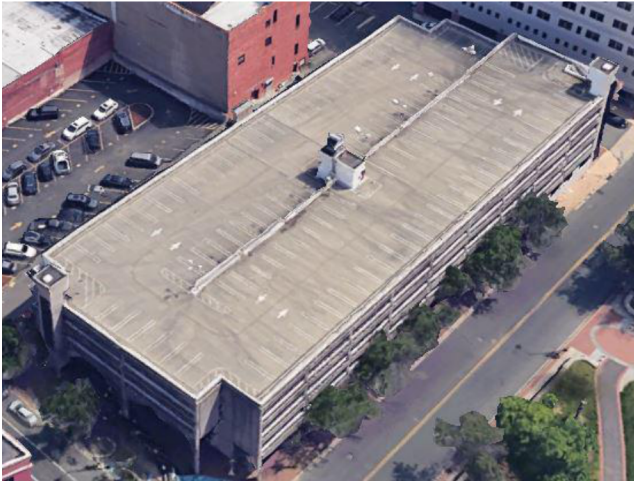


# Front and Broad Street Parking Garage Re-Stabilization

## Project Specifications



December 26, 2023  
Trenton, NJ



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## BID SPECIFICATIONS

# ***BROAD and FRONT STREET PARKING GARAGE STABILIZATION***

**Trenton Parking Authority  
16 East Hanover Street  
Trenton, NJ 08608**

**Dated: December 26, 2023**

## **SECTION A - NOTIFICATION TO BIDDERS**

Notice is hereby given by the Trenton Parking Authority hereby requests Bids for the following "Work":

**Broad and Front St Parking Garage Stabilization**, as described in the Bidding Documents bearing the same name.

Downloadable bid documents will be accessible online at the Trenton Parking Authority website (<http://www.tpanj.com/2012procurements.htm>).

A non-mandatory pre-bid conference will be held **at 11:00am on Thursday, January 4, 2024** at the Owner's address identified above.

A Bid must be submitted in a sealed envelope, clearly marked on the outside with the name of the bid, the name of the OWNER, and the name and address of the Bidder.

Bids will be received, publicly opened and read aloud, at **2:00 p.m.**, prevailing time, on **Monday, January 22, 2024**, (the "Bid Date and Time") in the office of the OWNER at the address identified above. Bids received after the Bid Date and Time will be returned unopened.

In addition to other submittals and information required by the Bidding Documents, a Bid must be accompanied by the following:

1. Each bidder must deposit with his bid, security in an amount not less than ten percent (10%) of the base bid. Bid security (Bid Bond or Certified Check) shall be exclusive of any salvage of demolition materials. No bidder may withdraw his bid for a period of ninety (90) days after actual date of opening thereof.

2. The identity of any subcontractors proposed by the Bidder for use on any portion of the Work which is required to be disclosed by N.J.S.A. 40A:11-16.
3. Where the bidder is a corporation, a partnership or joint venture, appropriate evidence of the authority of the signatory to bind the Bidder.
4. The qualification information evidencing compliance with the qualifications set forth in the Bidding Documents.

The successful bidder will be required to furnish a Payment and a Performance Bond in the full amount of the contract price, indemnifying Owner from any and all proceedings, suits or actions of any kind, name or description and conditional for faithful performance of work; and Payment of all persons and entities performing labor and/or furnishing materials in connection with the contract.

A Corporation of the State of New Jersey, submitting a bid in response to this Advertisement, shall accompany such a bid with resolution authorizing its proper officers to submit such a bid, authorizing such officers to execute a contract in the event its bid is accepted, and a list of all stockholders holding in excess of ten percent (10%) of corporate stock.

All bidders are hereby notified that compliance with New Jersey Prevailing Wage Act (Chapter 150, Laws of 1963) and with rules and regulations of any public agency and/or department, applicable to projects in which said department participates, will be required in performance of any contract awarded. The successful bidder will be required to submit a certified copy of the project payroll for all workers on the job to the Trenton Parking Authority within ten (10) days of each pay period. The certified payroll will be kept by the Trenton Parking Authority as a permanent record and will be available for public inspection.

All bidders are also notified that compliance with New Jersey State Labor Law (PL 1999, Chapter 238) Public Works Contractor Registration Act (NJSA 34:11-56.48 et seq.) will be required in performance of any contract awarded.

All bidders are also required to comply with the requirements of N.J.S.A. 10:5-31 et seq. (P.L. 1975, C. 127) N.J.A.C. 17:27 entitled Exhibit B, Mandatory Equal Employment Opportunity Language for Construction Contracts, and will be required to complete Form AA-201.

All bidders will be required to comply with the requirements of N.J.S.A. 52:32-44 (P.L. 2004, c.57) entitled Business Registration Certificate. Contractor must provide a copy of their State Division of Revenue issued Business Registration Certificate with bid.

All bidders are required to review and comply with the "Americans with Disabilities Act of 1990".



Owners reserves the right to select any combination of bids or to award contract in part or whole, and to waive any informalities in or to reject any and all bids if deemed in the best interest of the Owner to do so.

The OWNER assumes no responsibility whatsoever in connection with any defects arising out of the issuance of the Bidding Documents or the receipt or failure to receive Bids, including those which may arise from delay for any reason, in obtaining or submitting the Bidding Documents, including but not limited to traffic delay, messengering, mis-labeling, mis-directions from any source, mis-delivery or otherwise.

Any Bid which does not fulfill the material requirements of the Bidding Documents will be rejected. When it is in the best interest to do so, the OWNER reserves the right to select any combination of bids or to award contract in part or whole, and to waive any informalities in or to reject any and all bids.

BY ORDER OF THE PARKING AUTHORITY OF THE CITY OF TRENTON, NEW JERSEY.

Ms. Anne LaBate  
Chairperson

## **SECTION B - INSTRUCTIONS TO BIDDERS**

### **I. SECURING DOCUMENTS:**

- A. Downloadable bid documents will be accessible online at the Trenton Parking Authority website (<http://www.tpanj.com/2012procurements.htm>).

### **II. BID SUBMITTAL AND FORM:**

In order to receive consideration, vendor's bids shall be in accordance with the following:

- A. Sealed proposals shall be received in accordance with Public Advertisement as required by law, a copy of said notice being attached hereto and made a part of these specifications.
- B. Bids shall be made upon the forms provided in Specification Section 00004 – Bid Form, properly executed and with all the items filled out. Do not change the wording of the documents contained within the Bid Form and do not add words to the wording of the documents contained within the Bid Form. Unauthorized conditions, limitations, or provisions attached to the proposal shall be cause for rejection of the proposal. Alterations by erasure or interlineation must be explained or noted in the bid over the signature of the Bidder. All blank spaces must be filled in, with both words and number figures if requested. Ink or typewritten required - no pencil is permitted. Proposals on forms other than the Bid Form documents provided herewith will be rejected.
- C. No telegraphic bid or telegraphic modification of a bid will be considered. No bids received after the time fixed for receiving them will be considered. Late bids will be returned to the Bidder unopened.
- D. The Parking Authority shall not assume responsibility for bids forwarded by mail. It is the individual's responsibility to see that bids are presented to the Parking Authority on the hour and at the place designated.
- E. Each bid shall be addressed to the Parking Authority of the City of Trenton and shall be delivered to their offices under the conditions set forth in the Invitation to Bid. The bid shall be enclosed in a sealed envelope bearing title of the Work, the name of the Bidder, and date and hour of opening. It is the responsibility of the Bidder to insure that his bid is submitted by the proper time.
- F. Bids will be opened at the time and place set forth in the Notice to Bidders. Every bid received shall be opened and publicly read aloud. Bidders and other persons properly interested may be present in person or by representative but are not required to attend. Any bid received after the time and date specified shall not be considered. Conditional bids will not be accepted.

### **III. BONDS:**

- A. Bonds shall be required as stipulated in Section A- Notification to Bidders and as otherwise provided in these Bid Documents. All Bonds shall be issued and

executed by surety companies licensed to do business in the State of New Jersey and acceptable to the Owner.

- B. Each bidder must deposit with his bid, a Bid Bond or Security in the form of a Bank Certified or Cashier's Check in the Name of the Trenton Parking Authority, in an amount of ten percent (10%) of the base bid as calculated on the Bid For, not to exceed Twenty Thousand (\$20,000) dollars.
- C. Prior to signing the contract the Owner will require the selected Contractor to secure and post a Performance Bond and Payment Bond, each in the amount of one hundred percent (100%) of the Contract Sum.

#### **IV. EXAMINATION OF DRAWINGS, SPECIFICATIONS AND SITES AND PRE-BID MEETING.**

- A. Before submitting a bid, each bidder is invited to attend a pre-bid meeting for the purpose of reviewing the contract documents and the site of Work in depth. In addition, each bidder is fully responsible for carefully examining the drawings, specifications and all other contract documents. Each Bidder shall full inform himself prior to bidding as to all existing conditions and limitations under which the Work as set forth is to be accomplished. The submission of a bid shall be construed as conclusive evidence that the Bidder has made such examination.

#### **V. WITHDRAWAL OF BIDS**

- A. Any Bidder may withdraw his bid, either personally or by written request at any time prior to the scheduled time for opening of bids.
- B. No Bidder may withdraw his bid for a period of sixty (60) days after the date set for the opening of thereof, and all bids shall be subject to exceptions by the Owner during this period.

#### **VI. AWARD OR REJECTION OF BIDS**

- A. The contract, if awarded, will be awarded to the lowest responsive and responsible Bidder, based on the Lump Sum Price, and subject to the Owner's right to reject any and all bids and to waive any informality in the bids or bidding.

#### **VII. EXECUTION OF AGREEMENT**

- A. The form of Agreement, which the successful Bidder, as Contractor, will be required to execute is included in the Contract Documents and must be carefully examined by each Bidder.
- B. The Bidder to whom the Contract is awarded by the Owner shall, within fifteen (15) days after notice of award and receipt of Agreement forms from the Owner, sign and deliver to the Owner all required copies of the Agreement.
- C. At or prior to delivery of the signed Agreement, the Contractor shall deliver to the Owner the Performance Bond and Payment Bond as well as the insurance certificates as required by the contract Documents. All bonds and certificates of

insurance shall be approved by the Owner before the successful Bidder may proceed with the work.

- D. Failure or refusal to furnish bonds or insurance certificates in the form satisfactory to the Owner shall subject the Bidder to loss of time from the allowable construction period equal to the time of delay in furnishing the required material.

**VIII. INTERPRETATION OF CONTRACT DOCUMENTS PRIOR TO BIDDING:**

- A. If any person contemplating submitting a Bid for the work is in doubt as to the true meaning of any part of the Contract Documents, he may submit to the Owner's Representative of the Trenton Parking Authority a written request for any interpretation or correction thereof not later than 5:00 p.m. **Friday, January 12, 2024.**
- B. Address all communications regarding this Work to the following:
- Sun-Hee Hwang, PE ([shwang@tha-consulting.com](mailto:shwang@tha-consulting.com))
  - Louis Garlatti Jr. ([lgarlatti@garlatticonstruction.com](mailto:lgarlatti@garlatticonstruction.com))
- C. The person submitting the request will be responsible for its prompt delivery.
- D. Any interpretation or correction of the Contract Documents will be made only by addendum and announcement of addendum will be emailed to each Bidder on record. The Owner will not be responsible for any other explanations or interpretations of the contract Documents.

**IX. NON-COLLUSION AFFIDAVIT:**

- A. Each Bidder submitting a Bid for the work contemplated within the Contract Documents shall attach to his bid an executed copy of the Non-Collusion Affidavit (sample attached hereinafter), which in effect states that he has not entered into a collusive agreement with any person, firm, or corporation in regard to any bid submitted.

**X. STATEMENT OF BIDDER'S QUALIFICATIONS:**

- A. Each Bidder shall submit to the Owner along with his Bid Proposal the completed Bid Qualification Form included in the Bid Form specification.
- B. All pertinent data requested must be filled in since the Bidder's qualifications will be a factor in awarding the Contract.
- C. The Trenton Parking Authority may make such investigation as it deems necessary to determine the ability of the Bidder to perform the work or furnish an executed Affidavit of Non-Collusion and all information called for the Owner Disclosure Statement. The Trenton Parking Authority reserves the right to reject any bid if evidence is revealed during an investigation of bidder which indicates the bidder is not properly qualified to carry out the obligations of the contract and to complete the work or furnish the materials and supplies herein contemplated within the specified time.

## **XI. COMPLETION TIME:**

- A. The successful bidder shall be required to diligently pursue completion as quickly as possible. The Contractor is required to adhere to the Construction Schedule as laid out in Specification 000006 – Milestone Dates. Failure of the Contractor to have the work completed as stipulated in this construction schedule would cause the Owner to suffer a loss that is difficult and expensive to accurately compute. In order to avoid such expense and difficulty, the Contractor shall pay to the Owner five hundred dollars (\$500) per day for each and every day, Saturdays, Sundays, and legal holidays, excepted after the determined day for phase completion, during or upon which said day the said work remains incomplete and unfurnished, not as a penalty, but as liquidated actual losses which the Owner shall suffer. Any sum which may be due to the Owner for such losses shall be deducted and retained by the Owner from any balance which may be due to the Contractor when the said work shall have been finished. The accepted Bidder will be required to provide a sufficient labor force to assure a satisfactory progress for the Work of this Contract. Time is of the essence.

## **XII. LUMP SUM PRICE:**

- A. The obligations of the Owner under the Contract shall be based upon a firm lump sum price. The contractor shall assume all increases in labor rates and/or site costs in order to determine progress payments.

## **XIII. PROGRESS PAYMENTS**

- A. Payment shall be made upon execution of payment requisition form and certificate of payment by Contractor and approval of the TPA Board of Commissioners.
- B. All certificates shall be reviewed by Owner's Property Manager and submitted to Owner upon approval by such.
- C. All payments shall be calculated at less **two percent** of the work completed during invoice period. This retained amount shall be held until the final payment.

## **IX. TIME AND MANNER**

- A. All work shall be performed strictly in accordance with the provisions as set forth hereinafter (refer to Specific Conditions).

## **X. NOT TO SUBLET OR ASSIGN**

- A. The Contractor shall constantly give its personal attention to the faithful execution of the Work, shall keep the same under its personal control, shall not assign the Contract or sublet the Work or any part thereof without the previous written consent of the Owner, and shall not assign any of the monies payable under the Contract, or his claim thereto, unless by and with like written consent of the

Owner, and the Surety on the Contract Bonds. Any assignments or subletting in violation thereof shall be void and unenforceable.

**XI. COMPLIANCE WITH ALL FEDERAL & STATE STATUTES:**

- A. The Bidders shall be required to comply with all laws, provisions, and requirements of all Federal and State Statutes and Municipal Ordinances applicable, and the bidders' particular attention is called to the following Revised Statutes of New Jersey: N.J.S.A. 52:33-1 to 52:33-4 (Preference for Domestic Products), R.S. 34:9-1 (Employment of Aliens Forbidden) : R.S. 34:0-2 (resident Citizens to be preferred in employment) and the Sections dealing with Worker's Compensation, Child Labor and Fair Employment Practices.

**XII. DOING BUSINESS WITH CONTRACTING AGENCIES AND BUSINESS ORGANIZATIONS COVERED BY P.L. 2004, c. 57**

- A. **Business Registration Certificate:** P.L. 2004, c. 57 (Chapter 57) amends and supplements the business registrations provisions of N.J.S.A. 52:32-44 which impose certain requirements upon a business competing for, or entering into a contract with a State Agency. A business organization must submit proof of business registration to the contracting agency. This certificate must be submitted with the bid. Proof of business registration shall be a copy of a Business Registration Certificate issued by the Department of Treasury, Division of Revenue. Information on how a business can obtain a certificate can be obtained on the internet at [www.nj.gov/njbgs](http://www.nj.gov/njbgs) or by phone at (609) 292-1730. Contractors must review the included mandatory "New Jersey Business Registration Requirements" language.
1. Subcontracts: A contractor must provide written notice to its subcontractors, regardless of the level of the contractor or subcontractor, of the requirement to submit proof of business registration to the contractor. The contractor shall obtain and maintain on file the proof of business registration of each subcontractor. In addition a copy of said "proof of business registration" by subcontractor must also be provided submitted with bid.
- B. **Public Works Contractor Registration Act:** NJSA 34:11-56.48 et. seq., took effect on April 11, 2000. This act covers all public buildings open to and used by the general public or a public institution as well as all prevailing wage work. The act requires all prospective contractors, subcontractors and sub-subcontractors to register with the Department of Labor. When submitting a bid, certificate or proof of application must be included with the bid. The certificate/application is a mandatory item of the Sealed Bid Checklist.
- C. **Prevailing Wage Rate:** When applicable, the Contractor shall pay the latest prevailing wage rates for projects in excess of \$2,000.00 as determined by Commissioners of Labor and Industry of the State of New Jersey, for the locality in which the work is to be performed, pursuant to Chapter 150, Laws of 1963



(NJSA 34:11-56, 25 et seq). A schedule of such is available from the Public Contracts Section, Office of Wage and Hour Compliance, CN 389, Trenton, New Jersey 08625-0389, telephone number (609) 292-2259. The Contractor shall comply with all applicable statutes and regulations regarding the payment of wages and specifically Title 34, Chapter 11 of the Revised Statutes of New Jersey.

In the event it is found that a worker employed by the Contractor, under this contract, has been paid a rate of wages less than the prevailing rate required, the Trenton Parking Authority may terminate the Contractor's right to proceed with the work, or such part of the work, as to which there has been a failure to pay required wages and to persecute the work to completion. The Contractor and his sureties shall be liable to the Trenton Parking Authority for any excess costs occasioned thereby.

- D. **Americans With Disabilities Act of 1990:** All bidders are required to review and comply with the "Americans with Disabilities Act of 1990". This act can be found on the internet at [www.eeoc.gov/policy/ada.html](http://www.eeoc.gov/policy/ada.html).

### **XIII. AFFIDAVIT OF FOREIGN CORPORATIONS:**

- A. Each bidder who is not chartered under the laws of the State of New Jersey, must submit with his bid an affidavit duly executed by the President, Vice President, or General Manager of the Corporation, stating in said affidavit that said corporation has, in accordance with the laws of the State of New Jersey, obtained a certificate authorizing it to do business in the State of New Jersey. Each bidder must also, in his proposal state the name and address of the local representative, agent or proposal state the name and address of the local representative, agent or counsel representing said Corporation, upon whom service of process can be made.

### **XIV. QUALITY OF EQUIPMENT:**

- A. The Bidder warrants to the Trenton Parking Authority that all materials and supplies to be furnished to the City shall be as specified, of merchantable quality, free from faults and defect, and for any particular purpose or use which may be set forth in specifications. Any and all work performed by successful bidder shall be done in a professional and quality manner.

### **XV. SPECIFICATIONS:**

- A. The specifications are attached hereto. If Bidder's proposal deviates from the specifications attached hereto the bid will be considered provided that the quality of the goods or services is equivalent to the specified goods or services and is deemed suitable to the needs of the Owner. All such deviations must be clearly listed on the "Statement of Bid Exceptions" form contained within Specification 000004 – Bid Form.

## SECTION C – GENERAL CONDITIONS

- I. **DEFINITIONS:** Wherever used in any of the Contract Documents, the following meanings shall be given to the terms herein defined:
- A. The "Contract" means the Contract executed by the Owner and the Contractor, of which these GENERAL CONDITIONS.
  - B. The term "Owner" means the TRENTON PARKING AUTHORITY which is authorized to undertake the Contract.
  - C. The term "Contractor" means the person, firm or corporation entering into the Contract with the Owner to perform the work of the Broad and Front Street Parking Garage Stabilization for the Project.
  - D. The term "Contract Area" means the areas specified on the Plans within which work of the Broad and Front Street Parking Garage Stabilization are to be performed under this Agreement.
  - E. The term "Owners Representative" means Louis Garlatti Jr, of the firm of Albert Garlatti Construction Company, Inc, serving the Owner as the representative to whom all correspondence shall be directed and through whom all information shall be received, employed by said owner for the purpose of directing or having in charge the work of Broad and Front Street Parking Garage Stabilization embraced in this Contract, having general charge of the work or through any assistant having immediate charge of a portion thereof limited by the particular duties entrusted to him.
  - F. The term "Local Government" means the CITY OF TRENTON, NEW JERSEY, within which the Contract Area is situated.
  - G. The Term "Contract Documents" means and shall include the following:  
Executed Agreement, Addenda (if any), Invitation for Bids, Instruction to Bidders, Signed Copy of Bid, General Conditions, Special Conditions, Technical Specifications and Drawings.
  - H. The term "Maps" means the Tax and Sanborn Maps that show the structures within the scope of the Project.
  - I. The term "Technical Specifications" means that part of the Contract Documents which describes, outlines and stipulates the manner and methods to be employed in the work of. Broad and Front Street Parking Garage Stabilization.
  - J. The term "Addendum" or "Addenda" means any changes, revisions or clarification of the Contract Documents which have been duly issued by the Owner to prospective Bidders prior to the time of receiving Bids.
  - K. If applicable, the term "Salvage" means all building materials, equipment, appliances and fixtures incorporated in any buildings and structures to be demolished, and other equipment or appurtenances, unless specifically exempted, located upon the real property within the Demolition Area, which the Contractor deems as having sufficient value to justify the reclaiming.
  - L. If applicable, the term "Clean Fill" means non-saturated soil material which is free from demolition or construction debris, rubbish, garbage, masonry

material, rocks over four (4) inches in diameter, tree trunks and limbs, stumps and other deleterious material which in the opinion of the Owner's Representative is objectionable.

## **II. SUPERINTENDENCE BY CONTRACTOR**

- A. Except where the Contractor is an individual and gives his personal superintendence to the work, the contractor shall have a competent superintendent, satisfactory to the Owner and the Owner's Representative, on the work at all times during working hours with full authority to act for him. The Contractor shall also provide an adequate staff for the proper coordination and expediting of its work.
- B. The Contractor shall schedule Broad and Front Street Parking Garage Stabilization as directed by the Owner and he shall be responsible for all work executed by him under this Agreement.

## **III. SUBCONTRACTS:**

- A. The Contractor shall not execute an agreement with any subcontractor or permit any subcontractor to perform any work included in this Contract, until he has submitted a Non-Collusive Affidavit from the subcontractor included in the Bid Form specification and has received written approval of such subcontractor from the Owner.
- B. No proposed subcontractor shall be disapproved by the Owner except for cause.
- C. The contractor shall be fully responsible to the Owner for the acts and omissions of his subcontractors, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.
- D. The contractor shall cause appropriate provisions to be inserted in all subcontractors relative to the work to required compliance by each subcontractor with the applicable provisions of this Contract for Broad and Front Street Parking Garage Stabilization.
- E. Nothing contained in this Contract shall create any contractual relationship between any Subcontractor and the Owner.

## **IV. OTHER CONTRACTS:**

- A. The Owner may award, or may have awarded, other Contracts for additional work, and the Contractor shall cooperate fully with such other Contractors, by scheduling his work with that to be performed under other Contracts as may be directed by the Owner. The Contractor shall not commit or permit any act which will interfere with the performance of work by any other Contractor as scheduled.

## **V. BREAKDOWN, PROGRESS SCHEDULE AND NOTICE TO PROCEED:**

- A. Breakdown of Contract Price: During the period between the award and execution of the Agreement, the Contractor shall furnish to the Owner complete breakdown of his total estimated cost of the Broad and Front Street Parking Garage Stabilization to meet the approval of the Owner. When approved, this breakdown shall become the payment requisition form and the basis for determining the amount of partial payment to the contractor.
- B. Progress Schedule: Upon approval of the breakdown, the Contractor shall promptly submit to the Owner's Representative a carefully considered progress schedule showing the proposed dates of starting and of completing each of the major subdivisions of the work shown in the cost breakdown.
- C. Notice to Proceed: After execution of the Agreement, a notice to proceed will be issued to the Contractor which shall clearly and accurately set forth the area and the structures which are thereby released to the Contractor for Broad and Front Street Parking Garage Stabilization and shall fix the starting and completion dates therefore, in accordance with the Contract time established in the "Special Conditions" contained herein.

