

# COUNTY OF UNION

DEPARTMENT OF ENGINEERING, PUBLIC WORKS & FACILITIES MANAGEMENT  
*Joseph A. Graziano Sr., Director*

**MEMO TO:** ALL PROSPECTIVE BIDDERS

**FROM:** Thomas O. Mineo, P.E.  
County Engineer

**DATE:** November 20, 2017

**RE:** CLARIFICATION NUMBER 1  
**BA#29-2017 – IMPROVEMENTS TO JURY WAITING ROOM**  
**CITY OF ELIZABETH, COUNTY OF UNION, NEW JERSEY**  
**UNION COUNTY ENGINEERING PROJECT #2016-035**

**BOARD OF  
CHOSEN FREEHOLDERS**

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*County Manager*

**ROBERT E. BARRY, ESQ.**  
*County Counsel*

**JAMES E. PELLETTIERE, RMC**  
*Clerk of the Board*

**THOMAS O. MINEO, P.E.**  
*County Engineer,  
Director, Division of  
Engineering*

The following is in response to an RFI received for the above referenced project:

- Q.1 Which pipe sizes should be used for steam and condensate? Part plan 3 on M-100 shows 2" steam and 1-1/4" condensate and part plan 4 shows 1-1/2" steam and 1" condensate.
- R.1 The pipe size should be as per plan 3 –
1. Steam = 2"
  2. Condensate = 1.25"

**DIVISION OF ENGINEERING**

**SPECIFICATIONS  
FOR  
IMPROVEMENTS TO THE JURY WAITING ROOM  
CITY OF ELIZABETH  
COUNTY OF UNION, NEW JERSEY  
BA#29-2017; UNION COUNTY ENGINEERING PROJECT #2016-035  
NOVEMBER 2017**

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**COUNTY MANAGER**  
Alfred J. Faella

**DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND  
FACILITIES MANAGEMENT**  
Joseph A. Graziano, Sr., CPWM, Director

**COUNTY ENGINEER  
DIVISION OF ENGINEERING**  
Thomas O. Mineo, P.E.  
2325 South Avenue  
Scotch Plains, New Jersey 07076  
Telephone: (908) 789-3675  
Fax: (908) 789-3674

**PREPARED BY:  
USA Architect Planners Interior Designers  
20 North Doughty Avenue  
Somerville, New Jersey 08876  
T: 908-722-2300**

**IMPROVEMENTS TO THE JURY WAITING ROOM  
CITY OF ELIZABETH, COUNTY OF UNION, NEW JERSEY  
BA#29-2017; Union County Engineering Project #2016-035**

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**COUNTY OF UNION  
NOTICE TO BIDDERS**

Sealed bids will be received by the director of the Division of Purchasing, or her designee, at the County of Union, New Jersey on November 28, 2017 at 10:30 a.m., prevailing time, in the 3<sup>rd</sup> Floor Conference Room, U.C. Administration Building, 10 Elizabethtown Plaza, Elizabeth, New Jersey for:

**IMPROVEMENTS TO THE JURY WAITING ROOM  
CITY OF ELIZABETH, COUNTY OF UNION, NEW JERSEY  
BA#29-2017; UNION COUNTY ENGINEERING PROJECT #2016-035**

Bid Packages may be obtained at no charge by registering and downloading at <http://ucnj.org/bid-specs>. Bid Packages may also be obtained in person from the Division of Engineering at 2325 South Avenue, Scotch Plains, New Jersey 07076 between 8:30 a.m. and 4:00 p.m. weekdays upon payment of a non-refundable money order or bank check in the amount of \$275.00 made payable to the County of Union. No Personal / Company checks will be accepted. Requests for mailing of specifications will not be honored. For further information please call 908-789-3675.

A **pre-bid meeting** will be held on November 9, 2017 at 12:00 noon. The meeting will be located at the 9 Elizabethtown Plaza, Elizabeth, New Jersey – Union County Courthouse, meet in Lobby. Specific questions regarding the project will be addressed at the pre-bid meeting.

Bidders on this project are required to be classified by the State of NJ, Division of Property Management and Construction (DPMC) under classification(s) # C008, or C009 as well as other documentary requirements in the INSTRUCTION TO BIDDERS found in the bid specification. If the Bidder himself does not have the required classification(s) as stated above, the Bidder must include and identify a subcontractor(s), of any tier, who has the required classification(s) in the List of Subcontractors.

The County reserves the right to reject any and all bids and to waive any and all informalities in the bid in accordance with the New Jersey Local Public Contracts Law.

Bids shall be submitted in a sealed envelope and clearly marked with the subject of the bid, name and address of the bidder, phone & fax number, and date of the bid opening. Each bid must be delivered to reach the Division of Purchasing prior to the stated time of the opening of the bids. The County will not be responsible for late delivery by the U.S. Mail or any other carrier. If hand delivered, please note that parking and security access at the County Complex may cause delays and bidders should take them into consideration in order to submit a timely bid. **No** late bids will be accepted.

Bidders are required to comply with the requirements of N.J.S.A. 10:5-31 et seq. and N.J.A.C. 17:27.

**Laura M. Scutari, QPA, MPA, Director of Purchasing**

**UNION COUNTY BOARD  
OF CHOSEN FREEHOLDERS**  

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***We're Connected to You!***

NB-1

**UNION COUNTY BOARD OF CHOSEN FREEHOLDERS  
INSTRUCTIONS TO BIDDERS AND FORMS**

**DEFINITIONS**

Wherever reference is made to the County, Title of Project, Bidder, or Vendor/Contractor they shall be as follows:

**OWNER/COUNTY:**

Union County Board of Chosen Freeholders  
UC Administration Building, 6<sup>th</sup> Floor  
10 Elizabethtown Plaza  
Elizabeth, New Jersey 07207

**ADDRESS BIDS AND SUBMIT TO:**

Union County Division of Purchasing  
UC Administration Building, 3<sup>rd</sup> Floor  
10 Elizabethtown Plaza  
Elizabeth, NJ 07207  
Attn: Laura M. Scutari, QPA, MPA, Director, Division of Purchasing  
Telephone: 908-527-4130  
Facsimile: 908-558-2548

**TITLE OF PROJECT: Improvements to Jury Waiting Room, City of Elizabeth  
County of Union, New Jersey  
BA#29-2017; Union County Engineering Project #2016-035**

**BIDDER: Bidder shall be a single overall contract bidder**

**ARCHITECT/ENGINEER:**

**COUNTY ENGINEER AND/OR CONSTRUCTION MANAGER (as applicable):**

**COUNTY ENGINEER:**

Thomas O. Mineo, P.E.  
Union County  
Division of Engineering  
2325 South Avenue  
Scotch Plains, NJ 07076  
Office: (908) 789-3675  
Facsimile: (908) 789-3674  
Email: [tmineo@ucnj.org](mailto:tmineo@ucnj.org)

**CONSTRUCTION MANAGER:**



## GENERAL SPECIFICATIONS

### 1. BID FORM

Bids for this Work will be enclosed in a sealed envelope addressed to the Purchasing Division, County of Union, New Jersey, Union County Administration Building, 10 Elizabethtown Plaza, Elizabeth, New Jersey 07207, with the full name of the Project clearly marked on the outside. Refer to the sheet marked "Notice of Bid (Advertisement)" for the correct name of the Project. Bidders must submit their bids on the attached pricing sheet (Bid Form), in a sealed envelope addressed to the County and bearing on the outside: the name of the Bidder, Bidder's business address, and the title of the Project.

The Division of Purchasing will receive the bids for this Work at the Union County Administration Building, 10 Elizabethtown Plaza, Elizabeth, New Jersey on the date and time noted on the sheet marked "**Notice of Bid (Advertisement)**".

The County will not assume responsibility for bids forwarded by mail. It is the individual's responsibility to see that the bids are presented to the Purchasing Division at the time and at the place designated.

Bids will be accepted only on the Bid Form supplied. Bids on forms other than the original supplied herein will be rejected. The "complete" Bid Documents includes the Bid Bond, Bid Form, Bidder's Checklist, Consent of Surety, Ownership Disclosure Certification, Non-Collusion Affidavit, and any other documents noted in these Instructions to Bidders or Contract Document to be submitted with this Bid. (See AIA Owner/Contractor Agreement & General Conditions attached.)

The bidder will state in the bidding sheet the price per unit of measure for each scheduled Item of Work for which he will agree to carry out the Work, and the Total Bid Price for the construction of the Project.

The prices in the Bid Form shall be typed or written in pen and ink. Erasures or alterations must be initialed by the bidder in ink.

The bidding sheet for this Project may include a fixed amount as a Bid Allowance. If applicable, all bidders are required to add this fixed amount to their base bid and to include this additional amount in their Bid Bond. This sum will be included in the Contract as well as the performance, labor and materials bond. Payment by the County will be made to the Contractor from these funds only upon the completion of extra Work pursuant to a written Change Order(s) signed by the County's Engineer or his designee and the Contractor, prior to the commencement of such Work. Work commenced prior to written approval by the County shall be done at Contractor's risk. Such payment will only be in the amount agreed to by the parties, in writing in the

Change Order(s). See Section 39, Change Orders, of these general specifications for further details.

Refer to Bid Document Submission Checklist for all required documents.

In the event there is a discrepancy between the unit price given and the extended total, the unit price will govern. Any discrepancies will be mathematically adjusted.

Insert applicable alternates, if any have been specified, applicable to the Bidder's Work. All alternates MUST be bid upon. Any Bidder's failure to do so will be deemed a material, non-waivable defect and shall render the bid nonresponsive. The Bidder shall clearly designate whether the change in price is an addition or subtraction, by using either a "+" sign or the word "addition", or in the alternative, a "-" sign or the word "minus". If there is no other change in price, the Bidder shall insert "NC" or "No Charge".

When two or more low bids are equal in all respects, awards will be made according to the provisions of N.J.S.A. 40A:11-6.1(d).

Where unit prices have already been established by the Contract Documents, the Bidder agrees that such unit prices shall prevail. All unit prices, whether filled in by the Bidder or established by the Contract Documents, shall become part of the Contract. No bid will be considered or award made, unless applicable unit prices, as required, are filled in.

The County reserves the right to reject any or all bids and also reserves the right to waive any informality in the bids received so long as said waiver is not of a response which is considered to be material and non-waivable pursuant to law.

The County of Union has the right to reject any and all bids from any bidder that is in, or contemplates bankruptcy of any chapter of nature. Said bidder shall notify the County, in writing, of any condition or knowledge of the same.

Conditional bids will not be accepted. Bids may be withdrawn prior to the advertised time for the opening of bids or authorized postponement thereof or in accordance with the provisions of N.J.S.A. 40A:11-23.3 discussed below. Bids received after the advertised time shall not be considered. Bidders shall be solely responsible for premature opening or late delivery of bids not properly marked, addressed, or directed.

## **2. WITHDRAWAL OF BID DUE TO MISTAKE**

N.J.S.A. 40A:11-23.3 authorizes a bidder to request withdrawal of a public works bid due to a mistake on the part of the bidder. A mistake is defined by N.J.S.A. 40A:11-2(42) as a clerical error that is an **unintentional and substantial computational error or an unintentional omission of a substantial quantity of labor, material, or both, from the final bid computation.**

A bidder claiming a mistake under N.J.S.A. 40A:11-23.3 must submit a request for withdrawal, **in writing**, by certified or registered mail to Laura M. Scutari, QPA, MPA, Director, Division of Purchasing, County of Union, New Jersey, Union County Administration Building, 10 Elizabethtown Plaza, Elizabeth, New Jersey 07207. The bidder must request withdrawal of a bid due to a mistake, as defined by the law, within five business days after the receipt and opening of the bids. Since the bid withdrawal request shall be effective as of the postmark of the certified or registered mailing, Laura M. Scutari, QPA, Director of the Division of Purchasing or his designee may contact all bidders, after bids are opened, to ascertain if any bidders wish to, or already have exercised a request to withdraw their bid pursuant to N.J.S.A. 40A:11-23.3.

A bidder's request to withdraw the bid **shall** contain evidence, including any pertinent documents, demonstrating that a mistake was made. Such documents and relevant written information shall be reviewed and evaluated by the County's designated staff pursuant to the statutory criteria of N.J.S.A. 40A:11-23.3.

The County will not consider any written request for a bid withdrawal for a mistake, as defined by N.J.S.A. 40A:11-2(42), by a bidder in the preparation of a bid proposal unless the postmark of the certified or registered mailing is within the five business days following the opening of bids.

### **3. QUALIFICATIONS OF BIDDERS AND REQUIRED SUBMISSIONS**

The County may make such investigation as it deems necessary to determine the ability of the Bidders to perform the Work, which includes investigation of any and all subcontractors listed with the bid. The Bidder shall furnish any information and data for this purpose as the County may request.

### **4. INTERPRETATIONS AND ADDENDA**

Any explanation desired by a bidder regarding the meaning or interpretation of the Contract Documents must be requested in writing to the County Engineer or Design Professional as the case may be and with reasonable time allowed for a reply to reach bidders before submission of their bids. Any interpretation or instruction made by the County Engineer will be in the form of an addendum to the Contract Documents or clarification and will be furnished to all prospective bidders. Oral explanations or instructions given before the award of the Contract will not be binding. Bidders are required to bring to the attention of the County Engineer, the discovery of any apparent ambiguity, inconsistency, error, discrepancy, omission in the Contract Documents for interpretation and correction at least ten (10) working days before opening of bids with the exception of Saturdays, Sundays and holidays.

All Addenda issued through the Offices of the County Engineer are amendments to the Contract Documents and shall be considered in preparing bids. Same shall become part of the Contract Documents.

Addenda take precedence over all earlier documents and over each other according to the latest date. Addenda unless themselves interpretive remain subject to interpretation the same as any other document incorporated in the Contract.

Addenda may be issued by the County Engineer up to seven (7) working days prior to the opening of bids. Failure of any bidder to receive an addendum shall not relieve such bidder from the obligation imposed by such addendum. Bidders are to keep themselves currently acquainted with the Contract Documents during the entire bidding period and make inquiry on their own initiative as to issuance of any Addenda. Receipts of all Addenda shall be acknowledged on the "*Acknowledgement of Receipt of Changes*" included in the bid package and must be submitted with the bid.

## **5. OBLIGATION OF BIDDER TO INSPECT SITE AND CONTRACT DOCUMENTS**

At the time of the opening of bids, each Bidder will be presumed to have inspected the site(s) and to have read, and be thoroughly familiar with the Contract Documents. The failure or neglect of any Bidder to receive or examine any form, instrument, or document shall in no way relieve any Bidder from any obligation in respect to its bid.

The Bidder shall examine the contents of the Project Manual and the set of Drawings and assure itself that all pages of the Specifications, Drawings, and other Contract Documents are included in the documents obtained for bidding purposes. Should the Specifications, Drawings, and other Contract Documents be incomplete, the Bidder shall notify the County Engineer in writing, who will supply the Bidder with any missing pages of Specifications, Drawings, or other Contract Documents. The lack of such written notification by the Bidder will be construed as evidence that the Specifications, Drawings, or other Contract Documents supplied it for bidding purposes are full and complete and as a waiver of any subsequent claim to the contrary.

## **6. BID AND PERFORMANCE GUARANTEE**

Each bidder must furnish a Bid Bond, Certified Check or Bank Cashier's Check in the amount of ten percent (10%) of the Bid. Checks shall be drawn to the order of the County of Union, New Jersey, not to exceed \$20,000.

Each bidder must furnish with the bid a certificate from a Surety Company, i.e. Consent of Surety, stating that in the event of the contract being awarded to said bidder, such Surety Company will provide the Contractor with Bonds guaranteeing the faithful performance of the Work in accordance with the plans and specifications, and the payment for labor, materials, and all other indebtedness which may accrue on the account of this Work. A Performance, Labor and Materials bond will be furnished by the Contractor upon an award of Contract, and will be in the amount of 100% of the contract price.

A one-year Maintenance Bond will be required upon acceptance of the Project by the County in the amount as stated in Section 17 of the General Specifications. Bonds will be written by a firm authorized to issue the bonds under the laws of the State of New Jersey and be in a form acceptable to the County Counsel.

N.J.S.A. 40A:11-1.1 et. seq. allows the prime Contractor to furnish the Performance Security for his Subcontractors. The County of Union requires Performance Security to be furnished by the prime contractor for the entire job in the total amount of the contract.

The County of Union shall award the contract or reject all bids within sixty (60) days; except that the bids of any bidders who consent thereto may, at the request of the County be held for consideration for such longer periods as may be agreed.

The County will return all certified checks or cashier's checks after the proposals have been opened, read, tabulated and checked except those of the three (3) bidders who have bid the lowest total price for carrying out the Project. The County will return the checks of these bidders when a contract is awarded to the successful bidder within ten (10) days after the award of the contract.

If the successful bidder refuses or neglects to sign the said Agreement and furnish the required bonds, the Bid Bond will be held and used by the County to offset any damages for such refusal or neglect.

## **7. COMMENCEMENT AND COMPLETION**

Work will not commence until a Notice to Proceed is received from the County Engineer.

Upon substantial completion of the Project, the Contractor must request a joint inspection with the County Engineer. Upon completion of this inspection, the County Engineer will prepare a list of incomplete or incorrect items (punch list) and have Contractor initial and date same. The Contractor shall rectify all deficiencies noted on the punch list within 30 calendar days of receipt of the list. The County Engineer may approve extensions for extenuating circumstances.

## **8. BIDDER AFFIDAVIT**

All Bidders are required to complete, sign, and submit with their Bid, the attached "Affidavit Regarding List of Debarred, Suspended or Disqualified Bidders". (See form enclosed)

## **9. CLASSIFICATION AND QUALIFICATION OF BIDDERS**

Pursuant to Ordinance Number 557-2002 as adopted by the County on September 5, 2002, all bidders on contracts for public works shall be classified and

qualified in accordance with N.J.S.A. 40A:11-25 as well as N.J.S.A. 52:35-1 et seq. (See Section 53 of the General Specifications)

This provision shall not apply to subcontractors.

## **10. UNCOMPLETED CONTRACTS (BUILDING PROJECTS ONLY)**

The Bidder shall submit a current Classification/Prequalification Certificate and accompanying form(s) indicating the dollar amount of uncompleted contracts, and a notarized and itemized list of these uncompleted contracts in the form provided, with their bid. (See form enclosed)

## **11. BID SECURITY**

All Bidders are required to submit a form of Bid Security with their bids. (Bid Bond or Certified Funds)

The Bid Security shall be in the amount of ten percent (10%) of the Bid, but not in excess of Twenty Thousand Dollars (\$20,000.00), and payable to the order of the "County of Union."

## **12. LABOR AND MATERIALS**

The prices will cover all costs of any nature incident to and growing out of the Work, including all labor, material, equipment, transportation, loss by damage or destruction of the Project, settlement of damages, and for replacement of defective work or materials. N.J.S.A. 54:32B-1 et seq. exempts all materials sold to the County of Union from sales or use taxes and should not be included in the prices provided on the Bidding Sheet.

## **13. INSURANCE REQUIREMENTS**

The County of Union requires all contractors to be able to comply with the following insurance requirements. In the event a bid is accepted by the County, the contractor must accept the applicable insurance requirements, as set forth below, as part of any contract awarded to it by the County.

Contractor shall carry and maintain at all times while the contract is in full force and effect, the following insurance coverage with an insurance company or companies acceptable to the County, with limits not less than those shown below. A Certificate of Insurance, shall be filed with the County prior to commencement of any Work indicating the following:

- a) Commercial General Liability (CGL): Coverage for all operations including, but not limited to, contractual, products and completed operations, and personal injury with limits no less than \$5,000,000 per occurrence/\$10,000,000 aggregate.

**G-7**

Revised: 2017.10.26

The County of Union, its Board of Chosen Freeholders, officers, employees, agents and servants shall be included as an additional insured. Coverage is provided on a primary and on-contributory basis to the County of Union, et al.

- b) Automobile Liability: Coverage for all owned, non-owned and hired vehicles with limits not less than \$5,000,000 per occurrence, combined single limits (CSL) or its equivalent.
- c) Workers Compensation: As required by the State of New Jersey and Employers Liability with limits not less than \$1,000,000 per accident for bodily injury or disease.
- d) Professional Liability (if design/build): Coverage with limits not less than \$1,000,000 per occurrence or claim, \$2,000,000 aggregate
- e) Contractor's Pollution Legal Liability and/or Asbestos Legal Liability and/or Errors & Omissions (if project involves environmental hazards): Coverage with limits no less than \$1,000,000 per occurrence or claim/\$2,000,000 aggregate.
- f) Builders Risk (for major renovations): During the course of construction utilizing an "All Risk" coverage form with limits equal to the completed value of the project and no coinsurance penalty provisions.

Where applicable, a waiver of subrogation in favor of the County of Union, its Board of Chosen Freeholders, officers, employees, agents, servants and the State of New Jersey is to be included in those policies of insurance where permitted by law.

Notice of Cancellation: Each insurance policy required above shall provide that coverage shall not be canceled, except with notice to the Entity.

Special Risks or Circumstances: The County reserves the right to modify these requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage, or other special circumstances.

#### **14. INDEMNIFICATION REQUIREMENTS**

The County of Union requires all bidders to accept the following indemnification requirements in the event the County accepts their bid. The Contract awarded by the County to the successful bidder will contain the following provision:

"To the fullest extent permitted by law the Contractor shall indemnify and hold harmless the owner and the owner's consultants, agents, representatives, and employees from and against any and all claims, damages, losses, costs, and expenses, including, but not limited to attorneys' fees, legal costs and legal expenses arising out of or resulting from the performance of the Contractor's work under this contract, provided that such claim, damage, loss, cost, or

expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) caused or alleged to be caused by the negligent acts, negligent omissions, and/or fault of the Contractor, anyone directly or indirectly employed or retained by the Contractor, or anyone for whose acts the Contractor may be liable regardless of whether caused in part by the negligent act or omission of a party indemnified hereunder provided it is not caused by the sole negligence of a party indemnified hereunder. Contractor shall further indemnify and hold harmless the County and the County's consultants, agents, representative, and employees from and against any and all claims, damages, losses, costs, and expenses, including, but not limited to attorneys' fees, legal costs and legal expenses, arising out of or resulting from performance of the work, provided that such claim, damage, loss, cost, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) caused or alleged to be caused by the negligent acts, negligent omissions, and/or fault of the County or the County's consultants, agents, representatives, or employees and arises out of this project and provided such claim, damage, loss, cost, or expense is not caused by the sole negligence of a party indemnified hereunder."

## **15. ROYALTIES AND PATENTS**

The Contractor shall pay all royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and shall hold the County harmless from loss on account thereof.

## **16. PLANS AND SPECIFICATIONS**

In carrying out the Work, the plan(s) and the specifications will be followed by the Contractor. Minor alterations in the plan may be made or permitted by the County Engineer from time to time and, if no additional Work is necessary, there will be no additional charge for carrying out such minor alterations.

The Contractor shall provide the County Engineer a set of reproducible as-built drawings upon completion of the Project. The Contractor shall maintain an updated construction progress plan in the Project field office at all times.

When applicable, The New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, as amended, and Supplemental Specifications for State Aid Projects, herein after referred to as the "Standard Specifications", are made a part of these specifications and contract for the improvements, and will govern the construction of this Project, the material used and the execution of this Project, except as revised and modified herein. The references to these specifications are given herein for the purpose of aiding in the rapid location of the description of the various items herein specified. The entire Work must be carried on



and completed to the satisfaction of the County. The Standard Specifications are amended as follows:

“Any reference to the Commissioner, Department, Department Laboratory, Engineer or Inspector should be redefined to be the County of Union”.

### **17. GUARANTEE AGAINST DEFECTIVE WORK**

Prior to final payment being made or before the release of the performance security required by Section 3 above, the Contractor and Surety shall execute and deliver to the County an original Maintenance Bond with an original signature and seal having a penal sum equal to:

- A) One hundred percent (100%) of the final adjusted Contract amount, if such amount is \$50,000.00 or less;
- B) Fifty percent (50%) of the final adjusted Contract amount, if such amount be greater than \$50,000.00 but less than \$250,000.00; and,
- C) Twenty-five percent (25%) of the final adjusted contract amount, if such amount is \$250,000.00 or more.

The Bond and Surety shall be satisfactory to the Union County Counsel. The Surety shall hold a Certificate of Authorization to do business in the State of New Jersey and shall conform to P.L. 1995 c.384, codified as N.J.S.A. 2A: 44-143, 144. The Surety Disclosure Statement and Certification required by N.J.S.A. 2A: 44-143, 144, shall be attached to the Bond. Such Maintenance Bond shall remain in full force and effect for a period of one (1) year from the date of Final Completion. Such Maintenance Bond shall also provide that the Contractor and the Surety guarantee to replace for the said period of one (1) year from the date of Final Completion, all Work performed and/or all materials furnished that were not performed or were not furnished in accordance to the terms and performance requirements of the Contract Documents, and will make good any defects thereof which become apparent before the expiration of one (1) year. If, during that period, any part of the Project, in the judgment of the Engineer, is found defective, the Contractor will repair or replace same within five (5) days of receipt of notice from the County Engineer. If the Contractor refuses or neglects to do such Work in the time specified, the County Engineer may have the Work done by others and the Contractor or his Surety thereof will pay the cost.

The Contractor will furnish the County a Maintenance Bond for a percentage of the final adjusted contract price, as stated above. The one (1) year period will start the day of Final Completion of Project by the County. Final payment is conditional on the receipt of a maintenance bond in a form acceptable to County Counsel.

### **18. TRAFFIC AND STREET MAINTENANCE**

The Work must be started and performed by the Contractor in such a manner as to minimize delays to the traveling public. It must be completed in a timely fashion, with little or no inconvenience to traffic and pedestrians, where such inconvenience may be avoided.

All municipal, county, and state roadways shall remain open to traffic unless otherwise provided for in the technical specifications.

If modified traffic patterns are authorized in order to provide a safe working or traveling environment, the Contractor is responsible for providing all equipment, barrels, cones, signs, and barricades to implement the work zone and detours, unless otherwise specified in the technical specifications. All work zones and detours shall be established in accordance with the technical plans and specifications if provided or in strict compliance with the current version of the Manual for Uniform Traffic Control Devices (MUTCD). The Contractor shall obtain approval for these work zones and detour plans from the Municipal Police or applicable police agency and the Union County Bureau of Traffic Maintenance prior to implementation.

All traffic control plans shall provide for safe movement of vehicular, bicycle, and pedestrian traffic. Particular attention shall be given to requirements of the Americans with Disabilities Act.

No portion of any street or alleyway may be used for the storage of any materials or equipment without the approval of the Municipal Police or other applicable police agency. Sidewalks, gutters, drains, fire hydrants and private drives shall be maintained for their intended use unless specifically approved by the County Engineer.

Upon suspension of Work, at the end of the day or for protracted periods, the Contractor shall remove all rubbish and materials from the Work site to the approved storage/staging location. All road cuts, saw cuts, and trenches that may pose hazard to vehicular, pedestrian, or bicycle traffic, to include handicapped users, shall be filled to the surface of the roadway or sidewalk. At no time will steel plates or settled trenches be allowed at the daily suspension of Work, unless specifically approved by the County Engineer.

Use of Traffic Control Officers shall be determined by the County in accordance with the provisions of N.J.S.A. 40A:11-23.1(c). If applicable to the Project, the County shall have provided an allowance for same as set forth in the Bid Form.

