H. The term "Install" shall mean: Deliver the referenced item to the project, physically install the item including all terminations, mounting or other labor necessary to successfully integrate the referenced device, item or system into the project including all applicable warranties.
- I. The term "Provide" shall mean: Furnish and Install the referenced device, item, or system.
- J. Owner-Furnished Equipment New (OFE-N)
  1. The term "Owner-Furnished-Equipment New" shall mean: the referenced "OFE-N" item will be furnished to the AV contractor by the owner in new condition. The AV Contractor shall treat an OFE-N item as if the item was being provided as part of the scope of work

defined within this section. The AV contractor shall provide all engineering, technical support, labor, and installation services as required to fully implement OFE-N devices as if the devices were furnished by the AV contractor.

- a. Warranty responsibility for an OFE-N item shall be as follows:
  - 1) Owner
    - a) Factory warranty
    - b) Physical Return of Item to Factory
    - c) Physical Receipt of Item from Factory
  - 2) AV Contractor
    - a) Site Service and Troubleshooting
    - b) Device removal
    - c) Handover of removed item to owner
    - d) Re-installation and activation of factory repaired item

K. Owner-Furnished Equipment Existing (OFE-E)

1. The term "Owner-Furnished-Equipment Existing" shall mean: the referenced "OFE-E" device is being furnished by the owner in a condition other than "new." A device defined as OFE-E is a device that has been previously used by the owner and does not maintain without any form of factory nor contractor warranty. The AV contractor shall provide all engineering, technical support, labor, and installation services as required to fully implement OFE-E devices as if these devices were furnished by the AV contractor, the AV contractor warranty obligations for an OFE-E item, however, are limited and defined as follows:
  - a. Provide the following within the warranty terms described within this section:
    - 1) Site Service and Troubleshooting
    - 2) Device removal
    - 3) Handover of removed item to owner
    - 4) Re-installation and activation of factory repaired item
  - b. The owner's obligations regarding warranty costs associated with OFE-E items include the following:
    - 1) Repair and replacement costs
    - 2) Site Service and troubleshooting costs
    - 3) Device removal
2. Site service and troubleshooting costs associated with a failed OFE-E item shall only be covered by the owner when the service problem is directly related to a failure of the OFE-E device. The AV Contractor's warranty responsibility for problems occurring from ancillary devices such as set-top-boxes, cables, connectors, or similar items provided by the AV contractor in the course of the work covered by this section remain as described elsewhere in this section.

L. The term AV System, Audio Video System or Audio Video Systems shall mean the complete systems as defined within this section including audio equipment, video equipment, lighting equipment, control system equipment, digital conversion equipment and related items that are described herein, mentioned herein, shown on the referenced AV drawing set or as necessary to fulfill the design intent.

M. The abbreviation AV shall mean Audio Video.

- N. The term CTS shall mean Certified Technology Specialist. The CTS certification program is ANSI certified, industry recognized certification program developed and administered by AVIXA that confirms an individual's general knowledge of AV products, systems, and generally accepted practices of the AV industry.
- O. The term CTS-I shall mean Certified Technology Specialist with Installation Specialty. The CTS-I certification program is ANSI certified, industry recognized certification program developed and administered by AVIXA that confirms an individual's specific knowledge and experience with respect to the installation and implementation processes, technical requirements and best practices associated with the installation and implementation of AV systems typical of those described within this section.
- P. The term CTS-D shall mean Certified Technology Specialist with Design Specialty. The CTS-D certification program is ANSI certified, industry recognized certification program developed and administered by AVIXA an individual's specific knowledge and experience with respect to the engineering, design, installation and implementation processes, technical requirements and best practices associated with the implementation of AV systems typical of those described within this section including the professional services and related integrities required to assure that a system of the type defined within this section is properly coordinated with all members of the project team and respective trade groups serving the project.

## 1.7 SUBMITTALS

- A. Pre-Bid
  - 1. All AV Contractor pre-bid questions pertaining to the AV System specifications and the scope of work described within this section shall be reviewed by, signed, and submitted by an experienced and qualified staff member of the bidding contractor.
  - 2. Qualifications and experience for the person who shall review, sign, and submit pre-bid AV questions shall be as described within paragraph 1.7.B below.
- B. With Bid
  - 1. Unit Price and AV System Cost Information
    - a. The contractor proposal shall include a complete Unit Price schedule identifying all system components, labor, miscellaneous materials, project management services, engineering services, programming services, warranty, field labor, in-house labor including unit price and extended price for each, a subtotal of equipment and material costs, a subtotal for all labor and services as well as a lump sum price for the overall scope of work for each specified AV System Type.
    - b. Provide a cost summary displaying the overall system cost for each AV system type multiplied by the total number of required systems.
    - c. Name and contact information of the CTS-D and CTS-I certified staff members who shall be assigned to this project.
    - d. An acceptable format for this submission is provided in the pages that follow this section.
  - 2. Facility and Capabilities Report
    - a. Provide detailed professional resumes of the bidding contractor staff members who shall be fulfilling the roles defined within paragraph 1.6 of this section. Provide a

written statement signed by an officer of the company stating that if the company is awarded the specified work, that the contractor shall assign the identified staff members, or equivalently qualified staff members to the project for the duration of the project. Failure to include the above stated resumes and letter in the bid response shall be grounds for rejection of bid.

- b. Provide a summary of the Audio Video System contractor's capabilities, which satisfactorily demonstrates that the selected Audio Video System vendor maintains the physical plant, personnel, and equipment necessary to provide the specified systems.
  - c. The report shall also include a sheet identifying the contractor's test equipment inventory as of the date of bid. This inventory at a minimum, must include the following equipment items:
    - 1) Dual Channel 20mhz Oscilloscope
    - 2) 1/3 Octave Spectrum Analyzer with calibrated microphone
    - 3) Calibrated SPL meter
    - 4) Audio Test Generator with Pink Noise and Variable Tone Generator (minimum 20 frequency)
    - 5) Polarity Tester
    - 6) HDMI/HDCP Compliance Tester
    - 7) Light Meter
  - d. Provide a list of five projects similar in scope and complexity to this project. Include client names and contact information for each project. Projects must include Audio Video Systems of similar size and scope.
  - e. All qualification information shall be reviewed by the owner's representative to verify that the Audio Video System contractor maintains the capabilities and experience necessary to ensure that a satisfactory system installation is accomplished.
  - f. Should the owner determine that the submitted qualifications do not meet the specified requirements, the general contractor shall be required at no additional cost to the owner; to cancel any agreements with the proposed AV contractor and to then subcontract the services of an AV Contractor whose qualifications fulfill the specified requirements.
- C. Shop Drawings
1. Within 30 days of award, provide the following information for review:
    - a. Bill of Material
      - 1) Complete bill of material including all material, component devices and equipment required for complete and operable systems. The bill of material shall contain the following information for each item listed:
        - a) Quantity
        - b) Description
        - c) Manufacturer's name and model number
    - b. Material Availability Report
      - 1) Within two days of receipt of notice to proceed, begin coordination with the specified manufacturers to confirm product availability.
      - 2) Within ten days of receipt of notice to proceed, provide a detailed list of all products identified as not available within the required timeframe for installation relevant to the project schedule.

- 3) Provide recommended/possible options for replacement, availability of optional items as we unit pricing and extended pricing reflecting the deletion of the specified items as well as unit and extended pricing for the proposed replacement models.
- c. Product Data Sheets
  - 1) Provide a complete set of product data sheets for all equipment, devices, hardware, and related items that shall be provided. The Data Sheets shall be presented in a 3-ring binder format, tab and organized such that the data sheets are readily referenced to the above noted Bill of Material Sheet.
- d. Engineering documentation identifying any and all proposed variances from the specified system layout.
- e. AV Plan Drawings, Device, Cable, and Related Legends
  - 1) Provide Device legend information for all field installed AV equipment items. Device Legend information shall include the following:
    - a) Device ID
    - b) Device Name
    - c) Device Description
    - d) Manufacturer Name
    - e) Manufacturer Model Number
    - f) Back Box Description
    - g) Back Box Dimension
    - h) Back Box Height
    - i) Device Weight
    - j) Device Location
    - k) Heat Load Information
    - l) Electrical Load Information
    - m) Clear Definition of Work Required By Others
    - n) Conduit and Related Rough-in Requirements
    - o) Cable Pull Information
    - p) Device Color Information
    - q) Applicable Notes
  - 2) Provide scaled device location drawings showing all wall and floor mounted AV system devices located in floor plan.
  - 3) Provide scaled device location drawings showing all ceiling mounted AV system devices within a properly coordinated ceiling plan.
- f. Section and Elevation Details
  - 1) Provide scaled and properly dimensioned section and elevation details showing all video displays, projection screens, projector lifts, wall mounted speakers systems, suspended speaker systems, video cameras, microphones, control equipment/user interfaces and related AV system devices.
  - 2) Projection system details shall include projection light paths coordinated with lighting devices, ceiling soffits and related information as necessary to properly coordinate the projection systems with mechanical devices, electrical devices as well as the planned construction finishes.
- g. AV Plate and Panel Drawings
  - 1) Provide scaled drawings identifying all AV connection plates, panels, and related devices. Plate and Panel drawings shall include:
    - a) Plate Dimension

- b) Detailed view of each required connector
  - c) Lettering Requirements
  - d) Plate/Panel Material and Finish
  - e) Plate Color
  - f) Lettering Color
  - g) Connector Colors
  - h) Any other information required for successful manufacture/ fabrication of the plate and panel devices for the project.
- h. Single Line Diagrams
- 1) Provide single line drawings for each of the following disciplines:
    - a) Audio
    - b) Video
    - c) AV Control, Network and Data Connections
    - d) Electrical
  - 2) Single line diagrams shall indicate each and every AV equipment item, signal flow, input connection information, output connection information, bus connection information, port information, audio impedance/level information, signal type, cable numbering and related circuit information for all AV equipment devices as well as the following information:
    - a) Location reference for each device shown in single line.
    - b) Cable system details including all input plates, panels, and connectors.
    - c) Indicate device, panel and plate locations coordinated with the riser and block diagrams.
    - d) Organized cable numbering system for all system cables. Include cable schedules following the cable designations indicated on the schematic and functional diagrams. Cable schedules shall be provided for field wiring, inner rack, and inter rack terminals.
  - 3) AV Control and Network diagrams shall indicate all interconnections between the AV system, building network devices, telephone equipment devices and any other connections associated with equipment being provided by others.
- i. Equipment Rack Details
- 1) Provide properly scaled front and rear rack elevation details for all equipment rack assemblies. Equipment rack layouts shall include all front and rear mounted devices, including device name and number coordinated with the single line diagrams. Show all blank, vent, tie line and custom fabricated panels.
  - 2) Show overall dimensions of each rack assembly including height, depth, width, and weight.
  - 3) Show scaled labeling details for each rack mounted equipment item.
  - 4) Identify each equipment rack by make and model.
  - 5) Provide EIA rack spacing reference adjacent to all rack elevation details such that rack locations and heights for all rack mounted devices can be easily identified by way of their vertical position in the rack.
  - 6) Provide scaled, properly dimensioned details relevant to cable entry, ladder trays, cable management, back-boxes and appurtenances associated with the physical installation of each AV equipment rack.
  - 7) Provide electrical connection information.



- 8) Show all vertically mounted electrical distribution devices within each rack assembly
- j. Suspended Device Drawings
  - 1) Provide mechanical drawings depicting weights, scaled dimensions and related information required for fabrication, assembly and installation for all products covered by this section that shall be suspended from walls, ceilings, or other overhead installation conditions.
  - 2) Suspended device drawings must be prepared, signed, and sealed by a properly qualified engineering professional with demonstrable experience on projects of similar type and scope.
- k. AV Network Device Ledger
  - 1) Provide a well-organized ledger sheet presented in 8.5" x 11" format that clearly describes all AV devices requiring connection to any network, network switch, LAN, WAN or Wireless network connection.
  - 2) At a minimum, the AV Network Ledger Sheet shall include the following information for each, and every network connected device:
    - a) Device Name and ID #
    - b) Manufacturer Name
    - c) Model
    - d) MAC Address (if not available, leave space blank for later use)
    - e) IP Address (if not available, leave space blank for later use)
    - f) Switch ID
    - g) Port ID
    - h) Device Location
- l. Name and contact information of the CTS-D and CTS-I certified staff members who shall be assigned to this project.
- m. Submit completed project experience for the individual who shall be responsible for preparing the DSP system program. The DSP programmer for this project must be capable of demonstrating the successful completion of a minimum of three DSP system designs. Provide project names, locations, and contact information for three recent DSP projects.
- n. Submit completed project experience for the individual who shall be responsible for preparing the AV control system programming. The AV Control System programmer for this project must be capable of demonstrating the successful completion of a minimum of three AV Control System programs of similar size and scope to this project. Provide project names, locations, and contact information for three recent AV Control System projects.
- o. Name, contact information and project resume, of the staff member or members who shall be responsible for final set-up and testing of the specified Audio Video Systems (see paragraph 1.6.E below).
- p. The AV contractor shall provide a Shop Drawing Sheet Numbering scheme that clearly differentiates the shop drawing documents from the construction document set that is provided with these specifications. Recommended sheet names would begin with an alphabetical prefix indicative of the AV contractor firm name, followed by sheet number.
- q. The contractor shall be authorized to use the specification "AV" drawing files for the purpose of preparing the required submittal and as-built documentation.

- r. These drawing files and related title blocks may be modified by the contractor in their preparation of shop drawings, to reflect the as-built conditions and to identify the contractor as a participant and responsible installing contractor for the project.
- s. No other use or re-use of the specification drawings in whole or part shall be allowed without the expressed written consent of the drawing author.
- t. Unless specifically agreed to in writing by the owner and the drawing author, the contents of the AV drawing files shall not be re-used, copied, or otherwise implemented by the contractor, its employees or subcontractors for any other project, proposal, report, article, or other form of publication.
- u. If the contractor chooses to use the specification AV drawing files, the contractor shall clearly identify any changes, modifications or adjustments made to the drawings. The contractor shall clearly identify the original author of each drawing with notations of revisions including the name of the person making the revision, date of revisions and purpose of each revision.

D. Control System Submission, Presentation, Coordination

- a. Within 120 Days of contract award or no less than 120 days prior to the scheduled completion of the project, the AV contractor shall fulfill the following presentation and coordination requirements relative to the AV Control System programming:
  - 1) Graphical User Interface Design
    - a) Provide graphical representation of all user interface screens, button panels, touch screens to be provided to the system users and technical operators.
    - b) These layouts shall be provided in .pdf file format.
    - c) Screen layouts shall be presented in 1" = 1" scale.
    - d) All layouts shall be presented in color.
    - e) Touch screens that include hard button controls adjacent to the touch screen device, shall be presented with an accurate screen shot of the touch screen surface with hard button devices shown to the proper scale and placement.
    - f) User interfaces consisting of only hard button controls shall be presented in 1" = 1" scale.
  - 2) AV Control System Presentation
    - a) The AV contractor and its approved AV Control System Programmer shall be required to provide a formal presentation of the user interface presentation described in paragraph 1.7.D.1 above. The AV Control System presentation shall occur in the presence of the owner, the architect, and the AV consultant.
    - b) During the presentation, the AV contractor shall take detailed notes relating to comments, questions and requested changes made by the owner, the architect and AV consultant.
    - c) Following the Presentation Meeting, the AV contractor shall revise the hard copy control system presentation as discussed and agreed during the presentation meeting and re-submit the updated presentation in a timely manner.
  - 3) AV Control System Demonstration and Final Adjustments
    - a) Once the AV system has reached substantial completion and the AV system is in a functional operating condition, the AV contractor shall be required

to provide a formal demonstration of the AV control system to the owner, architect, and AV consultant.

- b) During the demonstration, the AV contractor shall take detailed notes relating to comments, questions and requested changes/adjustments to the layouts, logic and related operations of the control system made by the owner, the architect and AV consultant.
  - c) Following the Control System Demonstration, the AV contractor shall revise the control system programming as discussed and agreed during the demonstration and revise the programming in a timely manner and as required to maintain the project completion schedule.
- E. As Built Documentation
1. Upon completion of the system's installation and prior to formal acceptance of the Audio Video Systems by the Owner, the Contractor shall submit "As Built" versions of the shop drawing set as well as other documentation covered within this section.
- F. Contract Close out
1. At the time of formal acceptance of the systems by the owner, the contractor shall provide the following:
    - a. Simplified Audio Video System Instruction Manual for each subsystem. This document shall be prepared specifically for this project and shall provide the non-technical user with a step-by-step set of instructions defining all steps necessary to activate, connect and otherwise operate the specified Audio Video System. These instructions shall at a minimum, cover the following topics:
      - 1) System Turn On
      - 2) Display System Use
      - 3) Control System Use.
      - 4) Audio System Use
    - b. One set of the owner/operator manuals for each Audio Video Systems component as supplied by the component manufacturers. Said manuals shall be provided in electronic format within an alphabetized file folder format that contains One folder for each letter of the alphabet and a subfolder for each manufacturer.
    - c. One set of system functional diagrams shall be provided for each system, laminated, and mounted adjacent to each equipment rack assembly. These laminated drawings shall be either xerographic or plotted original drawings.
      - 1) Diazo, blue-line or black-line copies shall not be acceptable for these specific documents.
    - d. Upon request, provide two complete sets of as-built drawings printed to the project sheet size.
    - e. Upon request. Provide two sets of the As-Built drawings printed 18" x 24" Sheets.
    - f. Two USB Thumb Drives with the following files provided in an organized file folder format:
      - 1) Shop Drawings in dwg. format
      - 2) Shop Drawings in pdf format
      - 3) Un-Compiled Control System Programming Files
      - 4) All software files provided by the equipment manufacturers
      - 5) Equipment Owner/User/Maintenance Manuals in pdf format

## 1.8 QUALITY ASSURANCE

- A. All qualification requirements of this paragraph must be met by the bidding contractor. If the bidding contractor shall require the services of a qualified subcontractor in order to fulfill the specified qualification requirements, the qualified sub-contractor must be clearly identified in the bid response. All submittal requirements must be provided on the qualified vendor/subcontractor's letterhead.
  
- B. The contractor shall provide qualified, industry certified staff members for all technical work associated with the work of this section.
  - 1. At least one ANSI/InfoComm International Certified Technical Specialist with Design Specialty (CTS-D), certified staff member must be provided by the contractor. The CTS-D staff member must maintain a minimum of eight years' design and/or project management experience.
  - 2. The certified (CTS-D) staff member must be engaged in the project throughout all phases of design, integration and testing. The designated CTS-D staff member shall be responsible for the following:
    - a. Review and approval including signature of all shop drawings, submittals and documentation prepared by the contractor.
    - b. Review and approval of any scope of work associated with any change order, work modification or field work order. All change orders must be reviewed and approved by the project CTS-D prior to final submission of such change orders to the owner, general contractor or architect.
    - c. Review, approve and/or preparation of all Request For Information or similar documents submitted by the contractor.
    - d. Resolution of any technical, trade, scope of work or similar disputes that may arise throughout the course of the project.
    - e. Attendance at meetings with the owner, architect, general contractor or electrical contractor
    - f. Site inspection and approval of all work including shop fabricated items, field installed devices and the overall system installation prior to demonstration to the owner.
    - g. All demonstration to, and training of, the owner.
    - h. Review and approval of all as-built submissions including owner manuals.
  - 3. Prior to beginning their work on the project, contractor staff members who are assigned the tasks defined within items 1 through 8 above, must provide written affirmation (email is acceptable format) that they have thoroughly read the entirety of this specification section. Questions, exceptions, or notes regarding the contents of this specification section shall be submitted with the affirmation correspondence.
  - 4. The following items may be performed by either a CTS-D or CTS-I AVIXA/ANSI Certified or equivalently qualified staff member:
    - a. Field verification of all work by others including but not limited to:
      - 1) System Grounding
      - 2) Electrical Systems
      - 3) Rigging
      - 4) Millwork
      - 5) Mechanical Systems
      - 6) Cabling Systems

- b. Supervision of Field Terminations
  - c. Fabrication, terminations, and preliminary testing of prefabricated equipment rack assemblies.
5. Prior to beginning their work on the project, contractor staff members who are assigned the tasks defined within items 9 through 11 above, must provide written affirmation (email is acceptable format) that they have read the following paragraphs of this specification section:
- a. 1.1
  - b. 1.2
  - c. 1.3
  - d. 1.8
  - e. 1.9
  - f. 1.10
  - g. 1.11
6. Staff member questions, exceptions, or notes regarding the contents of this specification section shall be submitted with the affirmation correspondence.
7. All other contractor staff members performing technician level work specified within this section but not identified in items 1 through 11 above, must be minimally certified as an AVIXA/ANSI Certified Technical Specialist (CTS).
8. Qualified contractors who do not participate in AVIXA/ANSI Certification and training, yet otherwise maintain personnel qualified to fulfill the intent of these specifications must provide the following information for review and approval by the project architect:
9. Personal resume of, including project references for six projects of similar size and scope and itemized list of technical capabilities of the staff member who shall be responsible for the successful integration of the specified systems and all items defined above under items 1 through 8.
10. Said individual must maintain a minimum of five-years, experience in Audio Video Systems integration, a bachelor's degree in electrical engineering from a fully accredited college or university and must be prepared to readily demonstrate capabilities equivalent to those of an AVIXA International CTS-D certified individual.
11. Personal resume of, including project references for six projects of similar size and scope and itemized list of technical capabilities of the staff member who shall be responsible for the successful integration of the specified systems and all items defined above under items 9 through 11. Said individual must maintain a minimum of four years experience in sound, video and television systems integration, an associate degree in electrical-electronic engineering technology from a fully accredited college or university and must be prepared to readily demonstrate capabilities equivalent to those of an AVIXA/ANSI certified CTS-I individual.
12. Failure to comply with the Quality Assurance requirements defined above shall constitute breach of contract by the AV contractor. Should the AV contractor be found to be in breach of this paragraph, the owner reserves the right to hire an Independent Technical Service Provider of their choosing to provide the services described in item 1 through 11 above.
13. Should the owner choose to hire an Independent Technical Service Provider as a result of the AV contractor's failure to fulfill the requirements of items 1 through 11 above, all costs associated with hiring the Independent Technical Service Provider shall be deducted from the AV contractor's lump sum price for the project.

- C. The contractor shall be required to attend a minimum of two pre installation conferences with the owner's representative. The intent of these conferences shall be to review the contractor's submittals and to review the proposed methods of implementation and to coordinate the Audio Video System installation with the work of other trades.
  - 1. The contractor shall be responsible for providing coordination documentation that shall insure that the owner's staff or designated contractors can properly provide electrical power to the Audio Equipment Rack as well as sufficient physical space for the Equipment Racks.
  - 2. The Audio Video and Stage Lighting contractor shall be responsible for reviewing all AV work that shall be provided by others. The review of work by others must be provided in a timely and well-coordinated manner. Any discrepancies found by the AV contractor must be clearly and concisely identified in writing and provided to the owner within five days of the date of review.
- D. The AV contractor shall inspect and verify all work performed by the project electrical contractor as necessary to insure that all work including, device installation, power receptacles, back-boxes, conduits, etc, are performed in compliance with these specifications.
- E. Audio and Video System final set-up shall be accomplished by a qualified Audio Video System technician or engineer who has been trained in the procedures and methods necessary for successful Audio Video System installation. The contractor must provide a qualified Audio Video System technician during the test and adjustment phase of the project.
  - 1. Lighting Systems must be set up and tested by a production lighting technician maintaining a minimum of five years lighting production and installation experience.
- F. All materials shall be new and shall conform to applicable provisions of Underwriters Laboratories and the American Standards Association.
- G. Safety Certifications as required to meet local code and as required for obtaining the owner's Certificate of Occupancy, are the responsibility of the contractor.
- H. Prior to the owner and/or the owners consultant review of the installed AV systems, the AV contractor's CTS-D certified staff member shall perform an initial review of the system's completeness and readiness for demonstration to the owner and/or the owners AV System consultant. The AV Contractor's review shall be performed using the "Standard Guide for Audiovisual Systems Performance Verification Checklist" as published by InfoComm International. All relevant elements of that checklist shall be verified, noted, and submitted by the AV contractor for the owner's review, prior to demonstration of the system condition or training of owner personnel.
- I. All network-based audio video systems work covered by this section shall be accomplished in strict compliance with the owner's Telecommunications Standards. A copy of those standards is provided with this section.

## 1.9 DELIVERY, HANDLING AND STORAGE

- A. Packing and Shipping

1. All items delivered to the job site shall be properly packaged and sealed.
2. All items to be delivered to the job site via contractor vehicles, shall be properly and adequately protected. Equipment racks are not to be delivered to the job site, unprotected and unpacked.

B. Acceptance at Job Site

1. All deliveries of specified components are to be received on the job site by the contractor.

C. Storage and Protection

1. The contractor shall be required to maintain adequate fire and theft protection for all specified items of equipment throughout the duration of the project.
2. Upon written notice by the contractor to the owner, the owner may provide a secured area for equipment storage for a limited period of time during the installation.
3. The schedule of time when such secured areas shall be required must be identified by the contractor and submitted to the owner at least three weeks prior to the required delivery of equipment.
4. Although the owner may provide the aforementioned secured areas, responsibility of equipment protection and liability for fire and theft damage shall remain with the contractor.

## 1.10 SCOPE OF WORK

- A. All labor, equipment, apparatus, and wiring devices, as required to provide the systems with broadcast quality in excellent working order, as specified herein, and as specified by relevant drawings, including:
1. Submission of drawings for approval by the owner's representative prior to fabrication and installation.
  2. Furnish and install all AV system cabling except for those cables that will be connected to the Owner's network. Coordinate with the project low-voltage contractor as required to ensure that the cabling meets the requirements covered by this section.
  3. Coordinate the electrical and related rough-in work provided by the project electrical contractor.
  4. Furnish and Install the Direct View LED Displays described within this section.
  5. Install, mount, and terminate all AV devices defined within this section. All devices shall be professionally installed, neatly mounted, plum, and square with finish detail commensurate with the finish requirements defined by and/or expected by, the project architect, interior designer and/or the owner.
  6. Install, mount, and terminate all items designated as OFE within this section.
  7. Install, mount, terminate, activate, and test all materials covered by this section in accordance with these specifications, manufacturer's recommendations, and all applicable code requirements.
  8. Prefabricate equipment rack assemblies prior to delivery and installation of the rack assembly on-site.
  9. Verification of dimensions and conditions at the job site as further defined within paragraph 1.8 of this section.
  10. The AV contractor shall be responsible for having all speaker grilles and bodies custom painted to comply with the color requirements throughout the project.