## **VI. PAYMENTS**

### Partial Payments:

- A. The Contractor shall prepare his requisition for partial payment in the required number of copies and submit to the Owner's Representative for approval. The payment shall consist of the total cost of all Broad and Front Street Parking Garage Stabilization work completed to such date as estimated in the light of the "Breakdown of Contract Price" subject to deductions of two percent (2%) of this sum to be retained until final payment, and the amount of all previous payments to the Contractor.
- B. After the final inspection and acceptance by the Owner through the Owner's Representative, of all work under the Contract, the Contractor shall prepare his requisition for Final Payment and submit it to the Owner's Representative for approval. The final payment shall consist of the total cost of Broad and Front Street Parking Garage Stabilization less all previous payments to the Contractor and subject to withholding of any amount due to the Owner under the Section entitled "Liquidated Damages" under SPECIAL CONDITIONS.
- C. The Owner, before making any payment, may require the Contractor to furnish releases or receipts from any or all persons performing work and supplying materials or services to the Contractor, or any subcontractor, if this is deemed necessary to project its interest. The Owner, however, may make payment in part or in full to the Contractor without requiring the furnishing of such releases or receipts and any payments so made shall in

no way impair the obligations of any surety or sureties on any bond or bonds furnished under this Contract.

- D. Each payment to the Contractor by the Owner shall be made subject to the following:
1. Submission by the Contractor of all written certifications required of him and his subcontractors by the Section entitled "Contractor's Certificates" under GENERAL CONDITIONS.
  2. That no payment made under the Contract shall act as a waiver of the right of the Owner to require the fulfillment of all of the terms of the Contract.

## **VII. CHANGES IN THE WORK:**

- A. The Owner's Representative may make changes in the scope of the work required to be performed by the Contractor by making additions thereto, or by omitting work therefrom, without invalidating the Contract, and without relieving or releasing the Contractor from any of his obligations under the Contract or any guarantee given by him pursuant to the Contract provisions, and without affecting the Validity of the guarantee bonds, and without relieving or releasing the surety or sureties of said bonds provided that the total net amount of the changes does not change the Contract amount by more than twenty-five (25%). All such work shall be executed under the terms of the original Contract unless it is expressly provided otherwise.
- B. Except for the purpose of affording protection against any emergency endangering life and property, the Contractor shall make no change in the work of Broad and Front Street Parking Garage Stabilization, providing any extra or additional work, or supply additional labor, services or materials beyond that which are required for the execution of the Contract, unless in pursuance of a written order from the Owner's Representative authorizing the change. No claim for an adjustment of the Contract Price will be valid unless so ordered.
- C. If the total net changes increase or decrease the total Contract Price more than twenty-five (25%), the Owner's Representative shall, before ordering the Contractor to proceed with desired changes, request an itemized proposal from him covering the work involved in the change after which the procedure shall be as follows:
1. If the proposal is acceptable, the Owner's Representative will prepare the change order in accordance therewith for acceptance by the Contractor, and
  2. If the proposal is not acceptable and prompt agreement between the two parties cannot be reached, the Owner's Representative may order the Contractor to proceed with the work on a cost-plus-limited basis. A labor, materials and insurance plus fifteen percent(15%) of said net

cost to cover overhead and profit, the total cost not to exceed a specified limit.

3. If the total changes to the Contract price exceeds twenty-five percent (25%) and it is feasible, without interference to the original "Primary Bid", to bid the change order work, the Owner's Representative in his discretion may do so. Any time delay caused by the bidding of the Change Order work will be added to the performance deadline of the Primary Bid.
- D. Each change order shall include in its final form: (1) a detailed description of the change in the work, (2) the Contractor's proposal (if any) or a conformed copy thereof, (3) a definite statement as to the resulting change in the Contract Price and/or time, and (4) the statement that all work involved in the change shall be performed in accordance with Contract requirements except as modified by the change order.

#### **VIII. CLAIMS FOR EXTRA COST**

- A. If the Contractor claims that any instructions contained herein involve extra cost or extension of time, he shall, within ten (10) days after the receipt of such instructions, and in any event before the proceeding to execute the work, submit his protest thereto in writing to the Owner's Representative, stating clearly and in detail the basis of his objections. No such claim will be considered unless so made.
- B. Any discrepancies which may be discovered between the Contract Documents and the review of the site during the pre-bid meeting and the actual conditions that are present shall at once be reported to the Owner's Representative and work shall not proceed, except at the Contractor's risk, until written instructions have been received by him from the Owner's Representative.
- C. If, on the basis of the available evidence, the Owner's Representative determines that an adjustment of the Contract Price and/or time is justifiable, the procedure shall then be as provided for in Section "Changes in the Work".

#### **IX. TERMINATION: DELAYS:**

- A. Termination of Contract: If the Contractor refuses or fails to prosecute the work with such diligence as will insure its completion within the time specified in these Contract Documents, plus any extension thereof provided in these Contract Documents, the Owner's Representative, by written notice to the contractor, may terminate the Contractor's right to proceed with the work. Upon such termination, the Owner's Representative may take over the work and prosecute the same to completion, by contract or otherwise, and the Contractor and his sureties shall also be liable to the Owner for any additional cost incurred by the Owner in its completion of the work and they



shall also be liable to the Owner for liquidated damages for any delay in the completion of the work as provided below. If the Contractor's right to proceed is terminated, the Owner may take possession of and utilize in completing the work such materials, tools, equipment, and plant as may be on the site of the work and necessary therefor.

- B. Excusable Delays: The right of the Contractor to proceed shall not be terminated nor shall the Contractor be charged with liquidated damages for any delays in the completion of the work due:
1. To any acts of the Government, including controls or restrictions upon or requisitioning of materials, equipment, tools of labor by reason of war, National Defense, or any other national emergency;
  2. To any acts of the Owner;
  3. To causes not reasonably foreseeable by the parties to this Contract at the time of the execution of the Contract which are beyond the control and without the fault or negligence of the Contractor, including, but not restricted to, acts of God or of the public enemy, acts of another Contractor in the performance of some other Contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and weather of unusual severity such as hurricanes, tornadoes, cyclones and other extreme weather conditions; and
  4. To any delay of any subcontractor occasioned by any of the causes specified in subparagraphs (1), (2) and (3) of the paragraph.

provided, however, that the Contractor promptly (within ten (10) days) notifies the Owner's Representative in writing of the cause of the delay. The Owner's Representative shall then ascertain the facts concerning the cause of the delay and the extent to which completion of the Project as a whole has been delayed. If the facts show the delay to be properly excusable under the terms of the Contract, the Owner's Representative shall extend the contract time by a period commensurate with the period of excusable delay.

**X. ASSIGNMENT OR NOVATION:**

- A. The Contractor shall not assign or transfer, whether by an assignment or novation any of its rights, duties, benefits, obligations, liabilities or responsibilities under this Contract without the written consent of the Owner's Representative; provided, however, that assignments to banks, trust companies or other financial institutions may be made without consent of the Owner's Representative. No assignment or novation expressly provides that the assignment of any of the Contractor's rights or benefits under the Contract is subject to a prior lien for labor performed, services rendered and materials, tools and equipment supplied for the performance of the work under this Contract in favor of all persons, firms or corporations

rendering such labor or services or supplying such materials, tools or equipment.

**XI. DISPUTES:**

- A. All disputes arising under this Contract of its interpretation, except those disputes or general claims covered by Federal Labor Standards Provisions, whether involving law or fact or both, or extra work, and all claims for alleged breach of contract shall within ten (10) days of commencement of the dispute, be represented by the Contractor to the Owner's Representative for decision. All papers pertaining to claims shall be filed in quadruplicate. Such notice need not detail the amount of the claim but shall state the facts surrounding the claim in sufficient detail to identify the claim together with its character and scope. In the meantime, the Contractor shall proceed with the time limit specified within this paragraph shall be deemed to have been waived, except that if the claim is of a continuing character and notice of the claim is not given within ten (10) days of its commencement, the claim will be considered only for a period commencing ten (10) days prior to the receipt by the Owner's Representative of notice thereof.
- B. The Contractor shall submit in detail his claim and his proof thereof. Each decision by the Owner's Representative will be in writing and will be mailed to the contractor by registered mail, return receipt requested.
- C. If the contractor does not agree with any decision of the Owner's Representative, he shall in no case allow the dispute to delay the work but shall notify the Owner's Representative promptly that he is proceeding with the work under protest and he may then except the matter in questions from the final release.

**XII. REQUEST FOR SUPPLEMENTARY INFORMATION:**

- A. It shall be the responsibility of the Contractor to make timely requests of the Owner's Representative for any additional information not already in his possession which should be furnished by the Owner's Representative under the terms of this Contract, and which he will require in the planning and execution of the work. Such requests may be submitted in writing from time to time as the need is approached, but each shall be filed in ample time to permit appropriate action to be taken by all parties involved so as to avoid delay. The Contractor shall be fully responsible for any delay in his work or to others arising from his failure to comply fully with the provisions of this Section.

**XIII. PERMITS AND CODES**

- A. The Contractor shall give all notices required by, and comply with all applicable laws, ordinances and codes of the local government. All

disconnections and demolition shall comply with all applicable ordinances and codes, including all written waivers. Before beginning the work, the Contractor shall examine the Maps and Technical Specifications for compliance with applicable ordinances and codes, and shall immediately report any discrepancy to the Owner's Representative. Where the requirements of the Technical Specifications fail to comply with such applicable ordinances or codes, the Owner's Representative will adjust the Contract by Change Order to conform to such ordinances or codes (unless waivers in writing covering the difference have been granted by the governing body of department) and make appropriate adjustment in the Contract Price. Should the Contractor fail to observe the foregoing provisions and perform said Work at variance with any applicable ordinance or code including any written waivers (notwithstanding the fact that such methods are in compliance with the Technical Specifications), the contractor shall correct the methods of doing such work without cost to the Owner but a change order will be issued to cover only the excess cost the contractor would have been entitled to receive if the change had been made before the Contractor commenced work on the items involved.

- B. The Contractor shall at his own expense, secure and pay to the appropriate department of the local government, the fees or charges for all permits for water, demolition, sidewalks, sheds, removal of abandoned water taps, sealing of house connection drains, pavement cuts, repaving of streets and sidewalks and all other building, electrical, plumbing, gas and sewer permits necessary under the local regulatory body or any of its agencies.
- C. The Contractor shall comply with the applicable laws and ordinances governing the disposal of materials, debris, rubbish and trash on or off the Project area, and shall commit no trespass on any public or private property in any operation due to the project.

#### **XIV. CARE OF WORK:**

- A. The Contractor shall be responsible for all damages to persons or property that occur as a result of his fault or negligence in connection with the prosecution of the work and shall be responsible for the proper care and protection of all work performed until completion and final acceptance, whether or not the same has been covered in whole or in part by payments made by the Owner.
- B. In an emergency affecting the safety of life or property, on or adjoining the site, the Contractor shall act, either at his own discretion or as instructed by the Owner's Representative, to prevent such threatened loss or injury. Any compensation claimed by the Contractor on account of such emergency work will be determined by the Owner's Representative as provided in the Section entitled "Changes in the Work".
- C. The Contractor shall avoid damaging the sidewalks, streets, curbs, pavements, utilities, structures or any other property (except that which is to be replaced or removed) either on or adjacent to the site. He shall repair, at

- his own expense and in a manner satisfactory to the Owner's Representative, any damage thereto caused by his operations.
- D. The Contractor shall shore, brace, underpin, secure and protect as may be necessary all foundations and other parts of structures to remain on the project site or which are adjacent to or in the vicinity of the site and which may be in any way affected by its excavations or other operations. The Contractor shall indemnify and save harmless the Owner from liability for any injury or damage to said structures and their premises or to persons due to his operations. It shall issue any and all required notices to property owners or other parties on, or in the vicinity of the site and which may be in any way affected by its excavations or other operations.

#### **XV. ACCIDENT PREVENTION:**

- A. The Contractor shall exercise proper precaution at all times for the protection of persons and property and shall be responsible for all damages to persons or property, either on or off the site, which will occur as a result of his fault or negligence in connection with the prosecution of the work. The safety provisions of applicable laws and building and construction codes shall be observed, and the Contractor shall take or cause to be taken such additional safety and health measures as the Owner's Representative may determine to be reasonably necessary. Machinery, equipment and all hazards shall be guarded in accordance with the safety provisions of the "Manual of Accident Prevention in Construction", published by the Associated General Contractors of America, Inc., to the extent that such provisions are not in conflict with applicable local laws.
- B. The Contractor shall maintain an accurate record of all cases of death, occupational disease, and injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment on work under the Contract. The Contractor shall promptly furnish the Owner's Representative with reports concerning these matters.
- C. The Contractor shall indemnify and save harmless the Owner from any claims for damages resulting from the personal injury and / or death suffered or alleged to have been suffered by any person as a result of any work conducted under this Contract.

#### **XVI. SANITARY FACILITIES**

- A. The Contractor shall furnish, install and maintain ample sanitary facilities for the workers. As the needs arise, a sufficient number of enclosed temporary toilets shall be conveniently placed as required by the Sanitary Codes of the State and local government. Drinking water shall be provided from an approved source, so piped or transported as to keep it safe and fresh and served from single service containers or satisfactory types of sanitary drinking stands or fountains. All such facilities and services shall be

furnished in strict accordance with existing and governing health regulations.

**XVII. USE OF PREMISES:**

- A. The Contractor shall confine its equipment and storage of materials for the Broad and Front Street Parking Garage Stabilization operations to the limits prescribed by ordinances or permits, or as may be directed by the Owner's Representative and shall not unreasonably encumber the premises with his salvaged material.
- B. The Contractor shall comply with reasonable instructions of the Owner's Representative and the ordinances and codes of the local government regarding signs, advertising, traffic, fires, explosives, danger signals, barricades and fire prevention.

**XVIII. REMOVAL OF DEBRIS, CLEANING, ETC.:**

- A. All rubbish and debris found on the Contract Area at the start of the work as well as that resulting from the Warren Street Parking Garage Elevator Upgrade activities or deposited on the site by others, during the duration of the Contract shall be removed and legally disposed of by the contractor who shall keep the Contract Area and public rights-of-way reasonably clear at all times. Upon completion of the work, the Contractor shall remove all temporary construction, equipment, salvaged materials, trash and debris of all kinds leaving the entire Project area in a neat condition. After a full cleaning of the area has been completed, the Contractor shall provide the Owner with a receipt for legal dumping of said materials. Trash burning shall not be permitted.

**XIX. FINAL INSPECTION:**

- A. When the work of Broad and Front Street Parking Garage Stabilization is substantially completed. The Contractor shall notify the Owner's Representative in writing that the work will be ready for final inspection on a definite date which shall be stated in such notice. The notice shall bear the signed concurrence of the representative of the Owner's Representative having charge of inspection and shall be given at least ten (10) days prior to the date stated for final inspection.

**XX. DEDUCTION FOR UNCORRECTED WORK:**

- A. If the Owner's Representative deemed it expedient to require the Contractor to correct the work not done in accordance with the Contract Documents, an equitable deduction from the Contract Price will be made by agreement between the Contractor and the Owner's Representative, and subject to settlement, in case of dispute, as herein provided.

## **XXI. INSURANCE:**

Required Insurance. The Contractor shall purchase and maintain the Required Insurance specified in this Article to provide protection from claims for bodily injury, including death, and property damage which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether by Contractor, by any Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable :

- (i) Workers' Compensation Insurance in accordance with Applicable Law, and Employers' Liability Insurance in accordance with Applicable Law and with a limit of liability of no less than \$1,000,000.00 per project for each accident.
- (ii) Commercial General Liability Insurance on an occurrence basis, covering bodily injury and property damage in the amount of \$1,000,000.00 per project for each occurrence, including (a) contractor's protective liability coverage, (b) contractual liability covering the indemnification obligations of Contractor pursuant to the Contract Documents, (c) personal injury liability coverage and broad form property damage, (d) false arrest coverage, and (e) completed operations coverage.
- (iii) Comprehensive Automobile Liability Insurance on an occurrence basis, covering all owned, non-owned and hired automobiles and other vehicles used by Contractor with a combined single limit of \$1,000,000.00 per project for each occurrence.
- (iv) Excess liability insurance with a combined bodily injury and property damage limit of at least \$5,000,000.00 per project, excess of primary CGL Automobile and Employer's Liability.
- (v) If applicable, the Contractor shall also be insured in the minimum limits required by the Motor Carrier Act of 1980.
- (vi) The Contractor's insurance policy will name the **TRENTON PARKING AUTHORITY** and **ALBERT GARLATTI CONSTRUCTION CO. INC.** as additional insured.
- (vii) **The certificate must read:** The Certificate holder is hereby named as additional per form CG2037 0704 or its equivalent affording "On Going Completed Operations" coverage. A Waiver of Subrogation applies in favor of the Certificate Holder per form CG 2404 1093 or its equivalent. It is hereby agreed and understood that the coverage afforded for the Certificate Holder by this Certificate of Insurance is both Primary and Non-Contributory.

## **XXII. GENERAL GUARANTY:**

- A. Neither the final certification of payment nor any provision in the Contract Documents nor partial or entire use or occupancy of the premises by the Owner shall constitute an acceptance of work not done in accordance with the Contract or relieve the contractor of liability in respect to any express



warranties or responsibility for failure to comply with terms of Contract Documents. The Owner will give notice of observed noncompliance with reasonable promptness.

### **XXIII. RISK OF LOSS:**

- A. The Owner assumes no responsibility for the condition of existing paving and other property on the Project Areas nor for their continuance in the conditions existing at the time of issuance of the Invitation for Bids or thereafter. No adjustment of Contract Price or allowance for any change in conditions which may occur after Invitation for Bids has been issued, will be made.

### **XXIV. REMOVAL AND SALVAGE OF EXISITING BUILDINGS:**

- A. Upon execution of the Contract for the work of Broad and Front Street Parking Garage Stabilization on all or any part of the Contract Area, all right, title and interest of the Owner in and to buildings, structures and other property to be demolished and/or removed by the contractor, on said part or all of the Contract Area as described in the Notice to Proceed, shall be deemed to be vested in the Contractor, subject to all provisions of the Contract and the following:
1. No right, title, property or interest of any kind whatsoever in or to the land or premises is created, assigned, conveyed, granted or transferred to the Contractor, or any other person or persons, except only the license and right of entry to perform said work in strict accordance with the Contract.
  2. Only such property may be salvaged by the Contractor as is owned by the Owner and in the event of any doubt respecting the ownership of any particular property, a written statement respecting its ownership.
  3. All salvage becomes the property of the Contractor but storage of such materials and equipment on the Project Area will not be permitted except for the duration of the Contract and such storage shall at no time interfere with activities of the Owner or of other contractors.
  4. Personal property of third persons or of occupants of buildings on the site shall not become the property of the Contractor.
  5. In the event that the Owner terminates the Contractor's right to proceed in accordance with the Section "Termination, Delays" hereinbefore all right and all title in and to structures, material and property transferred by this Section and remaining on the Project Area, shall revert to and vest with the Owner without prejudice to any claim which the Owner may have against the Contractor arising from the Contractor's default.
  6. Materials left on the Contract Area after acceptance of the work by the Owner shall be deemed to have been abandoned by the Contractor or

to the Owner and title thereto shall thereupon revert to and vest in the Owner, without prejudice, however, to any claim which the Owner may have against the Contractor in so leaving such materials on the site.

- B. Unless otherwise specified, no dwelling structure shall be removed from the premises as a whole, or in a substantially whole condition, but all such buildings shall be demolished on the premises.

**XXV. LIVE UTILITIES AND OTHER PROPERTY:**

- A. The Contractor shall assume all responsibility for damage attributable to him to any property upon, or passing through, the Project Area, but excluded from the work not owned by the Owner, such as utility lines, surface improvements or like items.
- B. During disconnections of underground utility services to be made in public thoroughfares, the Contract shall comply with all local requirements and regulations respecting the barricading of street, the removal and restoration of pavement, and other pertinent matters.

## **SECTION D – SPECIAL CONDITIONS**

### **I. PROJECT AREA:**

The Project Area consists of an existing parking structure owned and operated by the Trenton Parking Authority located in Trenton, New Jersey. Bidders will have the opportunity to visit the project areas at the conclusion of the Pre-Bid Conference.

### **II. Not Applicable – Intentionally Removed**

### **III. RESPONSIBILITIES OF CONTRACTOR:**

- A. Prior to submitting a bid, the Contractor is required to visit the site and familiarize himself with the Maps, Technical Specifications, location and proximity of all buildings, all internal and external conditions, all City, County and State regulations having jurisdiction and is responsible for same during construction. A brief and general description of each building is contained in this Document and listed under Building Demolition Surveys.
- B. Except as otherwise specifically stated in the Contract Documents and Technical Specifications, the contractor shall provide and pay for all permits, materials, labor, tools, equipment, water, light, heat, power, transportation, superintendence, temporary construction of every nature, charges, levys, fees or other expenses incurred and all other services and facilities of every nature whatsoever necessary for the performance of the Contract within the specified time.

### **IV. COMMUNICATIONS**

- A. All notices, demands, requests, instructions, approvals, proposals, and claims must be in writing.
- B. Any notice to or demand upon the Contractor shall be deemed sufficiently given if delivered at the office of the Contractor stated in the signature page of the Agreement (or at such other office as the Contractor may from time to time designate in writing to the Owner's Representative), or if deposited in the United States mail in a sealed, postage prepaid envelope, or delivered with charges prepaid to any telegraph company for transmission, in each case addressed to such office.
- C. All papers required to be delivered to the Owner shall unless otherwise specified in writing to the Contractor, be delivered to the Trenton Parking Authority, 16 East Hanover Street, Trenton, NJ 08608 to the attention of the Owner's Representative and any notice to or demand upon the Owner shall be deemed sufficiently given if so delivered, or if deposited in the United States mail in a sealed, postage prepaid envelope, or delivered with charges prepaid to any telegraph company for transmission to Owner at such address.

- D. Any such notice shall be deemed to have been given as of the time of actual delivery of (in the case of mailing) when the same should have been received in due course of post, or in the case of telegrams, at the time of actual receipt, as the case may be.

**V. SIGNS:**

- A. Subject to the prior approval of the Owner as to size, design, type and location, and to local regulations, the Contractor and its subcontractors may erect temporary signs for the purpose of identification and controlling traffic. The Contractor shall furnish, erect and maintain such signs as may be required by Safety Regulations or as necessary to safeguard life and property.

**VI. JOB OFFICES:**

- A. The Contractor and his subcontractors may maintain such office and storage facilities at or near the site as are necessary for the Work of Broad and Front Street Parking Garage Stabilization. These shall be located so as to cause no interference to any Work to be performed on the site. The Project Representative shall be consulted with regard to locations.
- B. Upon completion of the Broad and Front Street Parking Garage Stabilization, or as directed by the Owner's Representative, the Contractor shall remove all such temporary structures and facilities from the site, same to become his property, and leave the premises in the condition required by the Contract.

**VII. WORK BY OTHERS:**

- A. The Owner reserves the right to retain outside forces for work adjacent to and beyond the scope of this Contract; however, access to and egress from the site area within this Contract may be necessary for the completion of Work by the Owner's own forces.

**VII. WORK NOT INCLUDED IN CONTRACT**

- A. Work specifically mentioned in the bid specifications, General Special and Technical Specifications as not being part of the Broad and Front Street Parking Garage Stabilization is not included in the Contract. The Contractor is to assume responsibility for all work and materials required to satisfy the intent and specific conditions of this scope of work.

(Sample – do not complete)  
**FORM OF AGREEMENT  
BETWEEN OWNER AND CONTRACTOR**

This Agreement made this \_\_\_\_\_ day of \_\_\_\_\_  
in the year of Two Thousand and \_\_\_\_\_, between TRENTON  
PARKING AUTHORITY in the CITY OF TRENTON, (hereinafter called the "Owner"),  
and \_\_\_\_\_,  
\_\_\_\_\_, the Contractor.

The Owner and the Contractor agree as set forth below:

**ARTICLE 1 - CONTRACT DOCUMENTS**

The Contract Documents consist of this Agreement, Conditions of the Contract (General and other), Specifications, all Addenda issued prior to execution of this Agreement and all Modifications issued subsequent thereto. These form the Contract, and all are as fully a part of the Contract as if attached to this Agreement or repeated herein. In enumeration of the Contract Documents appears in Article 6.

**ARTICLE 2 - THE WORK**

The Contractor shall supply as required by the Contract Documents, \_\_\_\_\_.