With respect to pedestrian traffic, the Contractor shall install signs restricting access of the general public and, as necessary, Union County employees to the area of construction. The Contractor shall provide safe access to required areas and place physical barriers to restricted areas. These barriers may range from caution tape to actual barriers, at the direction of the County Engineer.

## **19. CONTRACTOR'S EMPLOYEES**

The Contractor must employ only suitable and competent labor in the Work, and must remove from the Work any incompetent, unsuitable, or disorderly person upon complaint from the County Engineer.

The parties to any contract resulting from this proposal do hereby agree that the provisions of N.J.S.A. 10:2-1 through 10:2-4 (discrimination in employment on public works contracts): 34:11-56.25 et seq. (payment of prevailing rate of wages determined pursuant to N.J.S.A. 34:11-56.30 by the Commissioner), and the Rules and Regulations promulgated pursuant thereto, are hereby made a part of any contract and are binding upon them.

There will be no discrimination against any employee who is employed in the Work to be covered by any contract resulting from this bid because of age, race, creed, color, national origin, ancestry, marital status or sex.

Any person, firm, or corporation violating the provisions of this Section will be deemed and judged a disorderly person.

## **20. OWNERSHIP DISCLOSURES REQUIRED**

Pursuant to P.L. 1977, N.J.S.A. 52:25-24.2, the Bidder shall submit with its Bid, or prior to receipt of bids, a statement setting forth the names and addresses of all stockholders in the corporation or partnership bidding who own ten percent (10%) or greater interest therein. (See forms attached)

## **21. NON-COLLUSION AFFIDAVIT**

The Bidder shall submit with its bid either the attached completed "Non-Collusion Affidavit" or a statement of non-collusion with verbiage similar to same.

## **22. EQUAL EMPLOYMENT OPPORTUNITY COMPLIANCES**

The successful bidder shall be required to complete and submit an Initial Project Workforce Report, New Jersey Department of Treasury Form AA-201, upon notification of award. Failure to submit this completed form may result in the Contract being terminated.

The successful bidder shall also be required to submit a copy of its Monthly Project Workforce Report, New Jersey Department of Treasury Form AA-202, to the New Jersey Department of Treasury's Division of Public Contracts Equal Employment Opportunity Compliance and to the Board.

## **23. COMPLIANCE WITH NEW JERSEY PREVAILING WAGE ACT**

The County of Union, in order to fulfill the requirements of N.J.S.A. 34:11-56.25 et seq, requires that the following additional conditions be strictly followed. The bidders represent that he is not listed or is not on record in the Office of the Commissioner or the Department of Labor and Workforce Development and Industry as one who failed to pay prevailing wages in accordance with the provisions of this Act. The bidder agrees to the inclusion of a contract provision upon award which specifically requires said Contractor to fully comply with each and all of the requirements of the aforesaid Act as it relates to prevailing rates of wages on public contracts as set forth in the New Jersey Prevailing Wage Act, P.L. 1963, Chapter 150 and P.L. 1974, Chapter 64.

A Copy of the Prevailing Wage Rates is attached for your reference. Applicable rates are those wages and fringe benefit rates in effect on the date the contract is awarded. All predetermined rate increases listed at the time the contract award must also be paid, beginning on the dates specified. Rates may change between the time of issuance of this determination and the award of the public works contract. Therefore, prior to the award of the contract, verification must be made with the Public Contracts section, to insure that the rates contained in this determination are still prevailing.

The Contractor agrees to abide and be bound by each and all of the said statutory provisions with respect to the payment of prevailing rates of wages, and acknowledges that the County reserves the right to terminate the Contractor's (or his subcontractors') right to proceed with the scope of Work, or such portion thereof that relates to the failure to pay prevailing rates of wages. In such event or under the terms of N.J.S.A. 34:11-56.27, the Contractor and his surety will be liable to the County of Union for any excess costs occasioned by such a violation.

The Contractor or subcontractors for this Project will post the Prevailing Wage Rates for each craft and classification involved as determined by the Commissioner of Labor and Industry, including the effective date of any changes thereof, in prominent and easily accessible places at the site of the Work or at such place or places as are used by them to pay workmen their wages.

The County of Union requires a copy of payroll records from the Contractor and subcontractors. Payroll records shall be submitted with each voucher request for payment. Prevailing wage rates may be obtained from the New Jersey Labor, Division of Workplace Standards, Public Contracts Section, (609-292-2259).

## UNION LABOR IS PREFERRED ON ALL COUNTY WORK

The foregoing reference to specific laws will not be deemed to be a limitation of obligation of the Contractor to perform his obligations in full compliance with the provisions and requirements of all federal and state statutes and local ordinances applicable to the Work to be done under the contract.

It is agreed and understood that any contracts and/or orders placed as a result of this proposal will be governed and construed and the rights and obligations of the parties hereto will be determined in accordance with the laws of the State of New Jersey.

Upon completion of the Work, the Contractor will furnish a Certification of Compliance with the New Jersey Prevailing Wage Act. The certificate in a form acceptable to County Counsel is a condition of the final payment. (See form attached)

### **24. BRAND NAME OR EQUAL**

When the Specifications, Forms, and other Contract Documents use “brand name or equivalent” or similar language, the listed brand name shall serve as a reference or point of comparison for the functional or operational characteristic desired for the goods or services being requested. Where a bidder attempts to submit an equivalent product for a brand name, it shall be the responsibility of the bidder to fully describe and document the product to be provided with the bid in order to establish the equivalence claim.

- A. If the Bidder proposes to offer substitute goods as an equal to those specified herein, the bidder shall so indicate with the Bid Proposal. For the purposes of this paragraph, a proposed item shall be considered equal to goods specified herein if:
  - 1. The County, in its sole discretion, determines that: (i) the goods conform substantially, even with deviations, to the brand name goods specified herein; (ii) the goods are equal to or greater than the brand name goods specified herein in terms of quality, durability, functionality, appearance, strength and design; (iii) the goods are capable, at least as well as the brand name goods specified herein, or performing with existing equipment; and (iv) the goods do not cost the County more than the brand name goods specified herein costs the County.

- B. To offer substitute goods as an equal to those specified herein, it is necessary that:
1. The Bidder submits sufficient information with its bid to permit the County to determine that the goods are equivalent to the brand name goods specified herein, including, but not necessarily limited to the brand, catalog number and specifications/data sheets;
  2. The Bidder fully identifies and describes the variations of the goods from the brand name goods specified herein on a separate sheet that is to be submitted with the bid proposal. Bidder's literature WILL NOT suffice in explaining exceptions to these specifications.
  3. The Bidder certifies that the goods (i) are similar in substance to the brand name goods specified, and (ii) are suited to the same use as the item specified;
- C. The County shall be allowed a reasonable time within which to evaluate the Bidder's proposal to offer substitute goods as an equal to those specified herein. The County shall be the sole judge of acceptability. No "or-equal" goods shall be ordered, delivered, assembled, set-up or utilized until the County's evaluation is complete. The County's determination as to equivalency shall be deemed final and absolute.

In the event the Bidder does not provide sufficient supporting documentation with the bid, it will be presumed and required that the brand name goods and services as described in the specifications will be provided.

## **25. LINES AND GRADES**

Normally, horizontal and vertical control points will be provided in the technical specifications. All other surveying will be the responsibility of the Contractor unless otherwise noted.

## **26. NUMBER OF WORKING DAYS**

In accordance with N.J.S.A. 40A:11-17, the Work for the within Project shall be completed as specified on the Time of Completion Form. See form attached.

There shall be taken a deduction from the contract price, or any wages paid by the County, to any inspector(s) necessarily employed by it on the Work, for any number of days in excess of the number allowed in the specifications.

## **27. PROMPT PAYMENT OF CONSTRUCTION CONTRACTS (NJ Prompt Payment Act)**

Pursuant to N.J.S.A. 2A:30A-1 et seq., payment to the Contractor, other than for Work done pursuant to a contact allowance, where applicable, shall be processed and paid as follows:

1. All contractor bills shall be either approved for payment, or notice provided as to why the bill or any portion of it will not be approved by the representative(s) of the governing body no later than the public meeting following 20 calendar days of the billing date as defined in the statute.
2. If the billing is approved, said bill shall be paid in the payment cycle following the meeting.

## **28. STOPPING WORK ON ACCOUNT OF BAD WEATHER**

Work must only be performed in weather suitable for the type of construction planned or underway. Extremes in temperature, humidity, precipitation, evaporation, etc. can detrimentally affect the constructed product. Refer to the Standard and Technical Specifications for specific items.

## **29. ACCESS FOR OTHER CONTRACTORS**

The Contractor for this Work will give proper access to other contractors who may be employed upon the Project and must not hinder or delay unnecessarily any Work that may be progressing under other contracts.

## **30. CONDEMNED MATERIALS AND WORK**

Any materials and or part of the Work that may be condemned by the County Engineer will be removed and replaced by the Contractor or otherwise rectified, as may be directed by the County Engineer. No payment will be made upon the Work until such faulty work has been made good as may be directed. In the event the Contractor refuses or neglects to make good such faulty work, he will be deemed to have abandoned the contract and proceedings may be taken against him as provided herein.

## **31. STORAGE**

In the event that it is necessary for the Contractor to stockpile or store materials or equipment on the job site, the Contractor shall inform the County of such necessity

and the County may offer available space, if any, for storage of such materials or equipment. The Contractor shall use said space only for such purpose. Any and all materials which may be stored in such space or which may be brought onto the job site at any time by the Contractor will be at the Contractor's sole risk. The County will not be responsible for loss of or damage to said materials or equipment for any cause whatsoever. The Contractor shall take necessary measures to protect any such storage area and shall be responsible for any and all damages.

### **32. FINAL CLEAN UP**

Upon completion of the Work, the Contractor will remove all equipment, unused materials, rubbish, etc., and will repair, or replace in an a manner acceptable to the County Engineer, all areas that may have been damaged in the prosecution of the Work. Same shall be a condition precedent to final payment. Should said Contractor fail to comply with this requirement, the County shall undertake the clean-up with its own forces and charge the cost of same against the Contractor's contract balance.

### **33. SUB-LETTING OF WORK**

Except for the List of Subcontractors, pursuant to N.J.S.A. 40A:11-16 (See form attached), no portion of the Work will be sublet by the Contractor to any other entities, except with the consent of the County Engineer. A complete list of subcontractors must be submitted to the County Engineer at the preconstruction meeting. If the job does not warrant a preconstruction meeting, the Contractor must submit such list prior to the start of Work.

All Subcontractors will be subject to N.J.S.A. 34:11-56 et al.

N.J.S.A. 40A:11-16 requires the bidder to list in the bid sheets the name or names of all subcontractors involved in the following types of Work: plumbing and gas fitting and all kindred work, steam and hot water heating, ventilating apparatus, steam power plants and kindred work, electrical work, ornamental iron work, and structural steel. In addition, the County may require the identification of specific additional subcontractors. If these trades are expected to be part of the contract, such subcontractors should be listed on the "Subcontractor Identification Statement List of Subcontractors" and Bidder shall certify same on the accompanying sheet titled "Subcontractor Identification Certification". (See forms attached) **Bidder's failure to submit these two forms shall be considered a material defect and result in rejection of Bidder's bid.** Substitutions of any listed subcontractors pursuant to N.J.S.A. 40A:11-16 will not be permitted except with the consent of the County Engineer.

### **34. SAFETY**



The Contractor shall observe all rules and regulations of the Federal, State, and local health officials. Attention is directed to Federal, State, and local laws, rules, and regulations concerning construction safety and health standards. The Contractor shall not require any worker to work in surroundings or under conditions that are unsanitary, hazardous, or dangerous to the worker's health or safety.

The Contractor shall admit to the site, without delay and without the presentation of an inspection warrant, any inspector of OSHA or other legally responsible agency involved in safety and health administration upon presentation of proper credentials.

The Contractor shall make available to the Contractor's employees, subcontractors, the County Engineer, and the public, all information pursuant to OSHA 29 CFR Part 1926.59 of The Hazard Communication Standard 29 CFR 1910.1200, and shall also maintain a file on each job site containing all Material Safety Data Sheets (MSDS) for products in use at the Project. These Material Safety Data Sheets shall be made available to the Engineer upon request.

The Contractor shall at all times conduct the Work to provide for the safety and convenience of the general public and protection of persons and property. The safety provisions of applicable laws, OSHA regulations, building and construction codes, and the rules and regulations of the New Jersey Department of Labor and Workforce Development and Commerce shall be observed.

### **35. QUALITY, SAFETY AND PERFORMANCE STANDARDS**

All goods and services must be constructed and provided with the highest quality materials and workmanship. It is the intent of these specifications that only equipment equal to, or exceeding, the standard specified will be acceptable in order to protect the safety of the occupants of the Building.

### **36. MATTERS NOT MENTIONED IN CONTRACT DOCUMENTS**

Any Work, material, or method, not specifically described in these specifications, but shown upon the plans of the Work, will be carried out as shown on said plan.

### **37. PERMITS**

The Contractor will obtain all necessary permits required by law and provide the County with necessary approvals prior to commencement of permitted Work.

### **38. CONTRACTOR TO PROVIDE PROOF OF PAYMENT**

Upon the completion of the Work, the Contractor will furnish a General Release as proof that all claims for labor, materials, etc., have been settled by the Contractor. The General Release, in a form acceptable to County Counsel, is a condition of final payment.

### **39. CHANGE ORDERS**

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*Revised: 2017.10.26*

Change Order Procedures shall comply with N.J.A.C. 5:30-11.1 et seq., "Change Orders and Open End Contracts" and subsequent provisions of the New Jersey Administrative Code.

#### **40. SUPPLEMENTAL WORK**

In case any supplemental work is necessary, it will be performed by the Contractor at a price fixed by agreement between the Contractor and the County Engineer and approved by the County as specified in Section 39. The Contractor will do no supplemental work on any character, for which the Contractor will demand pay, except upon the written order of the County.

#### **41. FORM OF CONTRACT**

Contracts will be let on the attached Form of Agreement Between County ("Owner") and Contractor (AIA 101), and General Conditions (AIA 201), as supplemented.

The Contract will be subject to all statutory provisions on the matter of Public Works, Public Contracts, The Law Against Discrimination, the Laws Governing Affirmative Action and Prevailing Rates of Wages under the laws of New Jersey.

The Agreements shall be executed by both parties not later than twenty-one (21) days from the date of the award by the County (Sundays and holidays excluded); however, such time frame may be extended by agreement of the parties.

#### **42. PROGRESS PAYMENTS**

Monthly progress payments will be made based on the value of labor and materials incorporated in the Work and of materials suitably stored at the site. An itemized schedule of values shall be submitted with each Application for Payment.

(Refer to the Owner/Contractor Agreement for Retainage and other conditions pertaining to payment and the application of N.J.S.A. 2A:30A-1 et seq.)

All Applications for Payment shall be accompanied by paid invoices for materials incorporated in the Work and for materials suitably stored at the site, and affidavit(s) by Subcontractors whose Work was included in the next to the last application to the effect such Work and such materials have been paid for.

No payment shall be made without Contractor having provided all submittals set forth in this Section and the approval of same by the County.

For contracts exceeding \$100,000.00, monthly payments will be made on the Work to the extent of 98% of the value of the Work done which is considered to be retainage.

For contracts less than \$100,000.00, monthly payments will be on the Work to the extent of 90% of the value of the Work done. In lieu of the retainage, the Contractor will, at his option, deposit with the County Counsel negotiable bearer bonds of the State of New Jersey or any political subdivision thereof, equal to the amount otherwise withheld as retainage.

When the Project is completed, the final cost of the Project will be based on actual quantities of authorized Work done under each item scheduled in the bidding sheet and approved Change Orders, if any. The money due to the Contractor as determined by said final certificate after deduction of previous monthly payments on account, will be paid to the Contractor in accordance with the terms of the contract dealing with Prompt Payment, providing, however that before such final payment is made, all outstanding claims against the Contractor must be satisfied. Before final payment is released, the Contractor must furnish: **a)** Maintenance Bond (see Section 17 of these general specifications); **b)** Certification of Compliance, New Jersey Prevailing Wage Act (see Sections 23 & 53); and **c)** General Release (see Section 38) in a form satisfactory to County Counsel; **d)** complete set of as-built plans in the latest AutoCad on compact disc; and **e)** a complete set of in-progress photos in jpg, jpeg, or bmp digital format on a compact disc.

#### **43. INSPECTION**

The Work must be done in accordance with the plans and specifications, and will be inspected by the County Engineer. An inspector may be placed upon the Work at any time by the County Engineer to see that the plans, specifications, and instructions of the County Engineer are carried out. In connection herewith, bidders are referred to N.J.S.A. 40A:11-17.

#### **44. DAMAGES**

The Contractor will be held responsible for all damages that may occur to Work, or to persons or property by reason of the nature of the Work or from the elements, or by reason of inadequate protection of the Work, or from any carelessness or negligence on his part or on the part of his employees. The County will withhold payments on the Work until all suits or claims for damages sustained on, or by reason of, this Work will have been settled by the Contractor.

The construction and final completion of this Work will be guaranteed by the Contractor. Any damages that may be done to the Work or any part thereof, by the elements or otherwise, during its construction, will be made good by the Contractor.

## **45. LIQUIDATED DAMAGES**

If the Project is not completed within the time specified herein or within such further time as may have been granted by the County Engineer, then the Contractor hereby agrees to pay to the County as liquidated damages, but not as a penalty, \$1,000.00 per day for each and every calendar day that he is in default on time to complete the Work. The said sum will be deducted from moneys due the Contractor and if the damages exceed this amount, then the Contractor or his Surety Company will pay the excess. These damages may be waived at the option of the County.

## **46. AFFIRMATIVE ACTION REQUIREMENTS**

### **EXHIBIT B** (Revised 4/10)

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

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

The contractor or subcontractor will send to each labor union, with which it has a collective bargaining agreement, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under this act and shall

post copies of the notice in conspicuous places available to employees and applicants for employment.

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

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

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

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

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

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

vacancies;

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

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

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

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

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

(ii) If said individuals have never previously received any document or certification signifying a level of qualification lower than that required in order to perform the work of the construction trade, the contractor or subcontractor shall in good faith determine the qualifications of such individuals. The contractor or subcontractor shall hire or schedule those individuals who satisfy appropriate qualification standards in conformity with the equal employment opportunity and non-discrimination principles set forth in this chapter. However, a contractor or subcontractor shall determine that the individual at least possesses the requisite skills, and experience recognized by a union, apprentice program or a referral agency, provided the referral agency is acceptable to the Division. If necessary, the contractor or subcontractor shall hire or schedule minority and women workers who qualify as trainees pursuant to these rules. All of the requirements, however, are limited by the provisions of (C) below.

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

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

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

(C) The contractor or subcontractor agrees that nothing contained in (B) above shall

preclude the contractor or subcontractor from complying with the union hiring hall or apprenticeship policies in any applicable collective bargaining agreement or union hiring hall arrangement, and, where required by custom or agreement, it shall send journeymen and trainees to the union for referral, or to the apprenticeship program for admission, pursuant to such agreement or arrangement. However, where the practices of a union or apprenticeship program will result in the exclusion of minorities and women or the failure to refer minorities and women consistent with the targeted county employment goal, the contractor or subcontractor shall consider for employment persons referred pursuant to (B) above without regard to such agreement or arrangement; provided further, however, that the contractor or subcontractor shall not be required to employ women and minority advanced trainees and trainees in numbers which result in the employment of advanced trainees and trainees as a percentage of the total workforce for the construction trade, which percentage significantly exceeds the apprentice to journey worker ratio specified in the applicable collective bargaining agreement, or in the absence of a collective bargaining agreement, exceeds the ratio established by practice in the area for said construction trade. Also, the contractor or subcontractor agrees that, in implementing the procedures of (B) above, it shall, where applicable, employ minority and women workers residing within the geographical jurisdiction of the union.

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

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

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

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#### **47. INVESTMENT ACTIVITIES WITH IRAN**

Pursuant to P.L. 2012, c.25, codified as N.J.S.A. 52:32-55 et seq., prohibits State and local public contracts with persons or entities engaging in certain investment activities in energy or finance sectors of Iran.

#### **48. COMPLIANCE WITH THE PUBLIC WORKS CONTRACTOR REGISTRATION ACT - (N.J.S.A. 34:11-56.48 et seq.)**

Pursuant to the above-referenced law, Bidders are required to be registered with the New Jersey Department of Labor and Workforce Development and to possess a current certificate by said Department indicating compliance with the Act prior to the time and date that bids are received. Bidders are notified of this requirement of their compliance. Such certificates or applications shall also be provided for each Subcontractor furnishing plumbing and gas fitting, steam and hot water heating and ventilating apparatus, and all kindred work, steam power plants and kindred work, electrical work, structural steel and ornamental iron work, and such other subcontractors as the specifications require relative to prior identification.

#### **49. UTILITIES**

Attention of the bidder is directed to the fact that the approximate locations of known utility structures and facilities that may be encountered within and adjacent to the limits of the Work are shown on the plans and described herein. The accuracy and completeness of this information is not guaranteed by the County Engineer and the bidder is advised to ascertain for himself all the facts concerning the location of these and other utilities.

The Contractor will not proceed with his Work until he has made diligent inquiries of all public utility and municipal officials to determine the exact location of all underground structures and pipes within the site of the Project. The Contractor will notify utility owners not less than ten (10) days in advance of the time he proposes to perform any Work that will endanger or affect their facilities in compliance with **New Jersey One-Call**. In excavating in any part of the Work, care must be taken not to remove or damage any gas, water, sewer, or other pipe, conduit, or structure, - public or private - without the concurrence of the owner and the County Engineer. The Contractor will, at his own expense, shore up, secure and maintain a continuous flow in such structures, and will keep them in repair until final acceptance of the Work.

When pipes or other structures are encountered or when the removal, relocation or protection of these utilities are necessary in carrying out the Project as planned, the Contractor will cooperate with the owner of said utilities and will permit the owners or their agents access to the site of the Work in order to relocate or protect their facilities and not hinder or delay unnecessarily the Work of the owners in moving same. No extra allowance of payment will be made to the Contractor for the use of any materials,



equipment, etc., or for the performance of any Work in connection with the moving of said structures unless the Contractor is specifically ordered by the County Engineer to furnish such materials, equipment, or services. If directed by the County Engineer to do any Work or furnish any materials or equipment, payment will be allowed the Contractor in accordance with the unit prices bid for such Work, or, if such items are not scheduled in the proposal, such Work shall be allowed "Supplemental Work" as provided in Section 39 of these general specifications. The corporations, companies, agencies or municipalities owning or controlling the utilities, and the name, and telephone numbers are listed in the beginning of the Technical Specifications.

## **50. MATERIAL COMPLIANCE AND SHOP DRAWINGS**

The Contractor will require the manufacturer or supplier to furnish three (3) copies of Certification of Compliance with each delivery of materials, components and manufactured items for the Project. Two (2) copies will be furnished to the County Engineer; one copy will be retained by the Contractor. Certificates of Compliance will contain the following information:

1. Project to which material is consigned;
2. Name of the Contractor to which the material is supplied;
3. Kind of material supplied;
4. Quantity of material represented by the Certificate;
5. Means of identifying the consignment, such as label marking, seal number, etc.;
6. Date and method of shipment;
7. That the material is in conformity with the pertinent specifications stated in the certificate; and
8. Signature of a person having legal authority to bind the supplier.

The Contractor will submit to the County Engineer for his approval five (5) copies of complete and fully detailed shop or working drawings for those items listed in the beginning of the technical specifications.

Each drawing will identify the name of the job, location and Contractor.

All drawings will be approved in accordance with the standard specifications. Refer to the Technical Specifications for specific items.

All materials or articles used in the Work will be of American manufacture, insofar as same are available, in conformance with N.J.S.A. 40A:11-18.

## **51. PRECONSTRUCTION**

In order to provide full coordination of this Project among the parties concerned, the County Engineer will arrange for a preconstruction meeting between the Contractor, County Engineer and other interested parties as soon as possible after the contract is

executed. At this meeting the Contractor will present his proposed schedule of Work which shall be subject to review and approval of the County through its designated representatives.

## **52. DISPUTES UNDER THE CONTRACT**

A dispute arising under the Contract shall be submitted in writing to the County Engineer with all facts and supporting data. The County Engineer will review the dispute and issue his decision or request additional facts or documentation after which he will render his decision.

In the event the dispute is not then resolved, the matter shall, pursuant to law, be submitted to mediation before being submitted to a court of competent jurisdiction venued in Union County.

The County Engineer will notify the County Counsel when a matter is to be submitted to mediation. The County Counsel will communicate with the parties and inform them of the procedures to be followed in making such a submission.

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**53. ORDINANCE NO. 557-2002 ADOPTED ON SEPTEMBER 5, 2002  
BY THE BOARD OF CHOSEN FREEHOLDERS**

Ordinance No. 557-2002 adopted on September 5, 2002 by the Board of Chosen Freeholders on Preclassification of Bidders by the NJDPMC (if applicable) pursuant to Ordinance No. 557-2002, the County of Union requires all bidders on projects for the construction, reconstruction, demolition, alteration, repair or maintenance of public buildings to be preclassified by the State of New Jersey, Department of Treasury, Division of Property Management and Construction ("DPMC").

Bidders must provide proof of classification in the form of a Certificate/Notice of Classification from the DPMC showing a sufficient aggregate rating to cover their bid amount, which is active on the date of receipt of these bids. Further, Bidder must also provide proof of preclassification in the applicable/appropriate trade code necessary for Work on the Project.

**AN ORDINANCE IN ACCORDANCE WITH N.J.S.A. 40A:11-25 ESTABLISHING REASONABLE REGULATIONS APPROPRIATE FOR CONTROLLING THE QUALIFICATIONS OF PROSPECTIVE BIDDERS UPON CONTRACTS TO BE AWARDED ON BEHALF OF THE CONTRACTING UNIT, BY THE CLASS OR CATEGORY OF GOODS AND SERVICES TO BE PROVIDED OR PERFORMED AND FIXING THE QUALIFICATIONS REQUIRED ACCORDING TO THE FINANCIAL ABILITY AND EXPERIENCE OF THE BIDDERS AND THE CAPITAL AND EQUIPMENT AVAILABLE TO THEM PERTINENT TO AND REASONABLY RELATED TO THE CLASS AND CATEGORY OF SERVICE TO BE PERFORMED IN THE PERFORMANCE OF ANY SUCH CONTRACT.**

**WHEREAS**, N.J.S.A. 40A:11-25 provides that the governing body of any contracting unit may establish reasonable regulations appropriate for controlling the qualifications of prospective bidders upon contracts to be awarded on behalf of the contracting unit, by the class or category of goods and services to be provided or performed; and

**WHEREAS**, N.J.S.A. 40A:11-25 also states that the regulations established by the governing body may fix the qualifications required according to the financial ability and experience of the bidders and the capital and equipment available to them pertinent to and reasonably related to the class and category of service to be performed in the performance of any such contract; and

**WHEREAS**, N.J.S.A. 40A:11-25 also requires that prior to the adoption of any such regulations, a contracting unit shall submit them to a public hearing and notice and a general description of the subject matter shall be published in not less than two newspapers; and

**WHEREAS**, N.J.S.A. 52:35-1 et seq. and 18A:18A-27 et seq. establish qualifications for the experience and financial abilities of bidders and the capital and equipment available to them relative to the specific services to be performed; and

**WHEREAS**, currently state officials, under the Department of Treasury, Division of Property Management and Construction, classify all prospective bidders as to the character and amount of public works on which they shall be qualified to submit bids and bids shall be accepted only from persons qualified in accordance with such classifications; and

**WHEREAS**, application for classification is open to all Contractors, regardless of the size of the business; and

**WHEREAS**, classification is based on general standards equally applicable to all Contractors; and

**WHEREAS**, classification is expressed in terms of trade and an aggregate rating determined on the basis of experience, financial ability, equipment and capital; and

**WHEREAS**, generally aggregate ratings can range from 0 to \$200,000.00; and

**WHEREAS**, the County of Union will determine the aggregate rating it will require on contracts depending on the size and expense of the Project, but at no time shall the required aggregate rating exceed \$25,000,000.00 for any one project; and

**WHEREAS**, such provisions are of considerable benefit to the County and to bidders by insuring that such bidders have the requisite experience, expertise and resources necessary to effectively perform the terms and conditions of the contract:

**BE IT ORDAINED** by the Board of Chosen Freeholders of the County of Union that it formally adopts as **Policy** that all prospective bidders for building construction projects be classified in accordance with the Department of Treasury – Division of Property Management and Construction pursuant to N.J.S.A. 52:35-1 et seq. and N.J.S.A. 18A:18A-27 et seq.