11. Coordination of electrical and physical requirements as further defined within paragraph 1.8 of this section.
12. Initial tests and adjustments of the systems as well as final equalization and alignment of the systems.
13. Training as defined in part 3 of this section.
14. Maintenance services and warranty repair services for one year following acceptance of the systems.
15. Provision of as built and Contract Closeout Documentation.
16. Provide all labor on-site as required to install the specified components and systems. On-site labor shall be performed in harmony with all other trades and trade jurisdictions working on the project site.
17. Provide all technical support and programming as necessary to ensure that the specified Digital Signal Processing System has been properly programmed to provide the features and functions as specified herein. The DSP programming must be provided by a qualified individual with significant and demonstrable experience with the specified or equivalent, DSP system.
18. Provide all programming, development, software, and design work as required to provide a complete and fully functional control system and user control interface as described throughout this section and shown in drawings. Control system interface design and implementation shall be coordinated with the owner and its architect and AV consultant as described within this section.
19. Provide all technical support and programming services as required to provide a complete touch screen and remote-control system as shown on the project drawings as described within this section.
20. Deliver all portable items of equipment that are subject to a “furnish only” condition to the project site. Hand over such items to the owner’s representative with complete, proof of delivery documentation, warranty information and related ownership documentation.
21. Procure and pay for all necessary permits, licenses and inspections and observe any requirements stipulated therein.
22. Conform to all applicable trades with all local regulations and codes.
23. Comply with federal, state, and local labor regulations and applicable union regulations.
24. Life Safety Mute cabling and connection to Life Safety/Fire Alarm Systems.
25. Provide miscellaneous AV cable assemblies as necessary to connect the specified devices to plates, panels, and related devices.
26. Proof of Performance Demonstration
  - a. Following substantial completion of the AV system installation and following the contractor’s effort to confirm that all systems have been installed and tested for compliance with the specified requirements, the AV contractor shall provide a complete system demonstration where all features, functions and system capabilities are demonstrated to the owner, the construction manager, and their AV consultant.
  - b. The AV contractor’s proof of performance demonstration shall be presented by the staff member who fulfills the requirements defined in paragraph 1.8.B.1 through 1.8.B.8 above. See also paragraph 1.8.H above.
27. Furnish and install all AV Plates, Panels and Connectors.
28. Provide Life Safety Mute as required to meet all applicable codes.

## 1.11 RELATED WORK



- A. The following items of work shall be provided by either the project general contractor, the project electrical contractor, or the project IT/Data Contractor:
  - 1. Electrical receptacles, breakers, panels, disconnects and related accessories as shown on the AV and Electrical drawings.
  - 2. Conduit, Back boxes, Junction boxes, pull strings and related rough-in work.
  - 3. AV System cabling
    - a. Also refer to the AV drawing set legends and scope related notes.

#### 1.12 PERFORMANCE REQUIREMENTS

- A. Prior to formal acceptance by the owner, the specified systems shall be tested in accordance with the procedures and requirements as outlined in section 3 of this document. The results of all systems tests and measurements shall be documented by the Audio Video Systems Contractor as specified and defined in Part 3 of this Section.

END OF PART 1

## PART 2 PRODUCT SPECIFICATIONS

### 2.1 GENERAL

#### A. Manufactured Products

1. All equipment provided by the contractor shall be "brand new".
2. Demonstration models or previously used equipment shall not be acceptable.
3. Equipment that was specified as current but rendered obsolete by the manufacturer shall be identified by contractor in contractor's bid response.
4. Owner reserves the right to accept a substitute item as the closest replacement item at the expense of the contractor if not notified in advance of the obsolescence of the specified item.
5. Technical specifications for each item may or may not be identified within this document. Contractor shall be advised that in lieu of exact technical or functional specifications provided for each item, the technical and functional specifications of each item shall be implied by the specific make and model number identified herein.
6. The products listed within this section, including manufacturer names and model numbers provide a definition of features, capabilities and quality required for each specified item. The contractor may submit alternative, equivalent product models for approval as defined in paragraph 1.4 of this section.

#### B. Custom Fabricated Items

1. All custom fabricated items are subject to the owner and engineer's approval of the contractor's shop drawings, samples, or prototype submissions for the custom fabricated items. Custom fabricated items are to provide a professionally fabricated, "made to order" appearance.

### 2.2 MATERIALS

- A. The material requirements for the Audio Video System are defined by the following material list and the project drawings. Quantities shown within the Part 2 Material List are provided as a convenience to the bidding contractors. The contractor shall be responsible for providing all materials in the quantities required to fulfill the intent of the specified system, as defined within this document, and as shown in the system design drawings. If a discrepancy exists between the drawings and text specification, the contractor shall provide the greater quantity.
  1. For instance:
    - a. If the drawings show 4 speaker assemblies and the specification text defines a quantity of 3 of the same speakers, the contractor shall provide 4 speaker assemblies.
  2. or
    - a. If the drawings show 3 speaker assemblies and the specification text defines a quantity of 4 of the same speakers, the contractor shall provide 4 speaker assemblies.
- B. The contractor is responsible for providing all equipment and devices shown on the drawings regardless of whether such devices are identified within the specification text. Refer also to paragraph 1.02 of this specification for further detail of the functional requirements of the

specified system. Materials defined within paragraph 1.02 are required regardless of identification within this paragraph or shown on drawings.

A. Specified Materials

1. See Appendix A for the Bidder's Equipment List (BEL) that follows this section.
2. AV Keyed Bidding Notes shown on the BEL shall be as follows:
  - a. A - OFCI (Other Furnished Contractor Installed)
  - b. B - OFOI (Other Furnished Other Installed, or Provided by Others)
  - c. C - Included with above package
  - d. D - Coordinate stock color/finish with architect
  - e. E - Custom painted. Coordinate with architect
  - f. F - Field verify prior to submittals
  - g. G - Special or noteworthy installation requirements – Refer to System Description for details
  - h. H - Reference manufacturer's Master Quote

### PART 3 INSTALLATION

#### 3.1 INSTALLATION

##### A. General

1. All materials and equipment are to be new and unused.
2. Wiring practices unless herein specified to the contrary shall be in strict conformance with the contents of the “AV Installation Handbook - The Best Practices for Quality Audiovisual Systems” Second Edition as published by InfoComm.
3. Fastenings and supports for all fixed equipment and components including conduit and cables, to provide a safety factor of 5 or better.
4. Installation with all precautions necessary to prevent electromagnetic and electrostatic hum.
5. All precautions necessary to assure adequate ventilation.
6. Precautions to assure the safety of users shall be implemented as required by applicable codes.
7. Microphone and 600-ohm lines fully insulated from each other and from their conduit.
8. Lines in conduit free of any splices.
9. Wiring joints and connections made with rosin core solder or approved mechanical connections.
10. Cables free from wiring damage.
11. All equipment installed neatly, with boxes and racks plumb, level and true to line and level.
12. Switches, connectors, jacks, receptacles, conduits, outlets, and cable terminations clearly, logically, and permanently marked.
13. Moderate moves or changes as necessary to accommodate aesthetics to preserve symmetry, and for pleasing appearance without claim for additional payment.
14. Cooperation with other trades to achieve well coordinated and satisfactory order.
15. Job shall be adequately staffed at all times.
16. Same individual in charge of work throughout execution, unless illness, loss of personnel, or other circumstances beyond the control of the contractor intervenes.
17. Job site and all equipment and materials left clean and free of marks and blemishes.
18. All work shall be provided in a manner such that the work is provided in compliance with the general requirements stated within or implied by the “Standard Guide for Audiovisual Systems Performance Verification Checklist” as published by AVIXA.

##### B. Conduit and Raceway Separation

1. Separate conduits or raceways for microphone level circuits (less than 20 dBm), line level circuits ( 20 to +30 dBm), loudspeaker circuit (+30 dBm or greater), switching and power circuits.
2. Using the following guidelines, provide minimum conduit separation between conduits carrying wiring of the different groups as follows:

	MIC	LIN	SPK	AC POWER
MIC	ADJACENT	6 INCHES	12 INCHES	12 INCHES
LIN	6 INCHES	ADJACENT	12 INCHES	6 INCHES

SPK	12 INCHES	12 INCHES	ADJACENT	ADJACENT
AC Power	24 INCHES	12 INCHES	12 INCHES	ADJACENT

	MIC	LIN	SPK	CONTROL
DIMMER CONTROLL ED LIGHTING	24 INCHES	12INCHES	12 INCHES	6 INCHES
220/440 VOLT	24 INCHES	6 INCHES	12 INCHES	ADJACENT
ALL OTHER (NON-SCR)	6 INCHES	6 INCHES	ADJACENT	ADJACENT

- a. Should the contractor’s work in this regard be limited by site conditions or physical limitations beyond his control, the contractor shall notify the architect of such conditions and/or limitations prior to proceeding with the conduit/raceway installation.
  - b. As it may not be possible to fulfill these requirements at the entry/exit of enclosures, boxes and related devices, the intent of these guidelines is for the contractor to provide the stated separation wherever physically possible and specifically where the path of adjacent conduit shall be parallel for distances greater than 10 feet.
3. The major groups shall never be intermixed.

C. Signal Grounding Procedures

1. To minimize problems resulting from improper grounding, and to achieve maximum signal to noise ratios, the following grounding procedures shall be adhered to:
  - a. System Grounds
    - 1) A single Audio Video System ground point shall be provided at the Audio Video System breaker panel. All Audio Video System grounds shall connect directly to this ground point. Ground connections at the Audio Video System breaker panel shall be provided and distributed by way of captive screw, copper ground lug terminals.
    - 2) The Audio Video System breaker panel ground shall be connected directly to the main building service ground connection. The Audio Video System breaker panel ground connection shall be provided using an insulated copper ground wire providing a maximum of 0.1 ohms total resistance. All ground wires shall be sized as necessary to properly serve the Audio Video System load and as required to meet all applicable codes.
    - 3) All Audio Video System power receptacles including those mounted within equipment rack assemblies shall be provided as isolated ground receptacles. All receptacles shall include a ground conductor tied to the Audio Video System breaker panel ground connection.

- 4) Each audio equipment rack shall include a properly sized copper ground bar. Each ground bar shall be connected to the Audio Video System breaker panel ground point. The ground bar shall be electrically common to the equipment rack chassis. Connection between the ground bar and the rack chassis shall be readily removable for testing purposes by way of a standard screw lug terminal.
  - 5) Each ground bar shall provide standard lug connections allowing direct connection between individual component chassis grounds and the ground bar assembly. These equipment chassis connection points shall be used only to trouble shoot and/or resolve hum and noise problems that cannot otherwise be eliminated.
  - 6) The sound contractor shall be responsible for coordinating, inspecting, and confirming that the specified grounding methods have been properly implemented by the project electrical contractor and by the sound contractor's own fabrication methods.
2. Audio Shields
- a. All line level sound cable shields shall be grounded at one point only. Un-terminated shields shall be insulated using the proper size heat-shrink and completely protected against shorting to any other conductors.

### 3.2 IDENTIFICATION

- A. Provide permanent intelligible identification on, or adjacent to all controls, fuses, circuit breakers, patching jacks, conduit receptacles, and the like. This identification shall clearly and distinctly indicate the function of the item and shall be numbered or lettered to correspond with the function, circuit and use consistent with the field and shop drawings.
1. Identification of fuses and circuit breakers shall indicate protected circuitry, rating of protective device and voltage across open circuit protected device.
  2. Panel surfaces shall be engraved and filled, silk screened or shall be equipped with 1/16-inch laminated plastic labels with engraved characters at least 1/4" inch height (white characters on black background). Under no conditions shall embossed plastic labels, transfer lettering (Chart Pak, LetraSet, etc.) or other makeshift labeling be considered acceptable. Engraving and other identification requirements specifically shown on the specification drawings prevail over this paragraph.
  3. Each principal element of the system shall be completely integrated with consistently identified terminal strips or blocks for all connections. These designations shall be shown on related drawings and documentation.
  4. All rack mounted devices shall include an engraved laminate tag (black tag with white letters) that identifies the rack mounted device using the abbreviated nomenclature shown for that device within the project shop drawings.

### 3.3 AUDIO SYSTEM INITIAL TESTS AND ADJUSTMENTS

- A. Provide all necessary equipment and perform initial tests. Adjust or modify as necessary to provide system performance conforming to specifications.
1. Impedance and Phase
    - a. Check each microphone line for proper phase using a phase checker or voltmeter.

- b. Measure and record the impedance of all loudspeaker lines.
  - 1) Measure the absolute value of each loudspeaker line entering the equipment rack. Document loudspeaker impedance at the amplifier termination point at 250 Hz, 1000 & 4000 Hz.
  - 2) For low impedance speaker systems (16 ohms or less) all impedance readings shall be within 10% of the calculated value based on driver quantity and wiring configuration.
  
- B. Hum and Noise Level:
  1. Hum and noise of system shall be inaudible under normal operating conditions. The measured signal to noise from any microphone input to power amplifier output shall be greater than 70 dB signal to noise, and greater than 80 dB signal to noise from any line input to power amplifier output.
  2. HUM AND NOISE LEVEL NOTE: All system level balancing must be completed before this test is conducted.
    - a. Terminate microphone inputs with shielded 150-ohm resistor.
    - b. With all equalizers switched out, and a microphone input signal of 1 KHz sine wave at 50 dBm, adjust system gain controls for optimum signal to noise at full power amp output. Set gain controls for optimum signal to noise at full power amplifier output. Full power amplifier output shall be determined by maximum power capacity of the loudspeakers connected to the amplifier under test.
    - c. At the output of each power amplifier, with all system equalizers switched out and under the above stated conditions measure and record the unweighted 40 Hz to 10 KHz band width electrical hum and noise level for each of the microphone inputs.
    - d. Each recorded noise measurement shall be referred to the associated power amplifiers and maximum in system voltage output and be expressed and recorded in decibels of signal to noise. Signal to noise ratio shall be 70 dB or greater. Repeat the above stated procedure with all system equalizers switched in. Signal to noise ratio shall be 60 dB or greater.
  
- C. Parasitic Oscillation and RF Pick up
  1. Set up system for normal operation.
  2. Use a 10 MHz or greater oscilloscope and amplified loudspeaker monitor.
  3. Ensure that system at all useable gain settings that the system is free of spurious oscillation with no input signal and with full output at 250 Hz on both sound monitor and oscilloscope presentation.
  
- D. Acoustical Measurements
  1. Acoustic measurements of sound system performance shall be made using sound system real time optimization software or hardware-based equipment including, but not limited to dual channel analysis capable of comparing the output of the system to its input, in both the frequency and time domain, a calibrated ANSI sound level meter, and a calibrated measurement grade microphone on the order of an MK10, M30, or TEF05. All interior finishes and furnishings shall be in place prior to these measurements being taken.
  2. Documentation of acoustical testing shall include frequency response of the room under normal quiet conditions with and without HVAC running (the room "fingerprint"), and

frequency response to full bandwidth pink noise for each equalization zone comparing equalizers switched in and out.

- a. Polarity:
  - 1) Place the test microphone on axis with each loudspeaker component and check for absolute polarity using a shaped waveform or by generating an Energy Phase Curve or Nyquist Curve for each device.
  - 2) Make changes, as necessary.
- b. Frequency Response:
  - 1) With respect to a response which is flat from 60 Hz to 4 KHz then slopes off at 3 dB/octave from 4 KHz to 12.5 KHz, system response within + or -4 dB with no peaks outside this range.
  - 2) Using a Real Time Analyzer, a minimum of six (6) locations within each subsystem shall be checked for compliance with the frequency response specifications stated above.
- c. Coverage
  - 1) Measurement of the loudspeaker distribution coverage using a one octave band of pink noise centered at 2 KHz, measurements taken using a calibrated sound level meter set for "slow" damping.

E. Buzzes, Rattles and Distortion

1. The Audio Video System shall be free of mechanical buzzes, rattling, distortion caused by loose attachments, faulty wiring, overdriven components, etc.

### 3.4 DIGITAL VIDEO SYSTEMS

- A. Using an HD Pattern Signal Generator and HDCP compliance tester, verify all HDMI signal paths, inputs, and displays. Verify laptop connections and resolution settings using a contractor owner laptop, a contractor owner DVD player (Blu ray and 720p) as well as at least one owner-furnished laptop device.

### 3.5 ANALOG VIDEO SYSTEMS TESTING

- A. Video Circuits
  1. Using calibrated, industry accepted test equipment such as signal generators, waveform monitor, oscilloscopes, light meters, and standard source equipment, connect at each input, output point, and verify that the video signal path conforms to NAB NTSC RS-170A. Verify that all video system equipment has been properly installed and is ready for use.

### 3.6 DEMONSTRATION AND ACCEPTANCE TESTING

- A. General:
  1. Upon approval of the above test report, and at a time set by the owner's representative, the contractor shall demonstrate the operation of each major component of the system, each microphone and line input. After demonstration, contractor shall assist as required in the following acceptance tests which shall be conducted by the owner's representative:



- a. Listening Tests:
  - 1) May include speech intelligibility surveys and subjective listening tests by observers listening at various positions under operating conditions.
- b. Equipment Tests:
  - 1) May include measurements of frequency response, distortion, or other performance characteristics.
  - 2) May be performed on any item or group of items to verify conformity with specifications.
- c. Additional Adjustments and Tests:
  - 1) If the need for additional adjustment becomes evident during demonstration and testing, contractor's work shall be continued until the system installation operates properly.

### 3.7 TRAINING

- A. Provide prepared and organized training sessions for the benefit of the owner's personnel. These training sessions shall be of the following minimum duration:
  - 1. Audio and Video Systems Training - 12 Hours
  - 2. Audio and Video Systems Initial Event Support
    - a. Provide a technician who is familiar with the AV system installation for a minimum of two six-hour events. Provide technical assistance to the owner's staff or hired operators such that the initial events are properly served by the provided systems.

### 3.8 GUARANTEE

- A. Labor and materials provided under this specification shall be warranted, commencing on the date of final acceptance of the installation by the owner, for a period of one year, to be free of defects and deficiencies, and to conform to the component specifications and this document as to kind, quality, function, and characteristics. Defects in labor, or materials, occurring within the warranty period shall be rectified by replacement or repair without charge. Paint and exterior finishes, fuses, lamps, and tubes, are excluded from this warranty, unless damage or failure is the result of defective materials or workmanship covered by warranty, or work performed under warranty in the repairing of defects.
- B. Warranty service shall be provided to the owner for the warranted items within 48 hours of notice to the contractor.
- C. Manufacturer's warranties which shall exceed the one-year Contractor warranty shall be activated in the owner's name prior to system acceptance. Warranty cards and registration information shall be executed in the owner's name and forwarded to the respective manufacturers prior to final system acceptance.

### 3.9 MAINTENANCE AND SERVICE

- A. Provide one maintenance site visit at six months following the system acceptance.

- B. During the maintenance site visit, activate all system components and verify proper operation of controls and devices. Clean and adjust all recording and playback transports as recommended by the respective manufacturers. Repair or replace all defective materials within the scope of the above stated warranty.
- C. All service calls answered by contractor within 48 hours.
- D. Within 10 months of system acceptance provide a proposal for an annual maintenance and service agreement.

3.10 PERFORMANCE VERIFICATION CHECKLIST

- A. The contractor shall provide all services necessary to complete the AV industry standard checklist questionnaire as defined on the following pages.
- B. This checklist and report have been prepared using the AVIXA International Standard Guide for Audio Visual Systems Performance Verification Checklist as a basis for providing an organized report on the condition of the above noted AV system as of the dates noted above.
- C. The AVIXA Standard Guide is intended to provide owners, consultants, and integrators with a comprehensive and singular source of tests to determine if the audiovisual system achieves the client’s goals or objectives and that the system performs in accordance with the best practices of the industry. By providing this list to the audiovisual industry, AVIXA is establishing a set of commissioning guidelines to help industry professionals, and their clients communicate effectively about their expectations for system performance.

**Standard Guide for Audio Visual Systems Performance Verification Checklist**

<b>Project Title:</b>	
<b>Description:</b>	
<b>Project Location:</b>	
<b>Project Architect:</b>	
<b>System Designer:</b>	
<b>Date of Report:</b>	
<b>Date of Site Visit/Tests:</b>	
<b>AV Contractor:</b>	
<b>Client:</b>	

Contents of the Standard Audiovisual Systems Verification Tests Checklist

I AV-PH	Physical Installation
II AV-CM	Cable Management, Termination and Labeling
III AV-E	Electrical
IV AV-S	Serviceability
V AV-A	Audio Performance
VI AV-V	Video Performance
VII AV-N/AV-C	Control, Software and Networking
VIII AV-AC	Acoustical Environment
IX AV-DR	Verification and Documentation

D. Project Specific Notes and Reporting

1. Although not all segments or line items covered by the InfoComm Standard Guide may not be applicable to this specific project, all elements of the standard guide have been included in this report. In cases where a particular test or reporting element of the standard guide is not applicable to this specific project, such items shall be noted as Not Applicable (N/A) or otherwise explained.

E. AV-PH: Physical Installation

1. AV-PH-01 Site Inventory of AV Equipment
  - a. Is all the equipment in shop or on site?
2. AV-PH-02 Installation Status of AV Equipment
  - a. Is all rackable equipment installed?
3. AV-PH-03 AV Rack Cleanliness
  - a. Racks are "clean" - grease markings removed, etc.
4. AV-PH-04 AV Rack Blanks and Vents Installation
  - a. All blanks and vents installed in unused rack spaces.
5. AV-PH-05 AV Patch Bay Labeling
  - a. All patchbays labeled.
6. AV-PH-06 AV Patch Bay Configuration
  - a. Patchbays configured with all outputs on top rows, inputs on bottom rows.
7. AV-PH-07 AV Rack Thermal Gradient Performance
  - a. Thermal gradient inspected; all equipment operating within manufacturers' guidelines.
8. AV-PH-08 AV Rack Protective Treatments
  - a. Small racks have carpet tiles on the bottom to avoid scratching credenzas
9. AV-PH-09 AV Equipment Labeling
  - a. All engraved labels permanently fastened
10. AV-PH-10 AV System Cabling Verification
  - a. All peripheral equipment hooked up as per flow diagram: microphones, loudspeakers, video monitors, projectors, PC's, USB switchers, etc.

- F. AV-CM: Cable Management, Termination, and Labeling
1. AV-CM-01 AV Equipment Power Cable Management
    - a. Equipment without IEC removable power cords are not tie-wrapped to the cabinet, and there are no obstructions to the item being pulled from the front of the rack.
  2. AV-CM-02 Verification of AV Rack Cable Installation
    - a. Tie wraps are not too tight as to deform the cable. UTP cables are laced and bound with Velcro ties.
  3. AV-CM-03 Verification of AV Rack Cable Installation
    - a. Terminations are free from stress due to gravity acting on the cabling or cable dressing technique.
  4. AV-CM-04 Verification of AV Rack Cable Installation
    - a. Terminations have sufficient service loop, allowing a re-termination or two without having to open a cable bundle or pathway to lay in a new cable.
  5. AV-CM-05 Verification of AV Rack Cable Installation
    - a. Cables appropriately dressed and bundled according to cable type.
  6. AV-CM-06 Verification of AV Rack Cable Installation
    - a. Verify cable supports are used depending on size and stiffness of cable.
  7. AV-CM-07 Verification of AV Rack Cable Installation
    - a. Cables have appropriate separation according to signal type and level.
  8. AV-CM-08 Verification of AV Rack Cable Installation
    - a. Verify all cables are installed with an adequate bend radius as recommended by the manufacturer and general system requirements.
  9. AV-CM-09 AV System Cable Labeling
    - a. All cables have clearly legible, unambiguous identifying labels, and labels are oriented and positioned consistently. Labels are visible without system disassembly and are not hidden in cable bundles.
  10. AV-CM-10 AV System Cable Labeling
    - a. All cable labels are permanent, non-slipping and according to specification.
  11. AV-CM-11 AV Connector Verification
    - a. All terminations agree with the equipment and system requirements.
  12. AV-CM-12 AV Connector Verification
    - a. All connectors are correctly seated to its mating connector.
  13. AV-CM-13 AV Connector Plate Labeling
    - a. All connectors on input and output plates are labeled.
  14. AV-CM-14 AV Connector Plate Labeling
    - a. Confirm all labeling nomenclature for consistency between drawings, touch screen labels, wall plates and other labeling of connectors, connection points and devices.
- G. AV-E: Electrical
1. AV-E-01 AV System Power and Grounding
    - a. Verification Stray AC voltages on any equipment accessible to a user relative to ground?
  2. AV-E-02 AV System Power and Grounding
    - a. Verification Neutral and isolated ground current test.
  3. AV-E-03 AV System Power and Grounding Verification
    - a. Verify equipment is powered by correct circuits.
- H. AV-S: Serviceability

1. AV-S-01 AV System Serviceability
  - a. Input/output panels are easily accessible.
2. AV-S-02 AV System Serviceability
  - a. If there are obstructions prohibiting the disconnection of terminations on the back of AV equipment, there must be sufficient cabling to permit the equipment to be pulled from the front and disconnected there.
3. AV-S-03 AV System Serviceability
  - a. It is relatively easy to find proper cable termination points when removed or replaced equipment is re-installed.
4. AV-S-04 AV System Serviceability
  - a. Equipment can be pulled for repair or replacement without hindrance.
5. AV-S-05 AV System Serviceability
  - a. Equipment must be able to be serviced indefinitely; designed with the maintenance technician in mind (he or she shall "own it" longer than the person who fabricated the system initially).