**ARTICLE 3 - CONTACT PERSON**

All questions and comments regarding the work should be directed to:

Louis Garlatti Jr.  
Albert Garlatti Construction Company  
401 Cleveland Avenue  
Highland Park, NJ 08904  
Phone: (732) 545-5727

**ARTICLE 4 - TIME OF COMMENCEMENT AND COMPLETION**

The Work to be performed under this Contract shall commence on or about \_\_\_\_\_ and will be completed within \_\_\_\_\_ days.

**ARTICLE 5 - CONTRACT SUM**

**Base Bid:** \$ \_\_\_\_\_  
\_\_\_\_\_ Dollars  
Written

+ **Owner's Contingency Allowance (5 % x Base Bid):** \$ \_\_\_\_\_  
\_\_\_\_\_ Dollars  
Written

= **Total Lump Sum Bid (105% x Base Bid):** \$ \_\_\_\_\_  
\_\_\_\_\_ Dollars  
Written

The contract, if awarded, will be awarded to the lowest responsive and responsible Bidder, based on the Total Lump Sum Price, which includes the 5% Owner's Contingency Allowance; and subject to the Owner's right to reject any and all bids and to waive any informality in the bids or bidding. The Contingency Allowance will be used to pay for additional work at unit price if the Architect / Engineer determines that additional work is required.

**ARTICLE 6 - MISCELLANEOUS PROVISIONS**

The Contract Documents which include the bid specification in their entirety and constitute the entire Agreement between the Owner and the Contractor, are listed in Article 1 and, except for modifications issued after execution of this Agreement, are enumerated as follows:

- A. The Agreement
- B. Invitation to Bid
- C. Instruction to Bidder
- D. Executed Bid Proposal
- E. General Conditions
- F. Special Conditions (if applicable)
- G. Technical Specifications (including drawings)
- H. Addendums (if applicable)

This Agreement executed the day and year first written above

for TRENTON PARKING AUTHORITY:



\_\_\_\_\_  
Name

\_\_\_\_\_  
Title

for CONTRACTOR:

\_\_\_\_\_  
Name

\_\_\_\_\_  
Title

**FINAL RELEASE AND INDEMNITY AGREEMENT**

WHEREAS, Pursuant to Contract made on \_\_\_\_\_ by  
and between the TRENTON PARKING AUTHORITY located in the City of Trenton in  
the Mercer County, hereinafter called the Owner, and \_\_\_\_\_

\_\_\_\_\_, hereinafter called the Contractor, final payment is  
about to be made.

NOW, THEREFORE, in consideration of the premises and of the sum of \_\_\_\_\_

\_\_\_\_\_ lawful money the United States, being the full and entire sum due upon the completion  
of the Contract aforesaid less the sum

\_\_\_\_\_ still retained by the Owner to the said Contractor in hand paid by Owner, receipt of  
which is hereby acknowledged, said Contractor does hereby remise, release, and  
forever discharge the Owner of and from any and all manner of actions, suits, debts,  
dues sums of money accounts, reckonings, bonds, bills, covenants, controversies,  
agreements, promises, claims and demands whatsoever in law or in equity which the  
said Contractor has or may have for or on account of or in connection with the Contract  
aforesaid.

The Contractor further agrees to indemnify and hold harmless the Owner from  
loss, expense, damage or injury as a result of claims arising out of or in connection with  
the execution of the work provided for in said Contract, including any claim made by any  
labor or material directly or indirectly to the Contractor or by reason of any action  
brought or judgment recovered by such workers, contractor or material supplier.

IN WITNESS WHEREOF, the Contractor has caused its name to be hereunto  
subscribed and its seal to be hereunto affixed this \_\_\_\_\_ day of  
\_\_\_\_\_, Two Thousand and \_\_\_\_\_.

\_\_\_\_\_  
Corporate Title of Contractor

ATTEST:

By \_\_\_\_\_  
Principal

\_\_\_\_\_  
Secretary

SWORN AND SUBSCRIBED BEFORE ME

This \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_\_.  
(SEAL)

## **APPENDIX A**

### **NEW JERSEY BUSINESS REGISTRATION REQUIREMENTS**

#### **A. CONSTRUCTION CONTRACTS**

The Contractor shall provide written notice to its subcontractors and suppliers of the responsibility to submit proof of business registration to the contractor. The requirement of proof of business registration extends down through all level (tiers) of the project.

Before final payment on the contract is made by the contracting agency, the contractor shall submit an accurate list and proof of business registration of each subcontractor or supplier used in the fulfillment of the contract, or shall attest that no subcontractors were used.

For the term of the contract, the contractor and each of its affiliates and a subcontractor and each of its affiliates [N.J.S.A. 52:32-44(g)(3)] shall collect and remit to the Director, New Jersey Division of Taxation, the use tax due pursuant to the Sales and Use Tax on all sales of tangible personal property delivered into this State, regardless of whether the tangible personal property is intended for a contract with a contracting agency.

A business organization that fails to provide a copy of a business registration pursuant to section 1 of P.L. 2001, c.134 (C.52:32-44 et al.) or subsection e. or f. of section 92 of P.L. 1977, c. 110 (C.5-12-92), or that provides false business registration information under the requirements of either of those sections, shall be liable for a penalty of \$25 for each day of violation, not to exceed \$50,000 for each business registration copy not properly provided under a contract with a contracting agency.

#### **B. NON-CONSTRUCTION CONTRACTS**

The contractor shall provide written notice to its subcontractors of the responsibility to submit proof of business registration to the contractor.

Before final payment on the contract is made by the contracting agency, the contractor shall submit an accurate list and the proof of business registration of each subcontractor or supplier used in the fulfillment of the contract, or shall attest that no subcontractors were used.

For the term of the contract, the contractor and each of its affiliates and a subcontractor and each of its affiliates [N.J.S.A. 52:32-44(g)(3)] shall collect and remit to the Director, New Jersey Division of Taxation, the use tax due pursuant to the Sales and Use Tax on all sales of tangible personal property delivered into this State, regardless of whether the tangible personal property is intended for a contract with a contracting agency.

A business organization that fails to provide a copy of a business registration pursuant to section 1 of P.L. 2001, c.134 (C.52:32-44 et al.) or subsection e. or f. of section 92 of P.L. 1977, c. 110 (C.5-12-92), or that provides false business registration information under the requirements of either of those sections, shall be liable for a penalty of \$25 for each day of violation, not to

exceed \$50,000 for each business registration copy not properly provided under a contract with a contracting agency.

<b>STANDARD BID DOCUMENT REFERENCE</b>	
	<b>Reference: VII-G</b>
Name of Form:	<b>PUBLIC WORKS CONTRACTOR REGISTRATION</b>
Statutory Reference:	N.J.S.A.34:11-56.48
Instructions Reference:	Statutory and Other Requirements VII-G
Description:	Used for public works contract when prevailing wage threshold will be exceeded.

The Public Works Contractor Registration Act (PWCRA) requires that all contractors, including named subcontractors, to register with the Department of Labor prior to submitting price proposals or engaging on certain public works contracts that exceed the prevailing wage threshold. The prevailing wage threshold is \$11,892 for municipalities and \$2,000 for all non-municipal entities, such as boards of education, authorities, fire districts, counties, etc.

Because the PWCRA uses the definition of public works contracts under the prevailing wage law, where the law uses the term “bidding”, contracting units are advised to read that as meaning to “submit” a price proposal.” Thus, the law applies to the formal bidding process where the contract is awarded to the lowest responsible bidder, and the receipt of informal quotations awarded to the vendor whose proposal is the “most advantageous, price and other factors considered.”

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 PWCRA defines “public works projects” as contracts for "public work" as defined in the Prevailing Wage Act [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.

In order to provide guidance to contracting officials on implementing the law, nine key principles have been identified in the law. The nine items follow:

1. The law applies to all “public works contracts” that exceed the contracting unit’s prevailing wage threshold, as set by N.J.S.A. 34:11-56.26 (a) and (b).
2. The law applies to contracts for which public bidding is required, as well as those for which quotations are received.
3. All named contractors in a bid proposal (including out-of-state contractors) must be registered with the Department of Labor’s Division of Wage and Hour Compliance at the time proposals **are received** by the public entity.

For clarity, Local Finance Notice 2004-9 dated 4/28/04 uses the following term: “Received,” in context of when “proposals are received,” means the deadline or moment in time when proposals are formally opened and no other proposals are accepted.

4. The law requires contractors to submit certificates after a bid proposal is received and prior to awarding the contract. (N.J.S.A. 34:11-56.55)
5. After bid proposals are received, and prior to contract award, the contractor most likely to receive the contract award must submit to the public entity copies of certifications of all listed sub-contractors.
6. The contracting agent must review the certificates to be sure they were in effect at the time the bid proposals were received.
7. Non-listed subcontractors do not have to be registered until they physically start the public work assigned to them.
8. Bid proposal documents need to inform those submitting proposals of these requirements.
9. Emergency work is covered under the provisions of the Prevailing Wage Act and the PWCRA.

It is specifically recommended that language be included in specifications especially those sections regarding “Instructions to Bidders” advising potential bidders that:

1. All named sub-contractors must be registered with the Department of Labor pursuant to the PWCRA at the time the proposal is received, or the proposal will be determined to be non-responsive.
2. Any non-listed sub-contractor must be registered with the Department of Labor prior to physically starting work.

A contractor’s certification can be confirmed by contacting the Department of Labor’s [Division of Wage and Hour Compliance website](http://www.nj.gov/labor/lssc/lspubcon.html) ([www.nj.gov/labor/lssc/lspubcon.html](http://www.nj.gov/labor/lssc/lspubcon.html)). This site only

shows approved contractors; there is no “pending” approval or a “grace” period. If a contracting unit encounters a problem in its review of certifications, or difficulty in making an award because of a non-registered contractor, they should contact the Contractor Registration Unit as soon as possible.

N.J.S.A. 34:11-56.56 provides several methods for the Department of Labor to enforce the law. The Department can deny renewal, revoke or suspend the registration of a contractor for a period of not more than five years, or, as a condition of initial or continued registration, require a surety bond payable to the State of New Jersey.

Additional information on the PWCRA can be obtained from the:

Contractor Registration Unit	Telephone: 609-292-9464
Division of Wage and Hour Compliance	Fax: 609-633-8591
New Jersey Department of Labor	E-mail: <a href="mailto:contreg@dol.state.nj.us">contreg@dol.state.nj.us</a>
PO Box 389	Web site: <a href="http://www.nj.gov/labor/lssc/lspubcon.html">www.nj.gov/labor/lssc/lspubcon.html</a>
Trenton, New Jersey 08625-0389	

The web site has links to the PWCRA Registration Form, Listing of Contractors, Prevailing Wages and other useful information.

Contact the Division of Local Government Services at (609) 292-7842, by fax at (609) 633-6243 or by e-mail at [lpcl@dca.state.nj.us](mailto:lpcl@dca.state.nj.us) for assistance in the application of the Local Public Contracts Law or related PWCRA issues. As specific situations are presented to the contracting unit, local legal advisors should review this guidance as to its applicability.

<b>STANDARD BID DOCUMENT REFERENCE</b>	
<b>REFERENCE: VII-I</b>	
Name of Form:	FORMS TO BE PROVIDED BY ELEC
Statutory Reference:	N.J.S.A. 19:44A-20.27 (P.L. 2005, c.271,S.3)
Instructions Reference:	Statutory and Other Requirements VII
Description:	Disclosure of Contributions to ELEC

Disclosure of Contributions to New Jersey Election Law Enforcement Commission (ELEC)

N.J.S.A. 19:44A-20.27 establishes a new disclosure requirement for business entities. It requires that, when a business entity has received in any calendar year \$50,000 or more in public contracts with public entities, it must file an annual report with the Election Law Enforcement

Commission (ELEC). The report shall disclose any contribution of money or any other thing of value, including an in-kind contribution, or pledge to make a contribution of any kind:

- To a candidate for or the holder of any public office having ultimate responsibility for the awarding of public contracts, or,
- To a political party committee, legislative leadership committee, political committee or continuing political committee.

The report will include all reportable contributions made by the business entity during the 12 months prior to the reporting deadline. ELEC will be promulgating a form and procedures for filing commencing in January 2007. ELEC can also impose fines for failure to comply with this requirement.

While the local unit has no role in this process, it is recommended that all bid or proposal specifications and contracts should include language notifying business entities of their potential obligation under the law. Such language could read as follows:

Starting in January 2007, 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. 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).

## **APPENDIX B**

(REVISED 9/07)

**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**

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 take affirmative action to ensure that such applicants are recruited and employed, 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 action 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, where applicable, will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, 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 applicable employment goal prescribed by N.J.A.C. 17:27-7.3; 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 applicable employment goal established in accordance with N.J.A.C. 17:27-7.3. 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 attempt to hire or schedule minority and women workers directly, consistent with the applicable employment goal. 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 the applicable employment goal, the contractor or subcontractor agrees to be prepared to hire or schedule minority and women workers directly, consistent with the applicable employment goal, 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 or is so notified by the Division that the union is not referring minority and women workers consistent with the applicable employment goal.

(B) If the hiring or scheduling of a workforce consistent with the employment goal has not or cannot be achieved 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 consistent with the applicable county employment goals:

(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 until such time as the workforce is consistent with the employment goal;

(5) If it is necessary to lay off some of the workers in a given trade on the construction site, to assure, consistent with the applicable State and Federal statutes and court decisions, that sufficient minority and women employees remain on the site consistent with the employment goal; and to employ any minority and women workers laid off by the contractor on any other construction site on which its workforce composition is not consistent with an employment goal established pursuant to rules implementing N.J.S.A. 10:5-31 et. seq.;

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

(i) 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 determine the qualifications of such individuals and if the contractor's or subcontractor's workforce in each construction trade is not consistent with the applicable employment goal, it shall hire or schedule those individuals who satisfy appropriate qualification standards. 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.

(ii) If the contractor's or subcontractor's workforce is consistent with the applicable employment goal, the name of any interested women or minority individual shall be maintained on a waiting list for the first consideration, in the event the contractor's or subcontractor's workforce is no longer consistent with the applicable employment goal.

(iii) 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 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) 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. 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 Contract Compliance & EEO 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 Contract Compliance & EEO for conducting a compliance investigation pursuant to **Subchapter 10 of the Administrative Code (NJAC 17:27)**.

## APPENDIX C

### AMERICANS WITH DISABILITIES ACT OF 1990 Equal Opportunity for Individuals with Disability

The contractor and the \_\_\_\_\_ of \_\_\_\_\_, (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. *SI21 01* 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.

## APPENDIX D

### PARKING AUTHORITY OF THE CITY OF TRENTON DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN

Solicitation Number: \_\_\_\_\_ Proposer: \_\_\_\_\_

#### PART 1: CERTIFICATION

**BIDDERS MUST COMPLETE PART 1 BY CHECKING EITHER BOX.**

***FAILURE TO CHECK ONE OF THE BOXES WILL RENDER THE PROPOSAL NON-RESPONSIVE.***

Pursuant to Public Law 2012, c. 25, any person or entity that submits a bid or proposal or otherwise proposes to enter into or renew a contract must complete the certification below to attest, under penalty of perjury, that the person or entity, or one of the person or entity's parents, subsidiaries, or affiliates, is not identified on a list created and maintained by the New Jersey Department of the Treasury as a person or entity engaging in investment activities in Iran. If the Director finds a person or entity to be in violation of the principles which are the subject of this law, s/he shall take action as may be appropriate and 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 person or entity.

**I certify, pursuant to Public Law 2012, c. 25, that the person or entity listed above for which I am authorized to submit a proposal:**

**PLEASE CHECK THE APPROPRIATE BOX:**

- is not providing goods or services of \$20,000,000 or more in the energy sector of Iran, including a person or entity that provides oil or liquefied natural gas tankers, or products used to construct or maintain pipelines used to transport oil or liquefied natural gas, for the energy sector of Iran,  
**AND**
- is not a financial institution that extends \$20,000,000 or more in credit to another person or entity, for 45 days or more, if that person or entity will use the credit to provide goods or services in the energy sector in Iran.

**In the event that a person or entity is unable to make the above certification because it or one of its parents, subsidiaries, or affiliates has engaged in the above-referenced activities, a detailed, accurate and precise description of the activities must be provided in part 2 below to the New Jersey Turnpike Authority under penalty of perjury. Failure to provide such will result in the proposal being rendered as non-responsive and appropriate penalties, fines and/or sanctions will be assessed as provided by law.**

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PART 2: PLEASE PROVIDE FURTHER INFORMATION RELATED TO INVESTMENT ACTIVITIES IN IRAN

**You must provide a detailed, accurate and precise description of the activities of the proposer, or one of its parents, subsidiaries or affiliates, engaging in the investment activities in Iran outlined above by completing the boxes below.**

Name: \_\_\_\_\_ Relationship to Proposer: \_\_\_\_\_

Description of Activities: \_\_\_\_\_  
\_\_\_\_\_

Duration of Engagement: \_\_\_\_\_ Anticipated Cessation Date: \_\_\_\_\_

Proposer Contact Name: \_\_\_\_\_ Contact Phone Number: \_\_\_\_\_

**Certification: I, being duly sworn upon my oath, hereby represent and state that the foregoing information and any attachments thereto 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 State of New Jersey is relying on the information contained herein and thereby acknowledge that I am under a continuing obligation from the date of this certification through the completion of any contracts with the State to notify the State 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, and 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 State of New Jersey and that the State at its option may declare any contract(s) resulting from this certification void and unenforceable.**

Full Name (Print): \_\_\_\_\_ Signature: \_\_\_\_\_

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

## **BROAD AND FRONT PARKING GARAGE STABILIZATION**

**Trenton Parking Authority  
16 East Hanover Street  
Trenton, NJ 08608**

### **BID FORM COVER SHEET**

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

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

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

Contact Name: \_\_\_\_\_

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

Phone Number: \_\_\_\_\_

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

To Whom It May Concern:

This Bid is submitted in accordance with your Advertisement inviting bids to be received for the Broad and Front St Parking Garage Stabilization..

Having carefully examined the Contract Documents, including all Specifications, Drawings, and Addenda which are incorporated with these documents, indicating various conditions affecting this contract, the undersigned herein agrees to furnish all materials, perform all labor, and do all else necessary to complete the work for the Contract for the above named Project in accordance with said Contract Documents for the lump sum contained within this Bid Form.

I understand and acknowledge that the low bid will be calculated by the Trenton Parking Authority based upon the Total Bid of each bidder, including the work required by the Contract Documents plus the amount of all Allowances listed on the Bid Form.



## **SEALED BID CHECK LIST**

### **DOCUMENTS TO BE SUBMITTED TO OWNER WITH SEALED BID**

Each Bidder is required to complete this check list of all mandatory items that are required to be submitted for this bid. Bidder must acknowledge reading required documents.

**Must Submit With Bid:**

**Bidder Must Initial Each Item Below:**

- |  |       |
|--|-------|
| Bid Form Cover Sheet   | _____ |
| Sealed Bid Check List  | _____ |
| Bid Form   | _____ |
| Schedule of Alternates   | _____ |
| Schedule of Unit Prices  | _____ |
| Statement of Bid Exceptions  | _____ |
| Acknowledgement of Receipt of Addenda                              | _____ |
| Bid Bond/Security (Refer to Instruction to Bidders, Section B.III) | _____ |
| Consent of Surety  | _____ |
| Bidder's Qualifications  | _____ |
| Identity of Subcontractors   | _____ |
| Ownership Disclosure (Corp./Partner/Ind/LLC)                       | _____ |
| Acknowledgment of Contractor (Corp./Partner/Ind/LLC)               | _____ |
| Non-Collusion Affidavit (Contractor)                               | _____ |
| Non-Collusion Affidavit (Subcontractor)                            | _____ |
| Appendix D - Disclosure of Investment Activities in Iran Form      | _____ |

**Must Be Submitted Before Contract Award:**

Evidence of Affirmative Action Plan  
And Certificate (Contractor/Subcontractor) \_\_\_\_\_

Public Works Contractor Registration Certification \_\_\_\_\_

**Reviewed:**

Appendix A – New Jersey Business Registration Requirements \_\_\_\_\_

Appendix B - Mandatory Equal Employment Opportunity Language \_\_\_\_\_

Appendix C - Americans with Disabilities Act 1990 \_\_\_\_\_

Dated: \_\_\_\_\_, 2024

COMPANY NAME: \_\_\_\_\_

AUTHORIZED SIGNATURE: \_\_\_\_\_

**BID FORM**

**BASE BID AMOUNT IN WORDS:** \_\_\_\_\_

The contract amount stated above includes all sales taxes, excise, and other taxes for all material and appliances subject to and upon which taxes are levied.

1	Base Bid – Performance of all work required by the Contract Documents for the Broad and Front Street Parking Garage Stabilization for the subtotal lump sum amount of.....	\$  (Lump Sum)
2	Allowance #1 – Owner’s Contingency Allowance	\$ 5% of Base Bid Cost (Extended Price)
3		
4		
5		
6		
<b>TOTAL LUMP SUM BID (1 + 2 )</b>		<b>\$</b>

**TOTAL BID AMOUNT IN WORDS:** \_\_\_\_\_

The contract amount stated above includes all sales taxes, excise, and other taxes for all material and appliances subject to and upon which taxes are levied.

**SCHEDULE OF ALTERNATES**

*None.*

**SCHEDULE OF UNIT PRICES**

Refer to specification Section 012200 “Unit Prices” for description and quantity of measure for each unit price.

**Unit Price No. 1:** Add/deduct for angle connection at gird D/2(reference detail: 1 & 2/R2.1).

\$ \_\_\_\_\_  
UNIT PRICE / EACH

\_\_\_\_\_  
UNIT PRICE IN WORDS (PRICE AS STATED IN WORDS SHALL CONTROL)

**Unit Price No. 2:** Add/Deduct for shelf connection at grid C/2 (reference detail 3 &4/R2.1).

\$ \_\_\_\_\_  
UNIT PRICE / EACH

\_\_\_\_\_  
UNIT PRICE IN WORDS (PRICE AS STATED IN WORDS SHALL CONTROL)

**Unit Price No. 3:** Spalled Haunch Remedial Repair (reference detail 5/R2.1).

\$ \_\_\_\_\_  
UNIT PRICE / EACH

\_\_\_\_\_  
UNIT PRICE IN WORDS (PRICE AS STATED IN WORDS SHALL CONTROL)

**Unit Price No. 4:** Add/Deduct for Hollow Core Panel Shoring, 2 level shoring cost (refence detail 1/R2.2).

\$ \_\_\_\_\_  
UNIT PRICE / EACH

\_\_\_\_\_  
UNIT PRICE IN WORDS (PRICE AS STATED IN WORDS SHALL CONTROL)

**Unit Price No. 5:** Add/Deduct for Beam to Column Connection Repair (refence detail 6/R2.1).

\$ \_\_\_\_\_  
UNIT PRICE / EACH

\_\_\_\_\_  
UNIT PRICE IN WORDS (PRICE AS STATED IN WORDS SHALL CONTROL)

**Unit Price No. 6:** Tee Stem Shoring , 2 level shoring cost (reference detail 2/R2.2).

\$ \_\_\_\_\_  
UNIT PRICE / EACH

UNIT PRICE IN WORDS (PRICE AS STATED IN WORDS SHALL CONTROL)

**STATEMENT OF BID EXCEPTIONS**

Check off the statement that applies. If any bid exceptions have been taken, provide a detailed description of each in the space provided below. If additional space is needed, add pages as required.

We have taken no exceptions with regard to the work specified by the contract documents. All work specified by the contract documents is to be completed for the “Total Base Bid” value specified above.

We have taken the following exceptions with regard to the work specified by the contract documents. A list of all work specified by the contract documents but not included in the “Total Base Bid” value specified above is provided below. Any work not listed below shall be considered to be covered by the “Total Base Bid”.