**BE IT FURTHER ORDAINED** that the Board of Chosen Freeholders of the County of Union hereby adopts the classification of bidders by the New Jersey Department of Treasury, Division of Property Management and Construction as a reasonable regulation for controlling the qualifications of prospective bidders upon contracts to be awarded for construction on behalf of the County of Union.

**BE IT FURTHER ORDAINED** that the provisions of this ordinance are severable. To the extent any clause, phrase, sentence, paragraph or provision of this ordinance shall be declared invalid, illegal or unconstitutional, the remaining provisions shall continue to be in full force and effect.

**BE IT FURTHER ORDAINED** that a public hearing shall be held on this ordinance on September 5, 2002 at the meeting of the Board of Freeholders, County Administration Building, Elizabeth, New Jersey.

**BE IT FURTHER ORDAINED** that the Clerk of the Board of Freeholders of the County is hereby directed to publish and post notice of this ordinance as required by law.

**BE IT FURTHER ORDAINED** that within 10 days hereof the Clerk of the Board of Freeholders of the County shall forward certified copies of this ordinance to the County Manager, Director of Finance, County Counsel, and Division of Local Government Services.

This ordinance shall take effect twenty (20) days after final adoption and publication in accordance with applicable law.

## **54. CONTRACTOR BUSINESS REGISTRATION CERTIFICATE New Mandatory Requirement -Effective 1/18/2010**

The recently enacted **P.L. 2009, c.315**, requires that effective January 18, 2010; a contracting agency must receive proof of the bidder's business registration prior to the award of a contract. However, the proof must show that the bidder was in fact registered with the State of New Jersey Department of the Treasury, Division of Revenue and obtained the business registration prior to the receipt of bids.

If subcontractors are named on the bid, proof of the business registration for each subcontractor must be provided prior to the award of bid. Similarly to the bidder, the proof must show that each subcontractor was registered with the State of New Jersey Department of the Treasury, Division of Revenue and obtained the business registration prior to the receipt of bids.

Proof of business registration shall be

- A copy of a Business Registration Certificate issued by the Department of the Treasury, Division of Revenue; or
- A copy of the web version provided by the NJ Division of Revenue, or

Register online at <http://www.state.nj.us/treasury/revenue/busregcert.htm>. Click the "online" link and then select "Register for Tax and Employer Purposes or call the Division at 609-292-1730.

**Note: A NJ Certificate of Authority is not acceptable.**

**FAILURE** to submit proof of registration of the bidder or any subcontractor named on the bid prior to the award of contract shall be cause to reject the bid.

**FAILURE** of the bidder or any subcontractor named on the bid to be registered prior to the receipt of bids is cause for a **MANDATORY REJECTION** of bids. (A NON-WAIVABLE DEFECT). This covers construction Work as well as non-construction bids.

### **IN ADDITION:**

*N.J.S.A. 52:32-44* imposes the following requirements on Contractors and all subcontractors that knowingly provide goods or perform services for a Contractor fulfilling this contract:

- 1) the Contractor shall provide written notice to its subcontractors and suppliers to submit proof of business registration to the Contractor;
- 2) subcontractors through all tiers of a project must provide written notice to their subcontractors and suppliers to submit proof of business registration and subcontractors shall collect such proofs of business registration and maintain them on file;

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

A Contractor, subcontractor or supplier who fails to provide proof of business registration or provides false business registration information shall be liable to a penalty of \$25 for each day of violation, not to exceed \$50,000 for each business registration copy not properly provided or maintained under a contract with a contracting agency. Information on the law and its requirements are available by calling (609) 292-9292.

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## **55. BID PROTEST – LEGAL FEES AND COSTS**

In the event a Bidder unsuccessfully challenges a Bid Submission by filing an action in a court of law concerning same, said Bidder shall be responsible for payment of reasonable legal costs and fees incurred by the County relating to said protest.

## **56. AMERICAN GOODS AND PRODUCTS WHERE POSSIBLE**

Bidder shall comply with the requirements of NJSA 40A:11-18 and use only manufactured and farm products of the United States, wherever available, for the Project.

## **57. NEW JERSEY PAY-TO-PLAY REQUIREMENTS**

This Contract is required by law to be publicly advertised for bids. As such, lists of political contributions pursuant to N.J.S.A. 19:44A-1 et seq. are NOT REQUIRED to be provided with the bids.

## **58. STATEMENT OF EQUIPMENT TO BE USED IN CONSTRUCTION**

Pursuant to N.J.S.A. 40A:11-20 entitled Certificate of Bidder Showing Ability to Perform Contract, the County requires a Certification from all bidders submitting a bid showing that the Bidder owns, leases, or controls all necessary equipment required by the Project Plans and Specifications. All bidders shall provide this information at the time of the bid opening using the attached form entitled, "CERTIFICATE OF BIDDER SHOWING ABILITY TO PERFORM CONTRACT".

If the Bidder is not the actual owner of the equipment, it shall state the source from which the equipment will be obtained and shall attach a certificate from the owner or person in control of the equipment demonstrating that the equipment owner has granted the Bidder control of the requisite equipment during such time as may be necessary for completion of the portion of the contract for which the equipment is necessary.

## **59. NEW JERSEY SALES AND USE TAX REQUIREMENTS,**

Contractors are required to comply with the following:

New Jersey Sales and Use Tax Requirements: All contractors with subcontractors, or any of their affiliates, who enter into contracts for the provision of goods or services with or for New Jersey local government entities, are required to collect and remit to the New Jersey Director of Taxation in the Department of the Treasury the use tax due on all of their sales of tangible personal property delivered into the State of New Jersey pursuant to the "Sales and Use Tax Act," (N.J.S.A. 54:32B-1 et seq.), regardless of whether the tangible personal property is intended for a

contract with the contracting agency. This tax shall be remitted for the term of the Contract.

For purposes herein “affiliate” shall mean any entity that: (a) directly, indirectly, or constructively controls another entity, (b) is directly, indirectly, or constructively controlled by another entity, or (c) is subject to the control of a common entity. For purposes of the immediately preceding sentence, an entity controls another entity if it owns, directly or indirectly, more than fifty percent (50%) of the ownership interest in that entity. NJSA 52:32-44(g)(3).



BIDDER'S NAME: \_\_\_\_\_

ALFRED J. FAELLA  
COUNTY MANAGER

LAURA M. SCUTARI, QPA, MPA  
DIRECTOR / DIVISION OF PURCHASING

**BID DOCUMENT SUBMISSION CHECKLIST**

**ALL SIGNATURES AND SEALS SHALL BE ORIGINALS UNLESS OTHERWISE SPECIFIED  
BID SHEETS SHOULD NOT BE SUBMITTED DOUBLE SIDED PAGES, (SINGLE SIDE ONLY)**

**EACH BIDDER SHOULD COMPLETE THIS FORM AND INITIAL EACH ENTRY.**

DATE COMPLETED: \_\_\_\_\_

**PLEASE SUBMIT BID DOCUMENTS ON SINGLE SIDED PAPER ONLY, WITH THE EXCEPTION OF  
THE SURETY AND BID BOND DOCUMENTS.**

**IN ACCORDANCE WITH THE BID SPECIFICATIONS I HAVE REVIEWED, COMPLETED/EXECUTED  
AND INCLUDED THE FOLLOWING FORMS:**

\_\_\_\_\_ Bid Form Page (**Signed, Dated and Bid on all alternatives applicable to the Work**).

\_\_\_\_\_ Security in the form of:

\_\_\_\_\_ Bid bond in an amount equal to 10% of the total amount of this bid not to exceed \$20,000.00; or

\_\_\_\_\_ Certified check or cashier's check in the amount of 10% of this bid not to exceed \$20,000.00

\_\_\_\_\_ Consent of Surety form signed by a Surety Company if the total amount of your Bid is over \$36,000.00. If your bid is accepted, the Surety Company that provided the Consent shall be required to furnish a Performance, Labor and Materials Bond in the amount of 100% of the award of the contract.

The County of Union has provided its Consent of Surety form for your use. The use of this form by your Surety Company will expedite the bid review process and eliminate the possibility of having your bid rejected. If, however, you should need to use another form, please use language similar to that used on the Union County form and avoid making any additions or deletions to the Union County form language. In lieu of the Consent of Surety you may submit a Certified Check in the full amount of the bid.

\_\_\_\_\_ STATEMENT OF BIDDER OWNERSHIP. Pursuant to N.J.S.A. 52:25-24.2, which includes **BOTH** of the following documents:

- Bidder Signature Page
- Bidder Disclosure Statement (**Fill out 2 pages completely**)

\_\_\_\_\_ SUBCONTRACTOR IDENTIFICATION. Pursuant to N.J.S.A. 40A:11-16, which includes **BOTH** of the following documents:

- Subcontractor Identification Statement: List of Subcontractors (**only for certain types of work**)
- Subcontractor Identification Certification

\_\_\_\_\_ Acknowledgement of Addendum form: (**This form is to be used only when an addendum has been added to the specifications**).

\_\_\_\_\_ A copy of the State of New Jersey Department of the Treasury, Division of Revenue, **Business Registration Certificate ("BRC")** should be included with the bids as it must be received by the County prior to the award of the contract. The BRC provided must show that the Bidder was registered at the time of receipt of bids or the bid will be rejected.

**BIDDER'S NAME:** \_\_\_\_\_

\_\_\_\_\_ A copy of the State of New Jersey Department of the Treasury, Division of Revenue, **Business Registration Certificate ("BRC")** of all named or listed subcontractors (List of Subcontractors) in a Construction bid should be included with the bid as the BRC(s) must be received by the County prior to the award of the contract. Each subcontractor's certificate provided must show that the subcontractor was registered at the time of the receipt of bids or the bid will be rejected.

\_\_\_\_\_ Affirmative Action Requirement

\_\_\_\_\_ Experience Statement

\_\_\_\_\_ Certificate of Bidder showing ability to perform Contract

\_\_\_\_\_ Non-Collusion Affidavit – Fill out completely and notarize

\_\_\_\_\_ Certificates from New Jersey Department of Labor and Workforce and Workforce Development – Public Works Contractor Registration Act. **(Only for certaintypes of work)**

\_\_\_\_\_ Federal Attachments **(If applicable)**

\_\_\_\_\_ NJDPMC Certificate / Notice of Classification **(If applicable)**

\_\_\_\_\_ Americans with Disabilities Act

\_\_\_\_\_ Statement of Bidder's Qualifications

\_\_\_\_\_ Contractor Performance Record

\_\_\_\_\_ Affidavit Regarding List of Debarred, Suspended or Disqualified Bidders

\_\_\_\_\_ Prior Negative Experience Questionnaire

\_\_\_\_\_ Contractor's Certification of Compliance – New Jersey Prevailing Wage Act

\_\_\_\_\_ Uncompleted Contracts Affidavit **(For Bidder, if applicable) MUST ALSO PROVIDE DPMC FORM 701**

\_\_\_\_\_ Certificate of Insurance Statement

\_\_\_\_\_ Collection of Use Tax on Sales to Local Government Statement

\_\_\_\_\_ Time of Completion

\_\_\_\_\_ Disclosure of Investment Activities in Iran Certification Form

**I HAVE TAKEN THE FOLLOWING ACTIONS:**

\_\_\_\_\_ Visited the site and attended the Pre-Bid Meeting **(Where applicable)**

\_\_\_\_\_ Reviewed the Contract Documents (including any permits the County or its professionals may have obtained), Work, Site, Locality, and Local Conditions and Laws and Regulations that in any manner may affect Cost, Progress, Performance or Furnishing of Work.

\_\_\_\_\_ Reviewed Bond Requirements

\_\_\_\_\_ Provided Proof of Compliance with New Jersey Prevailing Wage Act

\_\_\_\_\_ Reviewed Form of Owner/Contractor Agreement and General Conditions to the Contract

**NOTE: QUESTIONS PERTAINING TO THIS BID ARE TO BE DIRECTED TO DIVISION OF ENGINEERING AT 908-789-3675**

**BIDDER'S NAME:** \_\_\_\_\_

**BIDDING DOCUMENTS**

The Bidding Documents consist of the following items:

- **ADDENDA, if issued**
- **CLARIFICATIONS, if issued**
- **INSTRUCTION TO BIDDERS**
- **BID FORM**
- **OWNER-CONTRACTOR AGREEMENT (AIA 101) AND GENERAL CONDITIONS (AIA 201)**
- **SPECIFICATIONS:** As outlined in the Table of Contents and included in the Project Manual.
- **DRAWINGS:** As per List of Drawings, indicated on the Project Title Sheet.

**BIDDER'S NAME:** \_\_\_\_\_

**BID FORM**

I/We have carefully examined the plans, specifications, and advertisement for bid for the

**IMPROVEMENTS TO THE JURY WAITING ROOM  
CITY OF ELIZABETH, COUNTY OF UNION, NEW JERSEY  
BA#29-2017; UNION COUNTY ENGINEERING PROJECT #2016-035**

that is on file in the Union County Division of Engineering. I/We have inspected the site of the work and will contract to do all the work and furnish all materials mentioned in said plans and specifications. Work will be accomplished in the manner prescribed therein.

**LUMP SUM BID:**

\_\_\_\_\_  
Written

\_\_\_\_\_  
Figures

**BID CONTINGENCY: (To be used if and when directed by the County)**

**TWENTY-FIVE THOUSAND DOLLARS AND NO CENTS**  
Written

**\$25,000.00**  
Figures

**TOTAL LUMP SUM PLUS BID CONTINGENCY AMOUNT:**

\_\_\_\_\_  
Written

\_\_\_\_\_  
Figures

**NOTE: Bid Contingency may include one-half of one percent of contract amount set aside for local training if and when directed by the County.**

**BIDDER'S NAME:** \_\_\_\_\_

**CONSENT OF SURETY**  
TO ACCOMPANY PROPOSAL (BID)

\_\_\_\_\_ (hereinafter called Surety), organized and existing under the laws of the State of \_\_\_\_\_ duly authorized and qualified to transact business in the State of New Jersey, in consideration of the sum of One Dollar (\$1.00), lawful money of the United States of America, to it in hand paid, receipt whereof is hereby acknowledged, and in consideration, hereby certifies and agrees that if the contract for which the attached proposal is made be awarded to \_\_\_\_\_ (hereinafter called Contractor) for the performance of certain work and labor or the supplying of certain materials, or both, as more particularly set forth in said proposal and described for purposes of this instrument as a proposal for \_\_\_\_\_ to the COUNTY OF UNION and if Contractor shall enter into the contract, Surety will become bound as surety for its faithful performance, labor and material payment and will provide the Contractor with a performance, labor and material payment bond in the full amount of the contract price.

**NOTE:**  
Expiration date  
Needed if Annual  
Surety

\_\_\_\_\_  
**NAME OF INSURANCE COMPANY**  
**ADDRESS:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_  
**ORIGINAL SIGNATURE**  
**ATTORNEY-IN-FACT FOR INSURANCE CO.**

**NOTE: PROOF OF AUTHORITY OF OFFICERS OF SURETY COMPANY TO EXECUTE THIS DOCUMENT MUST BE SUBMITTED.**

BIDDER'S NAME: \_\_\_\_\_

**BIDDER SIGNATURE PAGE**

THE BIDDER MUST READ THE FOLLOWING INSTRUCTIONS TO COMPLETE THIS PAGE:

1. If doing business under a **trade name, partnership or a sole proprietorship**, you must submit the bid under exact title of the trade name, partnership, or proprietorship, and the bid must be signed by either the **owner**, or a **partner** and **witnessed** by a **notary public**.
2. If a **Corporation**, the bid must be signed by the **President** or **Vice President** and **witnessed** by a **Corporate Secretary** (corporate title must be exact) and **affix corporate seal**. If a Corporate Secretary does not exist, President or Vice President's signature shall be witnessed by a Notary Public.
3. Other persons **authorized** by **corporate resolution** to execute agreements in its behalf may also sign the bid documents (pages). **Copy of a resolution must accompany the bid**.
4. The person who signs this bid form **must also** sign the **Non-Collusion Affidavit**.
5. You **cannot** witness your own signature.

\_\_\_\_\_  
NAME OF BIDDER

\_\_\_\_\_  
\_\_\_\_\_  
ADDRESS OF BIDDER

\_\_\_\_\_  
ORIGINAL SIGNATURE  
CORPORATE SECRETARY

\_\_\_\_\_  
PRINT NAME AND TITLE  
CORPORATE SECRETARY

TEL: \_\_\_\_\_  
FAX: \_\_\_\_\_  
E-Mail: \_\_\_\_\_

BY: \_\_\_\_\_  
ORIGINAL SIGNATURE

Corporate Seal

\_\_\_\_\_  
PRINT OR TYPE NAME AND TITLE

**WARNING: IF YOU FAIL TO FULLY, ACCURATELY, AND COMPLETELY SUPPLY THE INFORMATION REQUESTED ON THIS PAGE, YOUR BID MAY BE REJECTED.**

BIDDER'S NAME: \_\_\_\_\_

**STATEMENT OF OWNERSHIP DISCLOSURE**

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

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

Name of Organization: \_\_\_\_\_

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

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

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

**Part II**

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

OR

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

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

BIDDER'S NAME: \_\_\_\_\_

Name of Individual or Business Entity	Home Address (for Individuals) or Business Address

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

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

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

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



BIDDER'S NAME: \_\_\_\_\_

Stockholder/Partner/Member and Corresponding Entity Listed in Part II	Home Address (for Individuals) or Business Address

**Part IVCertification**

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

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

BIDDER'S NAME: \_\_\_\_\_

**SUBCONTRACTOR IDENTIFICATION STATEMENT**

**LIST OF SUBCONTRACTORS**

This form is ONLY required for plumbing and gas fitting, steam and hot water heating and ventilating apparatus, steam power plants, electrical work, structural steel, ornamental iron work, and any other trades required to be identified by the specifications (including, but not limited, to satisfying any DPMC Classification requirements).

**CHECK THIS BOX IF NONE OF THE ABOVE LISTED TRADES OR THOSE REQUIRED TO BE IDENTIFIED IN THE SPECIFICATIONS ARE TO BE USED TO PERFORM THE WORK**

In compliance with N.J.S.A. 40A:11-16 and the bid specifications, the undersigned hereby lists the name or names of the following subcontractors:

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

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

Telephone: \_\_\_\_\_ Subcontract Amount: \$ \_\_\_\_\_

Specific Scope of Work Subcontracted: \_\_\_\_\_

License No. \_\_\_\_\_

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

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

Telephone: \_\_\_\_\_ Subcontract Amount: \$ \_\_\_\_\_

Specific Scope of Work Subcontracted: \_\_\_\_\_

License No. \_\_\_\_\_

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

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

Telephone: \_\_\_\_\_ Subcontract Amount: \$ \_\_\_\_\_

Specific Scope of Work Subcontracted: \_\_\_\_\_

License No. \_\_\_\_\_

**IF MORE THAN THREE SUBCONTRACTORS, PLEASE COPY THIS SHEET AS NECESSARY AND ATTACH TO THE BID PACKAGE.**

(Continued on following page)

**BIDDER'S NAME:** \_\_\_\_\_

**SUBCONTRACTOR IDENTIFICATION CERTIFICATION**

Note the law does not permit the listing of alternate subcontractors. However, multiple subcontractors for the same trade are permitted to be named provided the bidder meets the following requirements:

- Bidder identifies each subcontractor named for that category;
- Bidder states the scope of work, goods and services (the portion of the work) to be performed by each subcontractor; and
- Bidder provides the price quote provided by each subcontractor.

The bidder is advised that any change of subcontractor(s) from ones listed herein is subject to the County's approval. Change of subcontractor(s) will be approved only if made for good cause and not as a result of an arbitrary purpose.

The undersigned Bidder certifies and declares that the subcontractors listed above shall be used as subcontractors to complete certain portions of the work in this project as set forth in N.J.S.A. 40A: 11-16.

\_\_\_\_\_  
**Witness**

**Date** \_\_\_\_\_

\_\_\_\_\_  
**NAME OF BIDDER**

\_\_\_\_\_  
**ADDRESS**

**By:** \_\_\_\_\_  
**ORIGINAL SIGNATURE ONLY**

\_\_\_\_\_  
**PRINT NAME AND TITLE**

BIDDER'S NAME: \_\_\_\_\_

**ACKNOWLEDGMENT OF ADDENDUM**

COUNTY OF UNION

\_\_\_\_\_  
(Name of Construction /Public Works Project)

\_\_\_\_\_  
(Project or Bid Number)

Pursuant to N.J.S.A. 40A:11-23.1a., the undersigned bidder, hereby acknowledges receipt of the following notices, revisions, or addenda to the bid advertisement, specifications or bid documents. By indicating date of receipt, bidder acknowledges the submitted bid takes into account the provisions of the notice, revision or addendum. Note that the County of Union's record of notice to bidders shall take precedence and that failure to include provisions of changes in a bid proposal may be subject for rejection of the bid.

Local Unit Reference Number or Title of Addendum/Revision	How Received (mail, fax, pick-up, etc.)	Date Received

**ACKNOWLEDGMENT BY BIDDER:**

**NAME OF BIDDER:** \_\_\_\_\_

**ORIGINAL SIGNATURE:** \_\_\_\_\_

**PRINTED NAME AND TITLE:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

**BIDDER'S NAME:** \_\_\_\_\_

**CONTRACTOR BUSINESS REGISTRATION CERTIFICATE**

New Mandatory Requirement - Effective 1/18/2010

The recently enacted **P.L. 2009, c.315**, requires that effective January 18, 2010; a contracting agency must receive proof of the bidder's business registration prior to the award of a contract. However, the proof must show that the bidder was in fact registered with the State of New Jersey Department of the Treasury, Division of Revenue and obtained the business registration prior to the receipt of bids.

If subcontractors are named on the bid, proof of the business registration for each subcontractor must be provided prior to the award of bid. Similarly to the bidder, the proof must show that each subcontractor was registered with the State of New Jersey Department of the Treasury, Division of Revenue and obtained the business registration prior to the receipt of bids.

Proof of business registration shall be

- A copy of a Business Registration Certificate issued by the Department of the Treasury, Division of Revenue; or
- A copy of the web version provided by the NJ Division of Revenue, or

Register online at [www.nj.gov/treasury/revenue/taxreg.htm](http://www.nj.gov/treasury/revenue/taxreg.htm). Click the "online" link and then select "Register for Tax and Employer Purposes or call the Division at 609-292-1730.

**Note: A NJ Certificate of Authority is not acceptable.**

**FAILURE** to submit proof of registration of the bidder or any subcontractor named on the bid prior to the award of a contract shall be cause to reject the bids.

**FAILURE** of the bidder or any subcontractor named on the bid to be registered prior to the receipt of bids is cause for a **MANDATORY REJECTION** of bids. (A NON-WAIVABLE DEFECT). This covers construction work as well as non-construction bids.

**IN ADDITION:**

The contractor shall provide written notice to all **subcontractors and suppliers** not specifically named on the bid of the responsibility to register and submit proof of business registration to the contractor. The requirement of proof of business registration extends down through all levels (tiers) of the project.

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 Act 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 as required 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.

BIDDER'S NAME: \_\_\_\_\_

**BUSINESS REGISTRATION**  
**Mandatory Requirement**

P.L. 2009, c.315, requires that effective January 18, 2010; a contracting agency must receive proof of the bidder's business registration prior to the award of a contract. However, the proof must show that the bidder was in fact registered with the State of New Jersey Department of the Treasury, Division of Revenue and obtained the business registration prior to the receipt of bids.

If subcontractors are named on the bid, proof of the business registration for each must be provided prior to the award of a contract. Similarly to the bidder, the proof must show that each subcontractor was registered with the State of New Jersey Department of the Treasury, Division of Revenue and obtained the business registration prior to the receipt of bids.

Proof of business registration shall be:

- A copy of a Business Registration Certificate issued by the Department of Treasury, Division of Revenue; or
- A copy of the web printed version provided by the NJ Division of Revenue

**STATE OF NEW JERSEY**  
**BUSINESS REGISTRATION CERTIFICATE**  
FOR STATE AGENCY AND CASINO SERVICE CONTRACTORS

DEPARTMENT OF TREASURY  
DIVISION OF REVENUE  
PO BOX 382  
TRENTON, NJ 08646

TAXPAYER NAME: TAX REG TEST ACCOUNT  
TRADE NAME: CLIENT REGISTRATION  
TAX REGISTRATION TEST ACCOUNT  
TAXPAYER IDENTIFICATION#: 970-097-382/000  
SEQUENCE NUMBER: 0107200  
ADDRESS: 847 ROEBLING AVE  
TRENTON NJ 08611  
ISSUANCE DATE: 09/14/04  
EFFECTIVE DATE: 09/01/04  
FORM-BRC(06/04)

*John S. Tandy*  
Authorized Signatory  
This Certificate is NOT assignable or transferable. It must be conspicuously displayed at above address.

**STATE OF NEW JERSEY**  
**BUSINESS REGISTRATION CERTIFICATE**

Taxpayer Name: TAX REG TEST ACCOUNT  
Trade Name:  
Address: 847 ROEBLING AVE  
TRENTON, NJ 08611  
Certificate Number: 1093907  
Date of Issuance: October 14, 2004

For Office Use Only:  
20041014112623533

ATTACH BRC HERE

BIDDER'S NAME: \_\_\_\_\_

**AFFIRMATIVE ACTION REQUIREMENT**

**REQUIRED AFFIRMATIVE ACTION EVIDENCE**

General Requirements of P.L. 1975, c. 127: You are hereby put on notice that:

CONSTRUCTION CONTRACTS: The successful contractor must submit within three (3) days of the notice of intent to award or the signing of the contract the initial project manning report (A.A.201). This report should be submitted at the time the signed contract is returned to the County of Union. Attention: *Affirmative Action Officer*.

**If the successful contract does not submit the initial project manning report (A.A.201) within the three (3) days from the time the signed contract is returned to the County of Union, the County of Union WILL declare the contractor non-responsive and award the contract to the next lowest responsible bidder.**

\_\_\_\_\_  
NAME OF BIDDER

\_\_\_\_\_  
ORIGINAL SIGNATURE

\_\_\_\_\_  
PRINT OR TYPE NAME AND TITLE

\_\_\_\_\_  
DATE THIS FORM IS COMPLETED

**BIDDER'S NAME:** \_\_\_\_\_

**EXPERIENCE STATEMENT**

I hereby certify that my company has performed the following private or public work, which is relevant to this bid. I further certify that my company has never defaulted under any contract. Should you not sign this form due to prior defaults, please provide details on an attached sheet.