I. AV-A: Audio Performance

1. All audio performance tests are made from all electronic system inputs (first physical output of source media, all I/O plates, mic inputs) to all electronic system outputs (all outputs connected to amplifier inputs, all connections to external facilities (to other rooms, buildings, or external services such as broadcast connections)).
2. AV-A-01 Audio System Total Harmonic Distortion
  - a. Measure total harmonic distortion of the audio system. Distortion level should not exceed best practices.
3. AV-A-02 Audio System Signal-to-Noise Ratio
  - a. Measure system signal to noise ratio. Noise level should not exceed best practices.
4. AV-A-03 Speech Reinforcement System Electronic Frequency Response
  - a. Measure frequency response of the audio system for speech sound reinforcement. System frequency response should be determined for the system during design process.
5. AV-A-04 Audio Playback System Electronic Frequency Response
  - a. Measure frequency response of the audio system for program sound amplification. System frequency response should be determined for the system during design process.
6. AV-A-05 Audio System Latency
  - a. Measure latency of the audio system. Latency should not exceed design requirements of the system.
7. AV-A-06 Audio Coverage in Listener Areas
  - a. Measure audio coverage uniformity in the listener area, see InfoComm Performance Standard for test procedure and acceptable performance criteria.
8. AV-A-07 Audio Level versus Background Noise Level
  - a. Measure background noise level during normal room operation. Measure audio system level during normal room operation. Audio level should exceed background noise level to provide for clear, intelligible amplified sound.
9. AV-A-08 Speech Reinforcement System Headroom
  - a. Measure audio system headroom. Audio system should be capable of performing above nominal operating levels without distortion.
10. AV-A-09 Program Loudspeaker Polarity

- a. Program loudspeakers in the same system shall produce consistent polarity for a mono input signal in all channels.
  11. AV-A-10 Speech Reinforcement Speaker Polarity
    - a. Speech reinforcement systems shall be polarized such that a positive acoustic pressure on a microphone results in a positive acoustic pressure at all loudspeakers
  12. AV-A-11 Alignment of Multiple Audio Sources
    - a. Calibrate audio system inputs so there is zero or minimal difference between any input signal level.
  13. AV-A-12 Audio Buzz and Rattles
    - a. There shall be no audible vibration caused by improper mechanical installation. Perform buzzes and rattles test, using continuous sweep signal (from generator or test CD) pass/ fail result or which device at what frequencies.
  14. AV-A-13 Audio System Gain Before Feedback
    - a. The speech reinforcement system shall be stable and operate without feedback.
  15. AV-A-14 Conferencing System Microphone Sensitivity & Gain Structure Alignment
    - a. For conference systems, adjust microphone input gain to demonstrate that "standard talker," positioned at each talker position in the room, produces a 0 dBu level at the output of the output bus of the audio conference DSP device. Verify signal levels for both transmit and receive using normal speech.
  16. AV-A-15 Audio System Equalization for Speech Intelligibility
    - a. Equalizers shall be adjusted for best intelligibility, and in accordance with the preferred acoustic level response curves. For systems with equalizers, document the "house curve" before equalization, as well as after the equalizers have been tuned, with and without microphone input filters. If requested by the Consultant, produce this documentation for systems without equalizers, as this test may apply to the preamp filter settings in cases where intelligibility can be improved.
  17. AV-A-16 Audio System Speech Intelligibility at Listener Positions
    - a. Audio systems should provide intelligible sound above background noise levels. System design should anticipate background noise levels in the listener space.
  18. AV-A-17 Audio System Amplifier Loading
    - a. No power amplifier shall have its rated load exceeded. Record the impedance (and at what frequency) of each loudspeaker line of each power amplifier. 63, 250, and 1,000 Hz are recommended if available.
  19. AV-A-18 Conferencing Echo Suppression Performance
    - a. For a system with conference capability, the system shall perform at nominal operating levels in a full duplex mode without echo or latency.
  20. AV-A 19 DSP Signal Path Verification
    - a. All DSP programming installed and properly pass intended signal pathways and mixes.
- J. AV-V: Video Performance
1. AV-V-01 Video System NTSC Signal Gain
    - a. For NTSC sources, demonstrate a consistent 1-volt peak-to-peak test signal at each source shall produce 1-volt peak-to-peak to each destination. Verify at each destination using NTSC bars, peak white, and 5-step multiburst (0.5, 1.0, 2.0, 3.0, 3.58, and 4.2 MHz).
  2. AV-V-02 Video System RGBHV Signal Gain

- a. For RGB sources, demonstrate consistent 700 mV from each source to each destination. Observe results using a flat-field pattern signal at 1024 by 768 resolution (VESA 8). Measure peak-to-peak voltage using a 200 MHz oscilloscope at each destination when a test generator with either multi-burst or H pattern is at each source location. Adjust 'peaking' and 'level' control settings on any interface at the positions whereby the 700 mV voltages were attained.
3. AV-V-03 Video System Pixel Failure Tolerance
  - a. "White Purity" Test. Note number and location of stuck or lost pixels, if any.
4. AV-V-04 Video Camera Image
  - a. Verify camera performance and operation.
5. AV-V-05 NTSC Image Alignment
  - a. For NTSC sources, confirm optimum brightness, contrast, and color in displays using SMPTE source with PLUGE (Picture Line Up Generation Equipment) display.
6. AV-V-06 Consistency of Multiple NTSC Displays
  - a. When several NTSC displays are visible, demonstrate consistencies in displays using NTSC bars with PLUGE signal to all.
7. AV-V-07 Projected Display Physical Alignment
  - a. Verify that projected displays are focused, centered, and evenly-illuminated.
8. AV-V-08 Projected Display Physical Alignment
  - a. For projected displays, take actual measurements of image geometry to verify image is rectangular and proportional across the entire image.
9. AV-V-09 Projected Image Contrast Ratio
  - a. Measure the contrast ratio of the projected image with ambient lighting in normal operating mode.
10. AV-V-10 Projected Display Brightness Uniformity
  - a. For projected displays, using a calibrated light meter, determine the image has uniform brightness across the entire image.
11. AV-V-11 Multiple Resolution Performance of Video Displays
  - a. Display stable, properly scaled images, with no scaling-related visual artifacts when switching between, at a minimum, 1024 x 768, 1280 x 1024, 1280 x 720 sources, and/or all those specified in the performance criteria for this system.
12. AV-V-12 Image Size Relative to Furthest Viewer
  - a. Image size relative to furthest viewer: Record each, compare to recommended multiplier.
13. AV-V-13 Cable Television RF Tap Levels
  - a. Confirm TV RF levels, using the highest frequency channel of the system, with field strength meter at all system taps.
14. AV-V-14 On Screen Display Settings for Video
  - a. Displays have OSDs (on screen displays) "OFF", or as specified by the user.
15. AV-V-15 Video Standby Screen Setting
  - a. Video projector, if any, must have 'blue screen' off, or as directed by the user.
- K. AV-N / AV-C: Control, Software and Networking
  1. AV-N-01 Control System IP Address Assignment
    - a. All IP-controlled equipment properly configured with IP addresses, host names, time servers, Gatekeeper addresses, network configurations, and subnets as applicable. All system connections are operational, and devices communicate correctly.
  2. AV-C-02 Control System Communications

- a. All control system programming installed and properly communicating with the equipment intended.
  3. AV-C-03 Control System User Interface Performance
    - a. Control system user interface conforms to user or specified requirements and all pages and buttons operate as intended.
  4. AV-C-04 Interfacing and Control of External Devices and Systems
    - a. Confirm control system functions not obvious from the control flow diagrams (i.e., lighting presets that are activated when the control system enters a videoconferencing mode)
  5. AV-C-05 Interfacing and Control of External Devices and Systems
    - a. Confirm control system interfaces exist and are functional for devices that may be outside AV scope such as drapes, shades, screens, lights, security, life safety and HVAC.
  6. AV-C-06 Control System Power Cycling and Recovery
    - a. The control system shall restart and resume full operation following an unanticipated cycling of AC power to the control system.
- L. AV-AC: Acoustical Environment
1. AV-AC-01 Acoustical Ambient Noise
    - a. Record ambient noise level with room is normal operating mode, see AV-A-07.
  2. AV-AC-02 Acoustical Ambient Noise
    - a. Document octave band ambient noise and calculate NC or RC per ASHRAE if NC was part of design criteria
  3. AV-AC-03 AV Room Reverberation Time
    - a. Document octave band reverberation times if speech intelligibility criterion is not met.
- M. AV-DR: Verification and Documentation
1. AV-DR-01 AV System Documentation
    - a. There is perfect agreement between the "paper model" documentation (drawings), the control system user interface (i.e., touch panel screens, push button labels, panel engravings, etc.), and the physical wiring and labeling. This includes designation strips, equipment labeling, etc.
  2. AV-DR-02 Video System Test Reporting
    - a. Video system tested (all pathways tested; all interconnections marked as tested on drawing).
  3. AV-DR-03 Audio System Test Reporting
    - a. Audio Tested (all pathways tested; all interconnections marked as tested on drawing).
  4. AV-DR-04 Control System Test Reporting
    - a. Control tested (all pathways tested; all interconnections marked as tested on drawing). Emulate closures for screens, motors, etc.
  5. AV-DR-05 AV System Commissioning Sanity Check
    - a. Sanity Check: Is there any reason why this system should NOT be turned over to the owner for use.
  6. AV-DR-06 Final Commissioning Report and System Turnover
    - a. Prepare document report, certifying the product, performance, and practices are in compliance and note any exceptions. Distribute accordingly.



NV5 Consultants, Inc.  
Pittsburgh, PA 15233

Atlantic City Public Library  
2<sup>nd</sup> Floor Meeting Room and Elevator  
Atlantic City, NJ  
Bid Set – 1/16/2025

END OF PART 3  
END OF SECTION 115201

# City of Atlantic City

## Atlantic City Public Library

### Audiovisual Systems Bidding Equipment List

ID	Manufacturer	Model	Item / Description	Unit Qty	Bidding Notes
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Number : **291**  
 Type : **SY01**  
 Name : **CIVIC ROOM**  
 Rm Qty : **1**

#### Display Devices

1	ATS-Pro	WX Series 1.2mm	10' x 5.75' Direct View LED Wall (Refer to Manuf. Master Quote #7069)	2	H
2	ATS-Pro	Service Tool Vacuum	Service Tool (Included in Above Master Quote)	1	H
3	ATS-Pro	WX Series - Trim Kit	Trim Kit for WX Series Panel (Included in Master Quote Above)	2	H
4	ATS-Pro	Freight	Freight for ATS-Pro LED Walls (Included in Master Quote Above)	1	H
5	Novastar	H2	Video Wall Splicer (Included in Master Quote Above)	1	H
6	Novastar	H_4XHDMI	4 x HDMI Input Card for H2 (Included in Master Quote Above)	1	H
7	Novastar	H_16xRJ45+2xFiber	16xRJ45 Sending Card for H2 (Included in Master Quote Above)	2	H
8	ATS-Pro	Remote Commissioning	Remote Commissioning and Support for ATS Video Walls (Included in Master Quote Above)	1	H
9	Dell	P2217H	22" LED Monitor, 1920x1080 Native	2	-
10	Chief	Articulating Monitor Mount	Contractor Selected Articulating Arm Monitor Mount	2	-

#### Source Devices

11	Owner Furnished	Workstation - 1 Output	PC w/1 Output (OFCL)	2	A
12	Hovercam	Duo	Dual Output Document Camera, 12MP 4056x3040 Image Resolution, 5x Digital Zoom, 5x Mechanical Zoom, w/Microphone, HDMI and USB Out	2	-
13	Crestron	AM3-212 KIT	AirMedia Series 3 Kit with AM-3200-WF Receiver, two AM-TX3-100 Adaptors, and Cradle	2	-
14	Denon Professional	DN-500BDMKII	Commercial Blu-ray Disc Player	2	-

#### Video Capture, Streaming and Conferencing

15	QSC	NC-12x80	12x Optical Zoom 80° Horizontal Field of View, PTZ Network Camera, PoE, with HDMI and SDI output. Includes PTZ-WMB1 wall mount bracket	3	-
16	INOGENI	TOGGLE	USB 3.0 Switcher w/ USB Hub	2	-

#### Signal Processing, Routing, and Distribution

17	QSC	NV-32-H (Core Capable)	QSYS Video Encoder/Decoder, (3) HDMI Inputs, (2) HDMI Outputs, USB Bridge, (1) RS232 Port, GPIO	3	-
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#### Speech Reinforcement System/Audio Conferencing

18	Shure	MXA920W-S	Square Ceiling Microphone Array, Dante (White Only)	2	-
19	Shure	UA864US	Wall/Ceiling Mount Active Directional Antenna (470-698 MHz) (White Only)	2	-
20	Shure	UA844+SWB	Wideband UHF (470-952 MHz) Five-Way Active Antenna Splitter, With Cables	1	-
21	Shure	QLXD124/85	Wireless Digital Microphone Single Channel Combo System w/ Handheld and Lavalier Mic	4	-
22	Listen Technologies	LS-31-xxx	Listen IDSP Essentials Level 2 Stationary RF System (72 MHz)	1	-
23	Listen Technologies	LT-803-072-01	Stationary (3-Channel) RF Transmitter	1	-
24	Contractor Select	Contractor Select	Flexible Lectern Mic Gooseneck and Wireless Mic Clip	2	-

#### Sound Reinforcement System

25	QSC	CX-Q 2K4	4-Channel 500W/CH Q-SYS Network Amplifier, Lo-Z, 70V, 100V Direct Drive, FlexAmp	1	-
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# City of Atlantic City

## Atlantic City Public Library

### Audiovisual Systems Bidding Equipment List

ID	Manufacturer	Model	Item / Description	Unit Qty	Bidding Notes
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Number : **291**  
 Type : **SY01**  
 Name : **CIVIC ROOM**  
 Rm Qty : **1**

26	JBL	Control 47C/T	6.5" 2-way Ceiling Loudspeaker w/70V Transformer - Consistent Coverage Extended Bass	12	-
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#### Control System

27	QSC	TSC-70-G3	Q-SYS 7" PoE Touch Screen Controller For In-Wall Mounting. Available In Black Only	2	-
28	QSC	TSC-710t-G3	Table Top Mounting Accessory For TSC-70-G3 And TSC-101-G3.	2	-
29	QSC	CORE 8 FLEX	Audio, Video & Control Processor (8) Flex Audio & GPIO Ports, (8) AEC, USB Bridge, 8x8 Dante (up to 32x32 Dante), (2) RS-232 Ports, (2) VoIP	1	-
30	QSC	TSC-101-G3	Q-SYS 10.1" PoE Touch Screen Controller For In-Wall Mounting. Available In Black Only	3	-
31	Crestron	TSS-770-x-S-LB KIT	7" Room Scheduling PoE+ Touch Screen w/ Light Bar	2	D
32	Crestron	GLS-PART-CN	Partition Sensor with Cresnet	1	-
33	QSC	SLMST-8N-P	Q-SYS Core 8 Flex, Core Nano, NV-32-H (Core Capable) License for Microsoft Teams Room Software Features, Enables Both Q-SYS Scripting and UCI Deployment, Perpetual.	1	-

#### Rack, Panels, Misc.

34	Marshall Furniture	Custom Lectern	Custom Lectern with Document Camera Drawer and Integrated Equipment Rack (Include \$8,000 Allowance)	2	D,F
35	Contractor Select	Contractor Select	48-Port Patch Panel	1	-
36	Owner Furnished	48P Network Switch	48-Port Network Switch (OFCI)	1	A
37	Middle Atlantic	ERK-4425-AV	ERK-Series 44RU, 25"D Equipment Rack Configured	1	-
38	Middle Atlantic	UPS-S2200R	Uninterruptable Power Supply Premium Series, (8) Outlets, 2150VA/1650W, 2RU	1	-
39	Middle Atlantic	D3	Drawer, 3RU, 14-1/2"D	1	-
40			Installation Materials as Defined in AV Systems Specification	Lot	
41			Custom Wall/Floor Box and Decorator-Style Plates as Needed	Lot	
42			Pre-Made Loose Cabling and Field Cabling as Needed	Lot	
43			Rack Panels, Vents, Mounts, Shelves, Other Rack Materials as Needed	Lot	
44			Rack ID Panels per Specification, See AV Rack Accessories	Lot	
45			Wall, Ceiling Mounts and Mounting Hardware as Needed	Lot	
46			Control System Accessories as Needed	Lot	
47			Power Supplies and Power Distribution as Needed	Lot	
48			Cable Terminations, Cable Dressing, Labels, Ties, Cable Management as Needed	Lot	

#### End of System

# City of Atlantic City

## Atlantic City Public Library

### Audiovisual Systems Bidding Equipment List

ID	Manufacturer	Model	Item / Description	Unit Qty	Bidding Notes
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Number : **NA**  
 Type : **SY02**  
 Name : **POD/BOOTH**  
 Rm Qty : **2**

#### Source Devices

1	Owner Furnished	PC/Workstation - All-In-One	All-In-One PC - Monitor w/Built-In PC / Camera / Microphone (Single Output) (OFCI)	1	A
2	Owner Furnished	Wireless Keyboard/Mouse	Wireless Keyboard and Mouse (OFCI)	1	A

#### Rack, Panels, Misc.

3			Installation Materials as Defined in AV Systems Specification	Lot	
4			Custom Wall/Floor Box and Decorator-Style Plates as Needed	Lot	
5			Pre-Made Loose Cabling and Field Cabling as Needed	Lot	
6			Rack Panels, Vents, Mounts, Shelves, Other Rack Materials as Needed	Lot	
7			Rack ID Panels per Specification, See AV Rack Accessories	Lot	
8			Wall, Ceiling Mounts and Mounting Hardware as Needed	Lot	
9			Control System Accessories as Needed	Lot	
10			Power Supplies and Power Distribution as Needed	Lot	
11			Cable Terminations, Cable Dressing, Labels, Ties, Cable Management as Needed	Lot	

#### End of System

SECTION 123600

COUNTERTOPS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Countertops for architectural cabinet work.
- B. Sinks molded into countertops.

1.2 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
  - 1. Preparation instructions and recommendations.
  - 2. Storage and handling requirements and recommendations.
  - 3. Specimen warranty.
- C. Shop Drawings: Complete details of materials and installation ; combine with shop drawings of cabinets and casework specified in other sections.
- D. Verification Samples: For each finish product specified, minimum size 6 inches square, representing actual product, color, and patterns.
- E. Test Reports: Chemical resistance testing, showing compliance with specified requirements.
- F. Installation Instructions: Manufacturer's installation instructions and recommendations.
- G. Maintenance Data: Manufacturer's instructions and recommendations for maintenance and repair of countertop surfaces.

1.3 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.4 FIELD CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

## PART 2 PRODUCTS

### 2.1 COUNTERTOPS

- A. Quality Standard: Custom Grade, in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), unless noted otherwise.
- B. Natural Quartz and Resin Composite Countertops: Sheet or slab of natural quartz and plastic resin over continuous substrate.
  - 1. Flat Sheet Thickness: 1-1/4 inch, minimum.
  - 2. Natural Quartz and Resin Composite Sheets, Slabs and Castings: Complying with ISFA 3-01 and NEMA LD 3; acrylic resin, mineral filler, and pigments; homogenous, non-porous and capable of being worked and repaired using standard stone fabrication tools; no surface coating; color and pattern consistent throughout thickness.
    - a. Manufacturers and Products: Refer to the Finish Schedule on the drawings.
    - b. Factory fabricate components to the greatest extent practical in sizes and shapes indicated; comply with NSI (DSDM).
    - c. Surface Burning Characteristics: Flame spread index of 25, maximum; smoke developed index of 450, maximum; when tested in accordance with ASTM E84.
    - d. NSF approved for food contact.
    - e. Sinks: Separate units for undercounter mounting.
    - f. Color and Pattern: As indicated on drawings.
  - 3. Other Components Thickness: 3/4 inch, minimum.
  - 4. Exposed Edge Treatment: Eased edge.
  - 5. Back and End Splashes: Same sheet material, eased edge top; minimum 4 inches high.

### 2.2 MATERIALS

- A. Plywood for Supporting Substrate: PS 1 Exterior Grade, A-C veneer grade, minimum 5-ply; minimum 3/4 inch thick; join lengths using metal splines.
- B. Adhesives: Chemical resistant waterproof adhesive as recommended by manufacturer of materials being joined.
- C. Joint Sealant: Mildew-resistant silicone sealant, color as selected, see Section 079000.

### 2.3 FABRICATION

- A. Fabricate tops and splashes in the largest sections practicable, with top surface of joints flush.
  - 1. Join lengths of tops using best method recommended by manufacturer.
  - 2. Fabricate to overhang fronts and ends of cabinets 1 inch except where top butts against cabinet or wall.
  - 3. Prepare all cutouts accurately to size; replace tops having improperly dimensioned or unnecessary cutouts or fixture holes.

- B. Provide back/end splash wherever counter edge abuts vertical surface unless otherwise indicated.
  - 1. Secure to countertop with concealed fasteners and with contact surfaces set in waterproof glue.
  - 2. Height: 4 inches, unless otherwise indicated.

### PART 3 EXECUTION

#### 3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- C. Verify that wall surfaces have been finished and mechanical and electrical services and outlets are installed in proper locations.

#### 3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

#### 3.3 INSTALLATION

- A. Securely attach countertops to cabinets using concealed fasteners. Make flat surfaces level; shim where required.
- B. Attach resin countertops using compatible adhesive.
- C. Seal joint between back/end splashes and vertical surfaces.

#### 3.4 TOLERANCES

- A. Variation From Horizontal: 1/8 inch in 10 feet, maximum.
- B. Offset From Wall, Countertops: 1/8 inch maximum; 1/16 inch minimum.
- C. Field Joints: 1/8 inch wide, maximum.

#### 3.5 CLEANING

- A. Clean countertop surfaces thoroughly.

3.6 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Date of Substantial Completion.

END OF SECTION



## SECTION 14000

### ELEVATOR MODERNIZATION

#### PART 1 - INSTRUCTIONS TO BIDDERS

##### 1.1 EXAMINATION OF EXISTING BUILDING AND CONTRACT DOCUMENTS

- A. Examine the existing building to become informed as to facilities for delivering materials and equipment.
- B. Examine the specifications and other data or instructions pertaining to the work. Lack of knowledge of any conditions that exist, or any difficulties or conditions that may be encountered concerning the work to be performed, will not be accepted as an excuse for any failure or omission on the part of the Elevator Contractor to fulfill the requirements of the work.
- C. Provide notice of any materials or apparatus that is in violation of laws or ordinance rules and regulations of authorities having jurisdiction.
- D. Provide a schedule of the work to be completed in the shortest possible time frame taking into account any negative impact on the tenants and their operations.

##### 1.2 REJECTION OF BIDS

- A. Owner reserves the right to reject any or all bids, to waive informalities and to award any bid.

##### 1.3 SUBSTITUTION OF MATERIAL OR EQUIPMENT

- A. Submit the proposal in accordance with materials listed in the specifications as the Base Bid.
- B. Acceptance of an alternate or substitute article, material or piece of equipment shall be subject to approval of the Owner.

##### 1.4 ASSIGNMENTS

- A. No part of the work of the contract shall be assigned without prior approval of the Owner.

##### 1.5 DEFINITIONS

- A. Technical terms in these specifications have their definitions given in the latest edition of the American National Standard Safety Code for Elevators, Dumbwaiters, Escalators and Moving Walks ASME A17.1 and A17.2.
- B. Common terms used in these specifications have their definitions given below:
  - 1. AHJ (Authority Having Jurisdiction): Authority having responsibility for final elevator acceptance inspection, enforcement of Codes, issuance of Certificate of Operation.
  - 2. Approved, Satisfactory, Accepted: As approved, satisfactory, accepted or directed by the Owner.
  - 3. Defective Elevator Work: Operation or control system failures; performances below specified ratings; excessive wear; unusual deterioration or aging of materials or finishes;

- unsafe conditions; the need for excessive maintenance abnormal noise or vibration; and similar unusual, unexpected, and unsatisfactory conditions.
4. Elevator Bidder: Person or company submitting a bid proposal to perform the work of the specification.
  5. Elevator Contractor: Elevator Company performing the work.
  6. Elevator Consultant: Person or company authorized by Owner to represent Owner and act as Owner's representative in all matters relating to the technical component of the specifications.
  7. Install: To erect, mount and connect complete with related accessories.
  8. Overhaul: To examine thoroughly, repair, renovate, revise, renew thoroughly.
  9. Owner: Person or company holding title to the property in which the specified work is to be performed, or his appointed representative(s).
  10. Provide: To supply, install, connect and make ready for safe and normal operation the complete elevator system as specified herein.
  11. Similar or Equal: Approved material, weight, size, design, and characteristics to the specified product.
  12. Supply: To purchase, procure, acquire and deliver complete with related accessories.
  13. Wiring: Conduit, fittings, wire, traveling cables, junction and outlet boxes, switches, cutouts, receptacles, and related items and accessories.
  14. Work: Labor materials, equipment, apparatus, controls, accessories and other items required for proper and complete installation.
  15. Non-Proprietary: The elevator equipment proposed for this project shall be Non-Proprietary. It shall comply with the following provisions and be in compliance with all known standards for universal serviceability and maintainability. Further,
    - a. Equipment must be generally available for purchase by any qualified elevator contracting business.
    - b. Spare Parts must be available to any qualified purchaser at reasonable prices and based on a published price list.
    - c. All equipment or tools necessary for diagnostics, maintenance, adjustment, or troubleshooting shall be available to any qualified elevator contracting business. Such tools shall provide access to all parameters and levels of adjustment that are necessary for the maintenance of the equipment. There shall be no expiring or degrading software that would prohibit proper maintenance.
    - d. Factory and or on-site training for the installation, adjustment, maintenance, and troubleshooting shall be available from the manufacturer to any qualified elevator contracting business. Any training fees shall be reasonable and appropriate.
    - e. Technical Support should be made available to any qualified elevator contracting business by the equipment manufacturer. The equipment manufacturer shall provide a toll-free phone line available for technical support.
    - f. Documentation in the form of manuals, circuitry diagrams, prints, engineering drawings, testing procedures, and parts lists shall be provided with the equipment at the time of installation. Replacement documentation shall be available to any qualified elevator contracting business and reasonable and normal cost.