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**ACKNOWLEDGMENT OF RECEIPT OF ADDENDA**

The undersigned Bidder hereby acknowledges receipt of the following Addenda:

<u>Addendum Number</u>	<u>Dated</u>	<u>Acknowledge Receipt</u> (initial)
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

**No addenda were received:**

Acknowledged for: \_\_\_\_\_  
(Name of Bidder)

By: \_\_\_\_\_  
(Signature of Authorized Representative)

Name: \_\_\_\_\_  
(Print or Type)

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

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

**CONSENT OF SURETY**

A performance bond will be required from the successful contractor on this project, and consequently, all bidders shall submit, with their bid, a Consent of Surety in substantially the following form:

To: \_\_\_\_\_  
(Owner)

Re: \_\_\_\_\_  
(Contractor)

\_\_\_\_\_  
(Project Description)

This is to certify that the \_\_\_\_\_  
(Surety Company)

will provide to \_\_\_\_\_ a performance bond in  
(Owner)

the full amount of awarded contract in the event that said contractor is awarded a contract for the above project.

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

\_\_\_\_\_  
(Authorized Agent of Surety Company)

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

**CONSENT OF SURETY MUST BE SIGNED BY AN AUTHORIZED AGENT  
OR REPRESENTATIVE OF A SURETY COMPANY AND NOT BY THE  
INDIVIDUAL OR COMPANY REPRESENTATIVE SUBMITTING THE BID.**



**BIDDER'S QUALIFICATIONS**

All questions must be answered and the data given must be concise, comprehensive and acceptable to the Owner. Attach separate sheets wherever necessary to properly answer question.

1. Firm name.
2. Principal address.
3. Year firm was organized.
4. Where and when incorporated.
5. Years of firm's experience in similar contracts (must have five years minimum experience with similar contracts)
6. List of three projects within the States of NJ, NY and PA that your company has completed contracts of similar size, nature, and type over the past five years. Provide name of Client, Contact Person, Telephone number, and Total Amount of Contract award.
7. List default experience on previous contracts.
8. List present and comparable contracts presently underway. Provide name of Client, Contact Person, Telephone number, and Total Amount of Contract award.
9. List principals and/or partners, supervisory personnel available for this contract.
10. Financial statement within the last six months.

The undersigned hereby authorizes any person, firm or corporation to furnish any information requested by the Owner verifying data submitted in the Statement of Qualification.

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

Company Name: \_\_\_\_\_

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

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

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

County of \_\_\_\_\_, being duly sworn, deposes and says that he is the \_\_\_\_\_ of \_\_\_\_\_

and that the answer to the foregoing questions and all statements therein contained are true and correct. Subscribed and sworn before me this \_\_\_\_\_ day of \_\_\_\_\_ 2018.

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

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

**IDENTITY OF SUBCONTRACTORS**

Provide the requested information below for each subcontractor listed and/or required per NJ State law. Each subcontractor to be used must be listed below for a complete bid submission.

Elevator Manufacturer/Installer:

Company Name: \_\_\_\_\_

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

\_\_\_\_\_

Trade: \_\_\_\_\_ License: \_\_\_\_\_

Elevator Make/Model/Size: \_\_\_\_\_

\_\_\_\_\_

Cost of the Work: \_\_\_\_\_

Structural Steel:

Company Name: \_\_\_\_\_

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

\_\_\_\_\_

Trade: \_\_\_\_\_ License: \_\_\_\_\_

Cost of the Work: \_\_\_\_\_

Masonry:

Company Name: \_\_\_\_\_

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

\_\_\_\_\_

Trade: \_\_\_\_\_ License: \_\_\_\_\_

Cost of the Work: \_\_\_\_\_

**IDENTITY OF SUBCONTRACTORS (CONTINUED)**

Electrician:

Company Name: \_\_\_\_\_

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

\_\_\_\_\_

Trade: \_\_\_\_\_ License: \_\_\_\_\_

Cost of the Work: \_\_\_\_\_

Mechanical:

Company Name: \_\_\_\_\_

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

\_\_\_\_\_

Trade: \_\_\_\_\_ License: \_\_\_\_\_

Cost of the Work: \_\_\_\_\_

Other Req'd Subcontractor:

Company Name: \_\_\_\_\_

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

\_\_\_\_\_

Trade: \_\_\_\_\_ License: \_\_\_\_\_

Cost of the Work: \_\_\_\_\_

Note: The General Contractor must provide the information requested above for all licensed subcontractors. If additional space is required, the General Contractor is to supply their own form to list all licensed subcontractors.

**OWNERSHIP DISCLOSURE STATEMENT**

**This Statement must be submitted with the Bid**

Trade or Corporate Name of Bidder \_\_\_\_\_

Federal ID Number: \_\_\_\_\_

Corporation \_\_\_\_\_ Partnership \_\_\_\_\_ Individual \_\_\_\_\_ LLC \_\_\_\_\_

Incorporated: YES \_\_\_\_\_ NO \_\_\_\_\_ In what State? \_\_\_\_\_ Year \_\_\_\_\_

Business Address \_\_\_\_\_  
\_\_\_\_\_

Telephone # \_\_\_\_\_ Fax # \_\_\_\_\_ PO Box \_\_\_\_\_

**If a Corporation Officers:**

President \_\_\_\_\_

Vice President \_\_\_\_\_

Treasurer \_\_\_\_\_

Secretary \_\_\_\_\_

**Proprietor(s) Partnership, or Individual doing business under a trade name.**

Partner / Title \_\_\_\_\_

Partner / Title \_\_\_\_\_

Partner / Title \_\_\_\_\_

**Limited Liability Co.**

Managing Member \_\_\_\_\_

Member \_\_\_\_\_

Member \_\_\_\_\_

**CORPORATE STOCKHOLDER OR PARTNERS DISCLOSURE FORM**

Pursuant to the provisions of Chapter 33 Public Law 1977, corporate or partnership bidder must submit a list of the names and addresses of all stockholders owning more of their stock than 10% or more of the stock of their corporate stockholders or in case of a partnership, the names and addresses of those partners owning a 10% or greater interest therein. Corporate officers must be listed regardless of ownership of 10% or more of the stock.

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

Percent of Ownership: \_\_\_\_\_

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

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

Percent of Ownership: \_\_\_\_\_

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

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

Percent of Ownership: \_\_\_\_\_

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

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

Percent of Ownership: \_\_\_\_\_

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

Signed \_\_\_\_\_  
Print Name & Title:

**LIMITED LIABILITY CO. OR MEMBERS DISCLOSURE FORM**

Pursuant to the provisions of Chapter 33 Public Law 1977, Limited Liability bidder must submit a list of the names and addresses of those members owning a 10% or greater interest therein.

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

Percent of Ownership: \_\_\_\_\_

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

\_\_\_\_\_

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

Percent of Ownership: \_\_\_\_\_

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

\_\_\_\_\_

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

Percent of Ownership: \_\_\_\_\_

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

\_\_\_\_\_

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

Percent of Ownership: \_\_\_\_\_

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

\_\_\_\_\_

Signed \_\_\_\_\_  
Print Name & Title:

**ACKNOWLEDGMENT OF CONTRACTOR, IF A CORPORATION**

STATE OF NEW JERSEY     )  
  )  
COUNTY OF                    )        SS:

BE IT REMEMBERED, that on this \_\_\_\_\_ day of \_\_\_\_\_,20\_\_\_\_, before me, the Subscriber, a Notary Public of the State of \_\_\_\_\_ personally appeared \_\_\_\_\_ the President of \_\_\_\_\_ \_\_\_\_\_ who I am satisfied, is the person who signed the foregoing Contract; and I having first made known to him the contents thereof, he thereupon acknowledge that he signed, sealed with the Corporate Seal, and delivered the said Contract as such officer aforesaid, that the said Contract is the voluntary act and deed of said Corporation, made by virtue of authority from its Board of Directors.

\_\_\_\_\_  
A Notary Public of  
My Commission Expires:

**ACKNOWLEDGMENT OF CONTRACTOR, IF A LIMITED LIABILITY CO.**

STATE OF NEW JERSEY     )  
  )  
COUNTY OF                 )     SS:

BE IT REMEMBERED, that on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me, the Subscriber, a Notary Public of the State of \_\_\_\_\_ personally appeared \_\_\_\_\_ the President of \_\_\_\_\_ who I am satisfied, is the person who signed the foregoing Contract; and I having first made known to him the contents thereof, he thereupon acknowledge that he signed, sealed with the Corporate Seal, and delivered the said Contract as such officer aforesaid, that the said Contract is the voluntary act and deed of said Corporation, made by virtue of authority from its Board of Directors.

\_\_\_\_\_  
A Notary Public of  
My Commission Expires:



**ACKNOWLEDGMENT OF CONTRACTOR, IF A PARTNERSHIP**

STATE OF NEW JERSEY     )  
  )  
COUNTY OF                    )     SS:

BE IT REMEMBERED, that on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me, the Subscriber, a Notary Public of the State of \_\_\_\_\_ personally appeared \_\_\_\_\_ a member of the firm of \_\_\_\_\_ a partnership, who, I am satisfied, is the person mentioned in the within Contract and who signed the same as a member of said firm, and thereupon acknowledge that he signed, sealed and delivered the same as his voluntary act and deed, and as the voluntary act and deed of said partnership firm, for the uses and purposes therein expressed.

\_\_\_\_\_  
A Notary Public of  
My Commission Expires:

**ACKNOWLEDGMENT OF CONTRACTOR, IF AN INDIVIDUAL**

STATE OF NEW JERSEY     )  
  )  
COUNTY OF                    )     SS:

BE IT REMEMBERED, that on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me, the Subscriber, a Notary Public, personally appeared \_\_\_\_\_, who I am satisfied, is the Vendor mentioned in the within Contract and thereupon he acknowledged that he signed, sealed and delivered the same as his personal voluntary act and deed, for the uses and purposes therein expressed.

\_\_\_\_\_  
A Notary Public of  
My Commission Expires:

**NON-COLLUSION AFFIDAVIT**

PROJECT: Bid Due Date \_\_\_\_\_

STATE OF NEW JERSEY    )  
  ) SS:  
COUNTY OF                    )

I, \_\_\_\_\_ of the City of \_\_\_\_\_  
\_\_\_\_\_ in the County of \_\_\_\_\_ and the State of New Jersey  
of full age, being duly sworn according to law on my oath and say that:

I am \_\_\_\_\_  
of the firm of \_\_\_\_\_

the bidder making the Proposal for the Broad and Front Steet Parking Garage Stabilization, and that I executed the said Proposal with full authority so to do; 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 State of New Jersey relies upon the truth of the statements contained in said Proposal and in the statements contained in this affidavit in awarding the Contract for the said project.

Signed \_\_\_\_\_

Title \_\_\_\_\_

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

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

My Commission expires \_\_\_\_\_, 20\_\_.

**NON-COLLUSION AFFIDAVIT OF SUBCONTRACTOR**

*To be completed for each subcontractor listed on the "Identity of Subcontractors" form*

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

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

\_\_\_\_\_, being first duly sworn, deposes and says that:

(1) He is the (owner, partner, officer) of \_\_\_\_\_ herein referred to as the "Subcontractor".

(2) He is fully informed respecting the preparation and contents of the Subcontractor's Proposal submitted by the Subcontractor to \_\_\_\_\_ the Contractor for certain work in connection with the Contract pertaining to the Broad and Front Street Parking Garage Stabilization in the City of Trenton, in the State of New Jersey

(3) Such Subcontractor's Proposal is genuine and is not a collusive or sham proposal;

(4) Neither the Subcontractor nor any of its officers, partners, owners, agents representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived, or agreed, directly or indirectly, with any other Bidder, firm or person to submit a collusive or sham Proposal in connection with such Contract, or has in any manner, directly or indirectly, sought unlawful agreement or connivance with any other Bidder, firm or person, to fix any overhead, profit or cost element of the price or prices in said Subcontractor's Proposal or to secure through collusion, conspiracy, connivance or unlawful agreement any advantage against the TRENTON PARKING AUTHORITY (Owner) or any person interested in the proposed Contract; and

(5) The price or prices quoted in the Subcontractor's Proposal are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owner, employees or parties in interest, including this affiant.

Signed \_\_\_\_\_

Title \_\_\_\_\_

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

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

My Commission expires \_\_\_\_\_, 20 \_\_\_\_.

# DRAFT AIA<sup>®</sup> Document A305<sup>™</sup> - 1986

## Contractor's Qualification Statement

The Undersigned certifies under oath that the information provided herein is true and sufficiently complete so as not to be misleading.

**SUBMITTED TO:**

**ADDRESS: SUBMITTED BY:**

**NAME:**

**ADDRESS:**

**PRINCIPAL OFFICE:**

Corporation

Partnership

Individual

Joint Venture

Other

**NAME OF PROJECT:** *(if applicable)*

**TYPE OF WORK:** *(file separate form for each Classification of Work)*

General Construction

HVAC

Electrical

Plumbing

Other: *(Specify)*

### § 1 ORGANIZATION

§ 1.1 How many years has your organization been in business as a Contractor?

§ 1.2 How many years has your organization been in business under its present business name?

§ 1.2.1 Under what other or former names has your organization operated?

§ 1.3 If your organization is a corporation, answer the following:

§ 1.3.1 Date of incorporation:

§ 1.3.2 State of incorporation:

§ 1.3.3 President's name:

§ 1.3.4 Vice-president's name(s)

#### ADDITIONS AND DELETIONS:

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

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

This form is approved and recommended by the American Institute of Architects (AIA) and The Associated General Contractors of America (AGC) for use in evaluating the qualifications of contractors. No endorsement of the submitting party or verification of the information is made by AIA or AGC.



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<< >>

§ 1.3.5 Secretary's name: << >>

§ 1.3.6 Treasurer's name: << >>

§ 1.4 If your organization is a partnership, answer the following:

§ 1.4.1 Date of organization: << >>

§ 1.4.2 Type of partnership (if applicable): << >>

§ 1.4.3 Name(s) of general partner(s)

<< >>

§ 1.5 If your organization is individually owned, answer the following:

§ 1.5.1 Date of organization: << >>

§ 1.5.2 Name of owner:

<< >>

§ 1.6 If the form of your organization is other than those listed above, describe it and name the principals:

<< >>

## § 2 LICENSING

§ 2.1 List jurisdictions and trade categories in which your organization is legally qualified to do business, and indicate registration or license numbers, if applicable.

<< >>

§ 2.2 List jurisdictions in which your organization's partnership or trade name is filed.

<< >>

## § 3 EXPERIENCE

§ 3.1 List the categories of work that your organization normally performs with its own forces.

<< >>

§ 3.2 Claims and Suits. (If the answer to any of the questions below is yes, please attach details.)

§ 3.2.1 Has your organization ever failed to complete any work awarded to it?

<< >>

§ 3.2.2 Are there any judgments, claims, arbitration proceedings or suits pending or outstanding against your organization or its officers?

<< >>

§ 3.2.3 Has your organization filed any law suits or requested arbitration with regard to construction contracts within the last five years?

<< >>

§ 3.3 Within the last five years, has any officer or principal of your organization ever been an officer or principal of another organization when it failed to complete a construction contract? (If the answer is yes, please attach details.)

<< >>

§ 3.4 On a separate sheet, list major construction projects your organization has in progress, giving the name of project, owner, architect, contract amount, percent complete and scheduled completion date.

<< >>

§ 3.4.1 State total worth of work in progress and under contract:

<< >>

§ 3.5 On a separate sheet, list the major projects your organization has completed in the past five years, giving the name of project, owner, architect, contract amount, date of completion and percentage of the cost of the work performed with your own forces.

<< >>

§ 3.5.1 State average annual amount of construction work performed during the past five years:

<< >>

§ 3.6 On a separate sheet, list the construction experience and present commitments of the key individuals of your organization.

<< >>

#### § 4 REFERENCES

§ 4.1 Trade References:

<< >>

§ 4.2 Bank References:

<< >>

§ 4.3 Surety:

§ 4.3.1 Name of bonding company:

<< >>

§ 4.3.2 Name and address of agent:

<< >>

#### § 5 FINANCING

§ 5.1 Financial Statement.

§ 5.1.1 Attach a financial statement, preferably audited, including your organization's latest balance sheet and income statement showing the following items:

Current Assets (e.g., cash, joint venture accounts, accounts receivable, notes receivable, accrued income, deposits, materials inventory and prepaid expenses);

Net Fixed Assets;

Other Assets;

Current Liabilities (e.g., accounts payable, notes payable, accrued expenses, provision for income taxes, advances, accrued salaries and accrued payroll taxes);

Other Liabilities (e.g., capital, capital stock, authorized and outstanding shares par values, earned surplus and retained earnings).

**§ 5.1.2** Name and address of firm preparing attached financial statement, and date thereof:

« »

**§ 5.1.3** Is the attached financial statement for the identical organization named on page one?

« »

**§ 5.1.4** If not, explain the relationship and financial responsibility of the organization whose financial statement is provided (e.g., parent-subsidiary).

« »

**§ 5.2** Will the organization whose financial statement is attached act as guarantor of the contract for construction?

« »

**§ 6 SIGNATURE**

**§ 6.1** Dated at this « » day of « » « »

Name of Organization: « »

By: « »

Title: « »

**§ 6.2**

« »

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

Subscribed and sworn before me this « » day of « » « »

Notary Public: « »

My Commission Expires: « »



## SECTION 011000 - SUMMARY

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section Includes:

- 1. Project information.
- 2. Work covered by Contract Documents.
- 3. Phased construction.
- 4. Access to site.
- 5. Coordination with occupants.
- 6. Work restrictions.
- 7. Specification and Drawing conventions.
- 8. Miscellaneous provisions.

- B. Related Requirements:

- 1. Section 013100 "Project Management and Coordination" for contractor's project management responsibilities and requirements.

#### 1.3 PROJECT INFORMATION

- A. Project Identification: Broad and Front St Parking Garage Stabilization

- 1. Project Location: Warren Street Parking Garage  
120 East Front Street  
Trenton, NJ 08608

- B. Owner: Trenton Parking Authority  
16 East Hanover Street  
Trenton, NJ 08608

- 1. Owner's Representative: Albert Garlatti Construction Company  
401 Cleveland Avenue  
Highland Park, NJ 08904  
Contact: Mr. Louis Garlatti Jr.

- C. Architect/Engineer: THA Consulting, Inc.  
470 Norristown Road, Suite 200

Blue Bell, PA 19422  
Contact: Mr. Sun-Hee Hwang, PE

#### 1.4 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of Project is defined by the Contract Documents and consists of the following:
  - 1. Stabilization activities to keep the parking structure in stable condition.; and other Work indicated in the Contract Documents.
- B. The project schedule is such that certain weather sensitive activities and components of the project may be required to be performed during cold weather conditions. The Contractor is to include the cost of all necessary protective measures required to permit such work to be performed during cold weather conditions without any impact to the schedule or quality of the work.
- C. Type of Contract:
  - 1. Project will be constructed under a single prime contract.

#### 1.5 PHASED CONSTRUCTION

- A. The Work of this contract will be conducted in single phase
- B. Before commencing Work of each phase, submit the Contractor's construction schedule showing the sequence, commencement and completion dates for all phases of the Work.

#### 1.6 ACCESS TO SITE

- A. General: Contractor shall have non-limited use of Project site for construction operations as indicated on Drawings and as indicated by requirements of this Section.
  - 1. Driveways, Walkways and Entrances: Keep driveways and entrances serving premises clear and available to Owner, Owner's employees, garage patrons, and emergency vehicles at all times. Do not use these areas for parking or for storage of materials.
    - a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
    - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
  - 2. Limits during Alternate 1 Line Striping:
    - a. No more than 80 parking spaces are to be occupied by the Contractor at any time during garage normal business hours.
    - b. The Contractor may coordinate with the Trenton Parking Authority to perform the line striping work during select weekends when the garage is closed to the public.
    - c. The Contractor may be granted access to the garage on week nights outside of the normal business hours to perform the line striping work, but the Contractor's Base Bid should not be reliant on this.

- B. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period. Repair damage caused by construction operations.
- C. Condition of Existing Grounds: Maintain portions of existing grounds, landscaping, and hardscaping affected by construction operations throughout construction period. Repair damage caused by construction operations.

#### 1.7 COORDINATION WITH OCCUPANTS

- A. Partial Owner Occupancy: Owner will NOT occupy the premises during entire construction period, with the exception of areas under construction.
  - 1. Provide not less than 72 hours' notice to Owner of activities that related the Stabilization Repairs,=.

#### 1.8 WORK RESTRICTIONS

- A. Work Restrictions, General: Comply with restrictions on construction operations.
  - 1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.
- B. On-Site Work Hours: Limit work in the Warren Street Parking Garage to normal business working hours of 6:00 a.m. to 10:00 p.m., Monday through Friday, unless otherwise indicated.
  - 1. Weekend Hours: May be coordinated with the Trenton Parking Authority upon special request. The General Contractor's Base Bid should not consider that work will be completed during the weekends.
  - 2. Hours for Utility Shutdowns: Utility shut downs within the Warren Street Parking Garage may not occur during normal hours of operations, as listed in this specification, Section 1.8.B above. Coordination with the Trenton Parking Authority will be required for utility shutdowns during evening and/or weekend hours.
  - 3. General Contractor must comply with all noise ordinances in effect for the project area.
  - 4. See Article 1.6.B.4 for specific limitations during the Alternate 1 Line Striping work.
- C. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Owner.
  - 1. Notify Owner not less than two days in advance of proposed disruptive operations.
  - 2. Obtain Owner's written permission before proceeding with disruptive operations.
- D. Restricted Substances: Use of tobacco products and other controlled substances on Project site is not permitted.
- E. Employee Identification: Provide identification tags for Contractor personnel working on Project site. Require personnel to use identification tags at all times.
- F. Employee Screening: Comply with Owner's requirements for drug and background screening of Contractor personnel working on Project site.

1. Maintain list of approved screened personnel with Owner's representative.

#### 1.9 SPECIFICATION AND DRAWING CONVENTIONS

- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
  1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
  2. Specification requirements are to be performed by the Contractor unless specifically stated otherwise.
- B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.
- C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:
  1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
  2. Abbreviations: Materials and products are identified by abbreviations scheduled on Drawings.
  3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

#### 1.10 BUILDING CODE REVIEW AND APPROVALS

- A. The City of Trenton will be reviewing the project for the building and electrical permit. The New Jersey Department of Community Affairs (DCA) will be reviewing the project for the elevator permit. The Contractor is responsible for obtaining all permits but is not responsible for any permit fees.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

## SECTION 012100 - ALLOWANCES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements governing allowances.
- B. Types of allowances include the following:
  - 1. Quantity allowances.
  - 2. Contingency allowances.
- C. Related Requirements:
  - 1. Section 012200 "Unit Prices" for procedures for using unit prices, including adjustment of quantity allowances when applicable.
  - 2. Section 014000 "Quality Requirements" for procedures governing the use of allowances for field testing by an independent testing agency.

#### 1.3 DEFINITIONS

- A. Allowance is a quantity of work or dollar amount established in lieu of additional requirements, used to defer selection of actual materials and equipment to a later date when direction will be provided to Contractor. If necessary, additional requirements will be issued by Change Order.

#### 1.4 SELECTION AND PURCHASE

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

1.5 ACTION SUBMITTALS

- A. Submit proposals for purchase of products or systems included in allowances in the form specified for Change Orders.

1.6 INFORMATIONAL SUBMITTALS

- A. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.
- B. Submit time sheets and other documentation to show labor time and cost for installation of allowance items that include installation as part of the allowance.
- C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.7 QUANTITY ALLOWANCES

- A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Architect under allowance and shall include taxes, freight, and delivery to Project site.
- B. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials ordered by Owner or selected by Architect under allowance shall be included as part of the Contract Sum and not part of the allowance.
- C. Unused Materials: Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.
  - 1. If requested by Architect, retain and prepare unused material for storage by Owner. Deliver unused material to Owner's storage space as directed.

1.8 CONTINGENCY ALLOWANCES

- A. Use the contingency allowance only as directed by Architect for Owner's purposes and only by Change Orders that indicate amounts to be charged to the allowance.
- B. Contractor's overhead, profit, and related costs for products and equipment ordered by Owner under the contingency allowance are included in the allowance and are not part of the Contract Sum. These costs include delivery, installation, taxes, insurance, equipment rental, and similar costs.
- C. Change Orders authorizing use of funds from the contingency allowance will include Contractor's related costs and reasonable overhead and profit.