\_\_\_\_\_  
**Witness**

\_\_\_\_\_  
**Date**

\_\_\_\_\_  
**NAME OF BIDDER**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
**ADDRESS**

**By:** \_\_\_\_\_  
**ORIGINAL SIGNATURE ONLY**

\_\_\_\_\_  
**PRINT NAME AND TITLE**

**YOU MAY ATTACH ADDITIONAL SHEETS, BUT YOU MUST SIGN AND WITNESS THIS SHEET.**



BIDDER'S NAME: \_\_\_\_\_

**CERTIFICATE OF BIDDER SHOWING ABILITY TO PERFORM CONTRACT**

STATE OF NEW JERSEY / \_\_\_\_\_ )  
Specify, if Other ) SS:  
COUNTY OF \_\_\_\_\_ )

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

I am \_\_\_\_\_ of the firm of \_\_\_\_\_,  
the Bidder making the proposal for the above named Project ("Contractor"), and that I executed said  
proposal with full authority to do so; and that said Contractor, pursuant to N.J.S.A. 40A:11-20, certifies  
that it owns, leases or controls all the necessary equipment required by the Plans, Specifications and  
Advertisements under this Bids are asked for.

If the Bidder is not the actual owner or lessee of any such equipment, then the Bidder shall attach to this  
Certificate information identifying the source from which the equipment will be obtained, and such  
information shall be accompanied by a certificate from the owner or person in control of the equipment  
definitively granting to the Bidder the control of the equipment required during such time as may be  
necessary for the completion of that portion of the contract.

\_\_\_\_\_  
(Also type or print name of affiant under signature)

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

BIDDER'S NAME: \_\_\_\_\_

**NON-COLLUSION AFFIDAVIT**

(N.J.S.A. 52:34-15)

STATE OF \_\_\_\_\_ )  
 )SS: \_\_\_\_\_  
COUNTY OF \_\_\_\_\_ )

I \_\_\_\_\_, of the City of \_\_\_\_\_, in the County of \_\_\_\_\_, and the State of \_\_\_\_\_, of full age, being duly sworn according to law, on my oath depose and say that: I am \_\_\_\_\_ of the firm of \_\_\_\_\_, the bidder making the proposal for the above named project, and that I executed the said proposal for the above named project, and that I executed the said proposal with full authority to do so; that said bidder has not, directly or indirectly, entered into any agreement, participation 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 COUNTY OF UNION, NEW JERSEY relies upon the truth of the statements contained in said proposal and in the statements contained in the affidavit in awarding the contract for the said project.

I further warrant that no person or selling agency has been employed or retained to solicit or secure such contract upon an agreement or understanding for a commission, percentage, brokerage or contingent fee, except bona fide employees or bonafide established commercial or selling agencies maintained by \_\_\_\_\_ (N.J.S.A. 52:34-15).

\_\_\_\_\_  
**NAME OF BIDDER**

\_\_\_\_\_  
**ORIGINAL SIGNATURE ONLY**

**NOTE: The person who signed the bidder signature page for the bidder should sign this form also.**

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

\_\_\_\_\_  
Notary Public of the State of \_\_\_\_\_  
My commission expires: \_\_\_\_\_

**WARNING: IF YOU FAIL TO FULLY, ACCURATELY, AND COMPLETELY FILL OUT THIS AFFIDAVIT OF NON-COLLUSION, YOUR BID MAY BE REJECTED.**

**BIDDER'S NAME:** \_\_\_\_\_

**Contractor Registration Advisement**  
For Public Works Projects

A new law, known as "The Public Works Contractor Registration Act" (P.L. 1999, c.238), became effective April 11, 2000. Under the Act, no contractor/subcontractor will be permitted to bid on or engage in any contract for public work, as defined in Section 2 of P.L. 1963, c.150 (C:34:11-56.26), unless that contractor/subcontractor is registered with the New Jersey Department of Labor and Workforce and Workforce Development. The Act provides that upon registration with the Department, a public works contractor/subcontractor will be issued a certificate by the Department indicating compliance with the Act's requirements. The registration fee has been set at \$300.00 per year. Upon the effective date of the Act, public bodies will be expected to request production of such a certificate from those bidding on or engaging in public works projects.

It is important to note that the term "contractor," is defined in the, Act as, "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 provision of the "New Jersey Prevailing Wage Act," P.L. 1963, c.150 (C.34:11-56.25, et seq.) for the construction, reconstruction, demolition, alteration, repair or maintenance of a public building regularly open to and used by the general public or a public institution, and includes any subcontractor or lower tier subcontractor as defined herein: except that, for the purposes of the act, no pumping station, treatment plant or other facility associated with utility and environmental construction, reconstruction, demolition, alteration, repair or maintenance shall be regarded as a public building regularly open to and used by the general public or a public institution."

Registration forms, copies of the Act, and other relevant information can be obtained by contacting:

Contractor Registration Unit  
New Jersey Department of Labor and Workforce and Workforce Development  
Division of Wage & Hour Compliance  
PO Box 389  
Trenton, New Jersey 08625-0389  
Telephone: 609-292-9464  
Fax: 609-633-8591  
E-mail: [contreg@dol.state.nj.us](mailto:contreg@dol.state.nj.us)

**BIDDER'S NAME:** \_\_\_\_\_

**AMERICANS WITH DISABILITIES ACT**  
EQUAL OPPORTUNITY FOR INDIVIDUALS WITH DISABILITIES

The contractor and the County of Union (hereafter "Owner") do hereby agree that the provisions of Title II of the Americans With Disabilities Act of 1990 (the "Act") (42 U.S.C. S12101 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 thereto, 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 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 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 this Agreement or otherwise at law.

**Name** \_\_\_\_\_  
(Please print or type)

**Signature** \_\_\_\_\_ **Date** \_\_\_\_\_

**BIDDER'S NAME:** \_\_\_\_\_

**STATEMENT OF BIDDER'S QUALIFICATIONS**

All questions must be answered and the data given must be clear and comprehensive. This statement must be notarized. Questions may be answered on separate attached sheets. The Bidder may submit any additional information it desires.

1. \_\_\_\_\_  
(Name of Bidder)

2. \_\_\_\_\_  
(Permanent Main Office Address)

3. \_\_\_\_\_  
(When Organized)

4. \_\_\_\_\_  
(If a Corporation, where incorporated)

5. Number of years your organization has been engaged in construction or contracting business under present firm or trade name? \_\_\_\_\_

6. How many years of experience in construction work has your organization had (a) as a general contractor? And/or (b) As a subcontractor? \_\_\_\_\_

7. Contracts on hand: (Attach a list or table showing gross amounts of each Contract and the appropriate dates of completion) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

8. General character of work performed by you. \_\_\_\_\_  
\_\_\_\_\_

9. Have you ever failed to complete any work awarded to you? \_\_\_\_\_  
\_\_\_\_\_

10. Have you ever defaulted on a Contract? \_\_\_\_\_ If so, complete details, including where and why?  
\_\_\_\_\_  
\_\_\_\_\_

**BIDDER'S NAME:** \_\_\_\_\_

**STATEMENT OF BIDDER'S QUALIFICATIONS - (continued)**

11. Has any officer or partner of your organization ever failed to complete a construction contract handled in its own name? If so, state name of individual, name of owner, location and type of project, and reason for the failure to complete. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

12. List your major equipment available for this Contract.  
\_\_\_\_\_  
\_\_\_\_\_

13. Experience in the construction work similar in importance to this Project.  
\_\_\_\_\_  
\_\_\_\_\_

14. Have you had any material adverse changes from the trades as listed in NJ Notice of Classification within last five (5) years? \_\_\_\_\_. If so, list prior classification.

15. Background and experience of the principal members of your organization, including the officers.

<b>Individual's Name</b>	<b>Present Position or Office</b>	<b>Yrs. of Construction Experience</b>	<b>Magnitude &amp; Type of Work</b>	<b>In What Capacity</b>

**BIDDER'S NAME:** \_\_\_\_\_

16. Bank Reference. (Name, Address, Phone, Representative) \_\_\_\_\_

17. Will you, upon request, fill out a detailed financial Statement? \_\_\_\_\_

18. The undersigned hereby authorizes and requests any person, firm or corporation to furnish any information requested by the proper agency in verification of the responses comprising this Statement of Bidder's Qualifications.

19. Bidder's telephone number, fax number and e-mail address (if applicable).

Phone \_\_\_\_\_

Fax \_\_\_\_\_

E-mail \_\_\_\_\_

Mobile \_\_\_\_\_

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

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

\_\_\_\_\_  
BIDDER (Print Name)

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

\_\_\_\_\_  
(Seal) Notary Public of New Jersey/  
Specify Other State  
My Commission Expires \_\_\_\_\_, 20\_\_.

**NOTE: FAILURE TO COMPLETE AND SUBMIT THIS DOCUMENT WITH YOUR PROPOSAL  
MAY RESULT IN A REJECTION OF YOUR BID.**

BIDDER'S NAME: \_\_\_\_\_

**CONTRACTOR PERFORMANCE RECORD**

List all contracts completed by you below or provide separate form.

Name of Owner	Name & Location of Project: Type Of Work	Prime or Sub-Cont.	Engineer or Architect in Charge for Owner	Contract Price (Omit Cost)	Date Completed	Was Time* Extension Necessary	Were Any Penalties Imposed	Were Liens* Claims or Stop Notice Filed

\* If answer is YES, provide explanation of details in connection with non-completion of contracts, time extensions, penalties imposed, labor troubles, liens, claims and notices filed against contracts listed in preceding item "Performance Record" on an attached sheet.

**NOTE: FAILURE TO COMPLETE AND SUBMIT THIS DOCUMENT WITH YOUR PROPOSAL MAY RESULT IN A REJECTION OF YOUR BID.**



**BIDDER'S NAME:** \_\_\_\_\_

**CERTIFICATION**

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

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

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

\_\_\_\_\_  
(Title)

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

\_\_\_\_\_  
(Seal) Notary Public of New Jersey/  
Specify Other State  
My Commission Expires \_\_\_\_\_, 20\_\_\_\_.

BIDDER'S NAME: \_\_\_\_\_

**AFFIDAVIT REGARDING LIST OF DEBARRED,  
SUSPENDED OR DISQUALIFIED BIDDERS**

STATE OF NEW JERSEY / \_\_\_\_\_ )  
Specify, if Other ) SS:  
COUNTY OF \_\_\_\_\_ )

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

I am \_\_\_\_\_ of the firm of \_\_\_\_\_,  
the Bidder making the Proposal for the above named Project. I have executed the said Proposal with full  
authority to do so. Said Bidder is not at the time of the making this bid included on the New Jersey State  
Treasurer's or the Federal Government's List of Debarred, Suspended or Disqualified Bidders as a result  
of action taken by any State or Federal Agency.

\_\_\_\_\_  
Name of Contractor

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

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

\_\_\_\_\_  
(Seal) Notary Public of New Jersey/  
Specify Other State  
My Commission Expires \_\_\_\_\_, 20\_\_.

**NOTE: FAILURE TO COMPLETE AND SUBMIT THIS DOCUMENT WITH YOUR  
PROPOSAL MAY RESULT IN A REJECTION OF YOUR BID.**

**BIDDER'S NAME:** \_\_\_\_\_

**PRIOR NEGATIVE EXPERIENCE QUESTIONNAIRE**

(N.J.S.A. 40A:11-4)

1. Within the past ten (10) years, have you been found, through either court adjudication, arbitration, mediation, or other contractually stipulated alternate dispute resolution mechanism, to have: failed to provide or perform goods or services; or failed to complete a contract in a timely manner; or otherwise performed unsatisfactorily under a prior contract with a public entity?

\_\_\_\_\_yes                      \_\_\_\_\_ no    If yes, please provide full, detailed explanation.

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2. Within the past ten (10) years, have you defaulted on a contract, thereby requiring a public entity to utilize the services of another contractor to provide the goods or perform the services or to correct or complete the contract?

\_\_\_\_\_yes                      \_\_\_\_\_ no    If yes, please provide full, detailed explanation.

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3. Within the past ten (10) years, have you defaulted on a contract, thereby requiring a public entity to look to your surety for completion of the contract or tender of the costs of completion?

\_\_\_\_\_yes                      \_\_\_\_\_ no    If yes, please provide full, detailed explanation.

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4. Within the past ten (10) years, have you been debarred or suspended from contracting with any of the agencies or department of the executive branch of the State of New Jersey at the time of the contract award, where the action was based on failure to perform a contract for goods or services with a public entity?

\_\_\_\_\_yes                      \_\_\_\_\_ no    If yes, please provide full, detailed explanation.

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BIDDER'S NAME: \_\_\_\_\_

**PRIOR NEGATIVE EXPERIENCE CERTIFICATION**

I hereby certify that the above statements are true and accurate as of this \_\_\_\_\_ day  
of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Name of Contractor

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

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

\_\_\_\_\_  
(Seal) Notary Public of New Jersey/  
Specify Other State  
My Commission Expires \_\_\_\_\_, 20\_\_.

**NOTE: FAILURE TO COMPLETE AND SUBMIT THIS DOCUMENT WITH YOUR  
PROPOSAL MAY RESULT IN A REJECTION OF YOUR BID.**

**BIDDER'S NAME:** \_\_\_\_\_

**TO BE COMPLETED ONLY WHEN FINAL PAYMENT IS REQUESTED**

**CONTRACTOR'S CERTIFICATION OF COMPLIANCE -NEW JERSEY PREVAILING WAGE ACT**

**TO:** County of Union  
Division of Engineering  
2325 South Avenue  
Scotch Plains, New Jersey 07076

**CONTRACT:**

**PROJECT:**

In accordance with the requirements of the New Jersey Prevailing Wage Act, N.J.S.A. 34:11-56 et al \*, the undersigned contractor on the public work being performed for:

**COUNTY OF UNION**

hereby certifies that he/she has complied with the contract requirements regarding the payment of the minimum prevailing wages established under "The New Jersey Prevailing Wage Act" N.J.S.A. 34:11-56 et al.

**CONTRACTOR:** \_\_\_\_\_  
**ADDRESS:** \_\_\_\_\_

**BY:** \_\_\_\_\_  
**ORIGINAL SIGNATURE ONLY**

**STATE OF NEW JERSEY**  
**COUNTY OF** \_\_\_\_\_

Being by me duly sworn according to law, on his oath deposes and says that \_\_\_\_\_ is \_\_\_\_\_ of \_\_\_\_\_ the above named contractor, and that the facts set forth in the above statement are true.

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

\_\_\_\_\_

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

\* N.J.S.A. 34:11-56.33 requires the contractor and subcontractor to file written statements with the public body in form satisfactory to the Commissioner certifying to the amounts then due and owing from such contractor and subcontractor filing such statement to any and all workmen for wages due on account of the public work, setting forth therein the names of the persons whose wages are unpaid and the amount due to each respectively. Union County will withhold the amount so deducted for the benefit of the workmen whose wages are unpaid as shown by the verified statement filed, and will pay directly to any workman the amount shown by such statement to be due to him for such wages. Such payment shall thereby discharge the obligation of the contractor to the person receiving such payment to the extent of the amount thereof.

BIDDER'S NAME: \_\_\_\_\_

**UNCOMPLETED CONTRACTS AFFIDAVIT**  
(To be submitted with DPMC Form 701)

PURSUANT TO N.J.A.C. 17:19-2.13, BIDDER DECLARES THE FOLLOWING WITH RESPECT TO ITS UNCOMPLETED CONTRACTS, ON ALL WORK, FROM WHATEVER SOURCE (PUBLIC AND PRIVATE), BOTH IN NEW JERSEY AND FROM OTHER GOVERNMENTAL JURISDICTIONS

ENTITY	PROJECT TITLE	ORIGINAL CONTRACT AMOUNT	UNCOMPLETED AMOUNT AS OF BID OPENING DATE	NAME AND TELEPHONE NUMBER OF PARTY TO BE CONTACTED FROM ENTITY FOR VERIFICATION

TOTAL AMOUNT OF UNCOMPLETED CONTRACTS \$ \_\_\_\_\_

Sworn and Subscribed to Before me

This \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_

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

**BIDDER:**

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

\_\_\_\_\_  
(Print Name)

**NOTE: FAILURE TO COMPLETE AND SUBMIT THIS DOCUMENT WITH YOUR PROPOSAL MAY RESULT IN A REJECTION OF YOUR BID.**

**BIDDER'S NAME:** \_\_\_\_\_

**CERTIFICATE OF INSURANCE STATEMENT**

The Bidder fully understands the County of Union insurance requirements as stated in the Instructions to Bidders as well as the Owner/Contractor Agreement and agrees to provide all insurance required by these documents prior to the issuance of the Notice to Proceed.

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

\_\_\_\_\_  
BIDDER (Print Name)

**NOTE: FAILURE TO COMPLETE AND SUBMIT THIS DOCUMENT WITH YOUR PROPOSAL MAY RESULT IN A REJECTION OF YOUR BID.**

**BIDDER'S NAME:** \_\_\_\_\_

**COLLECTION OF USE TAX ON SALES TO LOCAL GOVERNMENTS STATEMENT**

The Bidder fully understands the requirements of the use tax on sales to local governments as stated in the General Conditions to the Contract for Construction and the Instructions to Bidders, and agrees at all times to comply with the "Contractor Use Tax Collection Legislation", as defined therein, and the terms relating thereto contained in the Contract Documents.

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

\_\_\_\_\_  
BIDDER (Print Name)

**NOTE: FAILURE TO COMPLETE AND SUBMIT THIS DOCUMENT WITH YOUR PROPOSAL MAY RESULT IN A REJECTION OF YOUR BID.**



**BIDDER'S NAME:** \_\_\_\_\_

**TIME OF COMPLETION**

The undersigned proposed that if awarded the Contract, the scope of work will be started within ten (10) calendar days and will be substantially completed within **120 calendar days** from the date of the notice to proceed.

I, \_\_\_\_\_ of \_\_\_\_\_  
NAME (Print or type) COMPANY

Agree to complete work in the time frame specified \_\_\_\_\_  
SIGNATURE

**SITE VISIT – GENERAL CONTRACTOR**

I, \_\_\_\_\_ of \_\_\_\_\_  
NAME (Print or type) COMPANY

Visited the site of the work on \_\_\_\_\_  
SIGNATURE

BIDDER'S NAME: \_\_\_\_\_

**COUNTY OF UNION NEW JERSEY  
Division of Purchasing  
DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN FORM**

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

Vendor/Bidder: \_\_\_\_\_

**PART 1**

**CERTIFICATION**

VENDOR/BIDDER MUST COMPLETE PART 1 BY CHECKING ONE OF THE BOXES

**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 neither the person nor entity, nor any of its parents, subsidiaries, or affiliates, is identified on the State of New Jersey, Department of the Treasury's Chapter 25 list as a person or entity engaged in investment activities in Iran. The Chapter 25 list is found on the Department's website at <http://www.state.nj.us/treasury/pdf/Chapter25List.pdf>. Vendors/Bidders **must** review this list prior to completing the below certification. **Failure to complete the certification will render a Vendor's/Bidder's proposal non-responsive.** If the Director of the Division of Purchase and Property finds a person or entity to be in violation of the 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 party.

**CHECK THE APPROPRIATE BOX**

A. I certify, pursuant to Public Law 2012, c.25, that neither the Vendor/Bidder listed above nor any of its parents, subsidiaries, or affiliates is listed on the N.J. Department of Treasury's list of entities determined to be engaged in prohibited activities in Iran pursuant to P.L. 2012, c. 25 ("Chapter 25 List"). Disregard Part 2 and complete and sign the Certification below.

**OR**

B. I am unable to certify as above because the Vendor/Bidder and/or one or more of its parents, subsidiaries, or affiliates is listed on the Department's Chapter 25 list. I will provide a detailed, accurate and precise description of the activities in Part 2 below and sign and complete the Certification below. Failure to provide such information will result in the proposal being rendered as non-responsive and appropriate penalties, fines and/or sanctions will be assessed as provided by law.

**PART 2**

PLEASE PROVIDE ADDITIONAL INFORMATION RELATED TO INVESTMENT ACTIVITIES IN IRAN

If you checked Box "B" above, provide a detailed, accurate and precise description of the activities of the Vendor/Bidder, or one of its parents, subsidiaries or affiliates, engaged in investment activities in Iran by completing the information below.

ENTITY NAME: \_\_\_\_\_  
RELATIONSHIP TO VENDOR/BIDDER: \_\_\_\_\_  
DESCRIPTION OF ACTIVITIES: \_\_\_\_\_  
DURATION OF ENGAGEMENT: \_\_\_\_\_  
ANTICIPATED CESSATION DATE: \_\_\_\_\_  
VENDOR/BIDDER CONTACT NAME: \_\_\_\_\_  
VENDOR/BIDDER CONTACT PHONE#: \_\_\_\_\_

*Attach Additional Sheets If Necessary*

**CERTIFICATION**

I, the undersigned, certify that I am authorized to execute this certification on behalf of the Vendor/Bidder, that the foregoing information and any attachments hereto, to the best of my knowledge are true and complete. I acknowledge that the County of Union, New Jersey is relying on the information contained herein, and that the Vendor/Bidder is under a continuing obligation from the date of this certification through the completion of any contract(s) with the County of Union to notify the County of Union in writing of any changes to the information contained herein; that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification. If I do so, I will be subject to criminal prosecution under the law, and it will constitute a material breach of my agreement(s) with the County of Union, permitting the County of Union to declare any contract(s) resulting from this certification void and unenforceable.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Print Name and Title

*Revised 10/19/17*

## STANDARD SPECIFICATIONS

The Standard Specifications for Road and Bridge Construction of New Jersey Department of Transportation, 2007 Edition; is added to and/or amended elsewhere herein by the Notice to Contractors (Advertisement), Proposal, Information for Bidders, General Conditions, Special Provisions, Project Plans, and Supplementary Specifications; shall, insofar as technical requirements are involved, govern in the execution of this project.

Such Standard Specifications are made a part of these Specifications by this reference and will not be repeated herein. It is the responsibility of prospective bidders to familiarize themselves with these Standard Specifications, copies of which may be examined at the office of the Engineer and may be obtained, upon payment of the cost thereof, from:

Department of Transportation  
State of New Jersey  
1035 Parkway Avenue  
Trenton, New Jersey 08625

The Notice to Bidders (Advertisement), Proposal, General Conditions, Instructions to Bidders, Special Provisions, Project Plans and/or Technical Specifications shall govern and prevail in the case of conflict between them and the Standard Specifications.

In these Standard Specifications the words "COMMISSIONER" or "DEPARTMENT" shall refer to and mean the person, persons, body, board or agent legally empowered to enter into contracts and otherwise legally act for the Owner. The words "RESIDENT ENGINEER (RE)", "ENGINEER" or "STATE" shall refer to and mean the professional engineering representative of the Owner as hereinbefore defined and the word "INSPECTOR" shall mean the authorized project representative of the Engineer with the authority as hereinbefore defined. The word "LABORATORY" shall mean and refer to the Engineer who may, at his discretion, and with the consent of the Owner, employ qualified technical personnel or testing laboratories to assist him in fulfilling the duties normally assigned to the "LABORATORY" in these Standard Specifications.

When reference is made herein to the bulletins, standards, specifications, publications or requirements of the Manual on Uniform Traffic Control Devices (MUTCD), Institute of Traffic Engineers (ITE), Federal Highway Administration (FHWA), American Association of State Highway Officials (AASHTO), the American Concrete Institute (ACI), the American Society of Civil Engineers (ASCE) or similar national or regional societies, associations, institutes or organizations; the requirements of the bulletins, specifications, publications or requirements referred to shall be considered a part of these Specifications by such reference and shall not be repeated herein but shall have the same import and be as binding as if herein set forth in full.

# DRAFT AIA Document A101™ - 2007

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

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

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

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

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

The County Engineer or his designee:  
(Name, legal status, address and other information)

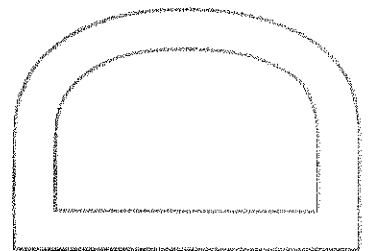
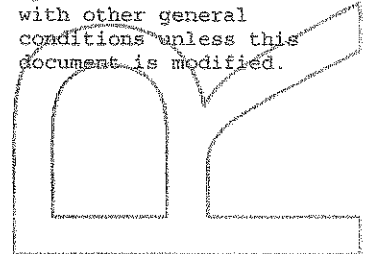
The Owner and Contractor agree as follows.



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

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

AIA Document A201™-2007, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.



**ELECTRONIC COPYING** of any portion of this AIA Document to another electronic file is prohibited and constitutes a violation of copyright laws as set forth in the footer of this document.

TABLE OF ARTICLES

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

ARTICLE 1 THE CONTRACT DOCUMENTS

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

ARTICLE 2 THE WORK OF THIS CONTRACT

The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others. The Contractor will not be compensated for labor or materials outside the scope of work that is not properly authorized.

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be the date of this Agreement unless a different date is stated below or provision is made for the date to be fixed in a Notice to proceed issued by the Owner, which is anticipated to be on or about

( )

If, prior to the commencement of the Work, the Owner requires time to file mortgages and other security interests, the Owner's time requirement shall be as follows: Not applicable.

( )

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

§ 3.3 The Contractor shall achieve Substantial Completion of the entire Work not later than ( ) days from the date of commencement, or as follows:

(Insert number of calendar days. Alternatively, a calendar date may be used when coordinated with the date of commencement. If appropriate, insert requirements for earlier Substantial Completion of certain portions of the Work.)

Portion of Work

Substantial Completion Date

Entire Work

TBD

, subject to adjustments of this Contract Time as provided in the Contract Documents.  
(Insert provisions, if any, for liquidated damages relating to failure to achieve Substantial Completion on time or for bonus payments for early completion of the Work.)

« » Should the Contractor fail to complete fully, and in conformity with all provisions of the Contract within the Contract Time, the Contractor shall, and hereby agrees to pay the Owner One Thousand Dollars (\$1,000.00) per day for as liquidated damages, for each consecutive calendar day beyond the number of days allowed by the Contract, which sum is agreed upon as reasonable and proper measure of damages that the Owner will sustain per diem by failure of Contractor to complete Work within time as stipulated; it is being recognized by Owner and Contractor that the injury to Owner that could result from a failure of the Contractor to complete on schedule, is uncertain and cannot be computed exactly. In no way shall costs of Liquidated Damages to be construed as a penalty to the Contractor. (See Bid Documents)

ARTICLE 4 CONTRACT SUM

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

§ 4.2 The Contract Sum is based upon the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner:  
(State the numbers or other identification of accepted alternates. If the bidding or proposal documents permit the Owner to accept other alternates subsequent to the execution of this Agreement, attach a schedule of such other alternates showing the amount for each and the date when that amount expires.)

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

Item	Units and Limitations	Price Per Unit (\$0.00)
« »	« »	« »

§ 4.4 Allowances included in the Contract Sum, if any:  
(Identify allowance and state exclusions, if any, from the allowance price.)