#### 1.6 INTENT

- A. Intent of these specifications is to cover the specified work complete and operable in every respect. It is not intended to give every detail in the specifications. Owner shall not be responsible for absence of wiring diagrams for existing equipment or any detail the Elevator Contractor may require. Material and equipment usually furnished with such systems and/or needed to make a complete and safe installation, whether specifically mentioned or not, omitting only such parts and assemblies as are specifically excluded, shall be furnished. Material and equipment furnished shall be new and in perfect condition.
- B. Owner's, or Owner's representative's, interpretation of specifications shall be final and binding upon the Elevator Contractor.

#### 1.7 QUALITY ASSURANCE

- A. Work shall comply with governing codes, conform to laws, ordinances and regulations affecting the erection, sequence of erection and completion of the whole or part of the work, and conform to the requirements of Authorities Having Jurisdiction. Elevator Contractor shall be responsible for correction of any violations of codes caused by himself or his employees. Owner warrants that as of the bid date, no violations have been placed upon the existing equipment by any authority having jurisdiction.

#### 1.8 LAWS AND PERMITS

- A. Comply with federal, state and municipal laws and ordinances, prepare documents, obtain and pay costs and fees for permits and inspections and obtain certificates of operation.

#### 1.9 CONFLICTS

- A. Should it appear that there is real or apparent discrepancy between different sections of the specifications concerning nature quality or extent of work to be furnished, it shall be assumed that the Elevator Contractor has based the bid on completing the work in a more stringent manner. Final decision shall rest with the Owner or Owner's Representative.

#### 1.10 PROJECT SCHEDULE and COORDINATION

- A. Submit a schedule with the Bid Proposal indicating the following.
  - 1. Engineering Survey/Drawing Approval time.
  - 2. Fabrication Time.
  - 3. Installation Time.
- B. Proposed project schedule shall be the initial basis for the contract schedule, modified as may result from discussion prior to award of a contract. Final schedule shall be the basis for establishing starting and completion dates upon which penalties shall be based, if applicable.
- C. Be responsible for coordinating with all trade contractors in such a timely manner so as to facilitate project progress.

## PART 2 - GENERAL REQUIREMENTS

### 2.1 SCOPE OF WORK

- A. The scope of work of the Elevator Contractor's Base Bid consists of the following:
  - 1. The modernization one (1) existing hydraulic passenger elevator, #6, including work as outlined within this specification and coordination with other trades as required to obtain a Certificate of Operation from the State of New Jersey.
- B. Perform field surveys and provide engineering, labor, materials, tools, equipment, coordination, transportation, supervision and means and methods as required to design, fabricate and install the equipment as specified, complete in a first-class workmanlike manner. All work shall be done in accordance with the requirements of local codes and applicable regulations which may govern the requirements of the installation.
  - 1. During the term of the project, maintain life safety systems of operating elevators in Code compliant condition.
- C. In cases where a device or part of the equipment is herein referred to in the singular number, it is intended that such reference shall apply to as many such devices as are required to complete the installation.
- D. All work and materials that may be required for the complete and proper execution of the work shall be included. Work shall be performed in accordance with the best trade practices.
- E. Any items not specified in detail by the specifications, but which are incidental to or necessary for the complete installation and proper operation of the work described herein or reasonably implied, shall be furnished as if called for in detail by the specifications.
- F. Discrepancies or ambiguities occurring in the specifications shall be reported prior to the submission of a bid proposal, or at the time of submission of a bid.
  - 1. Submission of a bid without clarifications will reflect acceptance of the specifications and complete understanding of the project scope and intent.

### 2.2 ARCHITECT AND ELEVATOR CONSULTANT'S RESPONSIBILITIES

- A. The Architect and Elevator Consultant shall act as a representatives of the Owner in matters pertaining to the work of the contract.
  - 1. Responsibilities shall include interpretation of specifications and contract documents, review of shop drawing submissions, approval of payment applications and final review of the completed work.
- B. The Architect and Elevator Consultant shall not be responsible for engineering and equipment design, equipment application, means and methods, project oversight, coordination or safety.

### 2.3 STANDARDS AND REGULATIONS

- A. Regulatory Requirements: Comply with governing codes and conform to the requirements of Authorities Having Jurisdiction.

- B. Standards: Comply with provisions of the following.
1. Safety Code for Elevators and Escalators, ASME A17.1.
  2. Guide for Inspection of Elevators, Escalators, and Moving Walks, ASME A17.2.
  3. Accessible and Usable Buildings and Facilities, ICC A117.1.
  4. Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities.
  5. International Building Code-IBC.
  6. National Fire Alarm and Signaling Code, NFPA 72.
  7. National Electric Code, NFPA 70.
  8. OSHA.
  9. Life Safety Code, NFPA 101
  10. Uniform Construction Code
  11. Requirements of the AHJ.
- C. Nothing contained in these specifications shall conflict with any codes or federal, state or local laws, ordinances, rules or regulations governing the work.

#### 2.4 LAWS, PERMITS AND INSPECTIONS

- A. Comply with federal, state and municipal laws and ordinances, prepare documents, obtain permits, pay costs and fees for permits and inspections, obtain Certificates of Operation and deliver to the Owner.
- B. Obtain and pay for state and local inspections and conduct tests as required by the regulations of such authorities. Conduct tests in the presence of the authorized representative of such authorities.
- C. Confirm that all systems interfacing with elevators are operational prior to scheduling tests with regulatory authorities to assure that testing will be accomplished promptly and efficiently.
- D. Obtain final approval of constituted authorities and provide evidence of the inspection results and the Certificate of Operation from the constituted authority.

#### 2.5 INSURANCE

- A. Maintain a comprehensive general liability insurance policy throughout the term of the contract, including completed operations, blanket contractual and broad form property damage in a casualty or liability insurance company acceptable to the Owner, in accordance with project requirements.
- B. Insurance shall fully protect the Elevator Contractor, the Elevator Contractor's subcontractors engaged to perform work under this contract, Owner, Elevator Consultant, and any other Owner representatives identified by the Owner, from loss.
- C. Prior to starting work, submit Certificate of Insurance as evidence of required coverage. Certificate shall include the statement that the Owner will be notified thirty (30) days prior to any cancellation.
- D. Coverage shall be as identified in Project documents, with Minimum coverage as follows:

Workman's Compensation      Statutory

Employer's Liability	\$1,000,000	Comprehensive General Liability
	\$ 500,000	Single Limit, Combined Bodily Injury and Property Damage
Comprehensive Automobile Liability		
Bodily Injury	\$ 500,000	Each Person
	\$1,000,000	Each Occurrence
Property Damage	\$ 500,000	Each Occurrence
Umbrella Liability Coverage	\$5,000,000	

- E. The Owner, the Architect, the Elevator Consultant, and any other Owner designated representatives must be included as named Additional Insured to the Elevator Contractor's insurance, regardless of any other document.

## 2.6 PROJECT SCHEDULE

- A. Subsequent to the Contract award, immediately commence survey work and submit shop drawings of the hoistway and elevator equipment.
1. Confirm power, floor designation, emergency recall floors and dispatch floor locations, etc. prior to fabricating equipment.
  2. Provide engineering information as necessary for the Owner to coordinate the interface work of other trades not part of the elevator contract impacting the elevator work.
- B. Confirm the following, as committed to on Bid Form.
1. Engineering Survey/Drawing Approval time.
  2. Fabrication Time.
  3. Installation Time, hours, number of teams.

## 2.7 ELEVATOR EQUIPMENT MANUFACTURER QUALIFICATION

- A. Manufacturers of elevator components shall be regularly engaged in the business of design, engineering and manufacture of elevators, or elevator components, of the type and character required by these specifications and shall assume full responsibility for the products used in said assembly.
- B. Components, technical assistance, operating manuals, hardware and software, etc. must be immediately available to the Owner, regardless of whether the elevator maintenance contractor is the original installing contractor or manufacturer.

## 2.8 ELEVATOR EQUIPMENT MANUFACTURERS

- A. Products and manufacturers listed are approved for the project. Other products and manufacturers will be considered upon substantiation of equal status to specified products.
1. Power Unit  
Unitec.  
Elevator Equipment Co. (EECo).  
Minnesota (MEI).
  2. Hydraulic Jack Assembly  
Custom Elevator

- |                       |  |
|-----------------------|--|
|                       | EECo.  |
| 3. Control Valve      | Maxton.<br>EECo.   |
| 4. Controller         | Smartrise Engineering.<br>GAL Manufacturing.<br>Elevator Systems, Inc. |
| 5. Signal Fixtures    | Mad.<br>Innovation Industries.   |
| 6. Door Operator      | GAL Manufacturing.   |
| 8. Car Enclosure      | Curtis Cab.<br>Columbia.<br>Elevator Cabs Inc.<br>SnapCab.             |
| 9. Proximity Detector | Janus Elevator Products.   |
| 10. Telephone         | Rath.<br>K-TECH  |
| 11. Travel Cable      | Draka.   |

## 2.9 PRODUCTS AND SUPPORT

- A. The elevator equipment proposed for this project shall be Non-Proprietary. It shall comply with the following provisions and be in compliance with all known standards for universal serviceability and maintainability.
1. Equipment must be generally available for purchase by any qualified elevator contracting business.
  2. Spare Parts must be available to any qualified purchaser at reasonable prices and based on a published price list.
  3. All equipment or tools necessary for diagnostics, maintenance, adjustment, or troubleshooting shall be available to any qualified elevator contracting business. Such tools shall provide access to all parameters and levels of adjustment that are necessary for the maintenance of the equipment. There shall be no expiring or degrading software that would prohibit proper maintenance.
  4. Factory and or on-site training for the installation, adjustment, maintenance, and troubleshooting shall be available from the manufacturer to any qualified elevator contracting business. Any training fees shall be reasonable and appropriate.
  5. Technical Support should be made available to any qualified elevator contracting business by the equipment manufacturer. The equipment manufacturer shall provide a toll free phone line available for technical support.
  6. Documentation in the form of manuals, circuitry diagrams, prints, engineering drawings, testing procedures, and parts lists shall be provided with the equipment at the time of installation. Replacement documentation shall be available to any qualified elevator contracting business and reasonable and normal cost

## 2.10 ELEVATOR CONTRACTOR QUALIFICATION

### A. The Elevator Contractor shall:

1. Be regularly engaged in the business of design, engineering, installation and servicing of elevators of the type and character required by these specifications, shall be or represent an approved manufacturer, and shall assume full responsibility for the products used in assembling the elevator equipment.
2. Be able to demonstrate elevators installed similar to that specified and which have given satisfactory service and been in successful operation for a period of at least five years.
3. Be able to show successful experience in the complete maintenance of elevators, employ competent personnel to handle this service, maintain locally an adequate stock of parts for replacement or emergency and have qualified employees locally available to insure the fulfillment of the service without unreasonable delay.

### B. Qualified Elevator Contractors:

1. Code Elevator Company  
420 Feheley Drive, Suite B  
King of Prussia, PA 19406  
610-275-1800
1. TEC Elevator Company  
510 S Shore Rd. Suite c  
Marmora, NJ 08223  
609-935-0647
1. Allied Elevator Company  
4 1602 Hylton Rd  
Pennsauken, NJ 0811  
856-324-0621

## 2.11 SUBSTITUTION OF MATERIAL OR EQUIPMENT

- A. Bid proposal shall include materials and equipment as manufactured by manufacturers listed in the specifications. NO substitutions.

## 2.12 COORDINATION

- A. Coordinate locations and dimensions of other work relating to the elevator, including electrical service, electrical outlets, lights, and switches in pit and equipment room.
- B. Confirm power, floor designation, emergency recall floors and dispatch floor locations, etc., prior to fabricating equipment.
- C. Provide engineering information as necessary to coordinate the interface work of other trades impacting the elevator work.
- D. Review the specifications, drawings, and field conditions and be responsible for the proper fitting of the material and equipment indicated.



- E. Submit details of any conflict between the specifications, any drawings, and existing conditions prior to submission of the bid proposal. No departures from the requirements of the specifications shall be made without the prior written approval.

## 2.13 SHOP DRAWINGS/SUMITTALS

- A. Submit Product Data and Catalogue Information in electronic pdf format for review, as follows:
  - 1. Include capacity, sizes, performances, operations, safety features, finishes and similar information. Information shall be job specific.
  - 2. Provide catalogue cuts for the following:
    - a. Controller.
    - b. Power unit, including motor, pump and valve.
    - c. Hydraulic jack assembly.
    - d. Rupture valve.
    - e. Hydraulic fluid.
    - f. Guide shoes.
    - g. Signal operating fixtures.
    - h. Telephone system.
    - i. Doors and door operating systems.
    - j. Proximity detector.
- B. Shop Drawings:
  - 1. Submit in electronic PDF format.
  - 2. Show plan, elevation, section, scaled or fully dimensioned, details indicating service at each landing, equipment room layout, coordination with building structure, relationships with other construction, and locations of equipment and signals. Include the following:
    - a. Elevator machine/control room.
    - b. Elevator hoistway, plan and section.
    - c. Signal operating fixtures.
    - d. Doors and door operating equipment.
    - e. Elevator car enclosure details.
- C. Samples:
  - 1. For exposed finishes, submit 6-inch square samples of sheet materials; and 4-inch lengths of running trim members.
- D. Submit sufficiently in advance of job progress requirements to afford ample time for review.
- E. Submittals shall conform to requirements of contract documents. Submittals differing from the contract shall be identified in a letter of transmittal with explanation.
- F. Prior to submission, check submittals for conformity with contract specifications and correct any errors, omissions, or deviations before submitting. Submit specifications, catalogs, product data, etc., properly labeled indicating specific service for which material or equipment is to be used, and Manufacturer's name and name of job.

- G. Confirm correct quantities, dimensions, and details for satisfactory construction of work.
- H. Drawings shall be reviewed to confirm compliance with specifications. Documents that are reviewed and returned shall not be interpreted as a complete check, nor shall it relieve the Elevator Contractor of responsibilities stated.
- I. Materials or equipment delivered before the required approval is provided shall be removed and replaced at no charge, if material or equipment does not meet the intent of the specifications.
- J. Coordinate dimensions before submitting shop drawings. Submission of shop drawings shall represent that all project drawings have been reviewed with dimensions coordinated on the shop drawings.

#### 2.14 DRAWING CERTIFICATION

- A. Provide Professional Engineer's certification of elevator layout drawings, if/when required by AHJ.

#### 2.15 CONSTRUCTION PROGRESS SCHEDULE

- A. Submit initial schedules in a Bar Chart format, within 15 days after Notice to Proceed.
- B. Indicate dates required completion of work by other trades.
- C. Include a schedule showing submittal dates for shop drawings, product data, and samples. Indicate decision dates for selection of finishes.

#### 2.16 MATERIALS STANDARDS

- A. Materials to be furnished shall be new, of the best grade and quality used for the purpose of commercial practice and be the latest standard product as advertised in printed catalogues by reputable manufacturers.
  - 1. Aluminum Extrusions per ASTM B-221; sheet and plate per ASTM B-209.
  - 2. Bronze Stretcher leveled, resquared sheets composed of 60% copper and 40% zinc similar to Muntz metal, Alloy Group 2 with No. 4 finish. Grain of belting shall be in the direction of the longest dimension.
  - 3. Nickel Silver Copper-Nickel-Zinc extrusions of CDA alloy C77600.
  - 4. Steel Low carbon, cold rolled to stretcher leveled standard flatness per ASTM A366 for sheet; per ASTM A-36 for structural.
  - 5. Satin Stainless Steel ASTM A666 Type 302 or 304 with No 4 finish (150 grit) on exposed surfaces per ASTM A-167. Grains of belting shall be in the direction of the longest dimension.
  - 6. Polished Stainless Steel ASTM A666, Type 302 or 304 with No 8 polished finish.
  - 7. Textured Stainless Steel ASTM A666, Type 304 with embossed texture rolled onto exposed surface.
  - 8. Plastic Laminate NEMA LD3, Grade HGS 0.048-inch nominal thickness.

- |                   |   |
|-------------------|---|
| 9. Paint          | Exposed metal work, except as otherwise noted, shall be cleaned of oil, grease, scale, and other foreign matter with a factory coat of manufacturer's standard rust-resistant primer applied.   |
| 10. Prime Finish  | Surfaces which are to receive an enamel finish shall be cleaned of oil, grease, scale, etc. and have one coat of rust-resistant mineral paint applied followed by a filler coat over uneven surfaces, then the surfaces shall be sanded smooth and a final coat of mineral paint applied. |
| 11. Enamel Finish | Surfaces shall be primed per the preceding specification for Prime Finish and then have two (2) coats of enamel in the color selected applied.  |

## 2.17 EQUIPMENT STANDARDS

- A. Equipment furnished shall be new and be the latest standard product by listed manufacturers. Equipment shall be of the best grade and quality used for the purpose of commercial practice and shall have the Manufacturer's name, address and catalog numbers on a plate securely affixed to the equipment in a conspicuous place.
- B. Equipment or apparatus of any one system must be the product of one manufacturer, or equivalent products of several manufacturers which are suitable for use in a unified or assembled system. All parts of the elevator equipment shall be built to standard dimensions, tolerances and clearances in order to ensure complete interchangeability of similar parts of similar machines and devices. The mechanical fastenings used throughout the equipment on parts subject to wear and replacement shall be key and seat, nut and bolt, screw or other removable type not requiring physical deformation.

## 2.18 ACCEPTANCE OF EQUIPMENT

- A. Materials, equipment and appurtenances specified, or required for the completion of the work shall be completely satisfactory and acceptable with respect to operation, performance and capacity.
- B. No approval, either written or verbal, of any drawings, descriptive data or samples of such material, equipment and/or appurtenances shall relieve the Elevator Contractor of the responsibility to turn over the same in perfect working order at the completion of the work.
- C. Any material, equipment, or appurtenances, the operation, capacity or performance of which does not comply with the specification requirements, or which is damaged prior to acceptance, shall be held to be defective and shall be removed and replaced with proper and acceptable materials, equipment and/or appurtenances, or put in proper and acceptable working order, satisfactory, without additional cost.

## 2.19 VARIANCES

- A. Prepare, submit and obtain Variances from the AHJ as may be required to retain existing conditions.

## 2.21 RELATED WORK INCLUDED IN ELEVATOR CONTRACTOR SCOPE

- A. Hoistway and elevator equipment room shall be accepted as they exist.
  - 1. Size and design the equipment to fit within existing equipment room and maintain Code clearances.
  - 2. Apply for Variances as may be required to retain existing conditions not in compliance with current Code requirements.
- B. Coordinate the work to be performed by all subcontractors during the course of the project to assure that work required is completed in such a manner and in such time as will be required to permit the commencement and completion of the work within the project schedule requirements.
- C. Elevator Hoistway:
  - 1. Restore pit after removal of the existing jack cylinder and installation of new jack cylinder. Backfill jack cylinder PVC waterstop with non-shrink grout. Provide waterproofing as required to assure pit does not take on water as a result of the jack cylinder replacement.
  - 2. Bevel ledges in hoistway greater than 4" to 75 degrees.
  - 3. Repairs to hoistway walls, except those exceeding 3 sq. ft.
  - 4. Firesafe all wall penetrations.
  - 5. Provide access to the hoistway for others to remove all non-elevator equipment and materials from the hoistway, including any pass-through lines.

## 2.22 RELATED WORK - BY OTHERS

- A. Building work and Mechanical, Electrical, Plumbing, Sprinkler, and Fire Alarm systems work required to support the elevator modernization.
  - 1. Elevator Equipment Room:
    - a. Remove all non-elevator equipment and materials from the equipment room, including pass-through lines.
    - b. Provide a B labeled fire rated equipment room entry door with closer and storeroom type lock.
    - c. Provide a type ABC fire extinguisher in the equipment room, in accordance with NFPA 10.
  - 2. Equipment Room Ventilation:
    - a. Provide equipment room ventilation as required to maintain 50°-90° F temperature.
    - b. Provide power and disconnect.
  - 3. Electrical:
    - a. Three-phase Power:
      - 1) Inspect and confirm existing 3-phase power feeders comply with National Electric Code.
      - 2) Confirm feeders are dedicated for elevator service only and separate of other building circuits to prevent interference or segregate as necessary.

- 3) Replace existing disconnect switch with a new combination shunt breaker/power disconnect, compliant with National Electric Code and Elevator Code. Disconnect must be lockable in the open or de-energized position.
  - 4) Provide building ground in disconnect.
  - 5) Provide auxiliary contact in disconnect(s) to indicate when disconnect is manually activated vs. actual utility power loss.
  - 6) Provide signage on disconnect indicating location of power source.
  - 7) Extend feeders from main line disconnect to elevator controller.
- b. 110V Cab Lighting Power:
- 1) Provide 110V feed and circuit breaker in the equipment room for cab lighting.
    - a) Confirm separate feed for the elevator. Retain or replace as necessary.
    - b) Breaker to be lockable in the open or de-energized position.
  - 2) Provide signage on disconnect indicating location of power source.
  - 3) Extend feed from disconnect to elevator controller.
  - 4) Lighting to be on emergency power, if available.
- c. 110V Receptacles:
- 1) Evaluate 110V receptacles in the elevator equipment room and pit areas.
  - 2) Remove/replace all non GFCI 110V receptacles with duplex 110V GFCI receptacles.
  - 3) Receptacles to be on emergency power, if available.
- d. Elevator Equipment Room and Pit Lighting:
- 1) Remove/replace present lighting with LED fixtures in the elevator equipment room to provide minimum 19-foot candles at the floor level throughout.
  - 2) Remove/replace present lighting with LED fixtures in the elevator pit to provide minimum 10-foot candles at the floor level throughout.
  - 3) Provide a light switch located within 18" of the lock jamb side of the equipment room access door.
  - 4) Provide a light switch located adjacent to the pit ladder.
  - 5) Lighting to be on emergency power, if available.
4. Equipment Room Sprinklers and Heat Detectors:
- a. Inspect and certify sprinkler line in the equipment room.
  - b. Confirm a sprinkler head is not required in the elevator pit. (None presently).
  - b Relocate, modify, or replace the existing sprinkler head in the equipment room as necessary to comply with applicable codes.
    - 1) Confirm existing head is 200°F rated or replace with 200° rated heads.
    - 2) Provide 135°F rated heat detector located adjacent to the sprinkler head. Heat detector to signal fire alarm to activate shunt breaker.
5. Fire Alarm:
- a. Provide Code compliant fire alarm initiating devices (smoke detectors) at each floor level in each elevator lobby, in sprinklered hoistways, and in the equipment room. Provide fire alarm initiating devices, where missing.

- a. Provide signals from the fire alarm system to the elevator controller as required to comply with current Elevator Code requirements, as follows:
  - 1) Signal 1: One (1) set of wires through a set of contacts, Normally Open-Normally Closed, to the elevator controller in the equipment room representing the elevator lobby at the main Fireman access floor and at any floor below the main Fireman access floor.
  - 2) Signal 2: One (1) set of wires through a set of contacts, Normally Open-Normally Closed, to the elevator controller in the equipment room, representing the elevator lobbies all other typical floors, hoistways and equipment room.
  - 3) Signal 3: One (1) set of wires through a set of contacts, Normally Open-Normally Closed, to the elevator controller in the equipment room, representing the hoistway and elevator equipment room only.
  - 4) Sprinkler head associated heat detector to signal fire alarm to activate shunt breaker.
6. Security System-by Security Contactor, if to be Provided:
  - a. Provide security system interface panel in control room.
  - b. Identify type/size wire required for travel cable. Elevator Contractor to provide travel cable from elevator cab to elevator control room.
  - c. Provide card readers in elevator cab, and at hall stations, if required. Hook up card reader and in the control room.
  - d. Test card reader function with Elevator Contractor.
7. CCTV- by Security Contactor, if to be Provided:
  - a. Provide CCTV camera in the elevator car.
  - b. CCTV travel cable by Elevator Contractor, terminate at camera and in control room.
  - c. Hook up in cab and in control room by Security contractor
8. Telephone Line:
  - a. Retain/reuse/replace existing analog telephone line for emergency communication with the cab.
9. Sump Pit and Pump
  - a. Per NJ AHJ, a sump pit and pump is not required as this is an existing condition.
10. Pit Waterproofing:
  - a. Inspect pit.
  - b. Provide pit waterproofing if required.

## 2.23 SCHEDULE

- A. Commence survey work immediately upon receiving Notice to Proceed.
- B. Confirm power, capacity, floor designations, emergency recall floors and dispatch floor locations, etc. prior to fabricating equipment.
- C. Provide engineering coordination information as necessary to coordinate the interface work of other trades impacting the elevators.

## 2.24 WARRANTY

- A. Upon completion and turn-over of the elevator, Warrant equipment provided and installed under these specifications against defects in materials and workmanship and correct any defects not due to ordinary wear and tear or improper use or care which may develop within twelve (12) months from the date the elevator system is completed, placed into operation.

## 2.25 MAINTENANCE SERVICE

- A. Upon completion and turn-over of the elevator, provide twelve (12) months Preventive Maintenance service to the elevator to coincide with the Warranty period.
- B. Maintenance Service Program
  - 1. Preventive maintenance service shall consist of monthly scheduled systematic examinations of the equipment, and include adjustments, lubrication, cleaning, supplies and parts to keep the equipment in proper operation, except such adjustments, parts or repairs made necessary by abuse, misuse or any other causes beyond the control of the Elevator Contractor.
  - 2. Maintenance service work shall be performed solely by the Elevator Contractor and shall not be assigned or transferred to any agent or subcontractor. Work shall be performed by competent personnel under the supervision and in the direct employ of the Elevator Contractor.
  - 3. Electrical and mechanical parts of the equipment shall be repaired or replaced, whenever required, using only genuine parts produced by the Manufacturer of the equipment concerned.
  - 4. Tests as required by Code of the equipment operation shall be performed as often as required.
  - 5. Preventive maintenance and callback service work, except for Emergency callbacks, shall be performed during the regular working hours of the regular working days, unless specifically requested to be performed, at other times by the Owner.
  - 6. Perform a minimum of one (1) hour of preventive maintenance service per month to the elevator, exclusive of callbacks and repairs.
  - 7. Respond to requests for service within one hour during normal working hours, and two hours at all other times, regardless of time of day or day, including Saturdays, Sundays and Holidays, the call is placed for service.
  - 8. Provide callback service and Emergency Callback service on a 24-hour 7 day per week basis.
  - 9. Respond to emergency callbacks with 1 hour and routine callbacks within 2 hours during normal work hours or normal working days, and 2-4 hours nights, weekends and holidays.