## 1.9 ADJUSTMENT OF ALLOWANCES

- A. Allowance Adjustment: To adjust allowance amounts, prepare a Change Order proposal based on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place where applicable. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, and similar margins.
1. Include installation costs in purchase amount only where indicated as part of the allowance.
  2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other markups.
  3. Submit substantiation of a change in scope of Work, if any, claimed in Change Orders related to unit-cost allowances.  
Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.
- B. Submit claims for increased costs because of a change in scope or nature of the allowance described in the Contract Documents, whether for the purchase order amount or Contractor's handling, labor, installation, overhead, and profit.
1. Do not include Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of Work has changed from what could have been foreseen from information in the Contract Documents.
  2. No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.

## PART 2 - PRODUCTS (Not Used)

## PART 3 - EXECUTION

### 3.1 EXAMINATION

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

### 3.2 PREPARATION

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

### 3.3 SCHEDULE OF ALLOWANCES

- A. Allowance No. 1: Contingency Allowance: Include the Owner's Contingency allowance of 5 % of the Base Scope Cost.

END OF SECTION 012100



## SECTION 012200 - UNIT PRICES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for unit prices.
- B. Related Requirements:
  - 1. Section 012100 "Allowances" for procedures for using unit prices to adjust quantity allowances.
  - 2. Section 012600 "Contract Modification Procedures" for procedures for submitting and handling Change Orders.
  - 3. Section 014000 "Quality Requirements" for field testing by an independent testing agency.

#### 1.3 DEFINITIONS

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

#### 1.4 PROCEDURES

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

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF UNIT PRICES

1. Refer to Plans and Bid Form (project specifications section 000004).
2. Quantity Allowance: Coordinate unit price with allowance adjustment requirements in Section 012100 "Allowances."

END OF SECTION 012200

## SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Requirements:
  - 1. Section 012500 "Substitution Procedures" for administrative procedures for handling requests for substitutions made after the Contract award.

#### 1.3 MINOR CHANGES IN THE WORK

- A. Architect will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on form included in Project Manual.

#### 1.4 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
  - 1. Work Change Proposal Requests issued by Architect are not instructions either to stop work in progress or to execute the proposed change.
  - 2. Within time specified in Proposal Request or 14 days, when not otherwise specified, after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
    - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
    - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
    - c. Include costs of labor and supervision directly attributable to the change.
    - d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and

finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

- e. Quotation Form: Use forms acceptable to Architect.
- B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Architect.
1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
  2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
  3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
  4. Include costs of labor and supervision directly attributable to the change.
  5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
  6. Proposal Request Form: Use form acceptable to Architect.

#### 1.5 ADMINISTRATIVE CHANGE ORDERS

- A. Allowance Adjustment: See Section 012100 "Allowances" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect actual costs of allowances.
- B. Unit-Price Adjustment: See Section 012200 "Unit Prices" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect measured scope of unit-price work.

#### 1.6 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Work Change Proposal Request, Contractor will issue a Change Order for signatures of Owner and Architect on form acceptable to Architect.

#### 1.7 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Architect may issue a Construction Change Directive on form included in Project Manual. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
  1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.

- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
  - 1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

1.8 WORK CHANGE DIRECTIVE

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

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012600

## SECTION 012900 - PAYMENT PROCEDURES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Requirements:
  - 1. Section 012100 "Allowances" for procedural requirements governing the handling and processing of allowances.
  - 2. Section 012200 "Unit Prices" for administrative requirements governing the use of unit prices.
  - 3. Section 012600 "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
  - 4. Section 013200 "Construction Progress Documentation" for administrative requirements governing the preparation and submittal of the Contractor's construction schedule.

#### 1.3 DEFINITIONS

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

#### 1.4 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.
  - 1. Coordinate line items in the schedule of values with items required to be indicated as separate activities in Contractor's construction schedule.
  - 2. Submit the schedule of values to Architect at earliest possible date, but no later than seven days before the date scheduled for submittal of initial Applications for Payment.
  - 3. Subschedules for Phased Work: Where the Work is separated into phases requiring separately phased payments, provide subschedules showing values coordinated with each phase of payment.

- B. Format and Content: Use Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one line item for each Specification Section.
1. Identification: Include the following Project identification on the schedule of values:
    - a. Project name and location.
    - b. Name of Architect.
    - c. Architect's Project number.
    - d. Contractor's name and address.
    - e. Date of submittal.
  2. Arrange schedule of values consistent with format of AIA Document G703.
  3. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Provide multiple line items for principal subcontract amounts in excess of five percent of the Contract Sum.
  4. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
    - a. Differentiate between items stored on-site and items stored off-site.
  5. Allowances: Provide a separate line item in the schedule of values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
  6. Overhead Costs: Include total cost and proportionate share of general overhead and profit for each line item.
  7. Schedule of Values Revisions: Revise the schedule of values when Change Orders or Construction Change Directives result in a change in the Contract Sum. Include at least one separate line item for each Change Order and Construction Change Directive.

#### 1.5 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment following the initial Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.
- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.
1. Submit draft copy of Application for Payment seven days prior to due date for review by Architect.
- C. Application for Payment Forms: Use AIA Document G702 and AIA Document G703 as form for Applications for Payment.
1. Other Application for Payment forms proposed by the Contractor shall be acceptable to Architect and Owner. Submit forms for approval with initial submittal of schedule of values.

- D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.
1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
  2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
  3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
  4. Indicate separate amounts for work being carried out under Owner-requested project acceleration.
- E. Stored Materials: Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site.
1. Provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment for stored materials.
  2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
  3. Provide summary documentation for stored materials indicating the following:
    - a. Value of materials previously stored and remaining stored as of date of previous Applications for Payment.
    - b. Value of previously stored materials put in place after date of previous Application for Payment and on or before date of current Application for Payment.
    - c. Value of materials stored since date of previous Application for Payment and remaining stored as of date of current Application for Payment.
- F. Transmittal: Submit three signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt. One copy shall include waivers of lien and similar attachments if required.
1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- G. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from subcontractors, sub-subcontractors, and suppliers for construction period covered by the previous application.
1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
  2. When an application shows completion of an item, submit conditional final or full waivers.
  3. Owner reserves the right to designate which entities involved in the Work must submit waivers.



4. Submit final Application for Payment with or preceded by conditional final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
  5. Waiver Forms: Submit executed waivers of lien on forms acceptable to Owner.
- H. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors.
  2. Schedule of values.
  3. Contractor's construction schedule (preliminary if not final).
  4. Products list (preliminary if not final).
  5. Sustainable design action plans, including preliminary project materials cost data.
  6. Schedule of unit prices.
  7. Submittal schedule (preliminary if not final).
  8. List of Contractor's staff assignments.
  9. List of Contractor's principal consultants.
  10. Copies of building permits.
  11. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
  12. Initial progress report.
  13. Report of preconstruction conference.
  14. Performance and payment bonds.
  15. Data needed to acquire Owner's insurance.
- I. Application for Payment at Substantial Completion: After Architect issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
  2. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- J. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
  2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
  3. Updated final statement, accounting for final changes to the Contract Sum.
  4. AIA Document G706.
  5. AIA Document G706A.
  6. AIA Document G707.
  7. Evidence that claims have been settled.
  8. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
  9. Final liquidated damages settlement statement.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012900

## SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
  - 1. General coordination procedures.
  - 2. Coordination drawings.
  - 3. RFIs.
  - 4. Digital project management procedures.
  - 5. Project meetings.
- B. Related Requirements:
  - 1. Section 017300 "Execution Requirements" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
  - 2. Section 017700 "Closeout Procedures" for coordinating closeout of the Contract.

#### 1.3 DEFINITIONS

- A. RFI: Request for Information. Request from Owner, Architect, or Contractor seeking information required by or clarifications of the Contract Documents.

#### 1.4 INFORMATIONAL SUBMITTALS

- A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
  - 1. Name, address, telephone number, and email address of entity performing subcontract or supplying products.
  - 2. Number and title of related Specification Section(s) covered by subcontract.
  - 3. Drawing number and detail references, as appropriate, covered by subcontract.
- B. Key Personnel Names: Within 15 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and cellular

telephone numbers and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.

1. Post copies of list in project meeting room, in temporary field office, and in prominent location in built facility. Keep list current at all times.

#### 1.5 GENERAL COORDINATION PROCEDURES

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations included in different Sections that depend on each other for proper installation, connection, and operation.
  1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
  2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
  3. Make adequate provisions to accommodate items scheduled for later installation.
- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
  1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
  1. Preparation of Contractor's construction schedule.
  2. Preparation of the schedule of values.
  3. Installation and removal of temporary facilities and controls.
  4. Delivery and processing of submittals.
  5. Progress meetings.
  6. Preinstallation conferences.
  7. Project closeout activities.
  8. Startup and adjustment of systems.

#### 1.6 COORDINATION DRAWINGS

- A. Coordination Drawings, General: Prepare coordination drawings according to requirements in individual Sections, and additionally where installation is not completely indicated on Shop Drawings, where limited space availability necessitates coordination, or if coordination is required to facilitate integration of products and materials fabricated or installed by more than one entity.

1. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordination drawings on standard printed data. Include the following information, as applicable:
  - a. Use applicable Drawings as a basis for preparation of coordination drawings. Prepare sections, elevations, and details as needed to describe relationship of various systems and components.
  - b. Coordinate the addition of trade-specific information to coordination drawings in a sequence that best provides for coordination of the information and resolution of conflicts between installed components before submitting for review.
  - c. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
  - d. Indicate space requirements for routine maintenance and for anticipated replacement of components during the life of the installation.
  - e. Show location and size of access doors required for access to concealed dampers, valves, and other controls.
  - f. Indicate required installation sequences.
  - g. Indicate dimensions shown on Drawings. Specifically note dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternative sketches to Architect indicating proposed resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.
  
- B. Coordination Drawing Organization: Organize coordination drawings as follows:
  1. Floor Plans: Show architectural and structural elements, and mechanical, plumbing, fire-protection, fire-alarm, and electrical Work. Show locations of visible ceiling-mounted devices relative to acoustical ceiling grid. Supplement plan drawings with section drawings where required to adequately represent the Work.
  2. Plenum Space: Indicate sub framing for support of ceiling and wall systems, mechanical and electrical equipment, and related Work. Locate components within plenums to accommodate layout of light fixtures and other components indicated on Drawings. Indicate areas of conflict between light fixtures and other components.
  3. Mechanical Rooms: Provide coordination drawings for mechanical rooms showing plans and elevations of mechanical, plumbing, fire-protection, fire-alarm, and electrical equipment.
  4. Structural Penetrations: Indicate penetrations and openings required for all disciplines.
  5. Slab Edge and Embedded Items: Indicate slab edge locations and sizes and locations of embedded items for metal fabrications, sleeves, anchor bolts, bearing plates, angles, door floor closers, slab depressions for floor finishes, curbs and housekeeping pads, and similar items.
  6. Mechanical and Plumbing Work: Show the following:
    - a. Sizes and bottom elevations of ductwork, piping, and conduit runs, including insulation, bracing, flanges, and support systems.
    - b. Dimensions of major components, such as dampers, valves, diffusers, access doors, cleanouts and electrical distribution equipment.
    - c. Fire-rated enclosures around ductwork.
  7. Electrical Work: Show the following:

- a. Runs of vertical and horizontal conduit **1-1/4 inches (32 mm)** in diameter and larger.
  - b. Light fixture, exit light, emergency battery pack, smoke detector, and other fire-alarm locations.
  - c. Panel board, switch board, switchgear, transformer, busway, generator, and motor-control center locations.
  - d. Location of pull boxes and junction boxes, dimensioned from column center lines.
8. Fire-Protection System: Show the following:
- a. Locations of standpipes, mains piping, branch lines, pipe drops, and sprinkler heads.
9. Review: Architect will review coordination drawings to confirm that in general the Work is being coordinated, but not for the details of the coordination, which are Contractor's responsibility. If Architect determines that coordination drawings are not being prepared in sufficient scope or detail, or are otherwise deficient, Architect will so inform Contractor, who shall make suitable modifications and resubmit.
10. Coordination Drawing Prints: Prepare coordination drawing prints according to requirements in Section 013300 "Submittal Procedures."
- C. Coordination Digital Data Files: Prepare coordination digital data files according to the following requirements:
1. File Preparation Format: Same digital data software program, version, and operating system as original Drawings.
  2. File Preparation Format: DWG, Version 2016, operating in Microsoft Windows operating system.
  3. File Submittal Format: Submit or post coordination drawing files using PDF format.
  4. Architect will furnish Contractor one set of digital data files of Drawings for use in preparing coordination digital data files.
    - a. Architect makes no representations as to the accuracy or completeness of digital data files as they relate to Drawings.
    - b. Digital Data Software Program: Drawings are available in DWG, Version 2016, operating in Microsoft Windows operating system.
    - c. Contractor shall execute a data licensing agreement in the form of Agreement form acceptable to Owner and Architect.
- 1.7 REQUEST FOR INFORMATION (RFI)
- A. General: Immediately on discovery of the need for additional information, clarification, or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.
1. Architect will return without response those RFIs submitted to Architect by other entities controlled by Contractor.
  2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.

- B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
1. Project name.
  2. Project number.
  3. Date.
  4. Name of Contractor.
  5. Name of Architect.
  6. RFI number, numbered sequentially.
  7. RFI subject.
  8. Specification Section number and title and related paragraphs, as appropriate.
  9. Drawing number and detail references, as appropriate.
  10. Field dimensions and conditions, as appropriate.
  11. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
  12. Contractor's signature.
  13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
    - a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.
- C. RFI Forms: Software-generated form with substantially the same content as indicated above, acceptable to Architect.
1. Attachments shall be electronic files in PDF format.
- D. Architect's Action: Architect will review each RFI, determine action required, and respond. Allow 10 working days for Architect's response for each RFI. RFIs received by Architect after 1:00 p.m. will be considered as received the following working day.
1. The following Contractor-generated RFIs will be returned without action:
    - a. Requests for approval of submittals.
    - b. Requests for approval of substitutions.
    - c. Requests for approval of Contractor's means and methods.
    - d. Requests for coordination information already indicated in the Contract Documents.
    - e. Requests for adjustments in the Contract Time or the Contract Sum.
    - f. Requests for interpretation of Architect's actions on submittals.
    - g. Incomplete RFIs or inaccurately prepared RFIs.
  2. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt by Architect of additional information.
  3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Section 012600 "Contract Modification Procedures."

- a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within 10 days of receipt of the RFI response.
- E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log as requested by Architect. Include the following:
1. Project name.
  2. Name and address of Contractor.
  3. Name and address of Architect and Construction Manager.
  4. RFI number including RFIs that were returned without action or withdrawn.
  5. RFI description.
  6. Date the RFI was submitted.
  7. Date Architect's and Construction Manager's response was received.
  8. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
- F. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven days if Contractor disagrees with response.

#### 1.8 DIGITAL PROJECT MANAGEMENT PROCEDURES

- A. Architect's Data Files Not Available: Architect will not provide Architect's CAD drawing digital data files for Contractor's use during construction.
- B. PDF Document Preparation: Where PDFs are required to be submitted to Architect, prepare as follows:
1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
  2. Name file with submittal number or other unique identifier, including revision identifier.
  3. Certifications: Where digitally submitted certificates and certifications are required, provide a digital signature with digital certificate on where indicated.

#### 1.9 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at Project site unless otherwise indicated.
1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times a minimum of 10 working days prior to meeting.
  2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
  3. Minutes: Entity responsible for conducting meeting will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within three days of the meeting.



- B. Preconstruction Conference: Architect will schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 15 days after execution of the Agreement.
1. Attendees: Authorized representatives of Owner Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
  2. Agenda: Discuss items of significance that could affect progress, including the following:
    - a. Responsibilities and personnel assignments.
    - b. Tentative construction schedule.
    - c. Phasing.
    - d. Critical work sequencing and long lead items.
    - e. Designation of key personnel and their duties.
    - f. Lines of communications.
    - g. Procedures for processing field decisions and Change Orders.
    - h. Procedures for RFIs.
    - i. Procedures for testing and inspecting.
    - j. Procedures for processing Applications for Payment.
    - k. Distribution of the Contract Documents.
    - l. Submittal procedures.
    - m. Preparation of Record Documents.
    - n. Use of the premises and existing building.
    - o. Work restrictions.
    - p. Working hours.
    - q. Owner's occupancy requirements.
    - r. Responsibility for temporary facilities and controls.
    - s. Procedures for moisture and mold control.
    - t. Procedures for disruptions and shutdowns.
    - u. Construction waste management and recycling.
    - v. Parking availability.
    - w. Office, work, and storage areas.
    - x. Equipment deliveries and priorities.
    - y. First aid.
    - z. Security.
    - aa. Progress cleaning.
  3. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.
- C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity when required by other sections and when required for coordination with other construction.
1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect of scheduled meeting dates.
  2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:

- a. Contract Documents.
  - b. Options.
  - c. Related RFIs.
  - d. Related Change Orders.
  - e. Purchases.
  - f. Deliveries.
  - g. Submittals.
  - h. Review of mockups.
  - i. Possible conflicts.
  - j. Compatibility requirements.
  - k. Time schedules.
  - l. Weather limitations.
  - m. Manufacturer's written instructions.
  - n. Warranty requirements.
  - o. Compatibility of materials.
  - p. Acceptability of substrates.
  - q. Temporary facilities and controls.
  - r. Space and access limitations.
  - s. Regulations of authorities having jurisdiction.
  - t. Testing and inspecting requirements.
  - u. Installation procedures.
  - v. Coordination with other work.
  - w. Required performance results.
  - x. Protection of adjacent work.
  - y. Protection of construction and personnel.
3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
  4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
  5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.
- D. Project Closeout Conference: Schedule and conduct a project closeout conference, at a time convenient to Owner and Architect, but no later than 30 days prior to the scheduled date of Substantial Completion.
1. Conduct the conference to review requirements and responsibilities related to Project closeout.
  2. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the meeting. Participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
  3. Agenda: Discuss items of significance that could affect or delay Project closeout, including the following:
    - a. Preparation of Record Documents.
    - b. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.

- c. Procedures for completing and archiving web-based Project software site data files.
  - d. Submittal of written warranties.
  - e. Requirements for preparing operations and maintenance data.
  - f. Requirements for delivery of material samples, attic stock, and spare parts.
  - g. Requirements for demonstration and training.
  - h. Preparation of Contractor's punch list.
  - i. Procedures for processing Applications for Payment at Substantial Completion and for final payment.
  - j. Submittal procedures.
  - k. Owner's partial occupancy requirements.
  - l. Installation of Owner's furniture, fixtures, and equipment.
  - m. Responsibility for removing temporary facilities and controls.
4. Minutes: Entity conducting meeting will record and distribute meeting minutes.
- E. Progress Meetings: Conduct progress meetings at biweekly intervals.
1. Coordinate dates of meetings with preparation of payment requests.
  2. Attendees: In addition to representatives of Owner and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
  3. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
    - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
      - 1) Review schedule for next period.
    - b. Review present and future needs of each entity present, including the following:
      - 1) Interface requirements.
      - 2) Sequence of operations.
      - 3) Status of submittals.
      - 4) Deliveries.
      - 5) Off-site fabrication.
      - 6) Access.
      - 7) Site use.
      - 8) Temporary facilities and controls.
      - 9) Progress cleaning.
      - 10) Quality and work standards.
      - 11) Status of correction of deficient items.
      - 12) Field observations.

- 13) Status of RFIs.
  - 14) Status of Proposal Requests.
  - 15) Pending changes.
  - 16) Status of Change Orders.
  - 17) Pending claims and disputes.
  - 18) Documentation of information for payment requests.
4. Minutes: Entity responsible for conducting the meeting will record and distribute the meeting minutes to each party present and to parties requiring information.
- a. Schedule Updating: Revise Contractor's construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100

## SECTION 013300 - SUBMITTAL PROCEDURES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. Related Sections include the following:
  - 1. Division 1 Section "Payment Procedures" for submitting Applications for Payment and the Schedule of Values.
  - 2. Division 1 Section "Project Management and Coordination" for submitting and distributing meeting and conference minutes and for submitting Coordination Drawings.
  - 3. Division 1 Section "Quality Requirements" for submitting test and inspection reports and for mockup requirements.
  - 4. Division 1 Section "Closeout Procedures" for submitting warranties.
  - 5. Divisions 2 through 33 Sections for specific requirements for submittals in those Sections.

#### 1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information that requires Architect's responsive action.
- B. Informational Submittals: Written information that does not require Architect's responsive action.

#### 1.4 SUBMITTAL PROCEDURES

- A. General: Electronic copies of CAD Drawings of the Contract Drawings will not be provided by Architect for Contractor's use in preparing submittals.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
  - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
  - 2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.

- a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Submittals Schedule: Comply with requirements in Division 1 Section "Construction Progress Documentation" for list of submittals and time requirements for scheduled performance of related construction activities.
- D. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
  2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
  3. Resubmittal Review: Allow 15 days for review of each resubmittal.
  4. Sequential Review: Where sequential review of submittals by Architect's consultants, Owner, or other parties is indicated, allow 21 days for initial review of each submittal.
  5. Concurrent Consultant Review: Where the Contract Documents indicate that submittals may be transmitted simultaneously to Architect and to Architect's consultants, allow 15 days for review of each submittal. Submittal will be returned to Architect before being returned to Contractor.
- E. Identification: Place a permanent label or title block on each submittal for identification.
1. Indicate name of firm or entity that prepared each submittal on label or title block.
  2. Provide a space approximately 6 by 8 inches on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
  3. Include the following information on label for processing and recording action taken:
    - a. Project name.
    - b. Date.
    - c. Name and address of Architect and Construction Manager.
    - d. Name and address of Contractor.
    - e. Name and address of subcontractor.
    - f. Name and address of supplier.
    - g. Name of manufacturer.
    - h. Submittal number or other unique identifier, including revision identifier.
      - 1) Submittal number shall use Specification Section number followed by a decimal point and then a sequential number (e.g., 06100.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., 06100.01.A).
- i. Number and title of appropriate Specification Section.
  - j. Drawing number and detail references, as appropriate.
  - k. Location(s) where product is to be installed, as appropriate.
  - l. Other necessary identification.

- F. Deviations: Encircle or otherwise specifically identify deviations from the Contract Documents on submittals.
- G. Additional Copies: Unless additional copies are required for final submittal, and unless Architect observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.
  - 1. Submit one copy of submittal to concurrent reviewer in addition to specified number of copies to Architect.
  - 2. Additional copies submitted for maintenance manuals will be marked with action taken and will be returned.
- H. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will return submittals, without review, received from sources other than Contractor.
  - 1. Transmittal Form: Provide locations on form for the following information:
    - a. Project name.
    - b. Date.
    - c. Destination (To:).
    - d. Source (From:).
    - e. Names of subcontractor, manufacturer, and supplier.
    - f. Category and type of submittal.
    - g. Submittal purpose and description.
    - h. Specification Section number and title.
    - i. Drawing number and detail references, as appropriate.
    - j. Transmittal number, numbered consecutively.
    - k. Submittal and transmittal distribution record.
    - l. Remarks.
    - m. Signature of transmitter.
  - 2. On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same label information as related submittal.
- I. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
  - 1. Note date and content of previous submittal.
  - 2. Note date and content of revision in label or title block and clearly indicate extent of revision.
  - 3. Resubmit submittals until they are marked "APPROVED."
- J. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- K. Use for Construction: Use only final submittals with mark indicating "APPROVED" by Architect.

## 1.5 CONTRACTOR'S USE OF ARCHITECT'S CAD FILES

- A. General: At Contractor's written request, copies of Architect's CAD files will be provided to Contractor for Contractor's use in connection with Project, subject to the following conditions:

## PART 2 - PRODUCTS

### 2.1 ACTION SUBMITTALS

- A. General: Prepare and submit Action Submittals required by individual Specification Sections.
  - 1. Submit electronic submittals directly to extranet specifically established for Project.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
  - 1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
  - 2. Mark each copy of each submittal to show which products and options are applicable.
  - 3. Include the following information, as applicable:
    - a. Manufacturer's written recommendations.
    - b. Manufacturer's product specifications.
    - c. Manufacturer's installation instructions.
    - d. Standard color charts.
    - e. Manufacturer's catalog cuts.
    - f. Wiring diagrams showing factory-installed wiring.
    - g. Printed performance curves.
    - h. Operational range diagrams.
    - i. Mill reports.
    - j. Standard product operation and maintenance manuals.
    - k. Compliance with specified referenced standards.
    - l. Testing by recognized testing agency.
    - m. Application of testing agency labels and seals.
    - n. Notation of coordination requirements.
  - 4. Submit Product Data before or concurrent with Samples.
  - 5. Number of Copies: Submit three copies of Product Data, unless otherwise indicated. Architect will return two copies. Mark up and retain one returned copy as a Project Record Document.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
  - 1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
    - a. Dimensions.
    - b. Identification of products.