Item	Price
« »	« »

ARTICLE 5 PAYMENTS

§ 5.1 PROGRESS PAYMENTS

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

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

§ 5.1.3 The Contractor shall submit a Preliminary Payment Request (Pencil Requisition) to the County Engineer or his designee on the twenty-fifth (25<sup>th</sup>) day of any given calendar month for Work performed during that month,

Upon receipt of the Pencil Requisition from the Contractor, the County Engineer or his designee shall review the Pencil Requisition and approve or disapprove of it in whole or in part as set forth hereafter. Within (4) calendar days of receipt of the Pencil Requisition from the Contractor, the County Engineer or his designee shall return the Pencil Requisition to the Contractor, with those charges that are approved or disapproved, if any, by the County Engineer or his designee, for the Contractor's incorporation into an Application for Payment. Within two (2) calendar days of return of the Pencil Requisition from the County Engineer or his designee, the Contractor shall submit a formal application for Payment to the County Engineer or his designee for review and approval by the County Engineer or his designee incorporating any revisions made by the County Engineer or his designee in the Pencil Requisition submission. Within five (5) calendar days of receipt of Contractor's Application for Payment, the County Engineer or his designee shall take any one of the following actions:

- 1) Certify the entire Application for Payment;
- 2) Certify partial payment and provide the Contractor with reasons for withholding the remaining portion of the payment; or
- 3) Withhold certification of the entire Application for Payment and provide the Contractor with reasons for withholding the entire payment,

Once the Application for Payment is certified either in whole or in part, the County Engineer or his designee shall transmit the Certified Payment Application within three (3) calendar days to the Owner for its review and payment. The Owner shall make payment to the Contractor for the Certified Payment Amount by no later than the time period set forth in the New Jersey Prompt Payment Act following receipt of the Certificate for Payment from the County Engineer or his designee. The Owner shall not be obligated to pay any Application for Payment until the Application for Payment is certified by the County Engineer or his designee. Approval of any Application for Payment may be withheld should the Contractor fail to submit Manning Reports in a timely manner.

Pursuant to N.J.S.A. 2A:30A-1 et seq. (the "Prompt Payment Act"), a public or governmental entity that requires the entity's governing body to vote on authorizations for each periodic payment, final payment, or retainage monies, such as the Owner, is excepted from the timing requirements of the Act. Accordingly, the Owner shall not approve the Contractor's Application for Payment until it is certified by the County Engineer or his designee in accordance herewith and shall not approve the Contractor's Certified Payment Application until the next scheduled public meeting of the Owner following the Owner's receipt of the Certified Payment Application from the County Engineer or his designee. The Owner shall not make payment to the Contractor for the Certified Payment Amount until the Owner's subsequent payment cycle following its approval of the Payment Application.

Pursuant to this same Act, if a payment due pursuant to the provisions herein is not made in a timely manner, the Owner shall be liable for the amount of money owed under the contract, plus interest at a rate equal to the prime rate plus one percent (1%), notwithstanding anything to the contrary in the Contract Documents. Interest on amounts due pursuant to the Act shall be paid to the prime contractor for the period beginning on the day after the required payment date and ending on the day on which the check for payment is received by the Contractor.

Pursuant to this same Act, disputes regarding whether a party has failed to make payments required by the Act may be submitted to a process of alternative dispute resolution, notwithstanding anything to the contrary in the contract documents, where the parties agree to same. Alternative dispute resolution permitted by the Act shall not apply to disputes concerning any other matters that may arise under or from this Contract. Any civil action brought to collect payments shall be conducted in Union County, State of New Jersey, and the prevailing party shall be awarded reasonable costs and attorneys' fees.

§5.1.4 The County Engineer or his designee may decide not to certify payment and may withhold a Certificate for Payment, in whole or in part, to the extent reasonably necessary to protect the Owner if, in the County Engineer or his designee's opinion, the representations as described in Section 5.1.5 below cannot be made to the Owner. If the County Engineer or his designee withholds a Certificate for Payment, the County Engineer or his designee will notify the Contractor and Owner as provided in Section 5.1.3 above. If the Contractor and County Engineer or his designee cannot agree on a revised amount, the County Engineer or his designee will issue a Certificate for Payment for the amount for which the County Engineer or his designee is able to make such representations to the Owner as set forth in Section 5.1.3 above. The County Engineer or his designee may also decide to withhold certifying

payment in whole or in part, or, because of subsequently discovered evidence or subsequent observations, to such extent as may be necessary in the County Engineer or his designee's opinion to protect the Owner from loss because of:

- .1 Defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims;
- .3 failure of the Contractor to make payments properly to Subcontractors or for labor, materials, or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or another contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or Liquidated Damages for the anticipated delay;
- .7 failure to carry out the Work in accordance with the Contract Documents;
- .8 avoidable delay in the progress of the Work;
- .9 deliberate delay in the submission for approval of names of Subcontractors, materialmen, sources of supply, shop drawings, and samples;
- .10 failure to maintain the Project Site in a safe and satisfactory condition in accordance with good construction practices as determined by the County Engineer or his designee; or
- .11 failure to submit updates as required by the General Conditions.

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

§5.1.5 The issuance of a separate Certificate for Payment will constitute representations made separately by the County Engineer or his designee to the Owner, based on its individual observations at the site and the data comprising the Application for Payment submitted by the Contractor, that the Work has progressed to the point indicated and that, to the best of the County Engineer or his designee's knowledge, information and belief, quality of the Work is in accordance with the Contract Documents.

The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to minor deviations from the Contract Documents correctable prior to completion and to specific qualifications expressed by the County Engineer or his designee. The

issuance of a separate Certificate of Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified. However, the issuance of a separate Certificate for Payment will not be a representation that the County Engineer or his designees has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed the Contractor's construction means, methods, techniques, sequences or procedures; (3) reviewed copies of requisitions received from Subcontractor's and materials suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

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

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

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



- .1 Take that portion of the Contract Sum properly allocable to completed Work as determined by multiplying the percentage completion of each portion of the Work by the share of the Contract Sum allocated to that portion of the Work in the schedule of values, less retainage of ~~5~~ percent (~~5~~ %). Pending final determination of cost to the Owner of changes in the Work, amounts not in dispute shall be included as provided in Section 7.3.9 of AIA Document A201™-2007, General Conditions of the Contract for Construction;
- .2 Add that portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing), less retainage of ~~5~~ percent (~~5~~ %);
- .3 Subtract the aggregate of previous payments made by the Owner; and
- .4 Subtract amounts, if any, for which the County Engineer or his designee has withheld or nullified a Certificate for Payment as provided in Section 9.5 of AIA Document A201-2007.

§5.1.9 The progress payment amount determined in accordance with Section 5.1.8 shall be further modified under the following circumstances:

- .1 Add, upon Substantial Completion of the Work, a sum sufficient to increase the total payments to the full amount of the Contract Sum, less such amounts as the County Engineer or his designee shall determine for incomplete Work, retainage applicable to such work and unsettled claims; and
- .2 Add, if final completion of the Work is thereafter materially delayed through no fault of the Contractor, any additional amounts payable in accordance with Section 9.10.3 of AIA Document A201-2007.

§5.1.10 Retainage shall be determined as follows: Pursuant to N.J.S.A. 40A:11-6.1, the Owner will withhold two percent (2%) of the amount due on each partial payment when the outstanding balance of the Contract exceeds One Hundred Thousand Dollars (\$100,000.00).

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

**§ 5.2 FINAL PAYMENT**

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

- .1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Section 12.2.2 of AIA Document A201-2007, and to satisfy other requirements, if any, which extend beyond final payment; and
- .2 a final Certificate for Payment has been issued by the County Engineer or his designee.

§ 5.2.2 The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the County Engineer or his designee's final Certificate for Payment, or as follows:

« »

**ARTICLE 6 DISPUTE RESOLUTION**

**§ 6.1 INITIAL DECISION MAKER**

The County Engineer or his designee will serve as Initial Decision Maker pursuant to Section 15.2 of AIA Document A201-2007, unless the parties appoint below another individual, not a party to this Agreement, to serve as Initial Decision Maker.

*(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the County Engineer or his designee.)*

« »  
« »  
« »  
« »

## § 6.2 BINDING DISPUTE RESOLUTION

Except as provided in Section 5.1.3 of the Standard Form of Agreement between the Owner and Contractor, all claims, disputes or other matters in question between the parties to this Contract, arising out of or relating to the Project or to the Contract, or the alleged breach hereof, shall be subject one to mediation, and if not resolved, then same shall be decided in a Court of competent jurisdiction venued in Union County, New Jersey. No party may be compelled to submit any dispute concerning the Project to arbitration. In the event any claim arising from the Project is beyond the jurisdiction of the court, the Contract consents to joinder as a party to such action or alternative dispute proceeding.

## ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201-2007.

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201-2007.

## ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201-2007 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 Payments due and unpaid under the Contract shall in no instance bear interest, except as required by law in accordance with Section 5.1.3 hereof.

§ 8.3 The Contractor shall ensure that the Project Site is maintained in a clean and safe condition at all times, based upon Owner's sole discretion. If the Contractor fails to keep the Project Site in a clean and safe condition, said failure shall result in the following:

- .1 all claims resulting from the Contractor's failure shall be the Contractor's responsibility;
- .2 said failure shall constitute an act of default and a substantial breach of the Contract giving the Owner remedies under the contract Documents; and
- .3 the Owner shall have the right to withhold any payments until the Contractor cures its failure.

Failure to do so shall authorize the Owner to withhold any Applications for payment until such time as the Contractor has rectified same. Further, if the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the cost thereof shall be charged to the Contractor.

§ 8.4 Indemnification – See Indemnification Requirements in Bid Documents.

§ 8.5 The within contract shall be governed by and interpreted pursuant to the law of the State of New Jersey.

§ 8.6 The Contractor shall comply with the anti-discrimination provisions of N.J.S.A. 10:2-1 et seq., the New Jersey Law Against Discrimination, N.J.S.A. 10:5-1 et seq., N.J.A.C. 17:27-1.1 et seq. and shall guarantee to afford equal opportunity in performance of the Work in accordance with an affirmative action program approved by the State Treasurer. (See Page G-21).

§ 8.7 The Contractor shall submit proof of Business Registration for itself and its subcontractors to the Owner and 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 levels (tiers) of the Project.

The Contractor agrees to comply with the rules and regulations promulgated pursuant to the Contractor Use Tax Collection Legislation.

For the term of the contract, the Contractor, any subcontractor, and each of their affiliates [N.J.S.A. 52:32-44(g)93], shall collect and remit to the New Jersey Director of the Division of Taxation in the Department of Treasury, the use tax due pursuant to the "Sales and Use Tax Act," P.L. 1966, c. 30 (C.54:32B-1 et seq.) on all of their sales of tangible personal property delivered into the State of New Jersey, regardless of whether the tangible personal property is intended for a contract with a contracting agency. For purposes herein, "affiliate" shall mean any entity that: (a)

directly, indirectly or constructively controls another entity; (b) is directly, indirectly, or constructively controlled by another entity; or (c) is subject to the control of a common entity. For purposes of the immediately preceding sentence, an entity controls another entity if it owns, directly or indirectly, more than fifty percent (50%) of the Ownership interest in that entity.

§8.8 This Standard Form of Agreement and the General Conditions set forth in the Bid Documents shall control in the case of conflict between these documents and the Project Specifications, the Project Manual, and any other exhibits incorporated by reference in this Contract.

#### ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 The Contract Documents, except for Modifications issued after execution of this Agreement, are enumerated in the sections below, and incorporated herein as if set forth in their entirety.

§ 9.1.1 The Agreement is this executed AIA Document A101-2007, Standard Form of Agreement Between Owner and Contractor.

§ 9.1.2 The General Conditions are AIA Document A201-2007, General Conditions of the Contract for Construction.

§ 9.1.3 The Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages

§ 9.1.4 The Specifications:

*(Either list the Specifications here or refer to an exhibit attached to this Agreement.)*

« See Specifications as referenced by Exhibit B.

Section	Title	Date	Pages

§ 9.1.5 The Drawings:

*(Either list the Drawings here or refer to an exhibit attached to this Agreement.)*

« See List of Drawings, annexed hereto as Exhibit C.

Number	Title	Date

§ 9.1.6 The Addenda, if any:

Number	Date	Pages

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

§ 9.1.7 Additional documents, if any, forming part of the Contract Documents:

.1 AIA Document E201™-2007, Digital Data Protocol Exhibit, if completed by the parties, or the following:

■

.2 Other documents, if any, listed below:

■

**ARTICLE 10 INSURANCE AND BONDS**

The Contractor shall purchase and maintain insurance and provide bonds as set forth in Article 11 of AIA Document A201-2007.

(State bonding requirements, if any, and limits of liability for insurance required in Article 11 of AIA Document A201-2007.)

Type of insurance or bond

Limit of liability or bond amount (\$0.00)

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

OWNER (Signature)

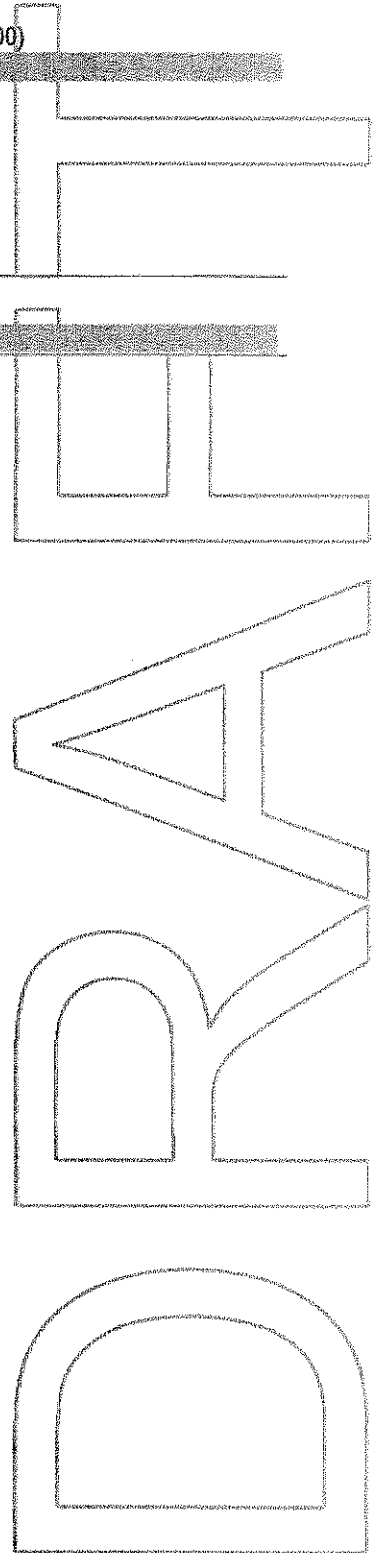
<><><>

(Printed name and title)

CONTRACTOR (Signature)

<><><>

(Printed name and title)



# DRAFT AIA Document A201™ - 2007

## General Conditions of the Contract for Construction

for the following PROJECT:

(Name and location or address)

(County of Union)

( )

THE OWNER:

(Name, legal status and address)

( )

( )

THE ENGINEER, OR HIS DESIGNEE :

(Name, legal status and address)

( )

( )

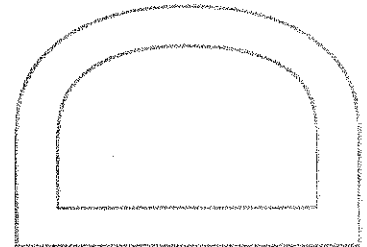
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#### ADDITIONS AND DELETIONS:

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.



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1.1.3

Use of Site

Written Consent

1.5.2, 3.4.2, 3.7.4, 3.12.8, 3.14.2, 4.1.2, 9.3.2, 9.8.5, 9.9.1, 9.10.2, 9.10.3, 11.4.1, 13.2, 13.4.2, 15.4.4.2

Written Interpretations

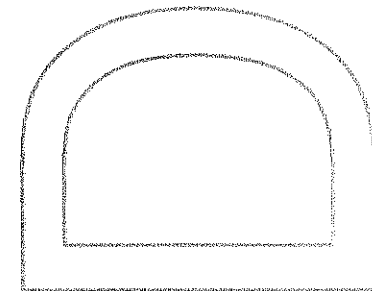
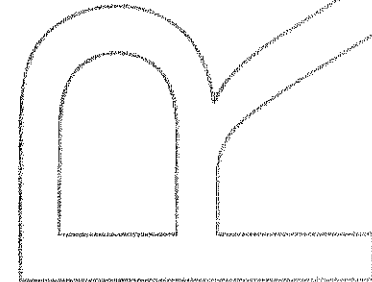
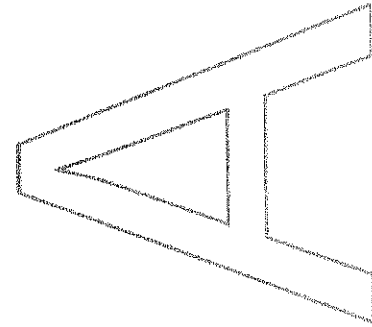
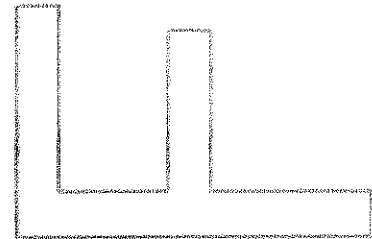
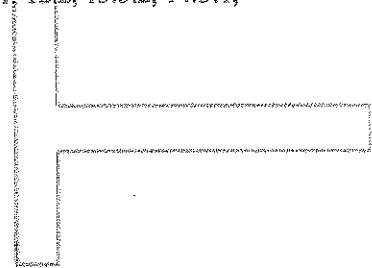
4.2.11, 4.2.12

Written Notice

2.3, 2.4, 3.3.1, 3.9, 3.12.9, 3.12.10, 5.2.1, 8.2.2, 9.7, 9.10, 10.2.2, 10.3, 11.1.3, 12.2.2, 12.2.4, 13.3, 14, 15.4.1

Written Orders

1.1.1, 2.3, 3.9, 7, 8.2.2, 12.1, 12.2, 13.5.2, 14.3.1, 15.1.2



**ARTICLE 1 GENERAL PROVISIONS**

**§ 1.1 BASIC DEFINITIONS**

**§ 1.1.1 THE CONTRACT DOCUMENTS**

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive or (4) a written order for a minor change in the Work issued by the Architect or Engineer. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding requirements.

**§ 1.1.2 THE CONTRACT**

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

**§ 1.1.3 THE WORK**

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

**§ 1.1.4 THE PROJECT**

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

**§ 1.1.5 THE DRAWINGS**

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

**§ 1.1.6 THE SPECIFICATIONS**

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

**§ 1.1.7 INSTRUMENTS OF SERVICE**

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

**§ 1.1.8 INITIAL DECISION MAKER**

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2 and certify termination of the Agreement under Section 14.2.2.

**§ 1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS**

**§ 1.2.1** The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent

consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

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

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

### § 1.3 CAPITALIZATION

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

### § 1.4 INTERPRETATION

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

### § 1.5 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER INSTRUMENTS OF SERVICE

§ 1.5.1 The Engineer, or his designee and the Engineer, or his designee 's consultants shall be deemed the authors and Owners of their respective Instruments of Service, including the Drawings and Specifications. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the Engineer, or his designee or Engineer, or his designee 's consultants' reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are authorized to use and reproduce the Instruments of Service provided to them solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers may not use the Instruments of Service on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Engineer, or his designee and the Engineer, or his designee 's consultants.

### § 1.6 TRANSMISSION OF DATA IN DIGITAL FORM

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

## ARTICLE 2 OWNER

### § 2.1 GENERAL

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided elsewhere in the Contract Documents, the Engineer, or his designee does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

### § 2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

§ 2.2.1 The Contractor may request in writing that the Owner provide reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract only in the event that: (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) a change in the Work materially changes the Contract Sum. The Owner shall furnish such evidence as a condition precedent to commencement or continuation of the Work or the portion of the Work affected by a material change. After the Owner furnishes the evidence, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

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

§ 2.2.3 If readily available, the Owner shall furnish surveys describing physical characteristics and legal limitations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work. The Contractor shall be responsible for requesting and obtaining a utility mark-out.

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

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

### § 2.3 OWNER'S RIGHT TO STOP THE WORK

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Article 12 or fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6. Owner shall in no way be responsible for any delays or claims arising from delays for enforcement of this Section.

### § 2.4 OWNER'S RIGHT TO CARRY OUT THE WORK

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a seven-day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Engineer, or his designee's additional services made necessary by such default, neglect or failure. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

## ARTICLE 3 CONTRACTOR

### § 3.1 GENERAL

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located and shall maintain as current any approvals or certifications that may be required to perform the Work. The term "Contractor" means the Contractor or the Contractor's authorized representative.

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

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

### § 3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

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



§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.2.3, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Engineer, or his designee any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Engineer, or his designee may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a Contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

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

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Engineer, or his designee issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall make Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Engineer, or his designee for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

### § 3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely written notice to the Owner and Engineer, or his designee and shall not proceed with that portion of the Work without further written instructions from the Engineer, or his designee. If the Contractor is then instructed to proceed with the required means, methods, techniques, sequences or procedures without acceptance of changes proposed by the Contractor, the Owner shall be solely responsible for any loss or damage arising solely from those Owner-required means, methods, techniques, sequences or procedures.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

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

### § 3.4 LABOR AND MATERIALS

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

§ 3.4.2 Except in the case of minor changes in the Work authorized by the Engineer, or his designee in accordance with Sections 3.12.8 or 7.4, the Contractor may make substitutions only with the consent of the Owner, after

evaluation by the Engineer, or his designee and in accordance with a Change Order or Construction Change Directive.

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

### § 3.5 WARRANTY

The Contractor warrants to the Owner and Engineer, or his designee that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Engineer, or his designee, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment. Such warranty shall continue for a period of one (1) year from the date of Substantial Completion of the Work. Under this warranty, the Contractor shall remedy at his expense any such failure for the Work to be conforming to the requirement of the Contract, or any other defect appearing in the Work. In addition, the Contractor shall remedy at his own expense, any damage to Owner's owned, controlled, real or personal property, when that damage is the result of the Contractor's failure to provide conforming Work as it relates to the Contract Documents or any other defect of equipment, material, workmanship or design. The Contractor shall also restore any Work damaged in fulfilling its obligations under the terms of this provision. The Contractor's warranty with respect to the Work repaired or replaced hereunder will run for a period of one (1) year from the date of repair or replacement.

### § 3.6 TAXES

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

### § 3.7 PERMITS, FEES, NOTICES AND COMPLIANCE WITH LAWS

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

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

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

§ 3.7.4 **Concealed or Unknown Conditions.** If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature, that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Engineer, or his designee before conditions are disturbed and in no event later than 21 days after first observance of the conditions. The Engineer, or his designee will promptly investigate such conditions and, if the Engineer, or his designee determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum or Contract Time, or both. If the Engineer, or his designee determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Engineer, or his designee shall promptly notify the Owner and Contractor in writing, stating the reasons. If either party disputes the Engineer, or his designee's determination or recommendation, that party may proceed as provided in Article 15.

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

### § 3.8 ALLOWANCES

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct.

§ 3.8.2 Unless otherwise provided in the Contract Documents,

- .1 Allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- .2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- .3 Whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2. The unused balance of any allowance shall be deducted from the Contract Sum upon completion and acceptance of the Work by Change Order.

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

### § 3.9 SUPERINTENDENT

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Engineer, or his designee the name and qualifications of a proposed superintendent. The Engineer, or his designee may reply within 14 days to the Contractor in writing stating (1) whether the Owner or the Engineer, or his designee has reasonable objection to the proposed superintendent or (2) that the Engineer, or his designee requires additional time to review. Failure of the Engineer, or his designee to reply within the 14 day period shall constitute notice of no reasonable objection.

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

### § 3.10 CONTRACTOR'S CONSTRUCTION SCHEDULES

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall prepare and submit for the Owner's and Engineer, or his designee's information a Contractor's construction schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.

§ 3.10.2 The Contractor shall prepare a submittal schedule, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, and shall submit the schedule(s) for the Engineer, or his designee's approval. The Engineer, or his designee's approval shall not unreasonably be delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Engineer, or his designee reasonable time to review submittals. If the Contractor fails to submit a submittal

schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Engineer, or his designee .

§3.10.4 Should the Contractor responsible for the scheduling requirements of Article 3 herein fail to comply with said scheduling requirements, said failure shall result in the following:

- 1 all claims resulting from the Contractor's failure to prepare or submit a schedule shall be the Contractor's responsibility;
- 2 shall constitute an act of default and a substantial breach of the Contract giving the Owner remedies under the Contract Documents; and
- 3 the Owner shall have the right to withhold any payments until the Contractor complies with the scheduling requirements of Article 3 herein.

§3.10.5 In the event of a Five Prime Contract, the General Contractor shall be responsible for the preparation and submittal of the schedule.

### § 3.11 DOCUMENTS AND SAMPLES AT THE SITE

The Contractor shall maintain at the site for the Owner one copy of the Drawings, Specifications, Addenda, Change Orders and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and one copy of approved Shop Drawings, Product Data, Samples and similar required submittals. These shall be available to the Engineer, or his designee and shall be delivered to the Engineer, or his designee for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

### § 3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

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

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

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

§ 3.12.4 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. Their purpose is to demonstrate the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Engineer, or his designee is subject to the limitations of Section 4.2.7. Informational submittals upon which the Engineer, or his designee is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Engineer, or his designee without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve and submit to the Engineer, or his designee Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents in accordance with the submittal schedule approved by the Engineer, or his designee or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors.

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

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

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

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

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of Engineer, or his designee ure or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. The Contractor shall not be required to provide professional services in violation of applicable law. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Engineer, or his designee will specify all performance and design criteria that such services must satisfy. The Contractor shall cause such services or certifications to be provided by a properly licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Engineer or his designee . The Owner and the Engineer, or his designee shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications and approvals performed or provided by such design professionals, provided the Owner and Engineer, or his designee have specified to the Contractor all performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Engineer, or his designee will review, approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Contractor shall not be responsible for the adequacy of the performance and design criteria specified in the Contract Documents.

### § 3.13 USE OF SITE

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

§ 3.13.2 The Contractor shall coordinate the Contractor's operations with, and secure the approval of, the Owner before using any portion of the Site.

§ 3.13.3 The Contractor shall store its apparatuses, materials, supplies, and equipment in such orderly fashion at the Site of the Work, if permitted, as will not unduly interfere with the progress of the Work or ongoing operations. The Contractor shall provide protective fencing around the designated storage areas.

§ 3.13.4 The Contractor shall see that stockpiles of materials and storage of equipment are kept to a minimum and neatly stored where directed by the Owner and the Engineer, or his designee .

§ 3.13.5 If the Work is to be executed in areas occupied by the Owner, the Contractor shall inform the Owner in advance of the areas scheduled to be worked on, so that the Owner's personnel may make proper preparations to protect equipment and records.

§3.13.6 The Contractor understands that some or all the Work of the Contract may be performed while the facilities are occupied by personnel, and accordingly shall make all reasonable and necessary provisions to ensure that the contract Work will be of minimal disruption to the environment.

§3.13.7 Materials and equipment that are to be used only directly in the Work, shall be brought to and stored on the Project site by the Contractor. After equipment is no longer required for the Work, it shall be promptly removed from the Project Site. Protection of construction materials and equipment stored at the Project Site from weather, theft, damage and all other adversity is solely the Contractor's responsibility. The Contractor shall bear the responsibility to replace all such materials that may be lost, damaged, or stolen at its expense, whether such materials or equipment have been entirely or partially paid for by the Owner.

§3.13.8 The Contractor and any entity for whom the Contractor is responsibility, shall not erect any sign on the Project Site without the prior written consent of the Owner, which may be withheld in the sole discretion of the Owner.

§3.13.9 Contractor shall ensure that the Work is performed at all times in a manner that affords reasonable access, both vehicular and pedestrian, to the Site of the Work and all adjacent areas. The Work shall be performed, to the fullest extent reasonably possible, in such a manner that public areas adjacent to the Site of the Work shall be free from all debris, building materials, and equipment likely to cause hazardous conditions.