## 2.26 CONTINUING MAINTENANCE SUPPORT

- A. Provide continuing information regarding changes to be performed to the equipment to comply with Manufacturer recommended and/or authorized changes or repairs, modifications, adjustments, replacements, etc.
- B. Perform all repairs and/or replacements of equipment components required by the component Manufacturer to be made to correct faulty design or manufacturer.

PART 3 - SPECIFICATIONS

3.1 ELEVATOR SCHEDULE/EQUIPMENT SUMMARY

A.	Quantity	Existing	One.
B.	Type	Existing	Passenger.
C.	Capacity	Existing	2500 lbs.
D.	Speed	Existing	100 fpm. Verify based on existing equipment.
E.	Travel	Existing	15-0" +/- . Field Verify.
F.	Stops/Openings	Existing	Two (2) in line at L1-2.
G.	Power	Existing	___; 3Ø; 60hz. Field verify.
			<ul style="list-style-type: none"> <li>• Confirm voltage prior to release of control to fabrication.</li> <li>• Others to provide:               <ul style="list-style-type: none"> <li>○ New combination disconnect switch/shunt breaker disconnect switch.</li> <li>○ Building ground wire in disconnect.</li> <li>○ Auxiliary contacts in disconnect switch associated with battery lowering</li> </ul> </li> <li>• Confirm location of disconnect switch with elevator equipment to assure NEC Code clearances.</li> <li>• Extend new feeders from disconnect switch to new controller location.</li> </ul>
H.	Hydraulic Power Unit	New	<p>Remove and replace existing power unit, oil line, valve, muffler, etc.</p> <ul style="list-style-type: none"> <li>• Provide submersible oil self-contained hydraulic power unit with control valve, pump, and muffler in existing equipment room.</li> <li>• Maintain existing motor HP.</li> <li>• Size unit to fit through existing equipment room entrance frame, or remove and restore door and frame. Restore entrance frame and disturbed masonry and drywall.</li> <li>• Provide threaded oil line to jack cylinder.</li> </ul>
I.	Hydraulic Fluid	New	<p>Remove and replace existing hydraulic fluid.</p> <ul style="list-style-type: none"> <li>• Provide petroleum based hydraulic fluid formulated specifically for use in operating hydraulic elevators.</li> </ul>



J.	Controller	New	Remove and replace existing controller and motor starter. <ul style="list-style-type: none"><li>• Provide microprocessor controller with solid state motor starter.</li><li>• Provide battery rescue system for car lowering in the event of power failure.</li></ul>
K.	Operation	New	Simplex collective microprocessor.
L.	Operational Features	New	<ul style="list-style-type: none"><li>• Non-proprietary design.</li><li>• Variable door timing.</li><li>• Door closing delay.</li><li>• Independent service.</li><li>• Firefighters Emergency Operation.</li><li>• Security Card System interface-car and hall.</li><li>• Floor Lockout capability from controller.</li><li>• Low oil control.</li><li>• Car light and fan shutdown.</li><li>• Hoistway access.</li></ul>
M.	Battery Lowering	New	Emergency Power Battery Operation: <ul style="list-style-type: none"><li>• Provide a self-contained battery lowering unit as part of the elevator controller.</li><li>• Upon loss of normal power, arrange car to automatically lower to floor level and open doors, allowing passengers to exit the elevator.</li><li>• Confirm others have provided an auxiliary contact in main line disconnect switch and shunt breaker to differentiate loss of building power from mechanical activation of a disconnect switch.</li></ul>
N.	Barricades	New	Provide barricades and walk-off mats. <ul style="list-style-type: none"><li>• Barricades to be minimum 6 ft in height, plywood and stud, and fully enclose the work area in front of the elevator hoistway at the 1<sup>st</sup> and 2<sup>nd</sup> floors.</li><li>• Barricades to be locked at all times.</li><li>• Walk off mats to completely cover and protect lobby floors.</li><li>• 1<sup>st</sup> floor barricade to be removable to facilitate removal of existing jack cylinder and installation of new jack cylinder.</li></ul>

- Provide additional protection of lobbies if jack cylinder hole must be redrilled.
  - Barricades to provide minimum 3ft wide corridor from stairwell to exit door at all times.
  - Coordinate with Owner regarding shut down of exit during hours when Owner is not open to permit full use of 1<sup>st</sup> floor lobby to facilitate jack cylinder removal and reinstallation.
- O. Jack Hole Modify Remove existing hydraulic jack assembly.
- Saw cut existing jack assembly in sections for removal. NO BURNING.
  - Modify existing concrete jack support as required.
  - Upon removal of existing jack assembly, clean out hole, plumb to determine clear diameter and confirm hole plumbness for new cylinder casing with PVC liner.
  - Support new jack assembly on existing support structure.
  - After installation of new jack assembly, restore structural integrity of pit caused by jack removal. Provide an Engineer's certification of pit repairs.
  - Restore pit and waterproof around all areas where concrete was disturbed.
- P. Jack Hole Redrill- Alternate #1 Modify In the event the existing jack hole is not plumb to adequate diameter and depth to enable installation of the new jack assembly with sealed PVC protection system:
- Remove existing casing.
  - Ream hole to adequate diameter and depth to accommodate new PVC liner.
  - Provide new steel outer liner as required.
  - Provide water-stop ring and embed in pit concrete.
  - Restore pit and waterproof around all areas where concrete was disturbed.
- Q. Jack Assembly New Provide a new direct acting jack assembly located directly beneath the elevator car in existing jack hole location.

			<ul style="list-style-type: none"> <li>• Provide jack manufacturer’s sealed PVC jack protection system with means to monitor and evacuate unwanted fluids.</li> <li>• Provide PVC water-stop ring around perimeter of PVC casing and embed in cylinder hole with non-shrink grout. Seal to prevent water infiltration into the pit</li> <li>• Provide new structural steel pit mounting channels to span cylinder hole.</li> <li>• Restore structural integrity of the pit floor, if disturbed, caused by jack cylinder removal, after installation of new jack cylinder assembly.</li> </ul>
R.	Guide Rails	Existing	<p>Retain existing guide rails.</p> <ul style="list-style-type: none"> <li>• Inspect, clean, secure, file rail joints, align.</li> <li>• Clean running surfaces, belt sand and file.</li> <li>• Torque fishplate bracket bolts.</li> <li>• Clean and paint non-machined surfaces with rust inhibitor paint.</li> </ul>
S.	Buffers	New	<p>Remove and replace existing buffers.</p> <ul style="list-style-type: none"> <li>• Provide spring buffers, pit steel and pit support channels.</li> <li>• Clean and paint non-machined surfaces with rust inhibitor paint.</li> </ul>
T.	Pit Access	New	<p>Provide a steel ladder as required to comply with code.</p> <ul style="list-style-type: none"> <li>• Ladder for access to the pit shall include handgrips extending 48” above access floor elevation.</li> </ul>
U.	Pit Stop Switch	New	<p>Remove and replace existing pit stop switch.</p> <ul style="list-style-type: none"> <li>• Provide new pit stop switch, located adjacent to pit access.</li> </ul>
V.	Pit Lighting and Switch	New	<p>Remove and replace existing pit light.</p> <ul style="list-style-type: none"> <li>• Replace existing/provide new LED strip pit lights to provide 10fc light level throughout pit.</li> <li>• Replace existing/provide a new light switch adjacent to pit ladder.</li> </ul>

			<ul style="list-style-type: none"> <li>• Replace existing/provide a new GFCI receptacle.</li> </ul>
V.	Terminal Limit and Slow Down Switches	New	<p>Remove and replace hoistway switches, cams and slowdowns.</p> <ul style="list-style-type: none"> <li>• Provide new switches, contacts and wiring, cams and roller wheels.</li> </ul>
W.	Car Frame	Existing	<p>Retain existing steel car frame.</p> <ul style="list-style-type: none"> <li>• Inspect and overhaul as per specification.</li> </ul>
X.	Car Platform	Existing	<p>Retain existing car platform.</p> <ul style="list-style-type: none"> <li>• Retain and protect existing flooring, sub floor, and car sill.</li> <li>• Inspect, tighten all fastenings.</li> <li>• Provide extended toe guard as per code.</li> </ul>
Y.	Guide Shoes	New	<p>Remove and replace existing guide shoes.</p> <ul style="list-style-type: none"> <li>• Provide new removable gib slide guide assemblies-</li> <li>• Provide adaptor plates to mount the new guide shoes to the existing car frame.</li> </ul>
Z.	Entrances	Existing	<p>Retain existing entrances.</p> <ul style="list-style-type: none"> <li>• Inspect, secure.</li> <li>• Clean and polish stainless steel.</li> <li>• Provide new door bumpers on strut angles to restrict door overtravel.</li> <li>• Clean, repair, straighten, or replace where missing, all fascia, toe guards and dust covers and paint with rust inhibiting paint to match hoistway</li> <li>• Retain and clean passenger hoistway door sills.</li> <li>• Provide access switches in frames at terminal floors.</li> </ul>
AA.	Hoistway Door Panels	Existing	<p>Retain existing hoistway door panels.</p> <ul style="list-style-type: none"> <li>• Retain existing mounting locations for interlocks and interlock release keyways.</li> <li>• Provide new U/L heavy duty door gibs and fire tabs.</li> </ul>
BB.	Identification Plates	Existing	<p>Retain existing floor ID plates.</p> <ul style="list-style-type: none"> <li>• Provide car ID plates at primary floor.</li> </ul>

			<ul style="list-style-type: none"><li>• Finish: Black background with stainless steel raised numerals.</li></ul>
CC.	Pictograph Signage	New	<p>Provide stainless steel pictograph signs.</p> <ul style="list-style-type: none"><li>• Pictograph signs to be minimum 5” x 8” x 1/8” thick, engraved with “In Case of Fire Do Not Use Elevators – Use Exit” and graphics required by Code.</li><li>• Locate adjacent to hall call pushbutton stations.</li><li>• Provide samples for approval.</li><li>• Stainless to match entrance finish.</li></ul>
DD.	Door Operating System	New	<p>Remove and replace existing door operating system.</p> <ul style="list-style-type: none"><li>• New door system to include closed loop heavy duty, solid-state door operator and all associated car and hoistway door operating system components, including control, gate switch and wiring, clutch, car door track, car and hoistway door hangers, hanger rollers, sill spring closers, door restrictor, interlocks, pickups, releases, fire retardant wiring.</li><li>• Hoistway and car door track may be retained if cleaned and able to provide smooth and quiet door operation.</li><li>• Adjust to provide smooth and quiet operation</li></ul>
EE.	Door Detector	New	<p>Remove and replace existing door detector.</p> <ul style="list-style-type: none"><li>• Provide Janus Panachrome proximity detector with light edges and with Smart 3D.</li></ul>
FF.	Car Enclosure	Retain	<p>Retain the existing car enclosure shell with the following modifications:</p> <ul style="list-style-type: none"><li>• Remove finishes to cab shell.</li><li>• <u>Canopy:</u><ul style="list-style-type: none"><li>○ Clean canopy.</li><li>○ Provide a new top exit lock, contact and chain.</li><li>○ Provide a new 2-speed exhaust fan and grill.</li></ul></li><li>• <u>Suspended Ceiling and Lighting:</u><ul style="list-style-type: none"><li>○ Remove existing suspended ceiling and lighting.</li></ul></li></ul>

- Provide a new stainless steel suspended ceiling with LED down lights.
- Side and Rear Walls:
  - Remove existing side and rear wall panels.
  - Provide new 3/4" thick vertical removable wall panels, faced with plastic laminate and edged with 1/8" stainless steel projecting 1/32" proud, eased, 2 panels per side wall and 3 panels on rear wall.
  - Separate panels with 1/2" stainless steel reveals between panels.
  - Provide stainless steel above wall panels to conceal cab shell.
- Base:
  - Provide #4 satin finish stainless steel base.
- Handrail:
  - Remove existing handrail.
  - Provide 2" stainless bar handrail on rear wall, with ends returned to wall, at 32" above finished floor.
- Returns Walls:
  - Clean and polish existing stainless steel front return walls.
  - Modify existing car operating panel and telephone box cutouts for new car operating panel. Reinforce.
  - Provide cutouts for car directional lantern in return jamb, visible from hall pushbutton station.
- Car Doors:
  - Remove existing car doors.
  - Provide new 16 gauge #4 satin finish stainless steel car doors.
  - Reinforce car doors for new door operation.
- Exhaust Fan:
  - Remove existing.
  - Provide new 2-speed exhaust fan and grill.
- Pads buttons and Pads:
  - Remove existing pad buttons.
  - Provide new pad buttons secured to cab shell.
  - Provide one set heavy vinyl elevator cab protection pads.
  - Cover front return walls and include cutouts for COP.
  - Provide sample colors for Approval.
- Emergency light:

- Provide an emergency light with alarm bell to be operable from emergency power packs.
  - Flooring:
    - Protect and retain existing. If new, to be by Owner.
- GG. Signal Fixtures                      New                      Remove the existing signal operating fixtures and replace.
- Size faceplates to cover existing boxes and cutouts to eliminate/minimize cutting, patching, refinishing of wall surfaces.
- Car operating panel:
- Call buttons with LED acknowledge lights and integral Braille plates.
  - 1.5” LED position indicator with direction of travel arrows at top of panel.
  - Emergency Light.
  - Firefighters Emergency Operation devices per Code.
  - Door open, door close buttons.
  - Alarm button.
  - Voice Annunciator.
  - Hands free, voice announcing, auto dialing telephone instrument.
  - Engraved Car Number identification, Capacity.
  - Space and provisions for card reader.
  - Keyed service switches-surface mount:
    - Access-enable switch.
    - Independent Service keyed switch.
    - Stop switch.
    - Light switch.
    - Emergency Light Test switch.
    - 2-speed fan switch.
    - One spare switch.
  - Adjustable volume floor passing electronic toners.
  - Door delay buzzer.
  - 110 GFCI outlet.
- Direction lantern:
- Car direction lantern with LED bulbs, in return jamb.
  - Audible, adjustable volume electronic chime.

- Lantern to chime/light upon arrival of car at floor.
- Locate to be visible from hall pushbutton stations.

Hall pushbuttons.

- Hall stations at each entrance frame at ADA height.
- 1” position indicator with discrete direction of travel arrows in each hall station.
- Size box and faceplate to match and completely cover existing cutouts.
- LED bulbs.
- Firefighters Emergency Operation keyed switch and illuminated signal at 1<sup>st</sup> floor hall station.
- Communication failure fixture at 1<sup>st</sup> floor.
- Battery Operation/Emergency Power illuminated signal at 1<sup>st</sup> floor station with Firefighters Emergency key switch.
- If existing cutouts are not reused, blank off with stainless cover.

Top of Car Inspection Station.

Terminal landing hoistway access switches.

HH. Fixture Style and Finish

New

Fixture style and finish:

- 1/8” thick #4 satin stainless steel.
- Eased edges on cover plates.
- Tamperproof stainless-steel operating buttons with LED acknowledge jewel and with integral Braille indications.
- Tamperproof fasteners.
- Fire-safe all cutouts.
- Repair any walls damaged around fixtures.
- Comply with ADA height accessibility.
- Oversize faceplates to cover existing boxes.

3.2 ELEVATOR SUMMARY – ADDITIONAL

A. Work Hours

All work shall be performed during agreed upon regular hours, unless otherwise indicated in this specification.

Removal of existing jack cylinder, installation of new jack cylinder and redrilling, if required of existing jack cylinder hole to be done when building is not open.

All testing of interface of building systems with the elevator, i.e. standby power, fire alarm, etc. shall be done after regular hours, if required.



- |    |  |  |
|----|--|--|
| B. | Warranty   | Twelve (12) months from completion of modernization.   |
| C. | Interim Maintenance                                  | Interim maintenance: From award of contract until removal of the elevator from service for modernization.  |
| C. | Warranty Maintenance                                 | Warranty Maintenance: Twelve (12) months from completion of modernization to coincide with Warranty period.  |
| D. | Interface with Existing Building Life Safety Systems | Interface new elevator system with building systems, including fire alarm, three-phase and single-phase electrical power, etc.<br>Perform fire alarm system interface.   |
| E. | Permits/Inspection                                   | Obtain permits and perform inspections and re-inspections necessary to obtain Certificate of Operation.  |
| F. | Testing  | Coordinate all testing with Owner and AHJ and perform the following: <ul style="list-style-type: none"><li>• Fire alarm system test and demonstration to AHJ.</li><li>• Battery Power/Emergency Power system test and demonstration to AHJ.</li></ul>  |
| G. | Codes  | Comply with requirements of applicable local codes, including faceplate engraving, indicator lights, etc.<br>Design and manufacture equipment to comply with clearance requirements of applicable Codes.   |
| H. | Americans with Disabilities Act                      | Comply with requirements of Americans with Disabilities Act.   |
| I. | Sound Isolation                                      | Isolate hydraulic power unit.  |
| J. | Variances  | Apply for Variances that may be necessary due to existing conditions.  |
| K. | Hoistway Inspection/Repair                           | Thoroughly inspect hoistway. <ul style="list-style-type: none"><li>• Provide 75° 16 gauge CRS steel bevels on any ledges in hoistway exceeding 4”</li><li>• Patch and fire-safe holes and voids in hoistway.</li><li>• Fire safe new and existing hall pushbutton penetrations, where required.</li><li>• Patch and grout holes in equipment room floor resulting from removal of existing equipment</li></ul> |
| L. | Hoistway Protection                                  | Erect and maintain OSHA approved barricades and enclosures to guard the elevator hoistway when exposed.  |
| M. | Cleaning and Painting                                | At the end of the project prior to turn-over: <ul style="list-style-type: none"><li>• Thoroughly clean hoistway, car top rails, etc. at end of project.</li></ul>  |

- Paint fascia, dust covers, toe guards.
- Stencil equipment identification number on power unit, controller, car top, buffers and disconnect switch.
- Paint the pit floor and equipment room floor with gray deck enamel.
- Paint areas of restricted clearance on car top and pit floor.
- Paint pit steel, buffer channels, buffers.

N. Storage

On-site storage for materials is limited.

- Store all new materials off site at a remote location. When brought to site, move directly to equipment room or to an area approved by and coordinated with Owner.
- All materials removed from hoistway and equipment room must be removed from site on the same day, unless moved to an area approved by and coordinated with Owner.
- Do not block sidewalk. Obtain approval from Owner and Atlantic City to erect barricades as required for access from street to elevator equipment room and elevator lobby.

O. Electrical Wiring and Conduit

Provide wiring from disconnect switch to new controller.

Replace all elevator electrical wiring, including:

- Travel cable.
  - Suspend via internal core.
  - Provide travel cable mesh protection.
- Hatch wire. .
- Interlock wiring.
  - Fire retardant code compliant.
- Safety circuit wiring.
  - All to be replaced for interlocks, hoistway switches, and miscellaneous devices.
- Signal fixture wiring.
  - All to be replaced for signal fixtures and miscellaneous devices.

Existing conduit may be retained if acceptable for use with new wiring.

Remove abandoned conduit and wire.

P. Cutting and Patching

Perform cutting, patching and firesafing of walls, floors, etc., where necessary for signal fixture boxes, etc. except marble, which will be by Owner

- Q. Fire Protection Obtain Owner approval for use of any “hot” tools, such as welders.  
Comply with Owner’s policy for use of such equipment.  
Provide “smoke eaters” to inhibit smoke from exiting the immediate area of work.
- R. Retained Equipment All existing retained components and equipment shall be modified as necessary to operate as per Code with new equipment.  
All parts to be replaced shall be new, original equipment manufacturer manufactured parts. DO NOT use parts obtained from secondary or after-market parts manufacturers.
- S. Alarm Provide a car mounted alarm bell with battery unit with solid state charger and means of testing. Battery to be rechargeable nickel cadmium with 10-year life expectancy. Interconnect alarm to car operating panel alarm button.
- T. Emergency Power Provide battery rescue system as part of controller.  
Confirm auxiliary contacts are in and operational in power disconnect switches before activation.
- U. CCTV and Security CCTV Camera Provisions:
- Provide provisions for camera surveillance of the elevator.
  - Camera and hook up by Owner.
  - Provide travel cable.
    - Confirm type wire, Coax of cat5E, before required for travel cable and include wiring in travel cable, terminated at camera location in car and in control room outside controller in a designated box marked CCTV cable.
  - Allow 10 ft extra, looped at each connection.
  - Camera to be located in the car enclosure, mounted in corner mounted housing.
  - CCTV Security contractor to furnish, install and hooked up by the CCTV Security contractor.
  - Provide one 120V un-switched duplex convenience outlet dedicated to CCTV camera on the top of each elevator equipped with a CCTV camera.
- Security System Interface:
- Provide for card reader security system interface.
  - Coordinate with Security contractor.
  - Confirm type travel cable wire and include wiring in travel cable, terminated at car operating panel location

in car and in control room outside controller in a designated box marked Card Reader cable.

- Allow 10 ft extra, looped at each connection.
- Readers to be located at the car operating panel and at the hall button stations. Coordinate with Owner.
- Reader to be provided by and hooked up by the Security contractor.
- Provide override of card reader upon a fire alarm condition.
- Provide card reader override key switch in car operating panel to override card reader operation.

V. Telephone

In car:

- Autodial ADA compliant hands-free telephone.
- Upon pressing of a button in the car, the telephone shall automatically dial a pre-programmed emergency number.
- Phone to have programming ability to include two additional numbers to dial in the event the dialed number does not respond to a call.
- Phone to automatically shut off.
- Battery back-up:
  - Capable of sustained operation of the complete system for a minimum of 4 hours.
  - Battery to have minimum life expectancy of 5 years.
  - Provide means to test battery.

3.3 MISCELLANEOUS ITEMS BY ELEVATOR CONTRACTOR

- A. Remove and dispose of off-site all existing equipment listed to be replaced.
- B. Provide equipment in accordance with AHJ requirement for elevators to be inspected in accordance with A17.1 Code
- C. Apply for all Variances with AHJ, as necessary. Provide support and justification for all Variances which may need to be applied for requiring Variance, i.e. retention of pipes, drains, etc., as needed.
- D. Protect building floors and walls. Provide masonite or plywood non-skid floor protection when transferring equipment from receiving location to elevator hoistways. Repair any damage to floors
- E. Perform all cutting of walls, floors, etc., and repairs where necessary, and remove obstructions as necessary for proper installation of the elevator equipment.
- F. Provide all recesses, block-outs and fixture cutouts to accommodate door operating equipment and, signal operating equipment, and grouting, patching and finishes required to maintain hoistway fire rating.
- G. Thoroughly inspect hoistway for holes and voids and patch.

- H. Provide all hoistway barricades and enclosures as required by and in conformance with OSHA and local code requirements. Do not expose hoistway to public at any time.
- I. Extend wiring from disconnect switches to new controllers.
- J. On-site storage for materials is limited. No extended on-site storage of materials will be provided. Store all materials off site at a remote location and, when brought to site, move directly to equipment room or to area in which materials are to be used.
- K. Materials removed from hoistway and equipment room must be removed from site on the same day, unless moved to an area approved by and coordinated with Owner.
- L. Interface new elevator system with all existing and new building systems, including emergency power signal, fire sensor signal, three phase and single-phase electrical power, etc.
- M. Provide 75° 16-gauge galvanized steel bevels on all ledges in the hoistway in excess of 4” (except divider beams.)
- N. Design and manufacture equipment to comply with clearance requirements of applicable Codes.
- O. All existing retained components and equipment shall be modified as necessary to operate as per Code with new equipment.
- P. Obtain approval for use of any “hot” tools, such as welders. Comply with Owner’s policy for use of such equipment, including the use of “smoke eaters” to inhibit smoke from exiting the immediate area of work.
- Q. Provide all required Professional Engineer's certification of elevator equipment room and hoistway drawings.

### 3.4 HYDRAULIC POWER UNIT AND OIL LINE

- A. Remove and replace existing hydraulic power unit and dispose of off-site.
- B. Remove all hydraulic fluid and dispose of in accordance with the Department of Environmental Protection Agency requirements.
- C. The new hydraulic power unit shall be a compact, self-contained fully enclosed rigid steel submersible design. Power unit shall be floor mounted on isolators. Power unit shall contain the submersible pump and drive motor, hydraulic fluid control valve unit assembly, and storage tank.
- D. Pump shall be a positive displacement screw type design, specifically designed for hydraulic elevator service, with a steady discharge for minimal vibrations to provide smooth operation. Output of the pump shall not vary more than 10% percent between no load and full load conditions on the elevator. Mechanical efficiency of the pump shall be minimum 85% under fully rated load conditions.
- E. Motor shall be an alternating current, poly-phase, squirrel-cage induction type design motor, specifically designed for starting and running requirements of a hydraulic elevator.