- c. Fabrication and installation drawings.
  - d. Roughing-in and setting diagrams.
  - e. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
  - f. Shopwork manufacturing instructions.
  - g. Templates and patterns.
  - h. Schedules.
  - i. Design calculations.
  - j. Compliance with specified standards.
  - k. Notation of coordination requirements.
  - l. Notation of dimensions established by field measurement.
  - m. Relationship to adjoining construction clearly indicated.
  - n. Seal and signature of professional engineer if specified.
  - o. Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.
2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 30 by 40 inches.
  3. Number of Copies: Submit three opaque copies of each submittal, unless copies are required for operation and maintenance manuals. Submit five copies where copies are required for operation and maintenance manuals. Architect will retain two copies; remainder will be returned.
- D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
  2. Identification: Attach label on unexposed side of Samples that includes the following:
    - a. Generic description of Sample.
    - b. Product name and name of manufacturer.
    - c. Sample source.
    - d. Number and title of appropriate Specification Section.
  3. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
- E. Product Schedule or List: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
1. Type of product. Include unique identifier for each product.
  2. Number and name of room or space.
  3. Location within room or space.
  4. Number of Copies: Submit three copies of product schedule or list, unless otherwise indicated. Architect will return two copies.
    - a. Mark up and retain one returned copy as a Project Record Document.

- F. Submittals Schedule: Comply with requirements specified in Division 1 Section "Construction Progress Documentation."
- G. Application for Payment: Comply with requirements specified in Division 1 Section "Payment Procedures."
- H. Schedule of Values: Comply with requirements specified in Division 1 Section "Payment Procedures."
- I. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Use CSI Form 1.5A. Include the following information in tabular form:
  - 1. Name, address, and telephone number of entity performing subcontract or supplying products.
  - 2. Number and title of related Specification Section(s) covered by subcontract.
  - 3. Drawing number and detail references, as appropriate, covered by subcontract.
  - 4. Number of Copies: Submit three copies of subcontractor list, unless otherwise indicated. Architect will return two copies.
    - a. Mark up and retain one returned copy as a Project Record Document.

## 2.2 INFORMATIONAL SUBMITTALS

- A. General: Prepare and submit Informational Submittals required by other Specification Sections.
  - 1. Number of Copies: Submit two copies of each submittal, unless otherwise indicated. Architect will not return copies.
  - 2. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
  - 3. Test and Inspection Reports: Comply with requirements specified in Division 1 Section "Quality Requirements."
- B. Coordination Drawings: Comply with requirements specified in Division 1 Section "Project Management and Coordination."
- C. Contractor's Construction Schedule: Comply with requirements specified in Division 1 Section "Construction Progress Documentation."
- D. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
- E. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification (WPS) and Procedure Qualification Record (PQR) on AWS forms. Include names of firms and personnel certified.

- F. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- G. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- H. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- I. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- J. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- K. Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- L. Research/Evaluation Reports: Prepare written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
  - 1. Name of evaluation organization.
  - 2. Date of evaluation.
  - 3. Time period when report is in effect.
  - 4. Product and manufacturers' names.
  - 5. Description of product.
  - 6. Test procedures and results.
  - 7. Limitations of use.
- M. Schedule of Tests and Inspections: Comply with requirements specified in Division 1 Section "Quality Requirements."
- N. Preconstruction Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
- O. Compatibility Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- P. Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.

- Q. Maintenance Data: Prepare written and graphic instructions and procedures for operation and normal maintenance of products and equipment. Comply with requirements specified in Division 1 Section "Operation and Maintenance Data."
- R. Design Data: Prepare written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.
- S. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer. Include the following, as applicable:
1. Preparation of substrates.
  2. Required substrate tolerances.
  3. Sequence of installation or erection.
  4. Required installation tolerances.
  5. Required adjustments.
  6. Recommendations for cleaning and protection.
- T. Manufacturer's Field Reports: Prepare written information documenting factory-authorized service representative's tests and inspections. Include the following, as applicable:
1. Name, address, and telephone number of factory-authorized service representative making report.
  2. Statement on condition of substrates and their acceptability for installation of product.
  3. Statement that products at Project site comply with requirements.
  4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
  5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
  6. Statement whether conditions, products, and installation will affect warranty.
  7. Other required items indicated in individual Specification Sections.
- U. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.
- V. Construction Photographs: Comply with requirements specified in Division 1 Section "Photographic Documentation."
- W. Material Safety Data Sheets (MSDSs): Submit information directly to Owner; do not submit to Architect.
1. Architect will not review submittals that include MSDSs and will return the entire submittal for resubmittal.

## 2.3 DELEGATED DESIGN

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

## PART 3 - EXECUTION

### 3.1 CONTRACTOR'S REVIEW

- A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.
- B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

### 3.2 ARCHITECT'S ACTION

- A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or modifications required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:

APPROVED (APP): Submittal is approved as is, proceed with work without any exception.

MAKE CORRECTIONS NOTED (MCN): Submittal is approved with some revisions, proceed with work with caution and make correction(s) as noted, revise and resubmit corrected submittal for record.

REVISE AND RESUBMIT (R&R): Submittal is not approved and must be revised

and resubmitted for approval, do not proceed with work.

REJECTED (REJ): Submittal is rejected outright without further review and a new submittal is required, do not proceed with work.

- C. Informational Submittals: Architect will forward each submittal to appropriate party.
- D. Partial submittals are not acceptable, will be considered nonresponsive, and will be returned without review.
- E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION 013300

## SECTION 014000 - QUALITY REQUIREMENTS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspection services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
  - 1. Specific quality-assurance and quality-control requirements for individual work results are specified in their respective Specification Sections. Requirements in individual Sections may also cover production of standard products.
  - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and quality-control procedures that facilitate compliance with the Contract Document requirements.
  - 3. Requirements for Contractor to provide quality-assurance and quality-control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
  - 4. Specific test and inspection requirements are not specified in this Section.
- C. Related Requirements:
  - 1. Section 012100 "Allowances" for testing and inspection allowances.

#### 1.3 DEFINITIONS

- A. Experienced: When used with an entity or individual, "experienced" unless otherwise further described means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.
- B. Field Quality-Control Tests: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- C. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, assembly, and similar operations.

1. Use of trade-specific terminology in referring to a trade or entity does not require that certain construction activities be performed by accredited or unionized individuals, or that requirements specified apply exclusively to specific trade(s).
- D. Mockups: Full-size physical assemblies that are constructed on-site either as freestanding temporary built elements or as part of permanent construction. Mockups are constructed to verify selections made under Sample submittals; to demonstrate aesthetic effects and qualities of materials and execution; to review coordination, testing, or operation; to show interface between dissimilar materials; and to demonstrate compliance with specified installation tolerances. Mockups are not Samples. Unless otherwise indicated, approved mockups establish the standard by which the Work will be judged.
1. Laboratory Mockups: Full-size physical assemblies constructed and tested at testing facility to verify performance characteristics.
  2. Integrated Exterior Mockups: Mockups of the exterior envelope constructed on-site as freestanding temporary built elements or as part of permanent construction, consisting of multiple products, assemblies, and subassemblies.
  3. Room Mockups: Mockups of typical interior spaces complete with wall, floor, and ceiling finishes; doors; windows; millwork; casework; specialties; furnishings and equipment; and lighting.
- E. Preconstruction Testing: Tests and inspections performed specifically for Project before products and materials are incorporated into the Work, to verify performance or compliance with specified criteria.
- F. Product Tests: Tests and inspections that are performed by a nationally recognized testing laboratory (NRTL) according to 29 CFR 1910.7, by a testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program (NVLAP), or by a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.
- G. Source Quality-Control Tests: Tests and inspections that are performed at the source; for example, plant, mill, factory, or shop.
- H. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- I. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- J. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Contractor's quality-control services do not include contract administration activities performed by Architect[ **or Construction Manager**].



#### 1.4 DELEGATED-DESIGN SERVICES

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
  - 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.

#### 1.5 CONFLICTING REQUIREMENTS

- A. Conflicting Standards and Other Requirements: If compliance with two or more standards or requirements are specified and the standards or requirements establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Architect for direction before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

#### 1.6 ACTION SUBMITTALS.

- A. Shop Drawings: For integrated exterior and laboratory mockups.
  - 1. Include plans, sections, and elevations, indicating materials and size of mockup construction.
  - 2. Indicate manufacturer and model number of individual components.
  - 3. Provide axonometric drawings for conditions difficult to illustrate in two dimensions.
- B. Delegated-Design Services Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit a statement signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional, indicating that the products and systems are in compliance with performance and design criteria indicated. Include list of codes, loads, and other factors used in performing these services.

#### 1.7 INFORMATIONAL SUBMITTALS

- A. Contractor's Quality-Control Plan: For quality-assurance and quality-control activities and responsibilities.
- B. Qualification Data: For Contractor's quality-control personnel.

- C. Contractor's Statement of Responsibility: When required by authorities having jurisdiction, submit copy of written statement of responsibility submitted to authorities having jurisdiction before starting work on the following systems:
    - 1. Seismic-force-resisting system, designated seismic system, or component listed in the Statement of Special Inspections.
    - 2. Main wind-force-resisting system or a wind-resisting component listed in the Statement of Special Inspections.
  - D. Testing Agency Qualifications: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
  - E. Schedule of Tests and Inspections: Prepare in tabular form and include the following:
    - 1. Specification Section number and title.
    - 2. Entity responsible for performing tests and inspections.
    - 3. Description of test and inspection.
    - 4. Identification of applicable standards.
    - 5. Identification of test and inspection methods.
    - 6. Number of tests and inspections required.
    - 7. Time schedule or time span for tests and inspections.
    - 8. Requirements for obtaining samples.
    - 9. Unique characteristics of each quality-control service.
  - F. Reports: Prepare and submit certified written reports and documents as specified.
  - G. Permits, Licenses, and Certificates: For Owner's record, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents established for compliance with standards and regulations bearing on performance of the Work.
- 1.8 CONTRACTOR'S QUALITY-CONTROL PLAN
- A. Quality-Control Plan, General: Submit quality-control plan within 10 days of Notice to Proceed, and not less than five days prior to preconstruction conference. Submit in format acceptable to Architect. Identify personnel, procedures, controls, instructions, tests, records, and forms to be used to carry out Contractor's quality-assurance and quality-control responsibilities. Coordinate with Contractor's Construction Schedule.
  - B. Quality-Control Personnel Qualifications: Engage qualified personnel trained and experienced in managing and executing quality-assurance and quality-control procedures similar in nature and extent to those required for Project.
    - 1. Project quality-control manager may also serve as Project superintendent.
  - C. Submittal Procedure: Describe procedures for ensuring compliance with requirements through review and management of submittal process. Indicate qualifications of personnel responsible for submittal review.

- D. Testing and Inspection: In quality-control plan, include a comprehensive schedule of Work requiring testing or inspection, including the following:
  - 1. Contractor-performed tests and inspections including Subcontractor-performed tests and inspections. Include required tests and inspections and Contractor-elected tests and inspections. Distinguish source quality-control tests and inspections from field quality-control tests and inspections.
  - 2. Special inspections required by authorities having jurisdiction and indicated on the Statement of Special Inspections.
  - 3. Owner-performed tests and inspections indicated in the Contract Documents.
- E. Continuous Inspection of Workmanship: Describe process for continuous inspection during construction to identify and correct deficiencies in workmanship in addition to testing and inspection specified. Indicate types of corrective actions to be required to bring work into compliance with standards of workmanship established by Contract requirements and approved mockups.
- F. Monitoring and Documentation: Maintain testing and inspection reports including log of approved and rejected results. Include work Architect has indicated as nonconforming or defective. Indicate corrective actions taken to bring nonconforming work into compliance with requirements. Comply with requirements of authorities having jurisdiction.

#### 1.9 REPORTS AND DOCUMENTS

- A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:
  - 1. Date of issue.
  - 2. Project title and number.
  - 3. Name, address, telephone number, and email address of testing agency.
  - 4. Dates and locations of samples and tests or inspections.
  - 5. Names of individuals making tests and inspections.
  - 6. Description of the Work and test and inspection method.
  - 7. Identification of product and Specification Section.
  - 8. Complete test or inspection data.
  - 9. Test and inspection results and an interpretation of test results.
  - 10. Record of temperature and weather conditions at time of sample taking and testing and inspection.
  - 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
  - 12. Name and signature of laboratory inspector.
  - 13. Recommendations on retesting and reinspecting.
- B. Manufacturer's Technical Representative's Field Reports: Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:
  - 1. Name, address, telephone number, and email address of technical representative making report.
  - 2. Statement on condition of substrates and their acceptability for installation of product.

3. Statement that products at Project site comply with requirements.
  4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
  5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
  6. Statement whether conditions, products, and installation will affect warranty.
  7. Other required items indicated in individual Specification Sections.
- C. Factory-Authorized Service Representative's Reports: Prepare written information documenting manufacturer's factory-authorized service representative's tests and inspections specified in other Sections. Include the following:
1. Name, address, telephone number, and email address of factory-authorized service representative making report.
  2. Statement that equipment complies with requirements.
  3. Results of operational and other tests and a statement of whether observed performance complies with requirements.
  4. Statement whether conditions, products, and installation will affect warranty.
  5. Other required items indicated in individual Specification Sections.

#### 1.10 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units. As applicable, procure products from manufacturers able to meet qualification requirements, warranty requirements, and technical or factory-authorized service representative requirements.
- C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. Installer Qualifications: A firm or individual experienced in installing, erecting, applying, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar in material, design, and extent to those indicated for this Project.
- F. Specialists: Certain Specification Sections require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.

1. Requirements of authorities having jurisdiction shall supersede requirements for specialists.
- G. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspection indicated, as documented according to ASTM E 329; and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.
- H. Manufacturer's Technical Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- I. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- J. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:
  1. Contractor responsibilities include the following:
    - a. Provide test specimens representative of proposed products and construction.
    - b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
    - c. Provide sizes and configurations of test assemblies, mockups, and laboratory mockups to adequately demonstrate capability of products to comply with performance requirements.
    - d. Build site-assembled test assemblies and mockups using installers who will perform same tasks for Project.
    - e. Build laboratory mockups at testing facility using personnel, products, and methods of construction indicated for the completed Work.
    - f. When testing is complete, remove test specimens and test assemblies, mockups, and laboratory mockups; do not reuse products on Project.
  2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.
- K. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
  1. Build mockups of size indicated.
  2. Build mockups in location indicated or, if not indicated, as directed by Architect.
  3. Notify Architect seven days in advance of dates and times when mockups will be constructed.

4. Employ supervisory personnel who will oversee mockup construction. Employ workers that will be employed to perform same tasks during the construction at Project.
  5. Demonstrate the proposed range of aesthetic effects and workmanship.
  6. Obtain Architect's approval of mockups before starting corresponding work, fabrication, or construction.
    - a. Allow seven days for initial review and each re-review of each mockup.
  7. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
  8. Demolish and remove mockups when directed unless otherwise indicated.
- L. Integrated Exterior Mockups: Construct integrated exterior mockup according to approved Shop Drawings. Coordinate installation of exterior envelope materials and products for which mockups are required in individual Specification Sections, along with supporting materials. Comply with requirements in "Mockups" Paragraph.
- M. Room Mockups: Construct room mockups according to approved Shop Drawings incorporating required materials and assemblies, finished according to requirements. Provide required lighting and additional lighting where required to enable Architect to evaluate quality of the Work. Comply with requirements in "Mockups" Paragraph.
- N. Provide room mockups of the following rooms:
1. To be determined
- O. Laboratory Mockups: Comply with requirements of preconstruction testing and those specified in individual Specification Sections.
- 1.11 QUALITY CONTROL
- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspection they are engaged to perform.
  2. Payment for these services will be made from testing and inspection allowances, as authorized by Change Orders.
  3. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor.
- B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities, whether specified or not, to verify and document that the Work complies with requirements.
1. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
  2. Engage a qualified testing agency to perform quality-control services.

- a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
  3. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspection will be performed.
  4. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
  5. Testing and inspection requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
  6. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- D. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
  2. Determine the locations from which test samples will be taken and in which in-situ tests are conducted.
  3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
  4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
  5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
  6. Do not perform duties of Contractor.
- E. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Section 013300 "Submittal Procedures."
- F. Manufacturer's Technical Services: Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.
- G. Associated Contractor Services: Cooperate with agencies and representatives performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
  2. Incidental labor and facilities necessary to facilitate tests and inspections.
  3. Adequate quantities of representative samples of materials that require testing and inspection. Assist agency in obtaining samples.

4. Facilities for storage and field curing of test samples.
5. Delivery of samples to testing agencies.
6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
7. Security and protection for samples and for testing and inspection equipment at Project site.

H. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspection.

1. Schedule times for tests, inspections, obtaining samples, and similar activities.

#### 1.12 SPECIAL TESTS AND INSPECTIONS

A. Special Tests and Inspections: Owner will engage a qualified testing agency to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner, as indicated in the Statement of Special Inspections attached to this Section, and as follows:

1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviewing the completeness and adequacy of those procedures to perform the Work.
2. Notifying Architect and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
3. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect with copy to Contractor and to authorities having jurisdiction.
4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
6. Retesting and reinspecting corrected work.

#### PART 2 - PRODUCTS (Not Used)

#### PART 3 - EXECUTION

##### 3.1 TEST AND INSPECTION LOG

A. Test and Inspection Log: Prepare a record of tests and inspections. Include the following:

1. Date test or inspection was conducted.
2. Description of the Work tested or inspected.
3. Date test or inspection results were transmitted to Architect.
4. Identification of testing agency or special inspector conducting test or inspection.

B. Maintain log at Project site. Post changes and revisions as they occur. Provide access to test and inspection log for Architect's reference during normal working hours.



1. Submit log at Project closeout as part of Project Record Documents.

### 3.2 REPAIR AND PROTECTION

- A. General: On completion of testing, inspection, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
  1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Section 017300 "Execution."
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

## SECTION 016000 - PRODUCT REQUIREMENTS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.
- B. Related Requirements:
  - 1. Section 012100 "Allowances" for products selected under an allowance.

#### 1.3 DEFINITIONS

- A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
  - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
  - 2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
  - 3. Comparable Product: Product that is demonstrated and approved by Architect through submittal process to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Basis-of-Design Product Specification: A specification in which a single manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation. In addition to the basis-of-design product description, product attributes and characteristics may be listed to establish the significant qualities related to type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other special features and requirements for purposes of evaluating comparable products of additional manufacturers named in the specification.
- C. Subject to Compliance with Requirements: Where the phrase "Subject to compliance with requirements" introduces a product selection procedure in an individual Specification Section,

provide products qualified under the specified product procedure. In the event that a named product or product by a named manufacturer does not meet the other requirements of the specifications, select another named product or product from another named manufacturer that does meet the requirements of the specifications. Submit a comparable product request, if applicable.

#### 1.4 ACTION SUBMITTALS

- A. Comparable Product Request Submittal: Submit request for consideration of each comparable product. Identify basis-of-design product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
  - 1. Include data to indicate compliance with the requirements specified in "Comparable Products" Article.
  - 2. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven days of receipt of a comparable product request. Architect will notify Contractor of approval or rejection of proposed comparable product request within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
    - a. Form of Architect's Approval of Submittal: As specified in Section 013300 "Submittal Procedures."
    - b. Use product specified if Architect does not issue a decision on use of a comparable product request within time allocated.
- B. Basis-of-Design Product Specification Submittal: Comply with requirements in Section 013300 "Submittal Procedures." Show compliance with requirements.

#### 1.5 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.
- B. Identification of Products: Except for required labels and operating data, do not attach or imprint manufacturer or product names or trademarks on exposed surfaces of products or equipment that will be exposed to view in occupied spaces or on the exterior.
  - 1. Labels: Locate required product labels and stamps on a concealed surface, or, where required for observation following installation, on a visually accessible surface that is not conspicuous.
  - 2. Equipment Nameplates: Provide a permanent nameplate on each item of service-connected or power-operated equipment. Locate on a visually accessible but inconspicuous surface. Include information essential for operation, including the following:
    - a. Name of product and manufacturer.
    - b. Model and serial number.
    - c. Capacity.

- d. Speed.
  - e. Ratings.
3. See individual identification sections in Divisions 21, 22, 23, and 26 for additional identification requirements.

#### 1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.
- B. Delivery and Handling:
  - 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
  - 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
  - 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
  - 4. Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and properly protected.
- C. Storage:
  - 1. Store products to allow for inspection and measurement of quantity or counting of units.
  - 2. Store materials in a manner that will not endanger Project structure.
  - 3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
  - 4. Protect foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
  - 5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
  - 6. Protect stored products from damage and liquids from freezing.
  - 7. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.

#### 1.7 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
  - 1. Manufacturer's Warranty: Written warranty furnished by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.

2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.
1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
  2. Specified Form: When specified forms are included with the Specifications, prepare a written document using indicated form properly executed.
  3. See other Sections for specific content requirements and particular requirements for submitting special warranties.
- C. Submittal Time: Comply with requirements in Section 017700 "Closeout Procedures."

## PART 2 - PRODUCTS

### 2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.
1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
  2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
  3. Owner reserves the right to limit selection to products with warranties meeting requirements of the Contract Documents.
  4. Where products are accompanied by the term "as selected," Architect will make selection.
  5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
  6. Or Equal: For products specified by name and accompanied by the term "or equal," or "or approved equal," or "or approved," comply with requirements in "Comparable Products" Article to obtain approval for use of an unnamed product.
    - a. Submit additional documentation required by Architect in order to establish equivalency of proposed products. Evaluation of "or equal" product status is by the Architect, whose determination is final.
- B. Product Selection Procedures:
1. Sole Product: Where Specifications name a single manufacturer and product, provide the named product that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
    - a. Sole product may be indicated by the phrase: "Subject to compliance with requirements, provide the following: ..."

2. Sole Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
    - a. Sole manufacturer/source may be indicated by the phrase: "Subject to compliance with requirements, provide products by the following: ..."
  3. Limited List of Products: Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered unless otherwise indicated.
    - a. Limited list of products may be indicated by the phrase: "Subject to compliance with requirements, provide one of the following: ..."
  4. Limited List of Manufacturers: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered unless otherwise indicated.
    - a. Limited list of manufacturers is indicated by the phrase: "Subject to compliance with requirements, provide products by one of the following: ..."
  5. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one of the other named manufacturers.
    - a. For approval of products by unnamed manufacturers, comply with requirements in Section 012500 "Substitution Procedures" for substitutions for convenience.
- C. Visual Matching Specification: Where Specifications require "match Architect's sample," provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.
1. If no product available within specified category matches and complies with other specified requirements, comply with requirements in Section 012500 "Substitution Procedures" for proposal of product.
- D. Visual Selection Specification: Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or similar phrase, select a product that complies with requirements. Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

## 2.2 COMPARABLE PRODUCTS

- A. Conditions for Consideration of Comparable Products: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with these requirements:
1. Evidence that proposed product does not require revisions to the Contract Documents, is consistent with the Contract Documents, will produce the indicated results, and is compatible with other portions of the Work. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant product qualities include attributes such as type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other specific features and requirements.
  2. Evidence that proposed product provides specified warranty.
  3. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
  4. Samples, if requested.
- B. Submittal Requirements: Approval by the Architect of Contractor's request for use of comparable product is not intended to satisfy other submittal requirements. Comply with specified submittal requirements.

PART 3 - EXECUTION (Not Used)

END OF SECTION 016000

## SECTION 017300 – EXECUTION REQUIREMENTS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:

1. Construction layout.
2. Field engineering and surveying.
3. Installation of the Work.
4. Cutting and patching.
5. Coordination of Owner-installed products.
6. Progress cleaning.
7. Starting and adjusting.
8. Protection of installed construction.

- B. Related Requirements:

1. Section 011000 "Summary" for limits on use of Project site.
2. Section 013300 "Submittal Procedures" for submitting surveys.
3. Section 017700 "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, replacing defective work, and final cleaning.