§3.13.10 Without prior approval of the Owner, the Contractor shall not permit any workers to use any existing facilities at the Project Site, including, without limitation, the lavatories, toilets, entrances, and parking areas, other than those designated by the Owner. Without limitation of any other provision of the Contract Documents, the Contractor shall use its best efforts to comply with all rules and regulations promulgated by the Owner in connection with the use and occupancy of the Project Site and the Building, as amended from time to time. The Contractor shall immediately notify the Owner in writing, if during the performance of the Work, the Contractor finds compliance with any portion of such rules and regulations to be impracticable. This notification shall set forth the problems of such compliance and shall suggest alternatives through which the same results intended by such portions of the rules and regulations can be achieved. The Owner may, in the Owner's sole discretion, adopt such suggestions, develop new alternatives or require compliance with the existing requirements of the rules and regulations. The Contractor shall also comply with all insurance requirements and collective bargaining agreements applicable to use and occupancy of the Project Site and the Building.

### § 3.14 CUTTING AND PATCHING

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

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

### § 3.15 CLEANING UP

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials from and about the Project.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and Owner shall be entitled to reimbursement from the Contractor, or shall be entitled to reduce the Contract Amount in an amount equal to the Owner's cost to clean up.

§3.15.3 The Contractor shall, on a daily basis, clean debris resulting from its Work, and protect construction in progress and maintain adjoining materials in place during handling and installation, and provide protective covering where required to assure protection from damage or deterioration until Substantial Completion.

§3.15.4 The Contractor shall clean and provide maintenance on completed construction, after installation, as frequently as necessary through the remainder of the construction period.

§3.15.5 The Contractor shall supervise its construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period. The term "clean" shall include the removal of debris from the work area to dumpsters furnished by the Prime General Work Contractor or the Contractor for Single Overall Contract Work, whichever contracting method shall apply.

### § 3.16 ACCESS TO WORK

The Contractor shall provide the Owner and Engineer, or his designee access to the Work in preparation and progress wherever located.

### § 3.17 ROYALTIES, PATENTS AND COPYRIGHTS

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Engineer, or his designee harmless from loss on account thereof, but shall not be responsible for such defense or loss when a particular design, process or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications or other documents prepared by the Owner or Engineer, or his designee. However, if the Contractor has reason to believe that the required design, process or product is an infringement of a copyright or a patent, the Contractor shall be responsible for such loss unless such information is promptly furnished to the Engineer, or his designee.

### § 3.18 INDEMNIFICATION

§ 3.18.1 The County of Union requires all bidders to accept the following indemnification requirements in the event the County accepts their bid. The Contract awarded by the County to the successful bidder will contain the following provision:

"To the fullest extent permitted by law the Contractor shall indemnify and hold harmless the Owner and Owner's consultants, agents, representatives, and employees from and against any and all claims, damages, losses, costs, and expenses, including, but not limited to attorney's fees, legal costs and legal expenses arising out of or resulting from the performance of the Contractor's work under this contract, provided that such claim, damage, loss, cost or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than work itself) caused or alleged to be caused by the negligent acts, negligent omissions, and/or fault of the Contractor, anyone directly or indirectly employed or retained by the Contractor, or anyone for whose acts the Contractor may be liable regardless of whether caused in part by the negligent act or omission of a party indemnified hereunder provided it is not caused by the sole negligence of a party indemnified hereunder. Contractor shall further indemnify and hold harmless the Owner and the Owner's consultants, agents, representative, and employees from and against any and all claims, damages, losses, costs, and expenses, including, but not limited to attorneys' fees, legal costs and legal expenses, arising out of or resulting from performance of the work, provided that such claims, damage, loss, cost, or expense is attributable to bodily injury, sickness, disease or death, or to injury to destruction of tangible property (other than work itself) caused or alleged to be caused by the negligent acts, negligent omissions, and/or fault of the Owner or the Owner's consultants, agents, representatives, or employees and arises out of this project and provided such claim, damage, loss, cost, or expense is not caused by the sole negligence of a party indemnified hereunder."

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

ARTICLE 4 ENGINEER, OR HIS DESIGNEE OR ENGINEER

§ 4.1 GENERAL

§ 4.1.1 The Owner shall retain an Engineer, or his designee lawfully licensed to practice Engineer, or his designee in the jurisdiction where the Project is located. That person or entity is identified as the Engineer, or his designee in the Agreement and is referred to throughout the Contract Documents as if singular in number.

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

§ 4.2 ADMINISTRATION OF THE CONTRACT

§ 4.2.1 The Engineer, or his designee will provide administration of the Contract as set forth in its respective Agreements with the Owner and as described in the Contract Documents.

§ 4.2.2 The Engineer, or his designee will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents.

§ 4.2.3 On the basis of the site visits, the Engineer, or his designee will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and report to the Owner (1) known deviations from the Contract Documents and from the most recent construction schedule submitted by the Contractor, and (2) defects and deficiencies observed in the Work.

§ 4.2.4 COMMUNICATIONS FACILITATING CONTRACT ADMINISTRATION

Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner and Contractor shall endeavor to communicate with each other through the Engineer, or his designee about matters arising out of or relating to the Contract. Communications by and with the Engineer, or his designee's consultants shall be through the Engineer, or his designee. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner.

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

§ 4.2.6 The Engineer, or his designee has authority to reject Work that does not conform to the Contract Documents. Whenever the Engineer, or his designee considers it necessary or advisable, the Engineer, or his designee will have authority to require inspection or testing of the Work in accordance with Sections 13.5.2 and 13.5.3, whether or not such Work is fabricated, installed or completed. However, neither this authority of the Engineer, or his designee nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Engineer, or his designee to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons or entities performing portions of the Work.

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



approval of safety precautions or, unless otherwise specifically stated by the Engineer, or his designee, of any construction means, methods, techniques, sequences or procedures. The Engineer, or his designee's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.8 The Engineer, or his designee will prepare Change Orders and Construction Change Directives, and may authorize minor changes in the Work as provided in Section 7. The Engineer, or his designee will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.9 The Engineer, or his designee will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

§ 4.2.10 If the Owner and Engineer, or his designee agree, the Engineer, or his designee will provide one or more project representatives to assist in carrying out the Engineer, or his designee's responsibilities at the site. The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in the Owner's Agreement with the Engineer, or his designee.

§ 4.2.11 The Engineer, or his designee will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Engineer, or his designee's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 4.2.12 Interpretations and decisions of the Engineer, or his designee will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Engineer, or his designee will endeavor to secure faithful performance by both Owner and Contractor and will not show partiality.

§ 4.2.13 The Engineer, or his designee will review and respond to requests for information about the Contract Documents. The Engineer, or his designee's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Engineer, or his designee will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

## ARTICLE 5 SUBCONTRACTORS

### § 5.1 DEFINITIONS

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

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

### § 5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

§ 5.2.1 Identification of Subcontractors required by N.J.S.A. 40A:11-16 shall be provided with the bid submission in accordance with the requirements of that statute. Names of persons or entities for any Subcontractor not covered by N.J.S.A. 18A-18 shall be furnished within thirty (30) thirty days of notification of Award of Contract. The Engineer, or his designee will notify the Contractor in writing if the Owner or Engineer, or his designee, after due investigation, has reasonable objection to any such proposed person or entity. The list of proposed Subcontractors shall include a description of the materials and equipment each proposes to furnish and install in the Work. The description shall be insufficient detail to allow the Engineer, or his designee to determine general conformance to Contract requirements. Approval of the submittals as required under this Article shall not relieve the Contractor from conformance to Contract requirements.

§5.2.2 Subcontractors shall comply with the statutory requirements of N.J.S.A. 34:11-56.25 and N.J.S.A. 34:11-56.48. Any subcontractors who fail to comply with those statutory provisions shall be rejected.

§5.2.3 Written confirmation of award of each major subcontract shall be submitted to the Owner by the Contractor, in form subject to his approval, within seven (7) days after receipt of Owner's approval of proposed Subcontractor list as provided under this Article. Every subcontract shall be in writing, shall be submitted to Owner for review and approval prior to execution, and shall specifically provide that the Owner is an intended third (3<sup>rd</sup>) party beneficiary of such subcontract.

§ 5.2.4 The Contractor shall not contract with a proposed person or entity to whom the Owner or Engineer, or his designee has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.5 If the Owner or Engineer, or his designee has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Engineer, or his designee has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

§ 5.2.6 The Contractor shall not substitute a Subcontractor, person or entity previously selected if the Owner or Engineer, or his designee makes reasonable objection to such substitution.

### § 5.3 SUBCONTRACTUAL RELATIONS

§5.3.1 By appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, which the Contractor, by these Documents, assumes toward the Owner and Engineer, or his designee. Each subcontract agreement shall preserve and protect the rights of the Owner and Engineer, or his designee under the Contract Documents and at law. No Subcontract shall diminish in any way any rights or benefits conferred upon the Owner by these Contract Documents. The Contractor shall make all Contract Documents available to the Subcontractors.

§5.3.2 Where the Contractor sublets portions of the Work, the entire responsibility for the subdividing of Work rests with the Contractor. The Owner and the Engineer, or his designee are not responsible for the manner of the subdivision of the Work, nor will they enter into or settle disagreements or disputes between Contractor and Subcontractors. The Contractor is, and will be held, responsible for the proper execution of the Work of all Subcontractors.

### § 5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

§ 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

- 1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor in writing.

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

## ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

### § 6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

§ 6.1.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site.

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

## § 6.2 MUTUAL RESPONSIBILITY

§ 6.2.1 The Contractor shall afford the Owner and separate contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a separate Contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Engineer, or his designee apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor so to report shall constitute an acknowledgment that the Owner's or separate Contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable.

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

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

§ 6.2.4.1 Should the Contractor cause damage to the Work or property of any separate Contractor on the Project, the Contractor shall promptly settle with such other Contractor by agreement, or otherwise resolve the dispute. If such separate Contractor institutes any legal proceeding against the Owner on account of any damage alleged to have been so sustained, the Contractor shall, indemnify, defend, or bear the cost of defense as the Owner shall in its own discretion determine, and hold the Owner's harmless. Said Indemnification shall be governed by Section 13, Page G7 of the Instructions to Bidders.

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

## § 6.3 OWNER'S RIGHT TO CLEAN UP

If a dispute arises among the Contractor, separate contractors and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Engineer, or his designee will allocate the cost among those responsible, which amounts the Owner shall be entitled to reduce the Contract Amounts of the various contracts of those responsible.

## ARTICLE 7 CHANGES IN THE WORK

### § 7.1 GENERAL

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents. Change Orders and Construction Change Directives shall be subject to and processed in accordance with N.J.A.C. 6A:23-7 and N.J.A.C. 6A:26-4.9, where applicable.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor and Engineer, or his designee; a Construction Change Directive requires a written agreement by the Owner and Engineer, or his designee and may or may not be agreed to by the Contractor; an order for a minor change in the Work which does not extend the Contract Time, increase the Contract Sum or change the Project Scope may be issued by the Engineer, or his designee alone.

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

§ 7.1.4 In order to facilitate checking of quotations for extras or credits, all proposals shall be accompanied by a complete itemization of costs including labor, materials and subcontracts. Labor and materials shall be itemized in the manner prescribed above. Where major cost items are subcontracts, they shall be itemized also. In no case will a change be approved without such itemization.

## § 7.2 CHANGE ORDERS

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

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

A Change Order shall not require consent of the Owner if the Owner has provided an allowance for such a change.

§ 7.2.2 Methods used in determining adjustments to the Contract Sum shall be those listed in Section 7.3.3.

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

## § 7.3 CONSTRUCTION CHANGE DIRECTIVES

§ 7.3.1 A Construction Change Directive is a written order prepared by the Engineer, or his designee and signed by the Owner and Engineer, or his designee, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. A Construction Change Directive shall not require the Agreement of the Engineer, or his designee if the Owner specifically waives their consent in writing. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

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

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

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 As provided in Section 7.3.6.

§ 7.3.4 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Engineer, or his designee of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time. The Contractor's failure to comply with a Construction Change Directive shall constitute an incident of default and cause for termination by the Owner.

§ 7.3.5 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.6 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Engineer, or his designee shall determine the method and the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Engineer, or his designee may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.6 shall be limited to the following:

- .1 Costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers' compensation insurance;
- .2 Costs of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;
- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others; and
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the Work.

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

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

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

§ 7.3.10 In subparagraphs 7.3.3 and 7.3.6, the allowance for overhead and profit combined shall be based upon the following schedule:

- .1 For the Contractor, for work performed by his own forces, 10% of cost.
- .2 For each Subcontractor, for the work performed by his own forces, 10% of cost.
- .3 For the Contractor, for work performed by a subcontractor, 5% of cost.

§ 7.3.11 Lump sum quotations for changes in the Work will not be accepted. Proposals shall be completely itemized and broken down. They shall be accompanied by such supporting data as the Engineer, or his designee may require, such as copies of subcontractor's or vendor's quotations, quantity take-off sheets, or other similar information.

#### § 7.4 MINOR CHANGES IN THE WORK

The Engineer, or his designee has authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes will be effected by written order signed by the Engineer, or his designee and shall be binding on the Owner and Contractor. The Contractor shall carry out such written orders promptly.

#### ARTICLE 8 TIME

##### § 8.1 DEFINITIONS

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work and services as required by the Contract

Documents, Substantial Completion of the Work shall be accomplished within the period of consecutive calendar days (or by the date), as stated in the Agreement, plus any authorized extension(s) of time as approved by written agreement. Final Completion of the Work shall be no later than thirty (30) consecutive calendar days from the date of Substantial Completion of the Work, unless otherwise set forth in Article 3.2 of the Owner/Contractor Agreement.

§ 8.1.2 Intentionally omitted

§ 8.1.3 Intentionally omitted.

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

## § 8.2 PROGRESS AND COMPLETION

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work. There will be no bonus or incentives paid, should the Work, or any portion thereof, be completed in advance of the specified activity milestone dates.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, prematurely commence operations on the site or elsewhere prior to the effective date of insurance required by Article 11 to be furnished by the Contractor and Owner. The date of commencement of the Work shall not be changed by the effective date of such insurance.

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

## § 8.3 DELAYS AND EXTENSIONS OF TIME

§ 8.3.1 Intentionally omitted

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

§ 8.3.3 Intentionally omitted

§ 8.3.4 No payment, compensation, or adjustment of any kind shall be made to the Contractor by the Owner for damages resulting from hindrances or delays caused by the delays of other contractors, or from foreseeable circumstances not attributable to the Owner's conduct. The Contractor agrees that it will make no claim against the Owner for payment, compensation, damages, mitigation of Liquidated Damages, or adjustment of any kind for such hindrances or delays, and will accept such extensions of time as may be granted by the Owner in the Owner's sole discretion in full satisfaction for any and all alleged claims against the Owner for any and all such hindrances or delays. For purposes of this Agreement, disputes arising between contractors before or during construction, adverse weather conditions, and delays on the part of local authorities issuing permits shall be considered foreseeable circumstances. Notwithstanding the foregoing, nothing herein shall limit the Contractor's remedies for Owner's negligence, bad faith, active interference, tortious conduct, or other reasons unanticipated by the parties that delay expenditures paid by the Owner to the Engineer, or his designee, other individual or entity, or to any inspector or inspectors necessarily employed by it on the Work, for any number of days in excess of the Contract Time, shall be deducted for the Contract Sum.

§ 8.3.5 The provisions of this Article shall not be so interpreted or construed as to preclude or prevent the Contractor from making and prosecuting any claim against any separate Contractor engaged or employed by the Owner for damages alleged to have been caused or occasioned by any such separate Contractor.

§ 8.3.6 To the extent permitted by law, the Owner may suspend the whole or any part of the Work, if it shall deem it for the best interest of the Owner to do so, without compensation to the Contractor for such suspension, other than extending the time for completion of the Work as much as it may have been delayed by such suspension. During such suspension, all materials delivered upon, but not placed in the Work shall be neatly piled by the Contractor so as not to obstruct public travel, or shall be removed from the line of Work at the direction of the Owner and, unless the

materials be moved by the Contractor upon such direction, the materials shall be removed by the Owner and expense thereof will be charged to the Contractor.

§8.4.1 Should the Contractor fail to complete fully, and in conformity with all provisions of the Contract within the Contract Time, the Contractor shall, and hereby agrees to, pay the Owner one thousand dollars (\$1,000.00) per day, for each consecutive calendar day beyond the number of days allowed by the Contract, which sum is agreed upon as reasonable and proper measure of damages that the Owner will sustain per diem by failure of Contractor to complete Work within time as stipulated; it being recognized by Owner and Contractor that the injury to Owner that could result from a failure of the Contractor to complete on schedule, is uncertain and cannot be computed exactly. In no way shall costs of Liquidated Damages be construed as a penalty to the Contractor.

§8.4.2 It is expressly understood and agreed by and between the Contractor and Owner that the Contract Time prescribed herein is a reasonable time for the completion of the Work.

## ARTICLE 9 PAYMENTS AND COMPLETION

### § 9.1 CONTRACT SUM

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

### § 9.2 SCHEDULE OF VALUES

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit to the Engineer, or his designee, before the first Application for Payment, a schedule of values allocating the entire Contract Sum to the various portions of the Work and prepared in such form and supported by such data to substantiate its accuracy as the Engineer, or his designee may require. This schedule, unless objected to by the Engineer, or his designee, shall be used as a basis for reviewing the Contractor's Applications for Payment.

### § 9.3 APPLICATIONS FOR PAYMENT

§ 9.3.1 See Article 5 of Standard Form of Agreement between Owner/Contractor.

§ 9.3.1.1 Applications for Payment may include requests for payment on account of changes in the Work which have been properly authorized by Construction Change Directives but not yet included in Change Orders.

§ 9.3.1.2 Such applications may not include requests for payment of amounts the Contractor does not intend to pay to a Subcontractor or material supplier because of a dispute or other reason.

§ 9.3.1.3 All applications for payment shall be accompanied by the Application and Certificate of Payment, AIA Document G702, and the Continuation Sheet, AIA Document G703, fully completed as required or such other application for Payment as the Owner's representative shall use.

§9.3.1.4 In cases where the work is awarded on a Single Overall Contract basis, payments shall be made in accordance with applicable State of New Jersey statutes.

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

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

§9.3.3.1 All municipal mechanic's liens filed by a lien claimant shall be governed by N.J.S.A. 2A:44-125 et seq. In the event a municipal mechanic's lien is filed, the Owner reserves the right to withhold the full amount of the lien. The Owner may release the funds to the party against whose account the lien is claimed, only after that party files with the Owner's financial officer, a bond in an amount double of all sums claimed ("Double Bond") under the lien, and such bond's form has been approved by the Owner's chief law officer and financial officer, per N.J.S.A. 2A:44-130 or if an acceptable release of liens is filed by the lien claimant.

#### § 9.4 CERTIFICATES FOR PAYMENT

§ 9.4.1 See Article 5 of Standard Form of Agreement between Owner and Contractor.

§ 9.4.2 See Article 5 of Standard Form of Agreement between Owner and Contractor

§9.4.3 See Article 5 of Standard Form of Agreement between Owner and Contractor.

#### § 9.5 DECISIONS TO WITHHOLD CERTIFICATION

§ 9.5.1 See Article 5 of Standard Form of Agreement between Owner and Contractor

§ 9.5.2 See Article 5 if Standard Form of Agreement between Owner and Contractor.

#### § 9.6 PROGRESS PAYMENTS

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

§ 9.6.2 The Contractor shall promptly pay each Subcontractor, upon receipt of payment from the Owner, out of the amount paid to the Contractor on account of such Subcontractor's portion of the Work, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work and shall certify same to Owner. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

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

§ 9.6.4 Neither the Owner nor Engineer, or his designee shall have an obligation to pay or to see to the payment of money to a Subcontractor except as may otherwise be required by law.

§ 9.6.5 Payment to material and equipment suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

#### § 9.7 FAILURE OF PAYMENT

If the Engineer, or his designee does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents the amount certified by the Engineer, or his designee or awarded by binding dispute resolution, then the Contractor may, upon seven additional days' written notice to the Owner and Engineer, or his designee , stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shut-down, delay and start-up, plus interest as provided for in the Contract Documents.

#### §9.7 REIMBURSEMENT TO OWNER

§9.7.1 If the Owner is entitled to any reimbursement or payment from the Contractor under, or pursuant to, the Contract Documents, such payment shall be made promptly upon demand by the Owner. Notwithstanding anything contained in the Contract Documents to the contrary, if the Contractor fails to promptly make any payment due the Owner, or the Owner incurs any costs and expenses to cure any default of the Contractor or to correct defective Work, the Owner shall have an absolute right to offset such amount against the Contract Sum and may, in the Owner's sole discretion, elect either to: (1) deduct an amount equal to that which the Owner is entitled from any



payment then, or thereafter, due the Contractor from the Owner; or (2) issue a written notice to the Contractor reducing the Contract Sum by an amount equal to that which the Owner is entitled.

### § 9.8 SUBSTANTIAL COMPLETION

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use; provided, however, that a condition precedent to Substantial Completion shall be the Owner's receipt of all certificates of occupancy (permanent or temporary) and any other permits, approvals, licenses, and other documents from any governmental authority having jurisdiction thereof necessary for the occupancy of the Project. The Owner may withhold a certification of Substantial Completion if temporary installations or temporary construction exists in areas requesting certification, or if certificates of occupancy are temporary or conditional.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Engineer, or his designee shall prepare a comprehensive list of items to be completed or corrected ("Punch List"). The Contractor shall proceed immediately and correct items on the list. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. Upon receipt of the list, the Engineer, or his designee, will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Engineer, or his designee's inspection discloses any item, whether or not included on the list, which is not in accordance with the requirements of the Contract Documents, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Engineer, or his designee. The Contractor shall then submit a request for another inspection by the Engineer, or his designee to determine Substantial Completion. When the Work or designated portion thereof is substantially complete, the Engineer, or his designee will prepare a Certificate of Substantial Completion which shall establish the date of Substantial Completion, shall establish responsibilities of the Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall finish all items on the List accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion. The Certificate of Substantial Completion shall be submitted to the Contractor for its written acceptance and to the Owner for its approval and acceptance as required by Section 9.8.1. No Certificate of Substantial Completion shall be deemed effective unless executed by both Owner and Contractor.

### § 9.9 PARTIAL OCCUPANCY OR USE

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, who shall obtain all necessary modifications to its insurance coverage to permit such occupancy or use. In addition, Contractor shall obtain consent of those public authorities having jurisdiction over the Work. Such partial occupancy or use may commence whether or not the portion is substantially complete pursuant to the terms of that Agreement. When the Contractor considers a portion substantially complete, the Engineer, or his designee shall prepare a Punch List as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld.

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

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

§ 9.9.4 The occupancy of any portion of the Work shall not constitute acceptance of any Work, except as hereinafter stated, nor does it waive the Owner's right to Liquidated Damages. Final Acceptance of the Work shall be for the whole Work only and not part.

§ 9.9.5 Occupancy by the Owner shall not be deemed to constitute a waiver of existing claims on behalf of the Owner or Contractor against each other.

**§ 9.10 FINAL COMPLETION AND FINAL PAYMENT**

**§ 9.10.1** Upon completion of the Work, the Contractor shall forward to the Engineer, or his designee a written notice that the Work is ready for final inspection and acceptance and shall also forward to the Engineer, or his designee a final Contractor's Application for Payment. The Engineer, or his designee will promptly make such inspection. When the Engineer, or his designee finds the Work acceptable under the Contract Documents and the Contract fully performed, the Engineer, or his designee will promptly issue a final Certificate for Payment stating that to the best of their knowledge, information and belief, and on the basis of their observations and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Engineer, or his designee's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

**§ 9.10.2** Neither final payment nor any remaining retained percentage shall become due until the Contractor complies with all requirements set forth in Section 6 of the Standard Form of Agreement between Owner and Contractor and the Contractor submits to the Engineer, or his designee (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner, (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment and (5), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

**§ 9.10.3** Intentionally omitted

**§ 9.10.4** Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee

**ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY**

**§ 10.1 SAFETY PRECAUTIONS AND PROGRAMS**

The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract. The Contractor shall submit the Contractor's safety program to the Engineer, or his designee for review and coordination with the safety programs of other Contractors.

**§ 10.2 SAFETY OF PERSONS AND PROPERTY**

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

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.
- .4 Construction or operations by the Owner or other Contractors.

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

§ 10.2.3 The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying Owners and users of adjacent sites and utilities.

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

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2, 10.2.1.3 and 10.2.1.4 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2, 10.2.1.3 and 10.2.1.4, except damage or loss attributable to acts or omissions of the Owner or Engineer, or his designee or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

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

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

#### § 10.2.8 INJURY OR DAMAGE TO PERSON OR PROPERTY

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

#### § 10.3 HAZARDOUS MATERIALS

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

§ 10.3.2 Upon receipt of the Contractor's written notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Engineer, or his designee the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of such material or substance or who are to perform the task of removal or safe containment of such material or substance.

#### § 10.3.3 Intentionally omitted

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

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

§ 10.3.6 Intentionally omitted

§ 10.4 EMERGENCIES

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 CONTRACTOR'S LIABILITY INSURANCE

§ 11.1.1 The County of Union requires all bidders to be able to comply with the following insurance requirements. In the event a bid is accepted by the County, the bidder must accept the applicable insurance requirements, as set forth below, as part of any contract, awarded to it by the County.

1. Automobile Liability Insurance in any amount of not less than \$1,000,000.00 combined single limits for Bodily Injury and Property Damage Liability. A certificate of such current insurance will be provided to the County and will reflect the provision of at least thirty (30) days notice to the County before any major cancellation or major change may be made the policy.

2. Workers Compensation Insurance insuring the obligations of the Contractor and all Subcontractors under the New Jersey Workers Compensation and Occupational Disability Laws as respects to Work performed under the Contract. Insurance will be extended to include any obligations under the United States Longshoremen's and Harbor Workers Act or any maritime act, when applicable.

3. General Liability Insurance will be provided on a Comprehensive General Liability form with a combined single limit of \$3,000,000.00 per occurrence for Bodily Injury Liability and Property Damage Liability and will include the interest of the County with respect to Work emanating from the Contract with the County. The insurance will include the following:

- a) Personal Injury Liability
- b) Blanket Contractual Liability applies to assumption of liability under any written Contract
- c) Coverage for A, X, C, U exposures, relating to excavation, blasting underground damage
- d) Broad Form Property Damage Liability
- e) Products and/or Completed Operations Liability

A Certificate of Insurance will be filed with the County prior to commencement of any Work. This certificate will contain a provision that insurance afforded under the policies will not be canceled without at least (30) days prior written notice being given to the County.

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§ 11.1.2 The insurance required by Section 11.1.1 shall remain in effect for the duration of the project, i.e., from beginning of construction until final payment and closeout.

§ 11.1.3 All insurance required by Section 11.1.1 shall be issued by insurance companies authorized to do business in the State of New Jersey and rated as "A" or better as determined by A.M. Best Company.

§ 11.1.4 The Contractor waives all rights against the Owner for damages caused by fire or other perils to the extent covered by insurance provided under this Article. Any deductibles, co-insurance, or contribution to the loss will be borne solely by the Contractor.