- F. The hydraulic control valve shall provide for step-less acceleration and deceleration. Valve shall ensure consistent operation and speed regulation regardless of load and/or oil temperature. Speed deviations throughout the load range shall not exceed 5% in either direction.
- G. Hydraulic fluid reservoir storage tank shall be constructed of welded steel sheets and provided with a tight fitting cover, a protected vent opening, an hydraulic fluid level gage, a filtering screen mounted over the suction inlet and a drain connection and baffles as required to prevent surging and splashing of the hydraulic fluid upon reentering the reservoir. An initial supply of hydraulic fluid of the proper grade and volume shall be provided to permit proper operation of the elevator. Storage tank shall be of sufficient capacity to lift the elevator to the top terminal of the hoistway, plus a reserve of a minimum of ten gallons. Tank shall not operate as a pressure tank but shall operate only as a storage tank.
- H. A blow out proof hydraulic muffler system, designed to reduce hydraulic pulsations and to minimize noise to permit quiet operation, shall be provided in the hydraulic fluid line near the power unit.
- I. A self-cleaning main line strainer with a 60-mesh element and a magnetic drain plug shall be installed in the hydraulic fluid line.
- J. Shut off valves shall be installed in the hydraulic fluid line in the elevator pump room and in the elevator pit to isolate the hydraulic fluid in the system to permit maintenance and repair work to be performed without draining the system.
- K. An automatic pipe rupture shut-off valve shall be installed in the oil line immediately before the jack inlet. Automatic shut-off valve shall be adjusted to immediately stop the elevator in the event of a loss in supply pressure or an excessive oil flow condition.
- L. Supplemental means to maintain oil operating temperatures within acceptable design ranges shall be provided, if necessary.
- M. Hydraulic fluid shall be formulated specifically for hydraulic elevators. Hydraulic fluid shall meet Code requirements and elevator manufactures specifications for hydraulic elevator duty.
- N. Supplemental sound isolation of the power unit and hydraulic operating system shall be provided, including:
  - 1. A minimum of two sound isolating couplings in the oil line in the equipment room between pump and jack. Each coupling shall consist of two machined flanges departed by two neoprene seals to absorb vibration and to positively prevent metal to metal contact in the oil line. Build couplings in such a manner that they will be absolutely blow-out proof.
  - 2. Vibration pads under the power unit assembly and oil line support brackets to isolate the unit from the building structure.
  - 3. Locate the power unit at least 6 inches from any walls.
  - 4. Resilient insert of neoprene sponge at any hydraulic floor or wall supports or use neoprene mount or hanger for the support.
  - 5. Flexible conduit with ground wiring for pump unit connections.
- O. Piping, fittings and valves shall be of sufficient schedule steel or extra heavy wrought iron with extra heavy fittings to exceed the pressures expected in operating the system. Piping installed

- under floors or in trenches shall be given a heavy exterior coating of bitumastic or other corrosion resistant material, after assembly. Piping in the equipment room and pit shall be resiliently supported by isolators. Piping which penetrates walls shall have a resilient sleeve to prevent direct contact with the equipment room wall. At least two hangers or supports shall be provided between each flexible coupling. All pipe connections shall be threaded.
- P. All piping running through walls shall include a resilient penetration sleeve fabricated from a pipe that is ½” to ¾” larger than the penetrating element in directions around the element. Space between the sleeve and the penetrating element shall be packed with fire-safing insulation to within ¼” of the ends of the sleeve. Remaining ¼” space on each end shall be filled with a fire rated sealant to form an airtight seal. Penetrating element shall be able to pass through the sleeve without contacting the sleeve.
- Q. Provide all new piping, fittings and valves, including a new threaded hydraulic oil line, of the proper schedule, properly supported and isolated from the hydraulic machine to the new hydraulic jack assembly and with approved shut off valves located in the equipment room and elevator pit. (Note: Victaulic connections are not acceptable).

### 3.5 HYDRAULIC CONTROLLER

- A. Remove and replace the existing hydraulic elevator controller.
- B. The elevator controller shall be designed to provide the required flow control of oil from the power unit to the hydraulic jack. This flow control shall bypass oil on the initial start of the pump, allowing the motor to attain full running speed, and gradually increase load to the motor over a timed acceleration interval. Thermal overload relays shall be provided to protect the motor in three phases. Time between door close and car start shall not exceed one second.
- C. Solid state starting shall be provided to limit the motor starting current.
- D. The elevator shall be provided with a self-leveling feature that will automatically bring the car level to the floor landing and maintain the car within 1/4" of level with the floor landing, regardless of rated capacity, load or direction of travel. Self-leveling shall be entirely automatic and correct for overtravel or undertravel.
- E. The controller shall be enclosed in a properly ventilated metal cabinet with sides and top, and with hinged access doors on the front. Rubber mats shall be installed on the floor in front of the controller for electrical grounding protection of the equipment.
- F. Controller printed circuit boards, discrete components, switches, and other items of control equipment shall be mounted on a common panel or individual panels which shall be made of a moisture-resisting, noncombustible material which shall be securely mounted in a substantial, self supporting steel frame. A vibration absorbing mounting shall be provided for the steel frame to eliminate perceptible vibration.
- G. Electro-mechanical switches and relays shall be used where heavy current is supplied and/or on safety circuits required by the governing Codes.
- H. Switches shall be the electro-magnetic operated with contacts of design and material to ensure maximum conductivity, long life and reliable operation without overheating or excessive wear

- and provide a wiping action to prevent sticking due to fusion. Switches carrying highly inductive currents shall be provided with arc deflectors or suppressers.
- I. Switches, printed circuit boards and discrete components shall be mounted in the front of panels together with any small electronic components. Large capacity resistors shall be mounted on the sides or top of panels.
  - J. Protective devices shall protect against overload and single phasing and against overload and phase reversal.
  - K. Time delay circuits shall be via electronic timing circuits.
  - L. Wiring on the controller shall be done in neat workmanlike order and connections shall be made to studs and/or terminals by means of solderless lugs or similar connections. Wiring shall be copper.
  - M. Terminal blocks with identifying studs shall be provided on the controller for connection of board wiring and external wiring.
  - N. Identifying symbols or letters shall be permanently marked on or adjacent to each device on the controller and the marking shall be identical to marking used on the wiring diagrams. In addition to the identifying marks, the ampere rating shall be marked adjacent to fuse holders.
  - O. Input-output devices shall be marked similarly to relays for ease of reference to wiring diagrams.
  - P. Confirmation of which floor is to be the main dispatch floor; the Fireman Recall floor and the Alternate Fireman Recall floor shall be obtained prior to fabrication of the control equipment. Control shall be programmable to enable dispatch and recall floors to be changed in the field.
  - Q. Electrical information necessary for review by the project Electrical Engineer shall be provided at the time of submission of the elevator hoistway layout drawings.

### 3.6 SINGLE CAR MICROPROCESSOR OPERATION

- A. Elevator operation shall be solid-state microprocessor design simplex collective automatic, operating from calls registered by momentary pressure of car or landing pushbuttons. System shall incorporate a directionally selective response to landing calls as well as a collective retention of calls.
- B. Elevator shall operate from buttons located at each floor and in the car. Registration of calls by momentary pressure on buttons shall cause the car to respond to passenger demand. Elevator shall slow down and stop automatically at landings corresponding to calls registered on car or hall buttons. Simultaneous to the initiation of the slowdown of a car for a hall call, that call shall be canceled. Call shall remain canceled and hall button ineffective until car doors begin to close after passenger traffic. Calls registered on car buttons shall cancel in the same manner.
- C. In the event the doors are held open, or prevented from closing, for a predetermined adjustable period of time, initially to be set at 20 seconds, after automatic door closing has been initiated, a buzzer shall continuously sound, a voice announcement shall indicate to clear the doors, and the doors shall reopen. The doors shall not be permitted to close, even at a reduced speed, if an obstruction is in the plane of proximity detector curtain. When the obstruction is removed and



- the doors are permitted to close, the doors shall close at a reduced speed. Buzzer shall continuously sound until the doors are fully closed. Door open button shall remain operable.
- D. Door Dwell Times: Door dwell times shall be field adjustable between 1 and 30 seconds. Hall call timing shall predominate in the event of a coincidental car and hall call stop. Upon interruption of car door proximity detector, the door open time shall be reduced to an adjustable time of 0.5 to 5 seconds. Proximity detector control door dwell time shall be separately adjustable for car and hall calls.
  - E. Provisions shall be incorporated into the elevator control dispatch system to prevent loss of control memory, sequence of operation and/or other control functions due to fractional power interruptions, spikes or other interference.

### 3.7 CONTROLLER DIAGNOSTICS

- A. The controller shall include the ability to perform diagnostic analysis of the system and be capable of determining faults. When a fault occurs, the computer shall be able to provide a retrievable fault code message identifying the location of the elevator, the time of day of the occurrence, and the number of times the fault occurred.
  - 1. The following shall be provided:
    - a. Instructions for proper use of diagnostic system.
    - b. Maintenance of the diagnostic system and update of the associated instructions and other related documents.

### 3.8 INDEPENDENT SERVICE

- A. Independent Service operation shall permit the elevator to be removed from automatic operation and be used for special service.
- B. When the switch is in the Independent Service position, the elevator shall respond only to calls registered on the car buttons. Hall calls shall be automatically bypassed, and directional lanterns and high call operation circuits shall be inoperative. Car doors shall close only when a car call button is pressed.

### 3.9 FIREFIGHTERS EMERGENCY OPERATION

- A. Firefighters Emergency Operation shall include Phase I, Phase II and Alternate Floor operation in accordance with ASME A17.1 Elevator Code and local Code requirements.
- B. Key switches for Phase I and Phase II operation shall be the same and not operate any other device. Key shall be a uniform key for the facility and be acceptable to local authorities. Provide adequate quantity of keys to operate all Firefighters Emergency Operation devices at once.
- C. Firefighters Emergency Operation Phase I key switch shall be located in the main Fireman access floor elevator lobby.
- D. Floor access restrictions shall be overridden on Firefighters Emergency Operation.

- E. Elevator control system shall be tied in and tested with the Fire Alarm system.

### 3.10 LOW OIL CONTROL

- A. In the event the oil level is insufficient for travel to the top floor, provide controls to return the elevator to the main level and park until oil is added.

### 3.11 EMERGENCY POWER OPERATION - Battery lowering

- A. Provide a battery-operated system as part of the elevator controllers to automatically lower each elevator to the lowest landing where it shall stop and allow the doors to open, then close in the event of loss of normal power. Door open button in the cab shall remain operational. Upon restoration of normal power, the elevator shall return to normal operation.
- B. Provide an auxiliary contact in the disconnect switch, and shunt breaker if applicable, to inhibit elevator emergency lowering in the event the disconnect switch shuts power off. Auxiliary contact shall be positively opened mechanically and the opening shall not be solely dependent on springs. Contact shall cause additional power source to be disconnected from its load when disconnecting means is in the open position.

### 3.12 EMERGENCY LIGHTING AND ALARM

- A. A self-contained power supply system shall be provided which shall operate a minimum of two of the light fixtures in the car enclosure, and an alarm bell in the event of loss of normal power.
- B. The standby power system shall contain nickel cadmium batteries and charger and shall be provided with a means of testing. The standby power supply power system be operational for at least four hours. The operation shall be completely automatic upon failure of normal power supply.
- C. The standby power system shall be connected to the normal power supply and be arranged to be energized at all times. After use, the standby power system shall recharge automatically. The standby power system shall have a minimum ten-year life expectancy

### 3.13 AMERICANS WITH DISABILITIES ACT

- A. Elevator system operation and equipment shall comply with requirements of the Americans with Disabilities Act, ICC/ANSI A117.1.

### 3.14 MANUFACTURER/CONTRACTOR LOGOS

- A. There shall be no Logos or Contractor's or Manufacturer's identification or nameplates visible within the car or in the corridors.

### 3.15 HOISTWAY ACCESS

- A. A hoistway access switch shall be provided at the terminal landings, to permit access to the elevator car top and pit, as per local Code requirements. Switch shall be recessed with flush cover. Coordinate cutting of the box for the new devices with Owner.

### 3.16 TOP OF CAR STATION

- A. The existing car top inspection station shall be removed and replaced.
- B. The new inspection and maintenance control station shall be mounted on top of the elevator car. Station shall contain Up and Down direction buttons and an emergency stop switch, 110V GFCI duplex receptacle, work light and audible and visual signal to comply with the Firefighters Emergency Operation requirements. When the car is on inspection it shall operate at reduced speed by constant pressure on the appropriate direction button. Provisions shall be made to make normal operating devices inoperative while the top of car operating device is in use.

### 3.17 SIGNALS AND OPERATING FIXTURES

- A. The existing signal operating fixtures shall be removed and replaced with new as indicated in equipment summary.
  - 1. Car operating panel shall include:
    - a. A series of car operating buttons with LED acknowledge light illumination corresponding to the landings served. Pressure upon a car button shall cause the button to illuminate. When car stops in response to a car call, call shall be canceled and button illumination extinguished.
    - b. Alarm bell button.
    - c. Door open and door close buttons.
    - d. Plates containing raised numerals and Braille indications shall be mounted flush and adjacent to each floor button, operating buttons, and the alarm bell button.
    - e. Adjustable volume electronic toner for audible signaling of floor passing and car stop, and buzzers to signal door delay and firefighters emergency operation.
    - f. An emergency light fixture, with prismatic flush lens.
    - g. Firefighters Emergency Operation Phase II key switch, illuminated signal and call cancel button.
    - h. Hands-free ADA compliant telephone and speaker.
    - i. Engraved and filled in standard Helvetica graphics as follows: “Capacity” (0.25”), “Car Number” (0.5”), “Fire fighter’s Instructions” (0.125”), And all other engraving as required by Code.
    - j. Keyed service switches:
      - 1) Independent service.
      - 2) Light.
      - 3) Two speed fan.
      - 4) Emergency light test.
      - 5) Inspection/access.
      - 6) Stop switch
      - 7) 110V GFCI outlet.
    - k. Voice annunciator speaker.

1. Engrave and fill, in standard Helvetica graphics as follows: “Capacity” (0.25 inch), “Car Number” (0.5 inch), “Firefighters Emergency Operation Instructions” (0.125 inch), and all other engraving required by Code”.
  2. An LED digital readout position indicator to indicate position of the car in the hoistway and include arrows to indicate direction of car travel shall be provided.
  3. Directional lantern with adjustable audible electronic toners shall be provided in the cab entrance jamb. Directional lantern shall signal once if a car is traveling in Up direction and twice if in Down direction and signal waiting passengers of arrival of next elevator and direction of travel.
  4. Landing pushbutton fixtures shall be provided at each floor which shall contain Up and/or Down pushbuttons and an LED digital readout position indicator to indicate position of the car in the hoistway and direction of travel. LED illumination shall be provided in each button, which shall light upon pressure registration of a call at that landing and extinguish when a car responds to that call.
  5. Firefighters Emergency Operation Phase I key switch and illuminated signal shall be located at primary Fire access floor elevator lobby to permit elevators to be recalled manually via operation of that key switch. Primary Fireman access floor and alternate floor shall be confirmed prior to fabricating control or installing key switch station.
  6. An illuminated signal shall be provided at the designated level marked “Elevator Battery Power” to indicate that normal power has failed, and battery emergency power is in effect.
  7. Visual and audible signal and reset shall be provided at the designated level to indicate communication failure.
  8. A hoistway access switch shall be provided at the top and bottom terminal landings to permit access to the car top and elevator pit. Cover plate to match entrance finish.
- B. Fixture faceplates shall be a minimum of 1/8 inch thick with eased edges to eliminate sharpness and finished per the Equipment Schedule. Faceplates graining shall run vertically.
- C. Landing, car and lobby fixtures shall be mounted with tamperproof type screws. Screws shall be same finish as the faceplates.
- D. Key switch cylinders in faceplates shall match the faceplate finish.
- E. Hall pushbutton bulbs, car operating panel pushbutton bulbs and hall lantern bulbs shall be LED. Bulb light shall be of sufficient intensity to not be overwhelmed by surrounding light. Car and hall pushbutton bulbs shall be uniform white.
- F. Fixtures and devices shall be located as required by the Americans with Disabilities Act. Fire-safing of wall penetrations shall be performed.

### 3.18 VOICE ANNUNCIATOR

- A. A programmable voice annunciator system shall be provided in the car. Voice annunciator system to include:
1. Solid state digital speech annunciator.

2. A recording feature for customized messages.
  3. Playback option.
  4. Built-in voice amplifier.
  5. Master volume control.
  6. Audible indication for selected floor, floor status or position, direction of travel and nudging.
- B. Locate all associated equipment in a single, clearly labeled enclosure on the car top.
- C. Voice annunciation shall be provided with ability to activate the following actions:
1. Upon arrival at a floor, announce floor number.
  2. As doors open at destination floor: Activated when the elevator stops at the designated level, “Floor (followed by floor number), 0.5 second pause “This car going (Up or Down)”.
  3. Immediately before door closing sequence is initiated: “Doors closing”.
  4. Nudging: Activated when the doors are delayed from closing beyond the scheduled dwell time. “Please allow the door to close”.
  5. Exit message, activated when on Firefighters Emergency Operation and/or Emergency Power Operation: “Emergency, this elevator is on Emergency Service. Please exit when the elevator arrives at the next floor”
- D. Language: English.
- E. Voice: Messages shall be in a calm, female gender voice, with phrases paced at 3 syllables per second.
- F. Messages and actual voice shall be submitted to the Owner from manufacturer’s standard range of voice products for Owner selection. Voice shall be digitized recordings of actual human speech, not synthesized voices. Voice recording shall be absent of background noise at normal listening levels. Volume of the announcements shall be field adjustable for each group of cabs within a range of plus or minus 20dB. The base setting shall be 10 dB above ambient levels in the cab with all equipment running.

### 3.19 TELEPHONE, CCTV and CARD ACCESS SECURITY INTERFACE

- A. Communication System:
1. An ADA compliant hands-free telephone and wiring from the telephone to terminals on the elevator controller, shall be provided in car operating panel.
  2. Others shall provide telephone wiring to the equipment room controller location.
  3. Hands-free telephone shall be integral with the car operating panel and include instructions for use, pushbutton to initiate the call, microphone transmitter, speaker and acknowledge light to indicate when the call has been answered.
  4. Operation of telephone shall automatically signal call acknowledgment and automatically reset on call termination and not require any special action on the part of the operator.
  5. The telephone shall have capability for ring-down use with in-house telephone system or operate with standard dial tone.
- B. CCTV Camera Provisions (If required):
1. Provide provisions for camera surveillance in the elevator cab. Cameras by Owner’s security system contractor.

2. Confirm type wire required for travel cable and include wiring in travel cable, terminated at camera location in car and in control room outside controller in a designated box marked CCTV cable.
  3. Allow 10 ft extra, looped at each connection.
    - a. Camera to be located in the car enclosure, mounted in corner mounted housing.
    - b. Camera to be provided by CCTV Security contractor, installed and hooked up by the CCTV Security contractor.
    - c. Provide one 120V un-switched duplex convenience outlet dedicated to CCTV camera on the top of each elevator equipped with a CCTV camera.
- C. Card Reader Provisions (If required):
1. Provide provisions for Card Reader System in the elevator cab and at hall stations. Card Readers by Owner's security system contractor.
  2. Confirm type wire required for travel cable and include wiring in travel cable, terminated at camera location in car and in control room outside controller in a designated box marked Card Reader cable.
  3. Allow 10 ft extra, looped at each connection.
    - a. Card reader to be located in the car enclosure, mounted in Car Operating Panel.
    - b. Card Reader to be provided by Security contractor, installed and hooked up by the Security contractor.

### 3.20 JACK ASSEMBLY REMOVAL AND REPLACEMENT

- A. The existing jack assembly shall be removed and replaced.
1. Pump hydraulic fluid out of the existing jack assembly and dispose of as per requirements of local environmental agencies.
  2. Remove the jack assembly, oil line, related hardware, and fittings, and clean out the jack hole to create a clean hole.
  3. Plumb hole and determine adequacy for use with new jack assembly. Jack assembly to include manufacturers PVC encased integral system.
  4. Minimize demolition of the concrete, which may be surrounding the jack hole casing.
  5. Dispose of all oil and contaminated materials in a proper manner in accordance with regulatory authority requirements
- B. Install the new PVC encased hydraulic jack assembly in the hole, plumb.
1. Once the jack assembly is aligned and plumb, backfill the casing with clean dry sand to maintain the plumb cylinder alignment.
  2. Restore concrete damaged due to removal of jack cylinder assembly or installation of new jack cylinder assembly.
  3. Embed jack assembly PVC waterstop ring in non-shrink concrete.

### 3.21 JACK HOLE REDRILLING - Alternate No. 1

- A. If, once the jack assembly is removed and the jack hole cleaned out, it is determined that the jack hole outer casing has insufficient clear plumb diameter to install the new PVC encapsulated jack assembly system, advise Owner and obtain authorization to redrill cylinder hole.

- B. Upon Owner authorization, pull the jack hole outer casing and re-bore the hole to sufficient depth and diameter to accommodate a new steel outer casing and the new PVC encased hydraulic jack assembly with a pit water-stop ring.
  - 1. Removal of the jack assembly, cleanout of the hole, installation of the new PVC encapsulated jack assembly in cleaned out hole is to be included as part of the Base Bid work.
  - 2. Removal of the existing jack hole casing, re-boring of the hole, if required, and installation of a new steel outer casing shall be bid as an Alternate to the Base Bid and a separate price shall be provided for this work.
- C. Restore the pit floor concrete disturbed due to the removal of the existing jack cylinder and jack hole casing.
  - 1. Provide a PVC waterstop ring for pit to be dry.
  - 2. Embed jack assembly PVC waterstop ring in non-shrink concrete.
  - 3. Provide certification from a Structural Engineer that the pit floor integrity has been restored.

### 3.22 HYDRAULIC FLUID DISPOSAL

- A. Engage a licensed environmental firm regularly employed in the recovery and removal of hazardous materials, to evacuate, remove, and properly dispose of all hydraulic fluid, and all hazardous and contaminated materials from the job site.
  - 1. When requested:
    - a. Submit a sample of the spoils to a certified and approved testing lab for analysis.
    - b. Submit testing lab test results to the Owner.
    - c. Provide manifests supporting removal methods, procedures and site of disposal of materials to the Owner for record.
    - d. Provide the location of the disposal site to the Owner for substantiation of authorization of site to receive contaminated materials.

### 3.23 HYDRAULIC JACK ASSEMBLY; PIPING

- A. Remove and replace the existing hydraulic jack assembly and oil lines.
- B. Hydraulic jack assembly shall be a single (non-telescoping) piece fabricated of steel pipe of sufficient thickness to withstand operating and overload pressure, closed at the bottom and provided with a removable cylinder head and packing gland at the top. Bottom of the jack cylinder shall have a safety bulkhead in addition to the welded closure. Jack head shall have a bronze or Babbitt lined bearing and an integral drip ring. Packing shall be of the self-adjusting type, not requiring external adjustment, and shall allow operation of the plunger with minimal friction. Packing gland shall be arranged for and a return system shall be provided to automatically return any hydraulic fluid, which may escape the packing ring to the reservoir.
- C. The jack assembly shall be contained within an integral sealed PVC protection system provided by the jack manufacturer, sealed at top and bottom to protect the jack assembly from corrosion and electrolysis.

1. A means shall be provided as part of the jack/PVC system to determine if water has entered the PVC containment system and to evacuate same pursuant to Code requirements.
  2. PVC shall include a waterstop ring to be embedded in non-shrink concrete in the pit floor.
- D. Structural steel channels shall be provided to support the jack and to transmit the vertical loads to the building structure.
- E. Exposed jack assembly shall be laterally supported, and access ladders and service platforms shall be provided for access to cylinder heads. Existing access ladders and service platforms may be retained if acceptable to local Code authority.
- F. Plunger shall be a single stage, seamless steel pipe or tubing, turned true and smooth and polished to a fine finish. Internal couplings shall join multiple piece plungers. Telescoping applications are not accepted.
- G. Plunger shall be fastened to the bottom of the car frame by means of vibration isolating dampening plates to prevent noise and vibration from being transmitted to the car frame. A stop plate shall be welded on the bottom of the plunger to prevent the plunger from leaving the jack cylinder.
- H. Grey cast iron or other brittle materials shall not be used, and the cylinder and plunger unit shall be factory tested at not less than 400 psi for strength and freedom from leakage. All jacks shall be tested for potential leakage, and corrected if any is observed, before they are finally installed.
- I. Oil lines shall be threaded, of the proper schedule, properly supported and isolated from the hydraulic machine to the hydraulic jack assembly and with approved shut off valves located in the equipment room and elevator pit. Victaulic connections are not acceptable.
- J. Piping, which penetrates walls, shall have a resilient sleeve to prevent direct contact with the equipment room wall and the hole fireproofed. At least two hangers or supports shall be provided between each flexible coupling.

### 3.24 SPRING BUFFERS

- A. Remove and replace the existing buffers.
1. Provide new spring buffers and pit mounting channels.

### 3.25 PIT LADDER

- A. Remove and replace the existing pit ladder.
1. Code compliant steel pit ladder with handgrips extending 48" above access floor level.

### 3.26 PIT STOP SWITCH

- A. Remove and replace the existing pit stop switch.
1. Provide a new stop switch in the elevator pit located adjacent to pit access ladder.



### 3.27 PIT LIGHT AND SWITCH

- A. Remove and replace the existing pit lights.
  - 1. Provide a new guarded LED strip light fixture and an 110V duplex GFCI receptacle in the elevator pit to provide illumination not less than 10-foot candles at the pit floor. Locate a pit light switch accessible from pit access ladder.

### 3.28 GUIDE RAILS

- A. Retain the existing guide rails.
- B. Rails and rail bracket fastenings shall be examined and resecured to the building structure, as necessary. Running surface of the guide rails shall be thoroughly cleaned. Joints shall be filed smooth and the alignment shall be checked and adjusted to within 1/8" (+ or -) top to bottom and face to face, as required for proper and smooth operation of the elevator. Unmachined portion of the guide rails and brackets shall be thoroughly cleaned.
- C. Anti-snag guards shall be provided where necessary to prevent travel cables from snagging on brackets, fishplates, clips or bolts.
- D. Unmachined portion of the guide rails and brackets shall be touched up with rust inhibitor paint at the conclusion of the project.

### 3.29 CAR FRAME

- A. Retain the existing car frame.
- B. Car frame members shall be checked and secured. The car frame shall be reinforced, as necessary, to relieve the car enclosure from undue strains.

### 3.30 PLATFORM

- A. Retain the existing car platform.
- B. Retain and protect the existing car platform flooring.
- C. Remove the existing toe guard and provide a new toe guard on the entrance side of the car platform extending the full width of the car opening and below the surface of the car platform of not less than the depth of the leveling zone plus 3", a minimum of 21". The lower portion of the toe guard shall be bent back at an angle of 75°.
- D. If the cab is replaced, provide a new extruded aluminum sill and new plywood subfloor, prepared for the new flooring. Provide Vinyl tile or carpet tile floor, as per Owner.