#### 1.3 DEFINITIONS

- A. Cutting: Removal of in-place construction necessary to permit installation or performance of subsequent work.
- B. Patching: Fitting and repair work required to restore construction to original conditions after installation of subsequent work.

#### 1.4 PREINSTALLATION MEETINGS

- A. Cutting and Patching Conference: Conduct conference at Project site.
  1. Prior to commencing work requiring cutting and patching, review extent of cutting and patching anticipated and examine procedures for ensuring satisfactory result from cutting



and patching work. Require representatives of each entity directly concerned with cutting and patching to attend, including the following:

- a. Contractor's superintendent.
  - b. Trade supervisor responsible for cutting operations.
  - c. Trade supervisor(s) responsible for patching of each type of substrate.
  - d. Mechanical, electrical, and utilities subcontractors' supervisors, to the extent each trade is affecting by cutting and patching operations.
2. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

#### 1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For professional engineer.
- B. Certificates: Submit certificate signed by professional engineer certifying that location and elevation of improvements comply with requirements.
- C. Cutting and Patching Plan: Submit plan describing procedures at least 10 days prior to the time cutting and patching will be performed. Include the following information:
  1. Extent: Describe reason for and extent of each occurrence of cutting and patching.
  2. Changes to In-Place Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building appearance and other significant visual elements.
  3. Products: List products to be used for patching and firms or entities that will perform patching work.
  4. Dates: Indicate when cutting and patching will be performed.
  5. Utilities and Mechanical and Electrical Systems: List services and systems that cutting and patching procedures will disturb or affect. List services and systems that will be relocated and those that will be temporarily out of service. Indicate length of time permanent services and systems will be disrupted.
    - a. Include description of provisions for temporary services and systems during interruption of permanent services and systems.
- D. Landfill Receipts: Submit copy of receipts issued by a landfill facility, licensed to accept hazardous materials, for hazardous waste disposal.

#### 1.6 QUALITY ASSURANCE

- A. Land Surveyor Qualifications: A professional land surveyor who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing land-surveying services of the kind indicated.
- B. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.

1. Structural Elements: When cutting and patching structural elements, notify Architect of locations and details of cutting and await directions from Architect before proceeding. Shore, brace, and support structural elements during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection.
  2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operational elements include the following:
    - a. Primary operational systems and equipment.
    - b. Fire separation assemblies.
    - c. Air or smoke barriers.
    - d. Fire-suppression systems.
    - e. Plumbing piping systems.
    - f. Mechanical systems piping and ducts.
    - g. Control systems.
    - h. Communication systems.
    - i. Fire-detection and -alarm systems.
    - j. Conveying systems.
    - k. Electrical wiring systems.
    - l. Operating systems of special construction.
  3. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety. Other construction elements include but are not limited to the following:
    - a. Water, moisture, or vapor barriers.
    - b. Membranes and flashings.
    - c. Exterior curtain-wall construction.
    - d. Sprayed fire-resistive material.
    - e. Equipment supports.
    - f. Piping, ductwork, vessels, and equipment.
    - g. Noise- and vibration-control elements and systems.
  4. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
- C. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of products and equipment.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.
- B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
  - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to Architect for the visual and functional performance of in-place materials.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.
  - 1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; underground electrical services; and other utilities.
  - 2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
- B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
  - 1. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
  - 2. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
  - 3. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
- C. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
  - 1. Description of the Work.
  - 2. List of detrimental conditions, including substrates.
  - 3. List of unacceptable installation tolerances.
  - 4. Recommended corrections.

- D. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

### 3.2 PREPARATION

- A. Existing Utility Information: Furnish information to Owner that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of Contractor, submit a request for information to Architect according to requirements in Section 013100 "Project Management and Coordination."

### 3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect promptly.
- B. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and rim and invert elevations.
- C. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.
- D. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect.

### 3.4 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
  - 1. Make vertical work plumb and make horizontal work level.

2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
  3. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
  4. Maintain minimum headroom clearance of 96 inches in occupied spaces and 90 inches in unoccupied spaces.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on site and placement in permanent locations.
- F. Tools and Equipment: Where possible, select tools or equipment that minimize production of excessive noise levels.
- G. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other portions of the Work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- H. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.
1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
  2. Allow for building movement, including thermal expansion and contraction.
  3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- I. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- J. Repair or remove and replace damaged, defective, or nonconforming Work.
1. Comply with Section 017700 "Closeout Procedures" for repairing or removing and replacing defective Work.

### 3.5 CUTTING AND PATCHING

- A. Cutting and Patching, General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
  - 1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during installation or cutting and patching operations, by methods and with materials so as not to void existing warranties.
- C. Temporary Support: Provide temporary support of work to be cut.
- D. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- E. Adjacent Occupied Areas: Where interference with use of adjoining areas or interruption of free passage to adjoining areas is unavoidable, coordinate cutting and patching according to requirements in Section 011000 "Summary."
- F. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to prevent interruption to occupied areas.
- G. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
  - 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
  - 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
  - 3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
  - 4. Excavating and Backfilling: Comply with requirements in applicable Sections where required by cutting and patching operations.
  - 5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
  - 6. Proceed with patching after construction operations requiring cutting are complete.
- H. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other work. Patch with durable seams that are as invisible as practicable. Provide materials and comply with installation requirements specified in other Sections, where applicable.

1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.
  2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will minimize evidence of patching and refinishing.
    - a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
    - b. Restore damaged pipe covering to its original condition.
  3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
    - a. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.
  4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
  5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition and ensures thermal and moisture integrity of building enclosure.
- I. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

### 3.6 OWNER-INSTALLED PRODUCTS

- A. Site Access: Provide access to Project site for Owner's construction personnel.
- B. Coordination: Coordinate construction and operations of the Work with work performed by Owner's construction personnel.
  1. Construction Schedule: Inform Owner of Contractor's preferred construction schedule for Owner's portion of the Work. Adjust construction schedule based on a mutually agreeable timetable. Notify Owner if changes to schedule are required due to differences in actual construction progress.
  2. Preinstallation Conferences: Include Owner's construction personnel at preinstallation conferences covering portions of the Work that are to receive Owner's work. Attend preinstallation conferences conducted by Owner's construction personnel if portions of the Work depend on Owner's construction.

### 3.7 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.

1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
  2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F.
  3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
    - a. Use containers intended for holding waste materials of type to be stored.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
1. Remove liquid spills promptly.
  2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Section 015000 "Temporary Facilities and Controls."
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Limiting Exposures: Supervise construction operations to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.
- 3.8 STARTING AND ADJUSTING
- A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.



- B. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.
- C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- D. Manufacturer's Field Service: Comply with qualification requirements in Section 014000 "Quality Requirements."

3.9 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Protection of Existing Items: Provide protection and ensure that existing items to remain undisturbed by construction are maintained in condition that existed at commencement of the Work.
- C. Comply with manufacturer's written instructions for temperature and relative humidity.

END OF SECTION 017300

## SECTION 017700 - CLOSEOUT PROCEDURES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
  - 1. Substantial Completion procedures.
  - 2. Final completion procedures.
  - 3. Warranties.
  - 4. Final cleaning.
  - 5. Repair of the Work.

#### 1.3 ACTION SUBMITTALS

- A. Product Data: For each type of cleaning agent.
- B. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.
- C. Certified List of Incomplete Items: Final submittal at final completion.

#### 1.4 CLOSEOUT SUBMITTALS

- A. Certificates of Release: From authorities having jurisdiction.
- B. Certificate of Insurance: For continuing coverage.
- C. Field Report: For pest control inspection.

#### 1.5 MAINTENANCE MATERIAL SUBMITTALS

- A. Schedule of Maintenance Material Items: For maintenance material submittal items specified in other Sections.

## 1.6 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete.
- B. Submittals Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
  - 1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
  - 2. Submit closeout submittals specified in other Division 01 Sections, including project record documents, operation and maintenance manuals, damage or settlement surveys, property surveys, and similar final record information.
  - 3. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
  - 4. Submit maintenance material submittals specified in individual Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Architect. Label with manufacturer's name and model number.
    - a. Schedule of Maintenance Material Items: Prepare and submit schedule of maintenance material submittal items, including name and quantity of each item and name and number of related Specification Section. Obtain Architect's signature for receipt of submittals.
  - 5. Submit testing, adjusting, and balancing records.
  - 6. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
- C. Procedures Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
  - 1. Advise Owner of pending insurance changeover requirements.
  - 2. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
  - 3. Complete startup and testing of systems and equipment.
  - 4. Perform preventive maintenance on equipment used prior to Substantial Completion.
  - 5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training video recordings specified in Section 017900 "Demonstration and Training."
  - 6. Advise Owner of changeover in utility services.
  - 7. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
  - 8. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
  - 9. Complete final cleaning requirements.

10. Touch up paint and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of 10 days prior to date the Work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.
1. Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
  2. Results of completed inspection will form the basis of requirements for final completion.

#### 1.7 FINAL COMPLETION PROCEDURES

- A. Submittals Prior to Final Completion: Before requesting final inspection for determining final completion, complete the following:
1. Submit a final Application for Payment according to Section 012900 "Payment Procedures."
  2. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
  3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
  4. Submit pest-control final inspection report.
  5. Submit final completion photographic documentation.
- B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
1. Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

#### 1.8 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
1. Organize list of spaces in sequential order, proceeding from lowest floor to highest floor.
  2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.

3. Include the following information at the top of each page:
  - a. Project name.
  - b. Date.
  - c. Name of Architect.
  - d. Name of Contractor.
  - e. Page number.
4. Submit list of incomplete items in the following format:
  - a. MS Excel electronic file. Architect will return annotated file.

#### 1.9 SUBMITTAL OF PROJECT WARRANTIES

- A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where warranties are indicated to commence on dates other than date of Substantial Completion, or when delay in submittal of warranties might limit Owner's rights under warranty.
- B. Partial Occupancy: Submit properly executed warranties within 15 days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.
- C. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.
- D. Warranty Electronic File: Provide warranties and bonds in PDF format. Assemble complete warranty and bond submittal package into a single electronic PDF file with bookmarks enabling navigation to each item. Provide bookmarked table of contents at beginning of document.
  1. Submit by email to Architect.
- E. Warranties in Paper Form:
  1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
  2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
  3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
- F. Provide additional copies of each warranty to include in operation and maintenance manuals.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

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

## PART 3 - EXECUTION

### 3.1 FINAL CLEANING

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
  - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:
    - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
    - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
    - c. Rake grounds that are not planted, mulched, or paved to a smooth, even-textured surface.
    - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
    - e. Remove snow and ice to provide safe access to building.
    - f. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
    - g. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
    - h. Sweep concrete floors broom clean in unoccupied spaces.
    - i. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain.
    - j. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.
    - k. Remove labels that are not permanent.

- l. Wipe surfaces of mechanical and electrical equipment, elevator equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
- m. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
- n. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.

### 3.2 REPAIR OF THE WORK

- A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.
- B. Repair, or remove and replace, defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.
  1. Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.
  2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that already show evidence of repair or restoration.
    - a. Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates. Remove paint applied to required labels and identification.
  3. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.
  4. Replace burned-out bulbs, bulbs noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.

END OF SECTION 017700

## SECTION 039300 - CONCRETE REHABILITATION

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This Section includes the following:
  - 1. Removal of deteriorated concrete and subsequent patching and rebuilding.

#### 1.3 UNIT PRICES

- A. Unit prices include costs of field quality-control testing required by the Work for which the unit price applies.
- B. Concrete Removal and Patching or Rebuilding: Work will be paid for by the **cubic foot** computed on the basis of rectangular solid shapes approximating the actual shape of concrete removed and replaced with average depths, widths, and lengths, measured to the nearest **inch**.
  - 1. Reinforcing bar replacement will be paid for separately by the **pound** of replacement steel with welded and mechanical splices paid for by the unit.

#### 1.4 REFERENCES

- A. ACI/ICRI 2003 Concrete Repair Manual
- B. ACI 222R Corrosion of Metals in Concrete
- C. ASTM C 309 Curing Compounds for Concrete
- D. ASTM B418-95a Standard Specification for Cast and Wrought Galvanic Zinc Anodes
- E. ASTM A82-97a Specification for Plain Steel Wire for Concrete Reinforcement
- F. ASTM C-881, "Specification for Epoxy Resin Base Bonding Systems for Concrete"
- G. ICRI Technical Guideline No. 310.1R-2008, "Guide for Surface Preparation for the Repair of Deteriorated Concrete Resulting from Reinforcing Steel Corrosion."
- H. ICRI Technical Guideline No. 310.2-1997, "Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings and Polymer Overlays."
- I. ICRI Technical Guideline No. 210.1-1998, "Guide for Verifying Field Performance of Epoxy Injection of Concrete Cracks".
- J. American Concrete Institute (ACI): Comply with the following ACI standards, as applicable:
  - 1. ACI 318-14 Building Code Requirements for Structural Concrete and Commentary, Chapter 17- Anchoring to Concrete
  - 2. ACI 349.2R Guide to the Concrete Capacity Design (CCD) Method – Embedment Design Examples
  - 3. ACI 355.4 Qualification of Post-Installed Adhesive Anchors in Concrete



## 1.5 SUBMITTALS

- A. Product Data: Include material descriptions, chemical composition, physical properties, test data, and mixing and application instructions.
  - 1. Include Material Safety Data Sheets, if applicable.
- B. Shop Drawings: For formwork and temporary shoring and supports, prepared by or under the supervision of a qualified professional engineer. Design and engineering of formwork and temporary shoring and supports are Contractor's responsibility. Indicate proposed schedule and sequence for removal of formwork and temporary shoring and supports.
- C. Samples: Cured samples of overlay and patching materials.
- D. Product Certificates: Signed by manufacturers certifying that products furnished comply with requirements and are recommended by manufacturer for uses indicated. Include compatibility certifications for all materials that come in contact with each other, including but not limited to bonding agents, patching mortars, concrete, corrosion-inhibiting treatments, sealers, overlays / epoxy deck membranes, galvanic anodes, etc.
- E. Qualification Data: For installers, professional engineer, and manufacturers to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
  - 1. For products required to be installed by workers approved by product manufacturers, include letters of acceptance by product manufacturers certifying that installers are approved to apply their products.
- F. Material Test Reports: From a qualified testing agency indicating and interpreting test results for compliance of bonding agents, patching mortars, epoxy adhesives, and composite structural reinforcement with requirements indicated.
- G. Rehabilitation program for each phase of the rehabilitation process, including protection of surrounding materials and Project site during operations. Describe in detail the materials, methods, equipment, and sequence of operations to be used for each phase of the Work.
  - 1. If alternative materials and methods to those indicated are proposed for any phase of rehabilitation work, submit substitution request complying with Division 1 Section "Product Requirements" and provide a written description of proposed materials and methods, including evidence of successful use on other comparable projects, and a testing program to demonstrate their effectiveness for this Project.

## 1.6 QUALITY ASSURANCE

- A. Installer Qualifications: In addition to other requirements in Division 1 Section "Quality Requirements," retain installers that employ workers trained and approved by manufacturer to apply corrosion-inhibiting treatments, concrete patching and rebuilding materials, epoxy crack injection materials, polymer overlays, polymer sealers, and composite structural reinforcement.

- B. Manufacturer Qualifications: In addition to other requirements in Division 1 Section "Quality Requirements," manufacturers shall have factory-trained representatives who are available for consultation and Project site inspection at no additional cost.
- C. Source Limitations: Obtain each of the following through one source from a single manufacturer:

- 1. Concrete patching and rebuilding materials.

#### 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project site in manufacturer's original and unopened containers, labeled with type and name of products and manufacturers.
- B. Comply with manufacturer's written instructions for minimum and maximum temperature requirements and other conditions for storage.
- C. Store cementitious materials off the ground, under cover, and in a dry location.
- D. Store aggregates, covered and in a dry location, where grading and other required characteristics can be maintained and contamination avoided.

#### 1.8 PROJECT CONDITIONS

- A. Environmental Limitations for Epoxies: Do not apply when air and substrate temperatures are outside limits permitted by manufacturer. During hot weather, cool epoxy components before mixing, store mixed products in shade, and cool unused mixed products to retard setting. Do not apply to wet substrates unless approved by manufacturer.
  - 1. Use only Class A epoxies when substrate temperatures are below or are expected to go below **40 deg F** within 8 hours.
  - 2. Use only Class A or B epoxies when substrate temperatures are below or are expected to go below **60 deg F** within 8 hours.
  - 3. Use only Class C epoxies when substrate temperatures are above **60 deg F**.
- B. Cold-Weather Requirements for Cementitious Materials: Comply with the following procedures:
  - 1. When air temperature is below **40 deg F**, heat patching material ingredients and existing concrete to produce temperatures between **40 and 90 deg F**.
  - 2. When mean daily air temperature is between **25 and 40 deg F**, cover completed Work with weather-resistant insulating blankets for 48 hours after repair.
  - 3. When mean daily air temperature is below **25 deg F**, provide enclosure and heat to maintain temperatures above **32 deg F** within the enclosure for 48 hours after repair.
- C. Hot-Weather Requirements for Cementitious Materials: Protect repair work when temperature and humidity conditions produce excessive evaporation of water from patching materials. Provide artificial shade and wind breaks, and use cooled materials as required. Do not apply to substrates with temperatures of **90 deg F** and above.

## 1.9 WARRANTY

- A. Special Manufacturer's Warranty: Manufacturer's standard form in which the Manufacturer agrees to furnish and repair or replace the product(s) that do not comply with performance and other requirements specified in this Section within specified warranty period.
  - 1. Warranty Period for all products listed in Part 2 of this Section, unless noted otherwise: Three years from date of Substantial Completion.
- B. Special Installer's Warranty: Manufacturer's standard form in which the Installer agrees to repair or replace the product(s) that do not comply with performance and other requirements specified in this Section within specified warranty period.
  - 1. Warranty Period for the installation of products listed in Part 2 of this Section, unless noted otherwise: Three years from date of Substantial Completion.
- C. Special warranties specified in this article exclude deterioration or failure from the following:
  - 1. Movement caused by structural settlement or errors attributable to design or construction resulting in stresses exceeding the manufacturer's written specifications for elongation and compression.
  - 2. Disintegration from natural causes exceeding design specifications.
  - 3. Mechanical damage caused by individuals, tools, or other outside agents.
  - 4. Changes in appearance caused by accumulation of dirt or other atmospheric contaminants.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Products: Subject to compliance with requirements, provide one of the following:
  - 1. Epoxy-Modified, Cementitious Bonding and Anticorrosion Agent:
    - a. Euclid Chemical Company; Duralprep AC.
    - b. Mapei Corporation; Planibond 3C
    - c. Sika Corporation; Armatec 110 EpoCem.
  - 2. Epoxy Bonding Agent:
    - a. Euclid Chemical Company; EUCO #452 EPOXY SYSTEM,.
    - b. Mapei Corporation; Planibond EBA; Planibond AE
    - c. Sika Corporation; Sikadur 32 Hi-Mod, or Sikadur 32 Hi-Mod LPL.
    - d. BASF Building Systems; MasterEmaco ADH 326.
  - 3. Cementitious Patching Mortar:
    - a. Mapei Corporation; Planitop X, Planitop XS, Planitop 12
    - b. Sika Corporation; SikaRepair 223 or SikaRepair SHB.

- c. BASF Building Systems; MasterEmaco S 440, Master Emaco S 440 MC, MasterEmaco S 440 CI, MasterEmaco S466 CI, MasterEmaco S477 CI, or MasterEmaco S488 CI.
4. Cementitious Patching Mortar, Rapid Setting:
  - a. Euclid Chemical Company; EUCO-SPEED.
  - b. Mapei Corporation; Planitop 18 or Planitop 18ES
  - c. Sika Corporation; SikaQuick 1000.
  - d. BASF Building Systems; MasterEmaco T 1060, MasterEmaco T 1061, MasterEmaco T 415, or MasterEmaco T 430.
5. Polymer-Modified, Cementitious Patching Mortar:
  - a. Euclid Chemical Company; CONCRETE COAT, THINCOAT, or VERTICOAT.
  - b. Mapei Corporation; Planitop 21, Planitop 23, Mapecem 102, Mapecem 202
  - c. Sika Corporation; SikaTop 121 Plus, SikaTop 122 Plus, or SikaTop 123 Plus.
  - d. BASF Building SystemsMasterEmaco N 400, MasterEmaco N 400 RS, MasterEmaco N 300 CI, MasterEmaco T 310 CI, or MasterEmaco T 302.
6. Polymer-Modified, Silica-Fume-Enhanced, Cementitious Patching Mortar:
  - a. Euclid Chemical Company; Verticoat Supreme.
  - b. Mapei Corporation; Planitop 12
  - c. Sika Corporation; Sika MonoTop 615.
  - d. BASF Building Systems; MasterEmaco N425.
7. Epoxy-Modified, Cementitious Patching Mortar:
  - a. Sika Corporation; Sikagard 75 EpoCem.

## 2.2 BONDING AGENTS

- A. Epoxy-Modified, Cementitious Bonding and Anticorrosion Agent: Product that consists of water-insensitive epoxy adhesive, portland cement, and water-based solution of corrosion-inhibiting chemicals that forms a protective film on steel reinforcement.
- B. Epoxy Bonding Agent: ASTM C 881, Type II V.
- C. Mortar Scrub-Coat: 1 part portland cement complying with ASTM C 150, Type I, II, or III and 1 part fine aggregate complying with ASTM C 144, except 100 percent passing a No. 16 (1.18-mm) sieve.

## 2.3 PATCHING MORTAR

- A. Patching Mortar: Unless otherwise indicated, use one of the following:
  1. Epoxy-Modified, Cementitious Patching Mortar: Mixture of water-insensitive epoxy adhesive, portland cement, and graded aggregates.

- B. Overhead Patching Mortar: For overhead repairs, use patching mortar recommended by manufacturer for overhead use and as specified above.
- C. Coarse Aggregate for Adding to Patching Mortar: Washed aggregate complying with ASTM C 33, Size No. 8, Class 5S. Add only as permitted by patching mortar manufacturer.

## 2.4 CONCRETE

- A. Concrete Materials and Admixtures: Comply with Division 3 Section "Cast-in-Place Concrete."
- B. Steel and Fiber Reinforcement and Reinforcement Accessories: Comply with Division 3 Section "Cast-in-Place Concrete."
- C. Form-Facing Materials: Comply with Division 3 Section "Cast-in-Place Concrete."
- D. Shotcrete: Comply with Division 3 Section "Shotcrete."
- E. Bbbbb h bbbbbbPreplaced Aggregate: Washed aggregate complying with ASTM C 33, Class 5S, with 100 percent passing a 1-1/2-inch sieve, 95 to 100 percent passing a 1-inch sieve, 40 to 80 percent passing a 3/4-inch sieve, 0 to 15 percent passing a 1/2-inch sieve, and 0 to 2 percent passing a 3/8-inch sieve.
- F. Fine Aggregate for Grout Used with Preplaced Aggregate: Fine aggregate complying with ASTM C 33, but with 100 percent passing a No. 8 sieve, 95 to 100 percent passing a No. 16 sieve, 55 to 80 percent passing a No. 30 sieve, 30 to 55 percent passing a No. 50 sieve, 10 to 30 percent passing a No. 100 sieve, 0 to 10 percent passing a No. 200 sieve, and having a fineness modulus of 1.30 to 2.10.
- G. Grout Fluidifier for Grout Used with Preplaced Aggregate: ASTM C 937.
- H. Portland Cement for Grout Used with Preplaced Aggregate: ASTM C 150.
- I. Pozzolans for Grout Used with Preplaced Aggregate: ASTM C 618.

## 2.5 MISCELLANEOUS MATERIALS

- A. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.
  - 1. After fabricating, prepare surfaces to comply with SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning."
  - 2. After preparation, apply 1 coat of lead- and chromate-free, universal, modified-alkyd primer complying with FS TT-P-664 and 1 coat of alkyd-gloss enamel complying with FS TT-E-489.
  - 3. After preparation, apply 2-coat high-performance coating system consisting of organic zinc-rich primer, complying with SSPC-Paint 20, at 2.5-mil (0.065-mm) dry film thickness and topcoat of high-build, 2-component, epoxy-polyamide, high-performance coating at 6-mil (0.15-mm) dry film thickness.