§ 11.1.5 A certificate of insurance evidencing the coverages required by Section 11.1.1 shall be submitted to the Owner's attorney for approval and transmittal to the Owner and Engineer, or his designee prior to the commencement of the Work. The certificate must be submitted on the ACORD form Certificate of Insurance. These certificates and the insurance policies required by this Section 11.1 shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least thirty (30) days written notice has been given to the Owner. If requested by the Owner, the Contractor shall provide complete copies of any policies of insurance required by this Contract to be obtained by the Contractor and Subcontractor(s). Information concerning any reduction of coverage shall be furnished by the Contractor with reasonable promptness in accordance with the Contractor's information and belief.

§ 11.2 PROPERTY INSURANCE

§ 11.2.1 Unless otherwise provided, the Owner shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance in the amount of the initial Contract Sum as well as subsequent modifications thereto for the entire Work at the site on a replacement cost

basis without voluntary deductibles. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Section 9.10 or until no person or entity other than the Owner has an insurance interest in the property required by this Section 11.2 to be covered, whichever is earlier. This insurance shall include the interest of the Owner, Contractor, Subcontractor(s), and Sub-Contractor(s) in the Work.

§ 11.2.1.1 Property insurance shall be on an "all-risk" policy form and shall be against the perils of fire and extended coverage and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, falsework, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Engineer, or his designee's services and expenses required as a result of such insured loss. Coverage for all other perils shall not be required unless otherwise provided in the Contract Documents.

§ 11.2.1.2 If the Owner does not intend to purchase such property insurance required by the Contract and with all of the coverages in the amount described above, the Owner shall so inform the Contractor in writing prior to commencement of the Work. The Contractor may then effect insurance which will protect the interests of the Contractor, Subcontractor(s) and Sub-subcontractor(s) in the Work. If the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain insurance as described above, without so notifying the Contractor, then the Owner shall bear all reasonable costs properly attributable thereto.

§ 11.2.1.3 If the property insurance requires minimum deductibles, and such deductibles are identified in the Contract Documents, the Contractor shall pay costs not covered because of such deductibles. If the Owner or insurer increases the required minimum deductibles over the amounts so identified or if the Owner elects to purchase this insurance with voluntary deductible amounts, the Owner shall be responsible for payment of the additional costs not covered because of such increased or voluntary deductibles.

§ 11.2.1.4 Unless otherwise provided in the Contract documents, this property insurance shall cover portions of the Work stored off the site after written approval of the Owner at the value established in the approval, and also portions of the Work in transit.

§ 11.2.1.5 A loss insured under Owner's property insurance shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgage clause and of Section 11.3.10. The Contractor shall pay Subcontractor(s) their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractor(s) to make payments to their Sub-Contractor(s) in a similar manner.

#### § 11.2.2 BOILER AND MACHINERY INSURANCE

The Owner shall purchase and maintain boiler and machinery insurance required by the Contract Documents or by law, which shall specifically cover such insured objects during installation and until final acceptance by the Owner; this insurance shall include interests of the Owner, Contractor, Subcontractors and Sub-subcontractors in the Work, and the Owner and Contractor shall be named insureds. The Owner as fiduciary shall have the power to adjust and settle a loss with insurers.

#### § 11.2.3 LOSS OF USE INSURANCE

The Owner, at the Owner's option, may purchase and maintain such insurance as will insure the Owner against loss of use of the Owner's property due to fire or other hazards, however caused.

§ 11.2.4 If the Contractor requests in writing that insurance for risks other than those described herein or other special causes of loss be included in the property insurance policy, the Owner shall, if possible, include such insurance, and the cost thereof shall be charged to the Contractor by appropriate Change Order.

#### § 11.3 PERFORMANCE BOND, PAYMENT BOND AND MAINTENANCE BOND

§ 11.3.1 Contractor, at its sole expense, shall furnish bonds covering faithful performance of the contract and payment of obligations arising thereunder as stipulated in bidding requirements or specifically required in the Contract Documents on the date of execution of the Contract, including material and labor..

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

§ 11.3.3 The Contractor shall file with the Owner, as a condition of final acceptance, a statement from the Surety of its Performance Bond and Payment Bond, that the Surety is satisfied that all claims for labor and material supplied under its contract have been satisfactorily settled.

§ 11.3.4 As a condition of Substantial Completion of the Work, the Contractor shall provide an acceptable Maintenance Bond in accordance with section 16, page G-9 of the Instructions to Bidders.

## ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

### § 12.1 UNCOVERING OF WORK

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

§ 12.1.2 If a portion of the Work has been covered that the Engineer, or his designee has not specifically requested to examine prior to its being covered, the Engineer, or his designee may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Change Order, be at the Owner's expense. If such Work is not in accordance with the Contract Documents, such costs and the cost of correction shall be at the Contractor's expense unless the condition was caused by the Owner or a separate Contractor in which event the Owner shall be responsible for payment of such costs.

### § 12.2 CORRECTION OF WORK

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

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of an applicable special warranty required by the Contract Documents any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. The Contractor shall give such notice promptly after discovery of the non-conforming work. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after the receipt of notice from the Owner or Engineer, or his designee, the Owner may correct it in accordance with Section 2.4. This obligation under Section 12.2.2 shall survive acceptance of the Work under the Contract and termination of the Contract.

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

§ 12.2.2.3 Intentionally omitted.

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

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

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work, nor to any deficient Work discovered after the one-year period that could not have readily been discovered.

### § 12.3 ACCEPTANCE OF NONCONFORMING WORK

If the Owner prefers to accept Work, that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made. However, there shall be no implied or expressed acceptance of Work not in compliance with applicable law. The amount of said reduction will be within the exclusive determination of the Owner as its representative.

## ARTICLE 13 MISCELLANEOUS PROVISIONS

### § 13.1 GOVERNING LAW

§ 13.1.1 The Contract shall be governed by the laws of the State of New Jersey.

§ 13.1.2 Nothing in the Contract Documents shall be construed to permit deviation from the governing law.

§ 13.1.3 In accordance with N.J.S.A. 40A:11-18, American manufactured products or materials shall be used in the Work, wherever possible.

### 13.1.4 RATE OF WAGES

Where the Project is not subject to a Project Labor Agreement, wage notes shall be paid pursuant to the New Jersey Prevailing Wage Act, N.J.S.A. 34:11-56.25 et seq, the Contractor and Subcontractor are required to do the following:

§ 13.1.4.1 Pay to all workmen engaged in the performance of services, directly upon a public work, the prevailing rate of wages, which shall be those in effect for the Project site(s) on the Contract Date and such rates shall remain in effect for (2) years, unless superseded by a subsequent determination.

§ 13.1.4.2 Before final payment, furnish Owner with an affidavit stating that all workmen have been paid the prevailing rate of wages specified in the contract.

§ 13.1.4.3 Keep an accurate record showing the name, craft, or trade and actual hourly rate of wages paid to each workman employed by it in connection with any public work. Records shall be preserved for two (2) years from date of payment.

§ 13.1.4.4 Post the prevailing wage rated for each craft and classification involved as determined by the Commissioner of Labor and Industry, including the effective date of any changes thereof in prominent and easily accessible places at the site of the Work, and at such place or places as are used by them to pay workmen their wages.

§ 13.1.4.5 Submit the Owner, certified payroll records for each payroll period within ten (10) days of the payment of wages. A certified payroll record is defined as "a payroll record that is attested by the employer or the Owner of the company doing business as the employer, or a corporate officer of such company, or an authorized agent of the employer". A copy of the certified payroll form for submission of the payroll records may be obtained by contacting the Department of Labor, Division of Workplace Standards at 609.292.2259.

§ 13.1.4.6 In the event the Owner finds that any workers employed by the Contractor or Subcontractor, covered by the said contract, have been paid a rate of wages less than the prevailing wage required to be paid by such contract, the Owner may terminate the Contractor's or Subcontractor's right to proceed with the Work, or such part of the

Work as to where there has been a failure to pay required wages, and to prosecute the Work to completion or otherwise, the Contractor and its sureties shall be liable to the Owner for any excess costs occasioned thereby,

§ 13.1.4.7 a current wage rate determination is on file at the offices of the Owner for inspection and Contractor's use.

### § 13.1.5 SAFETY AND HEALTH REGULATIONS (OSHA)

§ 13.1.5.1 The Contractor shall comply with the laws, rules, regulations and codes dealing with occupational safety and health, including, but not limited to, the latest amendments of the following:

§ 13.1.5.2 Williams – Steiger Occupational Safety and Health Act of 1970, Public Law 91-595

§ 13.1.5.3 Part 1910 – Occupational Safety and Health Standards Chapter XVII of Title 29, Code of Federal Regulations.

§ 13.1.5.4 Part 126 – Safety and Health Regulations for Construction, Chapter XVII of Title 29, Code of Federal Regulations.

§ 13.1.5.3 N.J.A.C. 8:59-5.1-5.109 requirements properly label any substances stored in containers) of the Worker and Community Right to Know Act, P.L. 1983, c.315.

### § 13.1.6 ENVIRONMENTAL REGULATIONS

§ 13.1.6.1 The Contractor shall comply with laws, rules, regulations, and codes dealing with the prevention of environmental pollution and the preservation of public natural resources, including but not limited to, the latest amendments of the following:

§ 13.1.6.2 Chapter 251, public Law of 1975 of the State of New Jersey, "soil Erosion and Sediment Control Act."

### § 13.1.7 AFFIRMATION ACTION EMPLOYMENT LAW

Contractor agrees to comply with the terms of the Mandatory Equal Employment Opportunity Language, a copy of which is annexed to the Contract Documents as Exhibit F and incorporated as if set forth herein.

§ 13.1.7.1 Contractor shall submit a copy of the Monthly Project Workforce Report, New Jersey Department of Treasury Form AA-202, to the New Jersey Department of Treasury's Division of Public Contracts Equal Employment Opportunity Compliance and to the Owner

§ 13.1.7.2 Contractor shall complete and submit to the Owner an Initial Project Workforce Report, New Jersey Department of Treasury Form AA 201, upon notification of award and no later than the execution of this Agreement. Failure to submit this completed form may result in this Agreement being terminated.

### § 13.2. SUCCESSORS AND ASSIGNS

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

### § 13.3 WRITTEN NOTICE

Written notice shall be deemed to have been duly served if delivered in person to the individual, to a member of the firm or entity, or to an officer of the corporation for which it was intended; or if delivered at or sent by registered or certified mail or by courier service providing proof of delivery to, the last business address known to the party giving notice.

### § 13.4 RIGHTS AND REMEDIES

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



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

### § 13.5 TESTS AND INSPECTIONS

§ 13.5.1 Tests, inspections and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. The Contractor shall give the Engineer, or his designee timely notice of when and where tests and inspections are to be made so that the Engineer, or his designee may be present for such procedures. The Owner shall bear costs of (1) tests, inspections or approvals that do not become requirements until after bids are received or negotiations concluded, and (2) tests, inspections or approvals where building codes or applicable laws or regulations prohibit the Owner from delegating their cost to the Contractor.

§ 13.5.2 If the Engineer, or his designee, Owner or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection or approval not included under Section 13.5.1, the Engineer, or his designee will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection or approval by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Engineer, or his designee of when and where tests and inspections are to be made so that the Engineer, or his designee may be present for such procedures. Such costs, except as provided in Section 13.5.3, shall be at the Owner's expense.

§ 13.5.3 If such procedures for testing, inspection or approval under Sections 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure including those of repeated procedures and compensation for the Engineer, or his designee's services and expenses shall be at the Contractor's expense.

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

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

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

### § 13.6 INTEREST

Except as required by Section 5.1.3 of the Owner Contractor Agreement and notwithstanding anything to the contrary contained in the Contract Documents and related documents, the Owner will pay no interest whatsoever for any payments due.

### § 13.7 TIME LIMITS ON CLAIMS

Intentionally deleted.

## ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

### § 14.1 TERMINATION BY THE CONTRACTOR

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, for any of the following reasons:

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

§ 14.1.2 Intentionally deleted

§ 14.1.3 If one of the reasons described in Section 14.1.1 exists, the Contractor may, upon thirty (30) days' written notice to the Owner and Engineer, or his designee, terminate the Contract

§ 14.1.4 Intentionally deleted.

#### § 14.2 TERMINATION BY THE OWNER FOR CAUSE

§ 14.2.1 The Owner may terminate the Contract if the Contractor after Notice and an opportunity to cure.

- .1 refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
- .3 disregards laws, ordinances, rules or regulations, or orders of a public authority having jurisdiction;
- .4 fails to furnish the Owner with assurances satisfactory to the Owner, evidencing the Contractor's ability to complete the Work in compliance with all requirements of the Contract Documents;
- .5 fails after commencement of the Work, to proceed continuously with the construction and completion of the Work, for more than three (3) days, except as permitted by the Contract Documents;
- .6 disregards orders of the Owner or Engineer, or his designee;
- .7 fails to maintain the Site in a clean, safe and orderly manner;
- .8 fails to comply with a Construction Change Directive; or
- .9 otherwise is guilty of any breach of a provision of the Contract Documents.

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

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. And charge the costs incurred against the Contractor's Contract balance

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished. The Engineer, or his designee's certification issued pursuant to Section 14.2.2 shall be given a presumption of correctness.

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

#### § 14.3 SUSPENSION BY THE OWNER FOR CONVENIENCE

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

§ 14.3.2 Intentionally deleted.

#### § 14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

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

- .1 cease operations as directed by the Owner in the notice;

- 2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- 3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment for Work executed, and costs incurred by reason of such termination, along with reasonable overhead and profit on the Work not executed.

## ARTICLE 15 CLAIMS AND DISPUTES

### § 15.1 CLAIMS

#### § 15.1.1 DEFINITION

A Claim is a demand or assertion by one of the parties seeking adjustment or interpretation of Contract terms, payment of money, extension of time, or other relief with respect to the terms of the Contract. Any Contractor Claim seeking the payment of money shall not include consequential damages, which Contractor hereby waives, and shall be calculated in accordance with Section 7.3.6 and Section 7.3.10 hereof.

#### § 15.1.2 DECISION OF ENGINEER, OR HIS DESIGNEE

Owner and Contractor agree that the Engineer, or his designee shall be the initial arbiter of all Claims, including those alleging error or omission by the Engineer, or his designee. All claims, shall be referred, initially to the Engineer, or his designee for action as provided in Article 4 and shall be required as a condition precedent to litigation of a Claim between the Contractor and Owner to all such matters arising prior to the date final payment is due, regardless of: (1) whether such matters relate to execution and progress of the Work; or (2) the extent to which the work has been completed. The decision by the Engineer, or his designee in response to a Claim shall not be a condition precedent to litigation in the event: (1) the position of the Engineer, or his designee is vacant; (2) the Engineer, or his designee has not received evidence or has failed to render a decision within agreed time limits; (3) the Engineer, or his designee has failed to take action required under Article 4 within thirty (30) days after the Claim is made; (4) forty-five (45) days have passed after the Claim has been referred to the Engineer, or his designee; or, (5) the claim relates to a mechanic's lien.

#### § 15.1.3 TIME LIMITS ON CLAIMS

Claims must be within twenty one (21) calendar days after the occurrence of the event giving rise to the Claim or within twenty-one (21) calendar days after the claimant first becomes aware of the condition giving rise to the Claim, whichever is later. There shall be no time limitation upon any Claims made by the Owner. Claims must be made by written notice to the Engineer, or his designee. An additional Claim made after the initial Claim has been implemented by Change Order will not be considered unless submitted pursuant to the requirements of this Paragraph. Notice shall be deemed effective upon the Engineer, or his designee's receipt of the Notice.

#### § 15.1.4 CONTINUING CONTRACT PERFORMANCE

Pending final resolution of a Claim, unless otherwise agreed in writing, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments to the extent required by the Contract Documents.

#### § 15.1.5 CLAIMS FOR CONCEALED OR UNKNOWN CONDITIONS

If conditions are encountered at the Site which are: (1) subsurface or otherwise concealed physical conditions which differ materially from those indicated in the Contract Documents; or (2) unknown physical conditions of an unusual nature, which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for the Contract Documents, the Owner and Contractor mutually agree to give written notice to each other; including the Engineer, or his designee and any affected Contractor or subcontractor, upon the observation of the condition within twenty-four (24) hours of first observation of the condition. The Engineer, or his designee will investigate such conditions within seventy-two (72) hours and will diligently process and render a recommendation within twenty-one (21) days unless otherwise agreed in writing. If the Engineer, or his designee determines that the condition at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified the Engineer, or his designee shall so notify the Owner and Contractor in writing, stating the reasons. Claims by either party in

opposition to such determination must be made within seven (7) days after the Engineer, or his designee has given notice of the decision.

#### § 15.1.6 CLAIMS FOR ADDITIONAL COST

If the Contractor wishes to make a Claim for an increase in the Contract Sum written notice as provided herein shall be given before proceeding to execute the Work. All documentation in support of the Contractor's request shall, likewise be provided at the time said written request is made. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.3 or elsewhere in the Contract Documents.

#### § 15.2 CLAIMS FOR ADDITIONAL TIME

§ 15.2.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, written notice as provided herein shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work, , all documentation in support of the Contractor's request shall, likewise be provided at the time said written request is made. In the case of a continuing delay, only one Claim is necessary.

§ 15.2.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on the scheduled construction. The term "abnormal" as used here shall be construed according to the following formula: average rainfall (or snow, low temperature, etc) for the past five (5) years for the month in question, plus ten percent (10%). Accordingly, weather is not deemed to be abnormal unless it is ten percent (10%) worse than the average for the month over the past five (5) years. Claims relating to weather must be submitted within seven (7) calendar days of the occurrence of any such delays.

§ 15.3 CLAIMS FOR INJURY OR DAMAGE TO PERSON OR PROPERTY. If either Party to the Contract suffers injury or damage to person or property because of an act or omission of the other party, of any of the other party's employees or agents, or of others for whose acts such party is legally liable, written notice of such injury or damage, whether or not insured, shall be given to the other party, including the Engineer, or his designee , within a reasonable time not exceeding twenty-one (21) days after first occurrence, unless another time period is required by law. The notice shall provide sufficient detail to enable the other party to investigate the matter. If a Claim for additional cost or time related to this Claim is to be asserted, it shall be filed as provided for in Article 15.

§ 15.3.2 The Owner is not required to institute a claim under this section in order to terminate this Agreement.

#### § 15.4 RESOLUTION OF CLAIMS AND DISPUTES

The Engineer, or his designee will review Claims and take one or more of the following preliminary actions with ten (10) days of receipt of a Claim: (1) request additional supporting data from the claimant; (2) reject the Claim in who or in part, stating reasons for rejection ; (3) recommend approval of the Claim by other party; or (4) suggest a compromise.

§ 15.4.2 If a Claim has been resolved, the Engineer, or his designee will prepare or obtain appropriate documentation in consultation with Owner's counsel as circumstances dictate.

§ 15.4.3 If a Claim has not been resolved after consideration of the foregoing and of further evidence presented by the parties or requested by the Engineer, or his designee , the Engineer, or his designee will notify the parties in writing that the Engineer, or his designee 's decision will be made within seven (7) days, which decision shall be final. Upon expiration of such time period, the Engineer, or his designee will render to the parties the Engineer, or his designee 's written decision relative to the Claim, including any change in the Contract Sum or Contract Time or both.

#### § 15.5. CLAIMS FORUM

Unless otherwise required by Section 5.1.3 of the Standard Form of Agreement between the Owner and Contractor, claims, disputes, or other matters in question between the parties to this Contract arising out of or relating to the Project or to this Contract, or the alleges breach thereof, shall be subject in the first instance to mediation and failing that, there in, a Court of competent jurisdiction venued in Union County, New Jersey. The Owner may not be compelled to submit any dispute concerning the Project to arbitration. By accepting award of the Contract and executing the Agreement, the Contractor consents to its joinder as a party in any litigation, mediation, arbitration or any other legal proceeding involving the Project and any references in the Contract documents.

§ 16.1 INTERPRETATIONS IN WRITING

§ 16.1.1 Neither the price bid for the work of any Contract, nor the Contract Sum, shall be based in any manner upon oral opinions, or real or alleged instructions of an oral nature, regardless if whether such opinions or instructions are expressed by the Owner, the Engineer, or his designee or its Consultants, the Contractor, or agents or representative of any of them and no such oral communication shall form the basis of a Claim.

§ 16.1.2 These provisions do not intend to deny, on an oral basis, normal discussion, recommendations, explanations, suggestions, approvals, rejections, and similar activity in pursuit of the work of the Project, such as at job conferences and otherwise at the Site. In such instances, the written minutes, correspondence, shop drawing records, written field orders, and other written data shall govern over personal claims regarding statements made contrary to the written data.

§ 17.1 JOB SITE MEETINGS

§ 17.1.1 Job site meetings, when called by the Engineer, or his designee, shall be held at a location and time convenient to the Owner's representatives, the Engineer, or his designee, and Contractor(s). Each Contractor shall attend such meeting, or be represented by a person in authority who is thoroughly familiar with the Project and who can speak and make decisions for the Contractor. In the instance of a Single Overall Contract, each of the major Subcontractors-Structural Steel, and ornamental iron work, plumbing, gas fitting and all kindered work and steam power plants, steam, and hot water heating and ventilating apparatus and Electrical-shall have a person in authority who is thoroughly familiar with the Project attend the meetings.

§ 18.1 MANDATORY LAW AGAINST DISCRIMINATION LANGUAGE  
PROCUREMENT, PROFESSIONAL AND SERVICE CONTRACTS  
(N.J.A.C. 13:6-1.3)

§ 18.1.1 The parties of this contract do hereby agree that the provision of N.J.S.A. 10:2-1 through N.J.S.A. 10:2-4 dealing with discrimination in employment on public contracts, and the rules and regulations promulgated pursuant thereto, are hereby made a part of this contract and are binding upon them.

§ 18.1.1 Pursuant to the provision of N.J.S.A. 10:2-1 through N.J.S.A. 10:2-4, during the performance of this contract, the Contractor agrees as follows:

§ 18.2.1.1 In the hiring of persons for the performance of work under this contract or any subcontract hereunder, or for the procurement, manufacture, assembling or furnishing of any such materials, equipment, supplies or services to be acquired under this contract, no Contractor, including without limitation, the Contractor, nor any person acting on behalf of such Contractor or subcontractor, shall by reason of race, creed, color national origin, ancestry, Marital status, gender identity or expression, affectional or sexual orientation, or sex, discriminate against any person who is qualified and available to perform the Work, to which the employment relates;

§ 18.2.1.2 No Contractor, including, without limitation, the Contractor, Subcontractor, nor any person acting on its behalf shall, in any manner, discriminate against or intimidate any employee engaged in the performance of work under this Contract or any subcontract hereunder, or engaged in the procurement, manufacture, assembling or furnishing of any such materials, equipment, supplies or services to be acquired under such Contract, on account of race, creed, color, national origin, ancestry, marital status, gender identity or expression, affectional or sexual orientation, or sex;

§ 18.2.1.3 There may be deducted from the amount payable to the Contractor by the Owner, under the Contract, a penalty of \$50.00 (fifty dollars) for each person for each calendar day during which such person is discriminated against or intimidated in violation of the provisions of the Contract; and

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

§ 19.1 CONTRACTOR AND SUBCONTRACTOR COLLECTION OF USE TAX TO LOCAL GOVERNMENTS

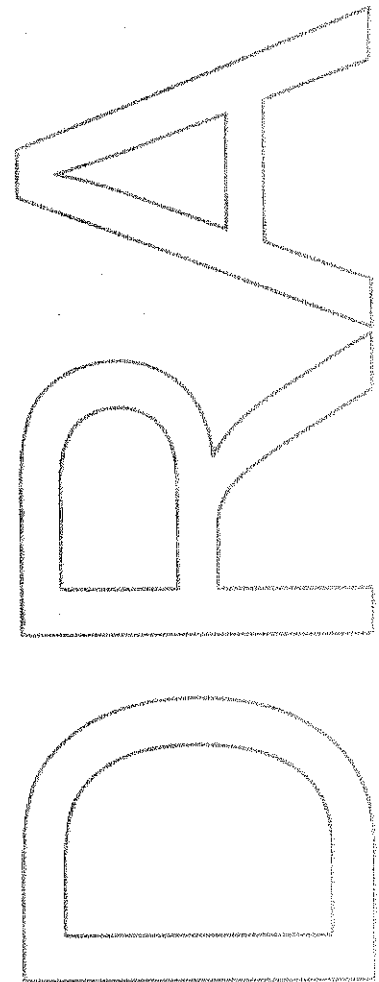
§ 19.1.1 The Contractor acknowledges and agrees that pursuant to P.L. 2004, c. 57, enacted by the State of New Jersey on June 29, 2004, contractors or contractors with subcontractors, or their affiliates, who enter into contracts

with New Jersey local government entities, including without limitation, boards of education, are, effective as of September 1, 2004, required to collect and remit to the New Jersey Director of Taxation in the Department of the Treasury the use tax pursuant to the "sales and Use Tax Act," P.L. 1966, c. 30 (C.54:32B-1 et. seq.) on all their sales of tangible personal property delivered into the State of New Jersey (hereinafter referred to as the "Contractor Use Tax Collection Legislation").

§ 19.2.1 The Contractor hereby covenants and agrees that the Contractor, any subcontractor and each of their affiliates, shall collect and remit to the New Jersey Director of the Division of Taxation in the Department of Treasury, the use tax due pursuant to the "Sales and Use Tax Act," P.L. 1966, c. 30 (C.54:32B-1 et. seq.) on all their sales of tangible personal property delivered into the State of New Jersey. For purposes herein, "affiliate" shall mean any entity that : (a) directly, indirectly or constructively controls another entity; (b) is directly, indirectly, or constructively controlled by another entity; or (c) is subject to the control of a common entity. For purposes of the immediately preceding sentence, an entity controls another entity if it owns, directly or indirectly, more than fifty percent (50%) of the Ownership interest in that entity.

§ 19.3.1 The parties intend that this Article 19 shall comply with the rules and regulations promulgated pursuant to the Contractor Use Tax Collection Legislation and shall be interpreted consistent therewith.

§ 19.4 Notwithstanding anything contained in the Agreement to the contrary, the Contractor hereby agrees to indemnify and hold the Owner harmless from and against any and all fines, taxes, penalties, interest, claims, losses. Costs, expenses, liabilities, or damages arising out of or in connection with the Contractor's failure to comply with the terms and condition of Sections 19.1 and 19.2 to the fullest extent permitted by law and public policy.



**OPERATING ENGINEERS**    **Rates Expiration Date : 03/31/2020**

{For apprentice rates refer to "Operating Engineers" apprentice rates in any county rate package}

The regular workday consists of 8 hours, Monday to Friday, between 6:00 AM and 4:30 PM.

**SHIFT DIFFERENTIALS:**

- Shift work must run for 5 consecutive workdays.
- When 2 shifts are worked, the second shift shall receive an additional 10% of the regular rate inclusive of benefits, per hour.
- When 3 shifts are worked, the second shift shall receive 8 hours pay for 7.5 hours of work, plus an additional 10% of the regular rate inclusive of benefits, per hour. The third shift shall receive 8 hours pay for 7 hours of work, plus an additional 15% of the regular rate inclusive of benefits, per hour.
- When such hours are mandated by the project owner, a shift that starts between 8:00 PM and midnight and ends by 6:00 AM Saturday, or that starts after 8:00 PM on Sunday, provided there are consecutive hours of work within the shift, shall receive an additional 15% of the regular rate, inclusive of benefits.
- On Highway, Road, Street, and Sewer projects irregular shifts starting between 5:00 PM and 12:00 AM may be worked Monday through Friday, and shall receive an additional 15% of the regular rate, inclusive of benefits. When working with other trades that receive a higher irregular shift rate, the Operating Engineer shall also receive the higher irregular shift rate.