### 3.31 CAR GUIDE SHOES

- A. Remove and replace the existing car guide shoes.
- B. Provide new removable gib slide guide shoes.

### 3.32 ENTRANCE ASSEMBLIES

- A. The existing hoistway landing entrances shall be retained.

- B. All fastenings of the retained landing entrance assemblies shall be made secure. Any repairs that may be required, or alterations necessary to adapt the new doors and door operating equipment to the existing hoistway landing entrance assemblies, shall be performed.
- C. Landing sills for all openings shall be cleaned to permit smooth operation of the door gibs in the sill tracks.
- D. Fascia, toe guards, hanger covers, and dust covers may be retained, if in compliance with Code and if reinforced, resecured, and degreased. New fascia shall be sheet steel, reinforced as necessary to prevent deflection and to present a flat surface. Fascia shall be no more than 5 inches from the edge of the car sill, or as required by Code, throughout the full rise of the hoistway and be securely fastened to hanger housings, intermediate supports and sills. The fascia shall overlap the entrance width by a minimum of 6 inches on each side. Fascia shall be secured at hanger supports and at the sills with oval head machine screws. All existing and new, fascia, toe guards, hanger covers, and dust covers shall be painted with rust inhibitor paint. Six (6) inch high numerals designating the appropriate floor shall be stenciled at six (6) foot intervals on all fascia.
- E. New door stops and rubber bumpers shall be mounted at the top and bottom of the strut angles to cushion and limit the extreme travel of the door panels.
- F. Floor identification plates shall be provided on each side of each entrance frame jamb at 60 inches above the finish floor line and be minimum two (2) inch high numerals with Braille. Numerals and Braille shall be raised stainless steel finish against a contrasting black painted background. Plates shall be secured to the jamb by concealed fasteners. Samples shall be submitted for approval.
- G. A pictograph sign, minimum 1/8" thick, stating "In Case of Fire Do Not Use Elevators-Use Exit" and graphics required by Code, shall be provided at all floors above the hall pushbutton station. Shop drawings and/or samples shall be submitted for approval. Finish to match entrance finishes.

### 3.33 HOISTWAY DOOR PANELS

- A. Retain the existing hoistway doors.
- B. Reinforced for new power operation. Retain existing locations for emergency release keyways.
- C. Provide heavy duty door gibs with fire tabs.

### 3.34 ELEVATOR DOOR OPERATING EQUIPMENT

- A. Remove and replace the existing door operating equipment.
- B. A motor driven heavy-duty door operator with closed loop control system and electronic and digital operation shall be provided. Door operator shall open and close car doors and hoistway doors simultaneously at any landing through use of pickups and an automatic clutch arrangement.
- C. Closed loop control shall give constant feedback on the position and velocity of the elevator door. Motor torque shall be constantly adjusted to maintain correct door speed based upon

- position and load of the door. Door movements shall be electronically cushioned at both limits of travel and door operating mechanism shall be arranged for manual operation in the event of power failure with amount of force needed not to exceed thirty pounds per Code.
- D. Closing speed of hoistway doors shall not cause the kinetic energy of hoistway door assembly to exceed 7 foot-pounds per Code. Doors shall begin to open when car has stopped at floor level.
  - E. Doors shall open automatically when the car has stopped at floor line and shall again close after predetermined time interval has elapsed or when the car is parked. A door open button shall be provided in the car, momentary pressure on which shall reopen the door and reset the time interval. Momentary touch of the corridor button at the floor at which the elevator is parked shall cause the doors to open. Doors shall reclose if no call is registered after an adjustable time interval. Emergency stop key switch operation shall open the car doors only after the car has come to rest.
  - F. Car and hoistway door hangers shall be sheave type arranged for two-point suspension of the doors. Sheaves and rollers shall be steel or have resilient sound-absorbing tires of approved material and shall include ball bearings properly sealed to retain grease lubrication. Adjustable ball bearing rollers shall be provided to take up thrust of doors. Hangers shall have safety retainers. Hanger tracks may be retained and cleaned. Worn tracks shall be replaced.
  - G. Hoistway door closers and relating devices shall be provided for hoistway doors. Operation of door closers shall be per Code.
  - H. Car door and hoistway doors shall be arranged that hoistway doors and car doors cannot be opened more than 4 inches from inside car when car is outside unlocking zone, per the requirements of ASME A17.1.
  - I. Mechanical electrical interlocks of a design, which will operate without use of a retiring cam, shall be installed at each landing entrance.

### 3.35 PROXIMITY DOOR DETECTOR EDGE

- A. Remove and replace the existing door detection system.
- B. A new full curtain screen design proximity detector door edge shall be installed on the car doors. Device shall include a full curtain of LED light-rays to fully cover entire opening and be so arranged that, should the plain of the screen be penetrated or if the edge should be touched or an object come into proximity of the doors while the doors are open or while the doors are closing, it shall cause car and hoistway doors to remain in the open position or, if closing, cause the doors to return to open position. Design and operation of the proximity detector shall be in conformance with requirements of the Americans with Disabilities Act.
- C. Should the proximity detector be interrupted for an extended adjustable period of time, an adjustable volume buzzer shall continuously sound until doors are released and allowed to fully close. Doors shall not be permitted to close, even at a reduced speed, if an obstruction is in the plane of proximity detector curtain. Nudging shall not be activated, only audible signal provided.

- D. The control system shall permit adjusting of varying door dwell times after the proximity detector is interrupted, based on car call time and hall call time.
- E. Should the proximity detector device become inoperative, elevator shall be removed from service until the proximity detector is made operational and elevator returned to service.
- F. A second independent 3D detection system consisting of an infra-red proximity detector which operates between the hoistway doors and landing doors shall be provided. 3D system shall detect any reflection within the 3D zone in the landing, which triggers the system, causing the doors to reopen. 3D system shall have multiple modes of activation to suit the building requirements. 3D system shall desensitize after either three attempts to close or after doors have been held open for a predefined time. Static curtain detector shall remain operational when 3D system is desensitized.

### 3.36 ELEVATOR CAR ENCLOSURE

- A. The elevator car enclosure shall be retained.
  - 1. Top exit shall be inspected and modified as required for Code compliance.
  - 2. New lighting shall comply with Code required minimum illumination levels.
  - 3. The existing exhaust fan shall be replaced with a new motor driven propeller type fan rubber mounted to prevent transmission of vibrations to car structure. Fan shall be a two (2) speed type and have a capacity of one air change per minute at low speed and 1.5 air changes per minute on high speed. The unit shall not exceed 45 dBA approximately 3 ft above the car floor when on high speed. A switch shall be provided in car-operating panel to control fan.
  - 4. Removable panels shall be particle board  $\frac{3}{4}$  inch overall thickness with  $\frac{1}{2}$ " separation reveal. Metal clad panels shall wrap the sides of the panels. All edges shall be eased to eliminate sharpness.
  - 5. Rails shall be fastened to car enclosure walls via through bolts penetrating the panels, fastened to 4" x 4" x  $\frac{1}{4}$ " steel reinforcing backing plates with nuts and lock washers.
  - 6. Car entrance, when provided, shall be provided with new 16-gauge hollow metal CRS horizontal sliding doors with flush surfaces both sides, min 1.25" thick. Car side surface of doors shall be clad with stainless steel. Door panel rigidity shall be obtained by suitable steel reinforcement. Doors shall be guided at the bottom by non-metallic shoes sliding in a smooth machined groove in an extruded non-slip car sill. A minimum of two gibs shall be provided on each door panel. New heavy duty gibs shall be provided and be replaceable without removing door panels from the track. Door panels shall have sound deadening filler. Doors shall be reinforced for power door operation.
  - 7. Pad hooks shall be mounted on walls and on return panel for the hanging of protective wall pads. Reinforced vinyl covered protective wall pads with hanging clips shall be provided. One set of pads shall be provided.
  - 8. Cutouts for car fixtures shall be reinforced and located to permit signal operating fixtures to be in compliance with ADA requirements.
  - 9. A Certificate of Operation frame shall be provided.

- B. Should the elevator car enclosure be replaced, provide a new 14 gauge shell, 12 gauge canopy with top exit, lock and electrical contacts, new plywood car platform subfloor, new extruded aluminum car sill and interior finishes as describe in Section A, above.

### 3.37 FINISHED FLOOR

- A. Finish flooring shall be per the Equipment Summary.

### 3.38 ELECTRIC WIRING

- A. Remove and replace the existing elevator electric wiring and travel cable.
- B. Existing wiring, travel cable and abandoned conduit shall be removed from the hoistway, pit, and elevator equipment room. Existing conduit and duct, which is in compliance with Code and compatible with the new equipment, may be retained.
- C. Power and control wiring to connect parts of the elevator equipment including controllers, cars, remote panels, and signal operating fixtures shall be insulated copper wiring.
- D. Wiring shall have a flame retarding and moisture resisting insulating outer cover and be run in metal conduit, metallic tubing or wire ducts. Wiring shall bear the UL approval or equivalent for service intended and be installed in accordance with National Electric Code.
- E. Travel cables for elevator cars shall have a flame retarding and moisture resisting outer cover and be circular in cross section. Travel cables shall contain a steel core and be flexible and suitably suspended by the steel core to relieve strains in individual conductors. Cables shall contain an approximately equal number of conductors and be of approximate equal diameter and flexibility. Traveling cables shall be terminated in a junction box on top of the car and in elevator equipment room. Anti-snag guards shall be provided to prevent travel cables from snagging or abrading on beams, brackets, or any surfaces within the hoistway.
- F. Each elevator shall include a minimum of:
  - 1. Six (6) pairs of 22/6 shielded wires for use by a building security and/or communication system for two in-car readers per car
  - 2. One (1) 22/6 shielded wires for use by a building security to each hall station.
  - 3. Two (2) video coaxial cable Type RG59/U.
  - 4. Three (3) Draka Cat 5e – 20AWG cables per cab. 1 for IP camera, 1 for intercom/telephone, 1 for spare. 300ft max distance run allowed.
  - 5. All other special wiring as may be required to accommodate telephone, music, card readers, etc.
- G. Ten percent spare wires shall be provided between each controller, hoistway junction box and remote panel and in each traveling cable. Spare wires shall be properly tagged.
- H. A duplex 110V GFCI receptacle shall be provided in the car enclosure and on top of the crosshead in the Top of Car operating panel.
- I. An emergency alarm bell shall be mounted in the hoistway, or just outside the hoistway, where directed by local Code enforcement official.
- J. Interlock wiring of elevator entrances shall be Teflon insulated, or as required by Code.

- K. Elevator cab lighting circuits of each elevator shall be separate of any other elevator.
- L. Wiring, conduit, fittings and devices in pit shall be waterproof NEMA rated design and be identified for use in wet locations in accordance with NFPA 70.

### 3.39 PAINTING

- A. The elevator hoistway, pit, and elevator equipment room shall be thoroughly cleaned at conclusion of the project and prior to Acceptance.
- B. The elevator hoistway, pit, and elevator equipment room shall be thoroughly cleaned at the conclusion of 12-month Warranty period.
- C. The elevator equipment room and pit floor shall be painted with two coats of deck enamel, after final adjusting.
- D. Restricted clearance areas on car top and in the pit shall be delineated by contrasting color.
- E. Exposed ferrous metal surfaces of power units and controllers shall receive a factory applied primer and finish coat of rust inhibiting machinery paint.
- F. Exposed ferrous metal in the hoistway including guide rails, brackets, pit steel, buffers, platforms, ladders, car frames, shall be thoroughly cleaned.
- G. Fascia, dust covers, toe guards receive a primer and finish coat of rust inhibiting paint and be touched up or repainted after installation and final adjusting.
- H. Electrical wiring ducts, junction boxes, switch boxes, signal boxes, terminal boxes, rigid or flexible metallic tubing, trough and brackets shall be painted to prevent corrosion or be fabricated from a noncorrosive material.

### 3.40 PERFORMANCE

- A. Elevator system shall be required to meet the following performance criteria.
  - 1. Control:
    - a. Design and adjust equipment and control so that an average acceleration over total accelerating period of not less than 2.2 FPS<sup>2</sup> is maintained and acceleration peaks do not exceed 3.5 FPS<sup>2</sup>.
    - b. Provide a selector as part of operating system to accurately provide signal to control of the exact position of the elevator within hoistway within  $\frac{3}{4}$  inches.
  - 2. Operating Time:
    - a. Adjust equipment so that elapsed time to travel one typical floor does not exceed time parameters as follows:
      - 1) Flight time: 13 seconds.  
Start to measure time when fully opened doors begin to close and continue to measure time until car is stopped level with next floor and car and hall doors are open to three quarters of fully open position.
    - b. Criteria to be used when measuring the time durations are as follows:
      - 1) A typical floor shall not exceed 14 feet.
      - 2) Floor level is considered to be within  $\frac{1}{4}$  inch of level.

- 3) Time is measured with full load in the car and in both directions of travel.
  - 4) Power door operation for the hall and car doors conforms to Elevator Code requirements.
- c. Adjust equipment so that operating speed in both directions of travel under load and no-load conditions does not vary more than three percent.
  - d. Adjust equipment so that operating time as set out above is compatible with dependable, consistent operation without undue wear on the equipment, can be maintained without excessive maintenance and so that operating time can be readily maintained over the life of the elevator installation.
  - e. Adjust equipment so that, with the control adjusted to give the required time, elevator operates under smooth acceleration and retardation and provides a comfortable and agreeable ride to passengers.
3. Leveling:
- a. Cause the car to stop automatically at floor level without overshooting, regardless of load or direction of travel, so that car sill is within  $\frac{1}{4}$  inch of level with respect to hoistway sill.
  - b. Correct for overtravel or undertravel or rope stretch by returning car imperceptibly to the floor. Releveling shall not commence within the  $\frac{1}{4}$  inch floor landing zone, above or below, with doors in open position. Releveling sequence of operation within this zone shall be initiated with car doors in closed position only.
4. Door Time/Door Operation:
- a. Arrange time necessary for passenger elevator doors to operate as follows:
  - b. Arrange doors to close with an average horizontal speed creating a kinetic energy not in excess of 7 foot-pounds.
  - c. Arrange time necessary for passenger elevator doors to operate as follows:
    - 1) Opening: Measured from start of door opening to  $\frac{3}{4}$  of fully open position.  
2.0 seconds.
    - 2) Closing: Measured start of door closing to fully closed position.  
3..5 seconds.
    - 3) Door Dwell Time: Measured as follows:
      - a) 3 seconds after stopping for a car call.
      - b) 5 seconds after stopping for a hall call.
      - c) Individual timers shall be adjustable from 0 to 90 seconds.
    - 4) Reduced Door Dwell Time: Measured as follows.
      - a) Initially adjusted to 1 second.
      - b) Short door dwell time after interruption of proximity detector to be adjustable from 0 to 10 seconds.
    - 5) Main Lobby Door Dwell Time: Measured as follows:
      - a) Initially adjusted to 10 seconds.
      - b) Timer to be adjustable from 0 to 30 seconds.
      - c) Load weigher to bypass door dwell time if load in car is 60% of rated capacity.

- 6) Arrange that door closing force, as measured when a door panel is stalled in the act of closing, does not exceed 30 lbs.
- 7) Arrange equipment so that the increase in noise level over ambient noise level as measured within the cab, does not exceed four decibels at any time during a full door open, door close and door reversal cycle.

#### PART 4 - EXECUTION

##### 4.1 EXAMINATION

- A. Examine elevator areas for compliance with requirements for installation tolerances and other conditions affecting performance.
- B. Examine hoistway, hoistway openings, pits, and equipment rooms; verify critical dimensions; and examine supporting structure and other conditions under which elevator work is to be installed.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

##### 4.2 PROJECT MANAGEMENT AND SUPERVISION

- A. Designate an experienced Project Manager to perform administrative management of the project.
- B. Place a competent Superintendent in charge of the project throughout the course of the work.
- C. Place a competent on-site job Foreman to be responsible for day-to-day operations and scheduling with the Owner.
- D. Project Manager and Superintendent shall be available to the Owner to assist in the progress and coordination of the work of the project and shall represent the Elevator Contractor in matters relating to the project.

##### 4.3 CONDUCT AT SITE

- A. Instruct all personnel to refrain from unworkmanlike conduct while on the Owner's property.
- B. Property is a smoke-free facility. No smoking is permitted in any location in the facility.
- C. Unworkmanlike conduct or smoking on the property shall be grounds for permanent removal of the violator from the job site.

##### 4.4 MATERIAL AND EQUIPMENT DELIVERY, STORAGE

- A. Deliver materials in the original unopened protective packaging and store in the protective packaging to prevent soiling, physical damage or wetting.
- B. Protect equipment and exposed finishes during transportation, erection and construction against damage and stains.
- C. Confine apparatus and the storage of materials to limits established by law, ordinances, permits or directions of the Owner and do not unreasonably encumber the premises with his materials.



- D. Properly store flammable or combustible materials to obviate fire and in areas approved by the Owner.

#### 4.5 CONSTRUCTION PROJECT MANAGEMENT AND COORDINATION

- A. Perform overall project management of the project and coordinate all trades, including subcontractors and other prime contractors associated with the project to assure work is completed in accordance with time schedule requirement for project completion.
- B. Conduct meetings as needed to assure work of all trades is coordinated.

#### 4.6 PROTECTION OF PERSONS AND PROPERTY AND CLEANING

- A. Initiate, maintain and supervise all safety precautions and programs in connection with the work and at minimum, follow guidelines of the most recent NEII (National Elevator Industry, Inc) Elevator Industry Field Employees' Safety Handbook.
- B. Take responsible precautions for the safety of all employees and other persons on the project.
- C. Provide reasonable protection to prevent damage to other work and materials and equipment to be incorporated herein whether in storage on or off the site or under the care custody or control of subcontractors.
- D. Comply with applicable laws, ordinances, rules, regulations and lawful orders of any public authority having jurisdiction over the safety of persons or property to protect them from damage, injury or loss. Erect and maintain, as required by existing conditions and progress of the work, reasonable safeguards for safety and protection, including posting of danger signs and other warnings against hazards.
- E. Do not load or permit any part of the work to be loaded so as to endanger the safety of the building or occupants.
- F. Keep the premises, driveways and streets clean and free from excess accumulation of waste material or rubbish caused by the Elevator Contractor's operations.
- G. At the completion of each workday, remove rubbish from and around the premises and tools, scaffolding and temporary work shall be left broom clean, unless otherwise specified.
- H. Failure to attend to such cleaning with reasonable promptness may cause such cleaning to be done by others with cost for cleaning backcharged to the Elevator Contractor.

#### 4.7 DEMOLITION, CUTTING, ALTERATIONS AND REMOVALS

- A. Protect and repair surfaces, such as roofs, walls, windows, floorings, ceiling, etc., which are damaged or disturbed due to the performance of the work of this contract, in a first-class workmanlike manner to match existing and surrounding areas.
- B. Provide permanent and temporary bracing and anchoring required for the support or transfer of any load while work is in progress. Work shall be made absolutely stable and secure and the Elevator Contractor shall be held strictly responsible for any damage resulting from failure to properly furnish such support.

- C. Protect the Owner's property, equipment and materials against damage, dust and dirt and confine methods of construction to promote safety and reduce noise and dust and provide necessary protective guards, barricades, tarpaulins and drop cloths.
- D. Remove unused equipment and rubbish on a continual basis and keep the premises clean during the term of the project. At the completion of work leave the premises clean and in such condition as is satisfactory to the Owner.
- E. Provide barricades and enclosures, which are necessary to guard the elevator shaft when the elevator shaft is exposed.

#### 4.8 HOISTING AND HANDLING

- A. Provide cartage, handling and receiving, hoisting and lowering and removal of equipment related to the work, from the property.
- B. Obtain permits, pay fees and coordinate with local authorities, including local police and fire departments, for use of crane service on and around the property.
- C. Install equipment in accordance with the equipment manufacturer's direction, referenced codes and specifications.
- D. Install equipment with clearances complying with referenced and applicable codes and specifications.
- E. Install equipment so as to be safely accessible for maintenance and be removable via portable hoist or other means for maintenance and repair.

#### 4.9 INSTALLATION

- A. Comply with manufacturer's written instructions.
- B. Provide welded connections for installing elevator work where bolted connections are not required for subsequent removal or for normal operation, adjustment, inspection, maintenance, and replacement of worn parts. Comply with AWS standards for workmanship and for qualifications of welding operators.
- C. Mount rotating and vibrating equipment on vibration-isolating mounts designed to minimize transmissions or vibrations to structure and thereby minimize structure-borne noise from elevator system.
- D. Lubricate operating parts of systems as recommended by manufacturers.
- E. Leveling tolerance shall be maximum 1/4" up or down, regardless of load in car and direction of travel.
- F. Pre-hang traveling cables for at least 24 hours with ends suitably weighted to eliminate twisting.
- G. Pack openings around wall penetrations with fire resistant, sound isolating material.

#### 4.10 EXECUTION

- A. Initiate, maintain and supervise safety precautions and programs in connection with the work and at minimum, follow guidelines of the NEII (National Elevator Industry, Inc) Elevator Industry Field Employees' Safety Handbook.
- B. Perform the following as part of the execution of the work:
  - 1. Provide safety barricades compliant with the NEII Field Safety Handbook and all applicable OSHA guidelines.
  - 2. Restore all barricades removed to facilitate work, to ensure the safety of the contractor's workforce and compliance with Owner requirements. Provide all temporary barricades to protect work areas when normal safety barricades are removed.
  - 3. Comply with requirements of the local Fire Codes applicable to this work. A fire watch shall remain in the vicinity of any welding for a minimum period of three (3) hours after the welding has been completed, or as required by the General Conditions of the Contract.
  - 4. Be sensitive to the needs and entitlements of the occupants of the building while performing the work.
  - 5. Confirm that the specifications and contract documents are complete with regard to the work required to provide for a complete, legal and Code compliant installation.
  - 6. Confirm that the equipment to be provided will fit within the space available. Survey the job site and verify by measurement, dimensions affecting the work to be performed as part of the Contract. Advise of any deficiencies, which may be in conflict with design tolerances of the equipment to be installed, prior to fabrication of the equipment affected.
  - 7. Provide information as required for coordination of work to be performed by other trades which will affect scheduling of the work and information required for coordination in scheduling the work which will affect the scheduling of other trade contractor work.
  - 8. Permit only skilled workmen to perform the work.
  - 9. Install equipment in accordance with the contract, the specifications and the final approved shop drawings.
  - 10. Install all replacement equipment, systems, and components in strict accordance with manufacturer's instructions, shop drawings and submittals.
  - 11. Ensure that existing equipment can be safely removed, and new equipment installed in existing spaces through existing access.
  - 12. Maintain operating life safety features of the elevator systems in operation throughout the term of the project.
  - 13. Keep means of access and egress to and from the building, stairwells and lobbies free and clear of materials, tools and equipment.
  - 14. Protect finished surfaces during installation through to the final acceptance of the equipment. Upon acceptance of the equipment, remove protective coverings and thoroughly clean finished surfaces of paint, wrappings, mastic, etc. Repair any damage, including scratches, dents, discoloration, etc., which may have occurred to the finished surfaces.
  - 15. Broom sweep the work areas, remove hazardous materials from the site on a daily basis and keep areas clean of dirt and grease resulting from the work.

16. Maintain operating life safety features of the elevator systems in operation throughout the term of the project.

#### 4.11 TESTING

- A. Notify the Owner before scheduling of tests to be performed to enable the Owner to observe testing of the elevators.
- B. Upon completion of work, completely test the equipment before the AHJ and the Owner to demonstrate that the equipment was provided in accordance with Code and Contract specification requirements and complies with the Performance criteria listed elsewhere in the specification.
  - 1. Testing that may be necessary to be done after hours shall be coordinated with the Owner and be provided at no additional cost to the contract.
- C. Provide labor, tools and equipment necessary for on-site observations, testing, re-testing, inspections and reinspections as may be required to satisfy the Code testing requirements, the requirements of the local testing authority.
- D. Upon satisfactory completion of required tests, obtain and submit the Certificate of Operation or other instrument, which may be required to legally permit the operation of the elevators.
- E. Provide escort to assist the Owner's Elevator Consultant in performance of Substantial Completion audits.

#### 4.12 DEMONSTRATION

- A. Operation of the elevator shall be demonstrated to Owner's personnel, including:
  - 1. Communication systems.
  - 2. Emergency Power operation.
  - 3. Instructions on proper procedures for assisting and dealing with entrapped passengers.
  - 4. Firefighters Emergency Operation.
  - 5. Independent service operation.
  - 6. Card Access control operation.
  - 7. Operating and control switches, devices, and keys.

#### 4.13 RECORD DOCUMENTS

- A. Submit the following in both hard copy and pdf electronic format, upon completion of the work:
  - 1. Three (3) sets of equipment parts lists with parts numbers.
  - 2. Three (3) sets of wiring diagrams.
  - 3. Three (3) sets of As-Built shop drawings.
    - a. Hoistway and machine/control room drawings.
    - b. Signal operating fixtures.
    - c. Equipment catalogue cuts.
  - 4. Three (3) sets of lubrication charts and type of lubrication recommended.

B. Submit the following upon completion of the work:

1. Six (6) sets of keys to operate each unique cylinder for key operated functions. Keys shall be marked and identified.
2. Two (2) copies of manufacturer warranties.

4.14 SPECIAL DEVICES AND INSTRUCTIONS AND DEVICE MAINTENANCE

- A. Provide diagnostic devices, manuals, and passwords necessary to operate the diagnostic device, where required to test, adjust, maintain and troubleshoot the equipment provided.