- a. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
  - b. Products: Subject to compliance with requirements, provide one of the following:
    - 1) Carboline Company; Carboline 621 and 190 HB.
    - 2) PPG Industries, Inc.; Aquapon Zinc-Rich Primer 97-670 and High-Build Polyamide-Epoxy 97-131.
    - 3) Tnemec Company, Inc.; Tneme-Zinc 90-97 and Series 69 Hi-Build Epoxoline II.
- B. Bolts: Steel bolts complying with **ASTM A 307, Grade A**; with **ASTM A 563** hex nuts and flat washers; hot-dip galvanized to comply with ASTM A 153, Class C.
- C. Postinstalled Anchors: Anchors as described below, with capability to sustain, without failure, a load equal to four times the load imposed, as determined by testing per ASTM E 488, conducted by a qualified independent testing agency.
1. Type: Chemical, Adhesive or Expansion anchors.
  2. Corrosion Protection: Stainless-steel components complying with **ASTM F 593 and ASTM F 594, Alloy Group 1 or 2** for bolts and nuts; ASTM A 666 or ASTM A 276, Type 304 or 316, for anchors.
  3. Basis if Design Products: Hilti Hit HY 200 Adhesive Anchors

## 2.6 MIXES

- A. Mix products in clean containers according to manufacturer's written instructions.
1. Add clean silica sand and coarse aggregates to products only as recommended by manufacturer.
  2. Do not add water, thinners, or additives unless recommended by manufacturer.
  3. When practical, use manufacturer's premeasured packages to ensure that materials are mixed in proper proportions. When premeasured packages are not used, measure ingredients using graduated measuring containers; do not estimate quantities or use shovel or trowel as unit of measure.
  4. Do not mix more materials than can be used within recommended open time. Discard materials that have begun to set.
- B. Mortar Scrub-Coat: Mix with enough water to provide a consistency of thick cream.
- C. Dry-Pack Mortar: Mix with just enough liquid to form a damp cohesive mixture that can be squeezed by hand into a ball but is not plastic.
- D. Grout for Use with Preplaced Aggregate: Proportion according to ASTM C 938. Add grout fluidifier to mixing water followed by cementitious materials and then fine aggregate.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Notify Architect seven days in advance of dates when areas of delaminated concrete and reinforcing bars will be located.
- B. Locate areas of delamination using hammer or chain drag sounding and mark boundaries. Mark areas for removal by simplifying and squaring off boundaries of delaminated areas as directed by Architect.
- C. Locate at least three reinforcing bars using a pachometer or GPR testing , and drill test holes to determine depth of cover. Calibrate pachometer, using depth of cover measurements, and verify depth of cover in removal areas using pachometer.

### 3.2 PREPARATION

- A. Protect people, motor vehicles, equipment, surrounding construction, Project site, plants, and surrounding buildings from injury resulting from concrete rehabilitation work.
  - 1. Erect temporary protective covers over pedestrian walkways and at points of entrance and exit for people and vehicles that must remain in operation during course of concrete rehabilitation work. Construct covers of tightly fitted, **3/4-inch** exterior-grade plywood supported at **16 inches** o.c. and covered with asphalt roll roofing..
  - 2. Protect adjacent equipment and surfaces by covering them with heavy polyethylene film and waterproof masking tape or a liquid strippable masking agent. If practical, remove items, store, and reinstall after potentially damaging operations are complete.
  - 3. Neutralize and collect alkaline and acid wastes for disposal off Owner's property.
  - 4. Dispose of runoff from wet operations by legal means and in a manner that prevents soil erosion, undermining of paving and foundations, damage to landscaping, and water penetration into building interiors.
- B. Shoring: Install temporary supports before beginning concrete removal.
- C. Concrete Removal: Saw-cut perimeter of areas indicated for removal to a depth of at least **1/2 inch**. Make cuts perpendicular to concrete surfaces and no deeper than cover on reinforcing. Remove loose and deteriorated concrete by breaking up and dislodging from reinforcing.
  - 1. Remove concrete between cuts to a depth of at least **1/2 inch**.
  - 2. Where half or more of the perimeter of reinforcing bar is exposed, bond between reinforcing bar and surrounding concrete is broken, or reinforcing bar is corroded, remove concrete from entire perimeter of bar to provide at least a **3/4-inch** clearance.
  - 3. Test areas where concrete has been removed by tapping with hammer, and remove additional concrete until unsound concrete is completely removed.
  - 4. Provide exposed aggregate surfaces with a profile of at least **1/8 inch** that are approximately perpendicular or parallel to original concrete surfaces. At columns and walls, make top and bottom surfaces level.
  - 5. Thoroughly clean removal areas of loose concrete, dust, and debris.

- D. Reinforcing Bar Preparation: Remove loose and flaking rust from reinforcing bars by high-pressure water cleaning, abrasive blast cleaning, needle scaling, or wire brushing until only tightly bonded light rust remains.
  - 1. Where section loss of reinforcing bar is more than 25 percent, or 20 percent in 2 or more adjacent bars, cut bars and remove and replace as directed by Architect. Remove additional concrete as necessary to provide at least a **3/4-inch** clearance at existing and replacement bars. Splice replacement bars to existing bars according to ACI 318, by lapping, welding, or using mechanical couplings.
- E. Preparation of Floor Joints for Repair: Saw-cut joints full width to edges of spalls and to a depth of at least **3/4 inch**. Clean out debris and loose concrete; vacuum or blow clear with compressed air.

### 3.3 APPLICATION

- A. Epoxy-Modified, Cementitious Bonding and Anticorrosion Agent: Apply to reinforcing bars and concrete by brush or hopper spray according to manufacturer's written instructions. Apply to reinforcing bars in two coats, allowing first coat to dry two to three hours before applying second coat. Allow to dry before placing patching mortar or concrete.
- B. Epoxy Bonding Agent: Apply to concrete by brush, roller, or spray according to manufacturer's written instructions, leaving no pinholes or other uncoated areas. Apply patching mortar or concrete while epoxy is still tacky. If bonding agent dries, recoat before placing patching mortar or concrete.
- C. Latex Bonding Agent, Type II: Mix with portland cement and scrub into concrete surface according to manufacturer's written instructions. If bonding agent dries, recoat before placing patching mortar or concrete.
- D. Latex Bonding Agent, Type I: Apply to concrete by brush roller or spray. Allow to dry before placing patching mortar or concrete.
- E. Mortar Scrub-Coat: Dampen repair area and surrounding concrete 6 inches (150 mm) beyond repair area. Remove standing water and apply scrub-coat with a brush, scrubbing it into surface and thoroughly coating repair area. If scrub-coat dries, recoat before applying patching mortar or concrete.
- F. Patching Mortar: Unless otherwise recommended by manufacturer, apply as follows:
  - 1. Wet substrate thoroughly and then remove standing water. Scrub a slurry of neat patching mortar mixed with latex bonding agent into substrate, filling pores and voids.
  - 2. Place patching mortar by troweling toward edges of patch to force intimate contact with edge surfaces. For large patches, fill edges first and then work toward center, always troweling toward edges of patch. At fully exposed reinforcing bars, force patching mortar to fill space behind bars by compacting with trowel from sides of bars.
  - 3. For vertical and overhead patching, place material in lifts of not more than 1 inch nor less than 1/8 inch. Do not feather edge.
  - 4. After each lift is placed, consolidate material and screed surface.



5. Where multiple lifts are used, score surface of lifts to provide a rough surface for application of subsequent lifts. Allow each lift to reach final set before placing subsequent lifts.
  6. Allow surfaces of lifts that are to remain exposed to become firm and then finish to a [smooth] [rough] surface with a [wood or sponge float] [broom or burlap drag].
  7. Wet-cure cementitious patching materials, including polymer-modified, cementitious patching materials, for not less than seven days by water-fog spray or water-saturated absorptive cover.
- G. Dry-Pack Mortar: Use for deep cavities and where indicated. Place according to manufacturer's written instructions and as follows:
1. Provide forms where necessary to confine patch to required shape.
  2. Wet substrate and forms thoroughly and then remove standing water.
  3. Place dry-pack mortar into cavity by hand, and compact into place with a hardwood drive stick and mallet or hammer. Do not place more material at a time than can be properly compacted. Continue placing and compacting until patch is approximately level with surrounding surface.
  4. After cavity is filled and patch is compacted, trowel surface to match profile and finish of surrounding concrete. A thin coat of patching mortar may be troweled into the surface of patch to help obtain required finish.
  5. Wet-cure patch for not less than seven days by water-fog spray or water-saturated absorptive cover.
- H. Grouted Preplaced Aggregate Concrete: Use for column and wall repairs and where indicated. Place as follows:
1. Design and construct forms to resist pumping pressure in addition to weight of wet grout. Seal joints and seams in forms and junctions of forms with existing concrete.
  2. Apply epoxy-modified, cementitious bonding and anticorrosion agent or epoxy bonding agent to reinforcing and concrete substrate.
  3. Place aggregate in forms, consolidating aggregate as it is placed. Pack aggregate into upper areas of forms to achieve intimate contact with concrete surfaces.
  4. Fill forms with water to thoroughly dampen aggregate and substrates. Drain water from forms before placing grout.
  5. Pump grout into place at bottom of preplaced aggregate, forcing grout upward. Release air from forms at top as grout is introduced. When formed space is full and grout flows from air vents, close vents and pressurize to 14 psi (96 kPa).
  6. Wet-cure concrete for not less than seven days by leaving forms in place or keeping surfaces continuously wet by water-fog spray or water-saturated absorptive cover.
  7. Repair voids with patching mortar and finish to match surrounding concrete.
  8. is filled.
  9. After epoxy adhesive has set, remove injection ports and grind surfaces smooth.

### 3.4 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified testing agency to sample materials and perform tests specified in Division 3 Section "Cast-in-Place Concrete" and as follows:

1. Patching Mortar, Packaged Mixes: 1 randomly selected samples for every 4 hours of placement or portion thereof. New samples shall be taken when conditions change, such as a change in shift, weather, temperature, etc. Test samples according to ASTM C 928.
2. Patching Mortar, Field Mixed: 1 randomly selected samples for every 4 hours of placement or portion thereof. New samples shall be taken when conditions change, such as a change in shift, weather, temperature, etc. Test samples for compressive strength according to ASTM C 109/C 109M.
3. Grouted Preplaced Aggregate: Tested for compressive strength of grout according to ASTM C 942.
  - a. Testing Frequency: 1 sample for each 25 cu. yd. of grout or fraction thereof, but not less than 1 sample for each day's work.

END OF SECTION 03930

## SECTION 055000 - METAL FABRICATIONS FOR GARAGE

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This Section includes the following:

- 1. Support angle connections for deficient structural concrete members.
- 2. Shelf angles to stabilize deficient structural concrete members.
- 3. Loose bearing and leveling supplemental connections.

- B. Related Sections include the following:

- 1. Division 3 Section "Concrete Rehabilitation." for installing adhesive anchors and miscellaneous items etc.

#### 1.3 PERFORMANCE REQUIREMENTS

- A. Structural Performance of Ladders: Provide ladders capable of withstanding the effects of loads and stresses within limits and under conditions specified in ANSI A14.3.

- B. Thermal Movements: Provide exterior metal fabrications that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components, failure of connections, and other detrimental effects. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

- 1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.

#### 1.4 ACTION SUBMITTALS

- A. Product Data: For the following:

- 1. Paint products.

- B. Shop Drawings: Show fabrication and installation details for metal fabrications.

- 1. Include plans, elevations, sections, and details of metal fabrications and their connections. Show anchorage and accessory items.
- 2. Provide templates for anchors and bolts specified for installation under other Sections.

3. For installed products indicated to comply with design loads, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

C. Samples for Verification: For each type and finish of extruded nosing and tread.

#### 1.5 INFORMATION SUBMITTALS

A. Mill Certificates: Signed by manufacturers of stainless-steel sheet certifying that products furnished comply with requirements.

B. Welding certificates.

C. Qualification Data: For professional engineer.

#### 1.6 QUALITY ASSURANCE

A. Welding: Qualify procedures and personnel according to the following:

1. AWS D1.1, "Structural Welding Code--Steel."
2. AWS D1.2, "Structural Welding Code--Aluminum."
3. AWS D1.3, "Structural Welding Code--Sheet Steel."
4. AWS D1.6, "Structural Welding Code--Stainless Steel."

#### 1.7 PROJECT CONDITIONS

A. Field Measurements: Verify actual locations of walls and other construction contiguous with metal fabrications by field measurements before fabrication and indicate measurements on Shop Drawings.

1. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating metal fabrications without field measurements. Coordinate wall and other contiguous construction to ensure that actual dimensions correspond to established dimensions.
2. Provide allowance for trimming and fitting at site.

#### 1.8 COORDINATION

A. Coordinate installation of anchorages for metal fabrications. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

B. Coordinate installation of steel weld plates and angles for casting into concrete that are specified in this Section but required for work of another Section. Deliver such items to Project site in time for installation.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, products specified.
  2. Products: Subject to compliance with requirements, provide one of the products specified.
  3. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, manufacturers specified.
  4. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

### 2.2 METALS, GENERAL

- A. Metal Surfaces, General: Provide materials with smooth, flat surfaces, unless otherwise indicated. For metal fabrications exposed to view in the completed Work, provide materials without seam marks, roller marks, rolled trade names, or blemishes.

### 2.3 FERROUS METALS

- A. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.
- B. Rolled-Steel Floor Plate: ASTM A 786/A 786M, rolled from plate complying with ASTM A 36/A 36M or ASTM A 283/A 283M, Grade C or D.
- C. Rolled-Stainless-Steel Floor Plate: ASTM A 793.
- D. Steel Tubing: ASTM A 500, cold-formed steel tubing.

### 2.4 NONFERROUS METALS

- A. Aluminum Plate and Sheet: ASTM B 209, Alloy 6061-T6.(AS REQUIRED)

### 2.5 FASTENERS

- A. General: Unless otherwise indicated, provide zinc-plated fasteners with coating complying with ASTM B 633, Class Fe/Zn 5, at exterior walls. Select fasteners for type, grade, and class required.
- B. Steel Bolts and Nuts: Regular hexagon-head bolts, ASTM A 307, Grade A; with hex nuts, ASTM A 563; and, where indicated, flat washers.

- C. Anchor Bolts: ASTM F 1554, Grade 36, hot-dipped galvanized.
  - 1. Provide hot-dip or mechanically deposited, zinc-coated anchor bolts where item being fastened is indicated to be galvanized.
- D. Plain Washers: Round, ASME B18.22.1.
- E. Lock Washers: Helical, spring type, ASME B18.21.1.
- F. Cast-in-Place Anchors in Concrete: Anchors capable of sustaining, without failure, a load equal to four times the load imposed, as determined by testing according to ASTM E 488, conducted by a qualified independent testing agency.
  - 1. Threaded or wedge type; galvanized ferrous castings, either ASTM A 47/A 47M malleable iron or ASTM A 27/A 27M cast steel. Provide bolts, washers, and shims as needed, hot-dip galvanized per ASTM A 153/A 153M.
- G. Expansion Anchors: Anchor bolt and sleeve assembly with capability to sustain, without failure, a load equal to six times the load imposed when installed in unit masonry and four times the load imposed when installed in concrete, as determined by testing according to ASTM E 488, conducted by a qualified independent testing agency.
  - 1. Material for Anchors in Interior Locations: Carbon-steel components zinc-plated to comply with ASTM B 633, Class Fe/Zn 5.
  - 2. Material for Anchors in Exterior Locations: Alloy Group 2 stainless-steel bolts complying with ASTM F 593 and nuts complying with ASTM F 594.

## 2.6 MISCELLANEOUS MATERIALS

- A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.
- B. Universal Shop Primer: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79.
  - 1. Use primer with a VOC content of 420 g/L (3.5 lb/gal.) or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
  - 2. Use primer containing pigments that make it easily distinguishable from zinc-rich primer.
- C. Galvanizing Repair Paint: High-zinc-dust-content paint for regalvanizing welds in steel, complying with SSPC-Paint 20. The galvanizing repair paint must match the color of the hot-dip galvanized finish; provide a mockup for confirmation.
- D. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout specifically recommended by manufacturer for interior and exterior applications.
- E. Concrete Materials and Properties: Comply with requirements in Division 3 Section "Cast-in-Place Concrete" for normal-weight, air-entrained, ready-mix concrete with a minimum 28-day compressive strength of 3000 psi, unless otherwise indicated.

## 2.7 FABRICATION, GENERAL

- A. Shop Assembly: Preassemble items in the shop to greatest extent possible. Disassemble units only as necessary for shipping and handling limitations. Use connections that maintain structural value of joined pieces. Clearly mark units for reassembly and coordinated installation.
- B. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch, unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.
- C. Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing work.
- D. Form exposed work true to line and level with accurate angles and surfaces and straight edges.
- E. Weld corners and seams continuously to comply with the following:
  - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
  - 2. Obtain fusion without undercut or overlap.
  - 3. Remove welding flux immediately.
  - 4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.
- F. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners where possible. Where exposed fasteners are required, use Phillips flat-head (countersunk) screws or bolts, unless otherwise indicated. Locate joints where least conspicuous.
- G. Fabricate seams and other connections that will be exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.
- H. Cut, reinforce, drill, and tap metal fabrications as indicated to receive finish hardware, screws, and similar items.
- I. Provide for anchorage of type indicated; coordinate with supporting structure. Space anchoring devices to secure metal fabrications rigidly in place and to support indicated loads.
  - 1. Where units are indicated to be cast into concrete or built into masonry, equip with integrally welded steel strap anchors, 1/8 by 1-1/2 inches, with a minimum 6-inch embedment and 2-inch hook, not less than 8 inches from ends and corners of units and 24 inches o.c., unless otherwise indicated.

## 2.8 MISCELLANEOUS FRAMING AND SUPPORTS

- A. General: Provide steel framing and supports not specified in other Sections as needed to complete the Work.

- B. Fabricate units from steel shapes, plates, and bars of welded construction, unless otherwise indicated. Fabricate to sizes, shapes, and profiles indicated and as necessary to receive adjacent construction retained by framing and supports. Cut, drill, and tap units to receive hardware, hangers, and similar items.
- C. Galvanize miscellaneous framing and supports where indicated.

## 2.9 SHELF ANGLES

- A. Fabricate shelf angles from steel angles of sizes indicated and for attachment to concrete framing. Provide horizontally slotted holes to receive 3/4-inch bolts, spaced not more than 6 inches from ends and 24 inches o.c., unless otherwise indicated.
  - 1. Provide mitered and welded units at corners.
  - 2. Provide open joints in shelf angles at expansion and control joints. Make open joint approximately 2 inches larger than expansion or control joint.
- B. For cavity walls, provide vertical channel brackets to support angles from backup masonry and concrete.
- C. Galvanize shelf angles located in exterior walls.

## 2.10 LOOSE BEARING AND/OR SHIM PADS

- A. Provide bearing/shim pads for new supplemental connections and shelf angles as follows:
  - 1. Random-Oriented, Fiber-Reinforced Elastomeric Pads for: supplemental connections and shelf angles. Preformed, randomly oriented synthetic fibers set in elastomer. Surface hardness of 70 to 90 Shore A durometer.
- B. Provide loose bearing and leveling pads for steel items bearing on concrete construction. Drill plates to receive adhesive anchors.
- C. Galvanize plates after fabrication.

## 2.11 STEEL WELD PLATES AND ANGLES

- A. Provide steel weld plates and angles not specified in other Sections, for items supported from concrete construction as needed to complete the Work. Provide each unit with not less than two integrally welded steel strap anchors for embedding in concrete.

## 2.12 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Finish metal fabrications after assembly.



- C. Finish exposed surfaces to remove tool and die marks and stretch lines, and to blend into surrounding surface.

## 2.13 STEEL AND IRON FINISHES

- A. Galvanizing: Hot-dip galvanize items as indicated to comply with ASTM A 153/A 153M for steel and iron hardware and with ASTM A 123/A 123M for other steel and iron products.
  - 1. Do not quench or apply post galvanizing treatments that might interfere with paint adhesion.
  - 2. Zinc high spots, such as a metal drip line, should be removed by cleaning with hand or power tools as described in SSPC Surface Preparation Specification 2 or 3. The zinc should be removed until it is level with the surrounding area, taking care that the base coating is not removed by the cleaning methods.
  - 3. After cleaning, the surface shall be inspected for conformance to the required zinc thickness in accordance with ASTM A 123/A 123M or A 153/A 153M utilizing a magnetic-field-type thickness instrument in accordance with ASTM E 376. Any item falling below the required zinc thickness, before or after removal of any high spots, shall be repaired in accordance with ASTM A 780.
- B. Shop prime iron and steel items unless they are to be embedded in concrete, sprayed-on fireproofing, or masonry, or unless otherwise indicated.

## PART 3 - EXECUTION

### 3.1 INSTALLATION, GENERAL

- A. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing metal fabrications. Set metal fabrications accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack; and measured from established lines and levels.
- B. Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints but cannot be shop welded because of shipping size limitations. Do not weld, cut, or abrade surfaces of exterior units that have been hot-dip galvanized after fabrication and are for bolted or screwed field connections.
- C. Field Welding: Comply with the following requirements:
  - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
  - 2. Obtain fusion without undercut or overlap.
  - 3. Remove welding flux immediately.
  - 4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.

- D. Fastening to In-Place Construction: Provide anchorage devices and fasteners where metal fabrications are required to be fastened to in-place construction. Provide threaded fasteners for use with concrete and masonry inserts, toggle bolts, through bolts, lag bolts, wood screws, and other connectors.
- E. Provide temporary bracing or anchors in formwork for items that are to be built into concrete, masonry, or similar construction.
- F. Corrosion Protection: Coat concealed surfaces of aluminum that will come into contact with grout, concrete, masonry, wood, or dissimilar metals with a heavy coat of bituminous paint.

### 3.2 INSTALLING MISCELLANEOUS FRAMING AND SUPPORTS

- A. General: Install framing and supports to comply with requirements of items being supported, including manufacturers' written instructions and requirements indicated on Shop Drawings.
- B. Anchor supports for operable partitions securely to and rigidly brace from building structure.
- C. Support steel girders on solid grouted masonry, concrete, or steel pipe columns. Secure girders with anchor bolts embedded in grouted masonry or concrete or with bolts through top plates of pipe columns.

### 3.3 INSTALLING BEARING AND LEVELING PADS

- A. Clean concrete bearing surfaces of bond-reducing materials, and roughen to improve bond to surfaces. Clean bottom surface of plates.
- B. Set bearing and leveling plates on wedges, shims, or leveling nuts. After bearing members have been positioned and plumbed, tighten anchor bolts. Do not remove wedges or shims but, if protruding, cut off flush with edge of bearing plate before packing with grout.
  - 1. Use nonshrink grout, either metallic or nonmetallic, in concealed locations where not exposed to moisture; use nonshrink, nonmetallic grout in exposed locations, unless otherwise indicated.
  - 2. Pack grout solidly between bearing surfaces and plates to ensure that no voids remain.

### 3.4 ADJUSTING AND CLEANING

- A. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint that are specified in Division 9 painting Sections. Paint uncoated and abraded areas with the same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.
  - 1. Use applicators and techniques to provide a minimum 2.0-mil dry film thickness that matches the color and texture of the shop paint.
- B. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing to comply with ASTM A 780.

3.5 SHOP & FIELD QUALITY CONTROL

- A. Testing: Owner will engage a qualified independent testing and inspecting agency to perform field tests and inspections.
- B. Bolted Connections: Bolted connections will be tested and inspected according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."
- C. Shop & field welds will be subject to tests and inspections.
  - 1. Magnetic Particle Inspection: ASTM E 709.
  - 2. Ultrasonic Inspection: ASTM E 164.
  - 3. Perform test on 100% of all full penetration welds, 25% of all partial penetration and field fillet welds and 5% of all shop welds using magnetic particle method or ultrasonic method. The balance of all field welds will be visually inspected according to AWS D1.1. Engineer may reduce frequency of tests when test results are consistently within acceptable range.
  - 4. Cracks or zones of incomplete fusion or penetration will not be accepted.
- D. Testing agency will report test results promptly and in writing to Contractor and Architect.
- E. Correct deficiencies in Work that test reports and inspections indicate does not comply with the Contract Documents.
- F. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of corrected work with specified requirements.

END OF SECTION 055000