4.15 SPECIAL CONDITIONS

- A. Provide escort for access to hoistway for Owner's representative(s) to perform substantial completion surveys, when requested.
- B. Obtain licenses in the state and in the local municipality to do work of this nature.
- C. Comply with laws, ordinances, rules and regulations, including standards as set forth in the rules and regulations of the AHJ and other bodies having jurisdiction, which are hereby incorporated and made a part of these specifications.
- D. Nothing contained in these specifications shall be so construed as to conflict with any Codes or state or local laws, ordinances, rules or regulations governing the work specified herein.
- E. Work performed and equipment installed under these specifications shall be subject to inspection and approval by any AHJ, notwithstanding anything in these specifications to the contrary.
- F. Confine apparatus, storage of materials and operation of workmen to limits established by law, ordinances, permits or directions of the Owner and do not unreasonably encumber the premises with materials. Flammable or combustible materials shall be properly stored to obviate fire and in areas approved by the Owner.
- G. Do not load or permit any part of the structure to be loaded with a weight that will endanger its safety

4.16 FINAL CLEAN-UP

- A. Clean and wipe down hoistway, pit, equipment room and equipment, including guide rails, ledges and projections, car slings and pits of excess lubricant, dirt and debris upon completion of the work.
- B. Remove crating and packing materials and unused equipment from the job site.
- C. Clean and wipe down the hoistway, pit and elevator equipment room and equipment, including guide rails, ledges and projections, and pit of dirt and debris immediately prior to the end of the warranty period.
- E. Provide Code Data plates.

## SECTION 267610

### AV SYSTEMS ELECTRICAL AND ROUGH-IN REQUIREMENTS

#### PART 1 GENERAL

##### 1.1 GENERAL AND RELATED DOCUMENTS

- A. This specification covers the procurement, installation, and maintenance of devices and equipment as noted on the AV Drawing Device Legend.
- B. This specification covers the procurement, installation and maintenance of conduit, raceway, and power equipment as required for the Audio Video Systems defined within Section 115201 for the Audio Video Systems for the Atlantic City Free Public Library project. The project is located in Atlantic City, NJ.
- C. The intent of this section is to define the products, methods and scope of services required to provide a first class, professionally installed, conduit, raceway and power system meeting the needs of the work associated with Section 115201 Audio Video Systems drawings and specifications.
- D. This specification establishes requirements necessary to achieve the intended performance and function of the specified Audio Video Systems Rough-in Requirements. Therefore, all materials and labor that are specified are necessary to meet these requirements.
- E. Provide all coordination, attention and labor as required to ensure that the rough-in system installation fulfills the requirements defined herein, within Section 115201 and as shown in the AV series drawings.
- F. All work associated with this section shall be provided in a professional workmanlike manner commensurate with all relevant industry standards and applicable code requirements. The specification text as well as any drawings provided with the bidding documents are detailed only to the extent necessary to define the design intent and anticipated performance requirements. Equipment not mentioned herein nor shown on drawings, but necessary to meet the defined requirements shall be provided without claim for additional payment.
  1. Drawings pertaining to this specification shall be considered part of this specification and shall be part of the contract documents.
- G. Related Documents.
  1. The construction documents for the project include all drawings prepared by the project architect, engineers, and related design professionals as well as the AV System Drawings:
  2. Also refer to:
    - a. Section 115201 Audio Video Systems Specifications.
    - b. Section 272610 AV System Cabling Requirements.

## 1.2 SCOPE OF WORK

- A. All labor, equipment, apparatus, wiring devices, conduit and wireway, as required to provide the systems with a complete raceway and electrical system in excellent working order, as specified herein, and as specified by relevant drawings, including:
- B. Furnish and install all conduit, raceway and related appurtenances as shown on the project Audio Video Systems and electrical systems drawings. This includes:
  - 1. All conduit, back boxes and related items associated with AV items as shown on the AV drawing set. Work required by this section is defined within the drawing details titled "Device Legend".
    - a. Within each Device Legend and within the description for each AV device shown on the device legends, under the column titled "SCOPE NOTES", any reference made as "By EC" define work items required by this section.
  - 2. Pull strings in all empty conduit systems.
  - 3. Electrical conduit, back-boxes, junction boxes, receptacles and related items are shown on the AV drawing set. Any information provided on the AV drawing set with respect to 110 volt or higher line voltage requirements is provided as Information Only. Formal direction for electrical system information is provided by the Project Electrical Engineer and the formal electrical drawings for the project.
- C. Provide outlets and receptacles at locations shown on the AV drawings and/or electrical drawings.
- D. Furnish and Install Ladder Trays at AV Rack Locations.
- E. Verification of dimensions and conditions at the job site.
- F. Close Coordination with the architect, general contractor, and Section 115201 contractor.
- G. Installation of all specified materials in accordance with these specifications, manufacturer's recommendations, and all applicable code requirements. See Device Legends shown throughout the AV drawings wherein work required by the electrical contractor regarding the specified Audio Video Systems is further defined.
- H. Provide manpower familiar with the rough-in installation as necessary for the section 115201 contractor to verify that the raceway/rough-in requirements have been fulfilled.
- I. Life Safety Mute cabling and connection to Life Safety/Fire Alarm Systems if required by code.
- J. Procure and pay for all necessary permits, licenses and inspections and observe any requirements stipulated therein.
- K. Conform in all applicable trades with all local regulations and codes.
- L. Comply with federal, state, and local labor regulations and applicable union regulations.
- M. Also refer to the AV drawing set legends and scope related notes.

### 1.3 RELATED WORK

- A. The major Audio Video system components will be furnished and installed by the project's Section 115201 Audio Video contractor. The device legends shown within the AV Drawing Set provide a detailed scope of work outline for each Audio Video device. As noted therein, the Section 115201 Audio Video system contractor's scope will include:
1. Prefabrication of the specified equipment rack assemblies prior to delivery and installation of the rack assembly on-site.
  2. Provide, mount, and terminate all AV system devices.
  3. Initial tests and adjustments of the systems as well as final equalization and alignment of the systems.
  4. AV System Training as defined within Section 115201.
  5. Furnish and install AV Cable as shown on AV Drawings.
  6. Furnish and install AV Plates, Panels and Connectors including AV connector plates for wall and table boxes.
  7. Furnish and Install all Video Camera devices.
  8. Furnish and Install Video Displays.
  9. Furnish and Install all Loudspeakers.
  10. Furnish and Install all Microphones.
  11. Furnish and Install all Wireless Microphone and Assisted Listening System antenna devices.
  12. Termination of all AV system cables, plates, racks and related devices.
- B. Also refer to the AV drawing set legends and scope related notes.

### 1.4 RELATED DOCUMENTS

- A. Section 115201 Audio Video Systems.
- B. AV Drawings.

### 1.5 REFERENCES

- A. All work included in this specification is to be performed within the guidelines of the following standards:
1. National Electrical Code.
  2. National Electric Code Article 520.
  3. National Electrical Code Article 640.
  4. ASTM (American Society of Tests and Measurements).
  5. IEEE (Institute of Electrical and Electronic Engineers).
  6. AES (Audio Engineering Society).
  7. NAB (National Association of Broadcasters).
  8. AVIXA (Audiovisual and Integrated Experience Association).



## PART 2 PRODUCTS

### 2.1 GENERAL

- A. All required conduit and raceway devices as defined on the AV drawings.
- B. Provide clear legible cable labels on all cables, junction boxes and cover plates provided for work covered by this section.
- C. All conduit, raceways and electrical devices shall meet the requirements of Division 26 of this project.
- D. Provide all conduit and back-boxes as defined on AV Drawings.
- E. Electrical Breaker Panel Assemblies as required and shown on Electrical Drawings.
- F. Junction boxes, back boxes and related devices shall be manufactured by Hubbel, Raco or Equivalent manufacturers. Box dimensions are defined on the AV drawing set.

## PART 3 EXECUTION

### 3.1 INSTALLATION

- A. General:
  - 1. All materials and equipment are to be new and unused.
  - 2. Fastenings and supports for all fixed equipment and components including conduit and cables, to provide a safety factor of 5 or better.
  - 3. Installation with all precautions necessary to prevent electromagnetic and electrostatic hum.
  - 4. All precautions necessary to assure adequate ventilation.
  - 5. Precautions to assure the safety of users shall be implemented as required by applicable codes.
  - 6. All equipment installed neatly, with boxes and racks plumb, level and true to line and level.
  - 7. Moderate moves or changes as necessary to accommodate aesthetics to preserve symmetry, and for pleasing appearance without claim for additional payment.
  - 8. Cooperation with other trades to achieve well-coordinated and satisfactory order.
  - 9. Job site and all equipment and materials left clean and free of marks and blemishes.
- B. Conduit and Raceway Separation.
  - 1. Separate conduits or raceways for microphone-level circuits (less than 20 dbm), line-level circuits (-20 to +30 dbm), loudspeaker circuit (+30 dbm or greater), switching and power circuits.

2. Using the following guidelines, provide minimum conduit separation between conduits carrying wiring of the different groups as follows:

	MIC	LIN	SPK	AC POWER
MIC	ADJACENT	6 INCHES	12 INCHES	12 INCHES
LIN	6 INCHES	ADJACENT	12 INCHES	6 INCHES
SPK	12 INCHES	12 INCHES	ADJACENT	ADJACENT
AC Power	24 INCHES	12 INCHES	12 INCHES	ADJACENT
	MIC	LIN	SPK	CONTROL
DIMMER CONTRO LLED LIGH TIN G	24 INCHES	12 INCHES	12 INCHES	6 INCHES
220/440 VOLT	24 INCHES	6 INCHES	12 INCHES	ADJACENT
ALL OTHER (NON SCR)	6 INCHES	6 INCHES	ADJACENT	ADJACENT

3. 90-degree crossings in close proximity are acceptable.
4. Should the contractors work in this regard be limited by site conditions or physical limitations beyond his control, the contractor shall notify the architect of such conditions and/or limitations prior to proceeding with the conduit/raceway installation.
5. As it may not be possible to fulfill these requirements at the entry/exit of enclosures, boxes and related devices, the intent of these guidelines is for the contractor to provide the stated separation wherever physically possible and specifically where the path of adjacent conduit will be parallel for distances greater than 10 feet.

### 3.2 IDENTIFICATION

- A. Provide permanent intelligible identification on, or adjacent to all controls, fuses, circuit breakers, patching jacks, conduit receptacles, and the like. This identification will clearly and distinctly indicate the function of the item and will be numbered or lettered to correspond with the function, circuit and use consistent with the field and shop drawings.
  1. Identification of fuses and circuit breakers shall indicate protected circuitry, rating of protective device and voltage across open circuit protected device.
  2. Panel surfaces shall be engraved and filled, silk screened or shall be equipped with 1/16-inch laminated plastic labels with engraved characters at least 3/32" inch height (white characters on black background). Under no conditions will embossed plastic labels, transfer lettering (Chartpak, LetraSet, etc) or other make shift labeling be considered acceptable. Engraving and other identification requirements specifically shown on the specification drawings prevail over this paragraph.

### 3.3 GUARANTEE

- A. Labor and materials provided under this specification shall be warranted, commencing on the date of final acceptance of the installation by the owner, for a period of one year, to be free of defects and deficiencies, and to conform to the component specifications and this document as to kind, quality, function, and characteristics. Defects in labor, or materials, occurring within the warranty period will be rectified by replacement or repair without charge. Paint and exterior finishes, fuses, lamps, and tubes, are excluded from this warranty, unless damage or failure is the result of defective materials or workmanship covered by warranty, or work performed under warranty in the repairing of defects.
- B. Warranty service will be provided to the owner for the warranted items within 48 hours of notice to the contractor.

**END OF SECTION**

## SECTION 277610

### AV CABLE REQUIREMENTS

#### PART 1 GENERAL

##### 1.1 GENERAL AND RELATED DOCUMENTS

- A. This specification covers the procurement and installation of low-voltage cabling limited to Category 6 cables and those cables required the Audio Video Systems as defined in the AV Device Legends Responsibility Matrix for the Atlantic City Free Public Library located in Atlantic City, NJ.
- B. The cabling scope covered by this section includes the following:
  - 1. Category 6 cable used for television and digital signage displays.
  - 2. Category 6 Cable used for AV touch-screen control panels.
  - 3. Twisted pair used for loudspeaker circuits.
  - 4. Shielded pair used for analog audio circuits.
  - 5. Coaxial Cable used for wireless microphone antenna systems.
  - 6. Any other cabling as shown within the Responsibility Matrix on the AV Systems Drawings.
  - 7. Coordinate with Division 27 cabling specifications for Category cabling requirements related to network devices.
- C. The intent of this section is to define the products, methods and scope of services required to provide a first class, professionally installed, AV cable system meeting the needs of the work associated with Section 115201 Audio Video Systems drawings and specifications.
- D. This specification establishes requirements necessary to achieve the intended performance and function of the specified Audio Video Systems cable requirements. Therefore, all materials and labor that are specified are necessary to meet these requirements.
- E. Provide all coordination, engineering and labor as required to ensure that the audio video cabling system installation fulfills the requirements defined herein.
- F. All work associated with this section shall be provided in a professional, workmanlike manner consistent with relevant industry standards and applicable code requirements.
- G. Equipment not cited herein nor shown in drawings, but necessary to meet the defined requirements shall be provided without claim for additional payment.
- H. Drawings pertaining to this specification shall be considered part of this specification and shall be part of the contract documents.

## 1.2 RELATED DOCUMENTS

- A. Stipulations: The specifications section "General Conditions" or other correspondence provided by the owner with this document and related amendments, form a part of this specification by this reference thereto and shall have the same force and effect as if printed herewith in full.
- B. Section 015210 Audio Video Systems General Contractor Responsibilities.
- C. Section 267610 AV Rough-In Requirements (by EC).
- D. This Section.
- E. Construction Documents: The Construction Document drawings for the project include all drawings prepared by the project architect, engineers, and related design professionals, as well as the AV System Drawings.
- F. The low voltage contractor's responsibilities for the audio video systems on the project are identified within this section and shown within various device legends shown on the AV drawings. Delineation of the scope of work associated with each audio video system device is stated within the "Scope Notes" portion of the various AV device legends shown throughout the AV drawing set.

## 1.3 SCOPE OF SPECIFICATION

- A. The intent of this section is to define the Low Voltage contractor's responsibilities for the Audio Video Systems that will be provided by the Audio video system integrator.

## 1.4 SYSTEM DESCRIPTIONS

- A. Refer to Section 115201.

## 1.5 SUBSTITUTIONS

- A. Provide CAT6 and Fiber Optic cable as shown within AV drawings and specified elsewhere within Division 27.

## 1.6 REFERENCES & ABBREVIATIONS

- A. All work included in this specification is to be performed within the guidelines of the following standards:
  - 1. NEC (National Electric Code).
  - 2. ASTM (American Society of Tests and Measurements).
  - 3. IEEE (Institute of Electrical and Electronic Engineers).
  - 4. AES (Audio Engineering Society).

5. NAB (National Association of Broadcasters).
6. AVIXA/InfoComm (International Communications Industry Association).
7. ADA (Americans with Disabilities Act).
8. ANSI (American National Standards Institute).
9. BICSI (Building Industry Consulting Service International).

B. Abbreviations.

1. AVC = Audio Video System Contractor/Integrator.
2. GC = General Contractor.
3. CM = Construction Manager.
4. LVC = Low Voltage Contractor.
5. EC = Electrical Contractor.
6. Owner = City of Atlantic City.

## 1.7 SUBMITTALS

- A. Within 30 Days of award of contract, submit the following information for review and approval prior to placing orders and/or beginning installation of the cable system:
- B. Product Data Sheets: Provide factory prepared product data sheet information for each of the specified cable types.
- C. Quality Assurance Verification: Provide a letter prepared on company letter head and signed by an authorized executive of the firm attesting that the cable installation work will be implemented as specified including verification that all services on the project shall be provided within the specified requirements including testing and overall supervision by a BICSI Certified RCDD engineer.

## 1.8 QUALITY ASSURANCE

- A. All work shall be performed in compliance with industry standards as defined by BICSI.
- B. All work on the project shall be performed by qualified technicians and journeyman with a minimum of five-years, experience relevant to low-voltage cable installations of this type.
- C. All work on the project will occur under the general supervision of a BICSI Certified RCDD engineer. At a minimum, the low voltage contractor's BICSI engineer assigned to the work covered by this section shall participate and/or provide the following services:
- D. Full review of this section and all drawings relevant to this section.
- E. Provide general direction, guidance, planning and related oversight to the project foreman or foremen who will be managing the on-site work.
- F. Provide all RCDD services stated within Part 3 of this section and as required to ensure that the low voltage cable installation will be implemented in compliance with all applicable industry standards as defined by BICSI.

## 1.9 DELIVERY HANDLING & STORAGE

- A. Packing and Shipping.
  - 1. All items delivered to the job-site shall be properly packaged and sealed.
  - 2. All items to be delivered to the job-site via contractor vehicles, shall be properly and adequately protected. Equipment racks are not to be delivered to the job-site, unprotected and unpacked.
- B. Acceptance at Job-Site: All deliveries of specified components are to be received on the job site by the contractor.
- C. Storage and Protection.
  - 1. The contractor shall be required to maintain adequate fire and theft protection for all specified items of equipment through the duration of the project.
  - 2. Upon written notice by the contractor to the owner, the owner may provide a secured area for equipment storage for a limited period of time during the installation.
  - 3. The schedule of time where such secured areas shall be required, must be identified by the contractor, and submitted to the owner at least three weeks prior to the required delivery of equipment.
  - 4. Although the owner may provide the aforementioned secured areas, responsibility of equipment protection and liability for fire and theft damage shall remain with the contractor.

## 1.10 SCOPE OF WORK

- A. All labor, equipment, apparatus, as required to provide the cable systems with a complete raceway and electrical system in excellent working order, as specified herein, and as specified by relevant drawings, including:
- B. Furnish and install all cable as shown on the AV drawings.
- C. Verification of dimensions and conditions at the job site.
- D. Close Coordination with the architect, general contractor, the project electrical contractor and Section 115201(AV) contractor.
- E. Installation of all specified materials in accordance with these specifications, manufacturer's recommendations, and all applicable code requirements. See Device Legends shown throughout the AV drawings wherein work required by the electrical contractor with regard to the specified Audio Video Systems is further defined.
- F. Provide manpower familiar with the cable installation as necessary for the Section 115201 (AV) contractor to verify that the cable system requirements have been fulfilled.
- G. Life Safety Mute connection to Life Safety/Fire Alarm Systems. Life Safety mute termination shall occur at the AVR rack location.
- H. Provide cable lengths as required.

- I. Provide a minimum of twenty-five (25) feet of excess cable at each AV Rack location.
- J. Provide a minimum of ten (10) feet of excess cable at each video display, touch panel, and technical facility plate (TFP) location.
- K. Provide a minimum of forty (40) feet of excess cable at all antenna locations.
- L. Coordinate cable lengths, pathways, locations, and excess cable requirements with the owner's audio video system contractor.
- M. Procure and pay for all necessary permits, licenses and inspections and observe any requirements stipulated therein.
- N. Conform in all applicable trades with all local regulations and codes.
- O. Comply with federal, state, and local labor regulations and applicable union regulations.
- P. Also refer to the AV drawing set legends and scope related notes.
- Q. The Construction Document drawings for the project include all drawings prepared by the project architect, engineers, and related design professionals as well as the AV System Drawings.

#### 1.11 RELATED WORK

- A. AV Systems Rough-In Requirements.
  - 1. Refer to Section 267610 for work provided by the project electrical contractor.
- B. General Construction Requirements.
  - 1. Refer to Section 015210 for work and coordination provided by the project general contractor /construction manager.
- C. AV Contractor/Integrator.
  - 1. The AV System integrator will be hired by the General Contractor. Detailed specifications for the AV Integrator's work will be defined within Specification Section 115201. This specification section will be prepared and released to qualified AV integration companies.
  - 2. Responsibilities of the AV integrator will include:
    - a. All labor, equipment, apparatus, and wiring devices, as required to provide the systems with AV quality in excellent working order, as specified herein, and as specified by relevant drawings, including:
    - b. Meet and coordinate with the construction manager, electrical contractor and low-voltage contractor.
    - c. Submission of drawings for approval by the owner's representative prior to fabrication and installation.
    - d. Prefabrication of the specified equipment rack assemblies prior to delivery and installation of the rack assembly on-site.
    - e. Provide, mount and terminate all AV devices defined within this section.
    - f. Verification of dimensions and conditions at the job site.



- g. Coordination of electrical and physical requirements.
- h. Installation of all specified materials in accordance with these specifications, manufacturer's recommendations and all applicable code requirements.
- i. Initial tests and adjustments of the systems as well as final equalization and alignment of the systems.
- j. Training.
- k. Maintenance services and warranty repair service for one year following acceptance of the systems.
- l. Provision of as-built and Contract Closeout Documentation.
- m. Provide all labor on-site as required to install the specified components and systems. On-site labor shall be performed in harmony with all other trades and trade jurisdictions working on the project site.
- n. Provide all technical support and programming as necessary to ensure that the specified Digital Signal Processing System has been properly programmed to provide the features and functions as specified herein. The DSP programming must be provided by a qualified individual with significant and demonstrable experience with the specified or equivalent, DSP system.
- o. Deliver all portable items of equipment that are subject to a "furnish" only condition to the project site. Hand over such items to the owner's representative with complete, proof of delivery documentation, warranty information and related ownership documentation.
- p. Procure and pay for all necessary permits, licenses and inspections and observe any requirements stipulated therein.
- q. Conform in all applicable trades with all local regulations and codes.
- r. Comply with federal, state and local labor regulations and applicable union regulations.
- s. Provide miscellaneous AV cable assemblies as necessary to connect the specified devices to plates, panels and related devices.
- t. Following substantial completion of the AV system installation and following the contractor's effort to confirm that all systems have been installed and tested for compliance with the specified requirements, the AV system contractor shall provide a complete system demonstration where all features, functions and system capabilities are demonstrated to the owner, the construction manager and their AV consultant.
- u. The AV system contractor's proof of performance demonstration.
- v. Furnish and Install all AV Plates, Panels and Connectors.
- w. Provide life safety AV muting termination point at the MDF AV Racks.

## 1.12 RELATED WORK

- A. AV Systems Rough-In Requirements.
  - 1. Refer to Section 267610 for work provided by the project electrical contractor.

## PART 2 PRODUCTS

### 2.1 GENERAL

- A. Furnish and install all required audio video system cable as defined on the AV drawings.
- B. Provide clear legible cable labels on all cables and cover plates provided for work covered by this section.
- C. All CAT6 cables shall be as specified elsewhere within Section 270000.

## PART 3 EXECUTION

### 3.1 INSTALLATION

- A. General:
  - 1. All materials and equipment are to be new and unused.
  - 2. Fastenings and supports for all fixed equipment and components including hardware and cables, to provide a safety factor of 5 or better.
  - 3. Installation with all precautions necessary to prevent against electromagnetic and electrostatic interference.
  - 4. Precautions to assure the safety of users shall be implemented as required by applicable codes.
  - 5. All cable installed neatly, without twisting of adjacent cables or similar workmanship deficiencies.
  - 6. Moderate moves or changes as necessary to accommodate aesthetics to preserve symmetry, and for pleasing appearance without claim for additional payment.
  - 7. Cooperation with other trades to achieve well-coordinated and satisfactory order.
  - 8. Job site and all equipment and materials left clean and free of marks and blemishes.
- B. Cable and Raceway Separation.
  - 1. Separate pathways, hangers, and/or raceways for microphone-level circuits (less than 20 dBm), line-level circuits (-20 to +30 dBm), CAT6 circuits, loudspeaker circuit (+30 dBm or greater), switching and power circuits.

2. Using the following guidelines, provide minimum cable separation of the different groups as follows:

	MIC	LINE/CAT6	SPEAKER	AC POWER
Microphone	ADJACENT	6 INCHES	12 INCHES	12 INCHES
Line	6 INCHES	ADJACENT	12 INCHES	6 INCHES
Speaker	12 INCHES	12 INCHES	ADJACENT	ADJACENT
AC Power	24 INCHES	12 INCHES	12 INCHES	ADJACENT
	MIC	LINE/CAT6	SPEAKER	CONTROL
Dimmer Controlled Lighting	24 INCHES	12 INCHES	12 INCHES	6 INCHES
220/440 Volt	24 INCHES	6 INCHES	12 INCHES	ADJACENT
All Other	6 INCHES	6 INCHES	ADJACENT	ADJACENT

3. 90-degree crossings in close proximity are acceptable.
4. Should the contractors work in this regard be limited by site conditions or physical limitations beyond his control, the contractor shall notify the general contractor and HHSS of such conditions and/or limitations prior to proceeding with the conduit/raceway installation.
5. As it may not be possible to fulfill these requirements at the entry/exit of enclosures, boxes and related devices, the intent of these guidelines is for the contractor to provide the stated separation wherever physically possible and specifically where the path of adjacent cable will be parallel for distances greater than 10 feet.

### 3.2 IDENTIFICATION

- A. Coordinate cable numbering requirements with the AV contractor/integrator prior to beginning cable installation.
- B. Provide temporary cable number identification indicating temporary cable number, and destination.
- C. Final installation will require permanent intelligible cable number identification at both ends of all cables using self-laminated ink-jet labels as manufactured by Panduit model S100X075YAJ:2500.
- D. Under no conditions shall masking tape, duct-tape or general adhesive tape be utilized for either temporary or permanent cable identification.

### 3.3 FIELD QUALITY CONTROL

- A. Management: All work shall be overseen, supervised, or otherwise managed by a BICSI certified RCCD engineer.
- B. Field Inspections.
  - 1. Upon completion of cable installation, provide the services of an RCCD certified engineer to perform a final inspection stating within a written report that the installed work either complies with, or deviates from the specified requirements and as required by industry standards as defined by BICSI.
  - 2. The above noted report shall be provided for each subsystem and submitted to the general contractor prior to the AV contractor's termination work from starting.

### 3.4 GUARANTEE

- A. Labor and materials provided under this specification shall be warranted, commencing on the date of final acceptance of the installation by the owner, for a period of one year, to be free of defects and deficiencies, and to conform to the component specifications and this document as to kind, quality, function, and characteristics.
- B. Defects in labor, or materials, occurring within the warranty period will be rectified by replacement or repair without charge.
- C. Warranty service will be provided to the owner for the warranted items within 48 hours of notice to the contractor.

**END OF SECTION**