**OVERTIME:**

- Hours in excess of 8 per day, or outside of the regular workday, Monday through Friday, that are not shift work, and all hours on Saturdays shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with all hours on Friday paid at time and one-half the regular rate, inclusive of benefits.

**RECOGNIZED HOLIDAYS:** New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. When all trades on a particular job site agree, the day after Thanksgiving may be substituted for Veteran's Day.

On hazardous waste removal work or asbestos removal work, on a state or federally designated hazardous waste site, where the operating engineer is in direct contact with hazardous material and when personal protective equipment is required for respiratory, skin, and eye protection, the operating engineer shall receive an additional 20% of the hourly wage, per hour.

**OPERATING ENGINEERS**    **Rates Expiration Date : 03/31/2020**

**Effective Dates:**

07/01/2017			01/01/2018	07/01/2018	01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total	Total	Total
48.98	30.70	79.68	80.68	82.03	83.03	85.38

**CLASSIFICATIONS:**

- A-Frame
- Backhoe (combination)
- Boom Attachment on loaders (Except pipehook)
- Boring & Drilling Machine
- Brush Chopper, Brush Shredder, Tree Shredder
- Bulldozer, finish grade
- Cableway
- Carryall
- Concrete Pump
- Concrete Pumping System (Pumpcrete & similar types)
- Conveyor, 125 feet or longer
- Drill Doctor (Duties include dust collector and maintenance)
- Front End Loader (2 cu. yds. but less than 5 cu. yds.)
- Grader, finish
- Groove Cutting Machine (ride-on type)
- Heater Planer
- Hoist (all types including steam, gas, diesel, electric, air hydraulic, single and double drum, concrete, brick shaft caisson, snorkle roof, and other similar types, Except Chicago-boom type)
- Hydraulic Crane (10 tons & under)
- Hydro-Axe
- Hydro-Blaster
- Jack (screw, air hydraulic, power-operated unit, or console type, Except hand jack or pile load test type)
- Log Skidder



**OPERATING ENGINEERS**     **Rates Expiration Date : 03/31/2020**

**Effective Dates:**

<b>07/01/2017</b>			<b>01/01/2018</b>	<b>07/01/2018</b>	<b>01/01/2019</b>	<b>07/01/2019</b>
Rate	Fringe	Total	Total	Total	Total	Total
48.98	30.70	79.68	80.68	82.03	83.03	85.38

**CLASSIFICATIONS:**

- Pan
- Paver, concrete
- Plate & Frame Filter Press
- Pumpcrete (unit type)
- Pumpcrete, Squeezecrete, or Concrete Pumping machine (regardless of size)
- Scraper
- Side Boom
- Straddle Carrier (Ross and similar types)
- Vacuum Truck
- Whiphammer
- Winch Truck (hoisting)

**OPERATING ENGINEERS**    **Rates Expiration Date : 03/31/2020**

**Effective Dates:**

	07/01/2017		01/01/2018	07/01/2018	01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total	Total	Total
47.07	30.70	77.77	78.77	80.12	81.12	83.47

**CLASSIFICATIONS:**

Asphalt Curbing Machine

Asphalt Plant Engineer

Asphalt Spreader

Autograde Curb Trimmer & Sidewalk Shoulder Slipform (CMI & similar types)

Autograde Curecrete Machine (CMI & similar types)

Autograde Tube Finisher & Texturing Machine (CMI & similar types)

Bar Bending Machines (Power)

Batcher, Batching Plant, & Crusher [On Site]

Belt Conveyor System

Boom-Type Skimmer Machine

Bridge Deck Finisher

Bulldozer (all sizes)

Captain (Power Boats)

Car Dumper (railroad)

Compressor & Blower unit for loading/unloading of concrete, cement, fly ash, or similar type materials (used independently or truck-mounted)

Compressor (2 or 3 battery)

Concrete Breaking Machine

Concrete Cleaning/Decontamination Machine

Concrete Finishing Machine

Concrete Saw or Cutter (ride-on type)

Concrete Spreader (Hetzl, Rexomatic & similar types)

Concrete Vibrator

**OPERATING ENGINEERS**    **Rates Expiration Date : 03/31/2020**

**Effective Dates:**

07/01/2017			01/01/2018	07/01/2018	01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total	Total	Total
47.07	30.70	77.77	78.77	80.12	81.12	83.47

**CLASSIFICATIONS:**

Conveyors - under 125 feet

Crane Signalman

Crushing Machine

Directional Boring Machine

Ditching Machine - Small (Ditchwitch, Vermeer or similar types)

Dope Pot - Mechanical (with or without pump)

Dumpster

Elevator

Fireman

Fork Lift (Economobile, Lull & similar types)

Front End Loader (1 cu. yd. and over but less than 2 cu. yds.)

Generator (2 or 3 battery)

Giraffe Grinder

Grader & Motor Patrols

Grout Pump

Gunnite Machine (Excluding nozzle)

Hammer - Vibratory (in conjunction with generator)

Heavy Equipment Robotics - Operator/Technician

Hoist (roof, tugger, aerial platform hoist, house car)

Hopper

Hopper Doors (power operated)

Ladder (motorized)

Laddervator

**OPERATING ENGINEERS**    **Rates Expiration Date : 03/31/2020**

**Effective Dates:**

07/01/2017			01/01/2018	07/01/2018	01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total	Total	Total
47.07	30.70	77.77	78.77	80.12	81.12	83.47

**CLASSIFICATIONS:**

Locomotive (Dinky-type)

Maintenance Utility Man

Master Environmental Maintenance Technician

Mechanic

Mixer (Except paving mixers)

Pavement Breaker (truck-mounted or small self-propelled ride-on type)

Pavement Breaker - maintenance of compressor or hydraulic unit

Pipe Bending Machine (power)

Pitch Pump

Plaster Pump (regardless of size)

Post Hole Digger (post pounder, auger)

Roller (black top)

Scale (power)

Seamen Pulverizing Mixer

Shoulder Widener

Silo

Skimmer Machine (boom type)

Steel Cutting Machine (service & maintenance)

Tamrock Drill

Tractor

Transfer Machines

Tug Captains

Tug Master (Power Boats)

**OPERATING ENGINEERS**     **Rates Expiration Date : 03/31/2020**

**Effective Dates:**

07/01/2017			01/01/2018	07/01/2018	01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total	Total	Total
47.07	30.70	77.77	78.77	80.12	81.12	83.47

**CLASSIFICATIONS:**

Ultra High Pressure Waterjet Cutting Tool System -  
Operator/Maintenance Technician

Vacuum Blasting Machine - Operator/Maintenance Technician

Vibrating Plant (used with unloading)

Welder & Repair Mechanic

**Effective Dates:**

07/01/2017			01/01/2018	07/01/2018	01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total	Total	Total
43.73	30.70	74.43	75.43	76.78	77.78	80.13

**CLASSIFICATIONS:**

Assistant Engineer/Oiler

Driller's Helper

Field Engineer - Transit man or Instrument man

Maintenance Apprentice (Deckhand)

Maintenance Apprentice (Oiler)

Mechanic's Helper

Off Road Back Dump

**Effective Dates:**

07/01/2017			01/01/2018	07/01/2018	01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total	Total	Total
41.15	30.70	71.85	72.85	74.20	75.20	77.55

**CLASSIFICATIONS:**

Field Engineer - Rodman or Chainman

TERRITORY  
ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT  
PREVAILING WAGE RATE DETERMINATION

**OPERATING ENGINEERS**    **Rates Expiration Date : 03/31/2020**

**Effective Dates:**

<b>07/01/2017</b>			<b>01/01/2018</b>	<b>07/01/2018</b>	<b>01/01/2019</b>	<b>07/01/2019</b>
Rate	Fringe	Total	Total	Total	Total	Total
51.31	30.70	82.01	83.01	84.36	85.36	87.71

**CLASSIFICATIONS:**

Lead Engineer, Foreman Engineer, Safety Engineer (minimum)

**OPERATING ENGINEERS**    **Rates Expiration Date : 03/31/2020**

**Effective Dates:**

	07/01/2017		01/01/2018	07/01/2018	01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total	Total	Total
50.57	30.70	81.27	82.27	83.62	84.62	86.97

**CLASSIFICATIONS:**

- Autograde Pavement Profiler (CMI & similar types)
- Autograde Pavement Profiler - Recycle Type (CMI & similar types)
- Autograde Placer/Trimmer/Spreader Combination (CMI & similar types)
- Autograde Slipform Paver (CMI & similar types)
- Backhoe (Excavator)
- Central Power Plant
- Concrete Paving Machine
- Draglines
- Drill, Bauer, AMI and similar types
- Drillmaster, Quarrymaster
- Drillmaster/Quarrymaster (down-the-hole drill), rotary drill, self-propelled hydraulic drill, self-powered drill
- Elevator Grader
- Field Engineer-Chief of Party
- Front End Loader (5 cu. yards or larger)
- Gradall
- Grader, Rago
- Helicopter Co-Pilot
- Helicopter Communications Engineer
- Juntann Pile Driver
- Locomotive (large)
- Mucking Machine
- Pavement & Concrete Breaker (Superhammer & Hoe Ram)

**OPERATING ENGINEERS**     **Rates Expiration Date : 03/31/2020**

**Effective Dates:**

<b>07/01/2017</b>			<b>01/01/2018</b>	<b>07/01/2018</b>	<b>01/01/2019</b>	<b>07/01/2019</b>
Rate	Fringe	Total	Total	Total	Total	Total
50.57	30.70	81.27	82.27	83.62	84.62	86.97

**CLASSIFICATIONS:**

Pile Driver

Prentice Truck

Roadway Surface Grinder

Scooper (loader & shovel)

Shovel (Excavator)

Trackhoe (Excavator)

Tree Chopper with boom

Trenching Machine (cable plow)

Tunnel Boring Machine



**OPERATING ENGINEERS**    **Rates Expiration Date : 03/31/2020**

**Effective Dates:**

07/01/2017			01/01/2018	07/01/2018	01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total	Total	Total
45.44	30.70	76.14	77.14	78.49	79.49	81.84

**CLASSIFICATIONS:**

- Chipper
- Compressor (single)
- Concrete Spreader (small type)
- Conveyor Loader (Except elevator graders)
- Engines, Large Diesel (1620 HP) & Staging Pump
- Farm Tractor
- Fertilizing Equipment (operation & maintenance)
- Fine Grade Machine (small type)
- Form Line Grader (small type)
- Front End Loader (under 1 cubic yard)
- Generator (single)
- Grease, Gas, Fuel, & Oil Supply Trucks
- Heaters (Nelson or other type)
- Lights - portable generating light plant
- Mixer, Concrete (small)
- Mulching Equipment (operation & maintenance)
- Power Broom or Sweeper
- Pump (diesel engine & hydraulic - regardless of power)
- Pump (larger than 2 inch suction, including submersible pumps)
- Road Finishing Machine (small type)
- Roller - grade, fill, or stone base
- Seeding Equipment (operation & maintenance)
- Sprinkler & Water Pump Trucks

**OPERATING ENGINEERS** Rates Expiration Date : 03/31/2020

**Effective Dates:**

	07/01/2017		01/01/2018	07/01/2018	01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total	Total	Total
45.44	30.70	76.14	77.14	78.49	79.49	81.84

**CLASSIFICATIONS:**

Steam Generator or Boiler

Stone Spreader

Tamping Machine (vibrating ride-on type)

Temporary Heating Plant (Nelson or other type, including propane, natural gas, and flow-type units)

Water or Sprinkler Truck

Welding Machine (gas, diesel, or electric convertor, of any type)

Welding System - Multiple (rectifier transformer type)

Wellpoint Systems (including installation by bull gang and maintenance)

**Effective Dates:**

	07/01/2017		01/01/2018	07/01/2018	01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total	Total	Total
52.39	30.70	83.09	84.09	85.44	86.44	88.79

**CLASSIFICATIONS:**

Helicopter Pilot/Engineer

**Effective Dates:**

	07/01/2017		01/01/2018	07/01/2018	01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total	Total	Total
57.07	30.70	87.77	88.77	90.12	91.12	93.47

**CLASSIFICATIONS:**

Cranes, Derricks, Pile Driver (all types), over 100 tons and TOWER CRANE with boom (including jib and/or leads) 140 ft. and over

**Effective Dates:**

	07/01/2017		01/01/2018	07/01/2018	01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total	Total	Total
56.07	30.70	86.77	87.77	89.12	90.12	92.47

**CLASSIFICATIONS:**

Cranes, Derricks, Pile Driver (all types), over 100 tons and TOWER CRANE with boom (including jib and/or leads) from 100 ft. to 139 ft.

**OPERATING ENGINEERS**     **Rates Expiration Date : 03/31/2020**

**Effective Dates:**

<b>07/01/2017</b>			<b>01/01/2018</b>	<b>07/01/2018</b>	<b>01/01/2019</b>	<b>07/01/2019</b>
Rate	Fringe	Total	Total	Total	Total	Total
52.57	30.70	83.27	84.27	85.62	86.62	88.97

**CLASSIFICATIONS:**

Cranes, Derricks, Pile Driver (all types) , under 100 tons with a boom (including jib and/or leads) 140 ft. and over

**Effective Dates:**

<b>07/01/2017</b>			<b>01/01/2018</b>	<b>07/01/2018</b>	<b>01/01/2019</b>	<b>07/01/2019</b>
Rate	Fringe	Total	Total	Total	Total	Total
55.07	30.70	85.77	86.77	88.12	89.12	91.47

**CLASSIFICATIONS:**

Cranes, Derricks, Pile Driver (all types), over 100 tons and TOWER CRANE with a boom (including jib and/or leads) under 100 ft.

**Effective Dates:**

<b>07/01/2017</b>			<b>01/01/2018</b>	<b>07/01/2018</b>	<b>01/01/2019</b>	<b>07/01/2019</b>
Rate	Fringe	Total	Total	Total	Total	Total
51.57	30.70	82.27	83.27	84.62	85.62	87.97

**CLASSIFICATIONS:**

Cranes, Derricks, Pile Driver (all types), under 100 tons with a boom (including jib and/or leads) from 100 ft. to 139 ft.

**STRUCTURAL STEEL ERECTION**     **Rates Expiration Date : 03/31/2020**

{For apprentice rates refer to "Operating Engineers" apprentice rates in any county rate package}

The regular workday consists of 8 hours, Monday to Friday, between 6:00 AM and 4:30 PM.

**SHIFT DIFFERENTIALS:**

- Shift work must run for 5 consecutive workdays.
- When 2 shifts are worked, the second shift shall receive an additional 10% of the regular rate inclusive of benefits, per hour.
- When 3 shifts are worked, the second shift shall receive 8 hours pay for 7.5 hours of work, plus an additional 10% of the regular rate inclusive of benefits, per hour. The third shift shall receive 8 hours pay for 7 hours of work, plus an additional 15% of the regular rate inclusive of benefits, per hour.
- When such hours are mandated by the project owner, a shift that starts between 8:00 PM and midnight and ends by 6:00 AM Saturday, or that starts after 8:00 PM on Sunday, provided there are consecutive hours of work within the shift, shall receive an additional 15% of the regular rate, inclusive of benefits.
- On Highway, Road, Street, and Sewer projects irregular shifts starting between 5:00 PM and 12:00 AM may be worked Monday through Friday, and shall receive an additional 15% of the regular rate, inclusive of benefits. When working with other trades that receive a higher irregular shift rate, the Operating Engineer shall also receive the higher irregular shift rate.

**OVERTIME:**

- Hours in excess of 8 per day, or outside of the regular workday, Monday through Friday, that are not shift work, and all hours on Saturdays shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with all hours on Friday paid at time and one-half the regular rate, inclusive of benefits.

**RECOGNIZED HOLIDAYS:** New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. When all trades on a particular job site agree, the day after Thanksgiving may be substituted for Veteran's Day.

On hazardous waste removal work or asbestos removal work, on a state or federally designated hazardous waste site, where the operating engineer is in direct contact with hazardous material and when personal protective equipment is required for respiratory, skin, and eye protection, the operating engineer shall receive an additional 20% of the hourly wage, per hour.

**Effective Dates:**

	<b>07/01/2017</b>		<b>01/01/2018</b>	<b>07/01/2018</b>	<b>01/01/2019</b>	<b>07/01/2019</b>
Rate	Fringe	Total	Total	Total	Total	Total
54.20	30.70	84.90	85.90	87.25	88.25	90.60

**CLASSIFICATIONS:**

Helicopter Pilot or Engineer

**STRUCTURAL STEEL ERECTION**      **Rates Expiration Date : 03/31/2020**

**Effective Dates:**

07/01/2017			01/01/2018	07/01/2018	01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total	Total	Total
50.14	30.70	80.84	81.84	83.19	84.19	86.54

**CLASSIFICATIONS:**

A-Frame

Cherry Picker -10 tons or less (Over 10 tons use crane rate)

Hoist (all types Except Chicago-boom)

Jack (screw, air hydraulic, power-operated unit or console type, Except hand jack or pile load test type)

Side Boom

Straddle Carrier

**Effective Dates:**

07/01/2017			01/01/2018	07/01/2018	01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total	Total	Total
47.48	30.70	78.18	79.18	80.53	81.53	83.88

**CLASSIFICATIONS:**

Aerial Platform Used On Hoists

Apprentice Engineer/Oiler with Compressor or Welding Machine

Captain (Power Boats)

Compressor (2 or 3 in battery)

Conveyor or Tugger Hoist

Elevator or House Car

Fireman

Forklift

Generator (2 or 3)

Maintenance Utility Man

Tug Master (Power Boats)

Welding Machines, Gas or Electric Converters on any type-2 or 3 in battery including diesels

**STRUCTURAL STEEL ERECTION**      **Rates Expiration Date : 03/31/2020**

**Effective Dates:**

	07/01/2017		01/01/2018	07/01/2018	01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total	Total	Total
45.95	30.70	76.65	77.65	79.00	80.00	82.35

**CLASSIFICATIONS:**

Compressor (Single)

Generators

Welding Machines, Gas, Diesel, Or Electric Converters of any type-single

Welding System, Multiple (Rectifier Transformer Type)

**Effective Dates:**

	07/01/2017		01/01/2018	07/01/2018	01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total	Total	Total
44.19	30.70	74.89	75.89	77.24	78.24	80.59

**CLASSIFICATIONS:**

Assistant Engineer/Oiler

Drillers Helper

Field Engineer - Transit/Instrument Man

Maintenance Apprentice (Deckhand)

Maintenance Apprentice (Oiler)

**Effective Dates:**

	07/01/2017		01/01/2018	07/01/2018	01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total	Total	Total
51.76	30.70	82.46	83.46	84.81	85.81	88.16

**CLASSIFICATIONS:**

Lead Engineer, Foreman Engineer, Safety Engineer (Minimum)

**Effective Dates:**

	07/01/2017		01/01/2018	07/01/2018	01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total	Total	Total
41.15	30.70	71.85	72.85	74.20	75.20	77.55

**CLASSIFICATIONS:**

Field Engineer - Rodman or Chainman

**STRUCTURAL STEEL ERECTION**      **Rates Expiration Date : 03/31/2020**

**Effective Dates:**

07/01/2017			01/01/2018	07/01/2018	01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total	Total	Total
50.90	30.70	81.60	82.60	83.95	84.95	87.30

**CLASSIFICATIONS:**

Field Engineer-Chief of Party

**Effective Dates:**

07/01/2017			01/01/2018	07/01/2018	01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total	Total	Total
59.09	30.70	89.79	90.79	92.14	93.14	95.49

**CLASSIFICATIONS:**

Cranes (all cranes, land or floating with booms, including jib, 140 ft. and over, above ground). Derricks (all derricks, land, floating or Chicago Boom type with booms including jib, 140 ft. and over, above ground), and Pile Drivers (all types) over 100 tons and Tower Cranes.

**Effective Dates:**

07/01/2017			01/01/2018	07/01/2018	01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total	Total	Total
57.43	30.70	88.13	89.13	90.48	91.48	93.83

**CLASSIFICATIONS:**

Cranes (all cranes, land or floating with booms including jib, less than 140 ft. above ground), Derricks (all derricks, land, floating or Chicago Boom type with booms including jib, less than 140 ft. above ground), Pile Drivers (all types), over 100 tons and Tower Crane.

**Effective Dates:**

07/01/2017			01/01/2018	07/01/2018	01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total	Total	Total
54.59	30.70	85.29	86.29	87.64	88.64	90.99

**CLASSIFICATIONS:**

Cranes (all cranes, land or floating with booms including jib, 140 ft. and over, above ground), Derricks (all derricks, land, floating or Chicago Boom type with booms including jib, 140 ft. and over, above ground), Pile Drivers (all types), under 100 tons.

**Effective Dates:**

07/01/2017			01/01/2018	07/01/2018	01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total	Total	Total
52.93	30.70	83.63	84.63	85.98	86.98	89.33

**CLASSIFICATIONS:**

Cranes (all cranes, land or floating with booms including jib, less than 140 ft. above ground), Derricks (all derricks, land, floating or Chicago Boom type with booms including jib, less than 140 ft. above ground), Pile Drivers (all types), under 100 tons.

TERRITORY  
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NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT  
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STRUCTURAL STEEL ERECTION      Rates Expiration Date : 03/31/2020

**Effective Dates:**

07/01/2017			01/01/2018	07/01/2018	01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total	Total	Total
54.59	30.70	85.29	86.29	87.64	88.64	90.99

**CLASSIFICATIONS:**

Helicopter Co-Pilot

Helicopter Communications Engineer



**TEST BORING PRELIMINARY TO CONSTRUCTION-SOUTH/WEST**      **Rates Expiration Date : 03/31/2020**

THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:

Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Hunterdon, Mercer, Monmouth, Ocean, Salem, Sussex, Warren

The regular workday consists of 8 hours, Monday to Friday, between 6:00 AM and 4:30 PM.

**SHIFT DIFFERENTIALS:**

- Shift work must run for 5 consecutive workdays.
- When 2 shifts are worked, the second shift shall receive an additional 10% of the regular rate inclusive of benefits, per hour.
- When 3 shifts are worked, the second shift shall receive 8 hours pay for 7.5 hours of work, plus an additional 10% of the regular rate inclusive of benefits, per hour. The third shift shall receive 8 hours pay for 7 hours of work, plus an additional 15% of the regular rate inclusive of benefits, per hour.
- When such hours are mandated by the project owner, a shift that starts between 8:00 PM and midnight and ends by 6:00 AM Saturday, or that starts after 8:00 PM on Sunday, provided there are consecutive hours of work within the shift, shall receive an additional 15% of the regular rate, inclusive of benefits.
- On Highway, Road, Street, and Sewer projects irregular shifts starting between 5:00 PM and 12:00 AM may be worked Monday through Friday, and shall receive an additional 15% of the regular rate, inclusive of benefits. When working with other trades that receive a higher irregular shift rate, the Operating Engineer shall also receive the higher irregular shift rate.

**OVERTIME:**

- Hours in excess of 8 per day, or outside of the regular workday, Monday through Friday, that are not shift work, and all hours on Saturdays shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with all hours on Friday paid at time and one-half the regular rate, inclusive of benefits.

**RECOGNIZED HOLIDAYS:** New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. When all trades on a particular job site agree, the day after Thanksgiving may be substituted for Veteran's Day.

On hazardous waste removal work or asbestos removal work, on a state or federally designated hazardous waste site, where the operating engineer is in direct contact with hazardous material and when personal protective equipment is required for respiratory, skin, and eye protection, the operating engineer shall receive an additional 20% of the hourly wage, per hour.

**Effective Dates:**

	07/01/2017		01/01/2018	07/01/2018	01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total	Total	Total
50.57	30.70	81.27	82.27	83.62	84.62	86.97

**CLASSIFICATIONS:**

Driller

**Effective Dates:**

	07/01/2017		01/01/2018	07/01/2018	01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total	Total	Total
43.73	30.70	74.43	75.43	76.78	77.78	80.13

**CLASSIFICATIONS:**

Driller's Helper

**FREE AIR TUNNEL JOBS**     **Rates Expiration Date : 02/28/2018**

{For apprentice rates refer to "Heavy & General" apprentice rates in any county rate package}

The regular workday consists of 8 hours, starting at 7:00 AM or 8:00 AM.

**SHIFT DIFFERENTIALS:**

- Shifts must start at 3:00 PM, 4:00 PM, 12:00 AM, or 1:00 AM, to be considered shift work, except when the project owner mandates special hours of work in the job specifications, in which case those hours may be considered shift work.
- When such hours are mandated by the project owner, a shift that begins before midnight on Friday and ends on Saturday morning, or that begins at or after 8:00 PM on Sunday and ends on Monday morning may be paid at the shift differential rate.
- Shifts shall receive an additional \$2.50 per hour.

**OVERTIME:**

- Hours in excess of 8 per day, Monday through Friday, or outside of the regular workday that are not shift work, and all hours on Saturdays, shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with Friday used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate.

**RECOGNIZED HOLIDAYS:** New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans Day may be substituted for the day after Thanksgiving. However, in the trading of Veterans Day for the day after Thanksgiving, if overtime is worked on Veterans Day, it shall be paid at double the hourly rate.

**Hazardous Waste Work:**

- where Level A, B, or C protection is required: + \$3.00/hr
- other Hazardous Waste site: + \$1.00/hr

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
41.50	29.03	70.53

**CLASSIFICATIONS:**

Walking Boss & Superintendent

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
41.20	29.03	70.23

**CLASSIFICATIONS:**

Heading Foreman, Shaft Foreman, Rod Foreman, Electrician Foreman, Rigging Foreman

**FREE AIR TUNNEL JOBS**      **Rates Expiration Date : 02/28/2018**

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
40.70	29.03	69.73

**CLASSIFICATIONS:**

Iron Foreman, Caulking Foreman, Form Foreman, Cement Finishing Foreman, Concrete Foreman, Track Foreman, Cleanup Foreman, Grout Foreman

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
43.20	29.03	72.23

**CLASSIFICATIONS:**

Blaster

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
40.15	29.03	69.18

**CLASSIFICATIONS:**

Top Labor Foreman

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
39.80	29.03	68.83

**CLASSIFICATIONS:**

Skilled Men (including Caulker, Powder Carrier, all other skilled men)

Skilled Men (including Miner, Drill Runner, Iron Man, Conveyor Man, Manitenance Man, Safety Miner, Rigger, Block Layer, Cement Finisher, Tod Man)

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
39.65	29.03	68.68

**CLASSIFICATIONS:**

Semi-Skilled Men (including Bell or Signal Man Top or Bottom, Form Worker & Mover, Concrete Worker, Shaft Man, Tunnel Laborer, Caulker's Helper, all other semi-skilled)

Semi-Skilled Men (including Miner's Helper, Chuck Tender, Track Man, Nipper, Brake Man, Derail Man, Cable Man, Hose Man, Gravel Man, Form Man)

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**03/01/2017**

Rate	Fringe	Total
39.15	29.03	68.18

**CLASSIFICATIONS:**

All Others (including Powder Watchman, Change House Attendant, Top Laborer)

**DRILL FOR GROUND WATER SUPPLY**    **Rates Expiration Date : 03/31/2020**

The well driller and/or helper may perform all work relative to the construction, finishing, and servicing of wells, pumps and borings for ground water supply. The present methods of well drilling entailing as they do, many diverse job operations calling for drilling, pump discharge, piping, and the operation of various types of related power equipment, shall all be within the job duties and functions of the well driller and/or helper. In the event that an extension of work should occur beyond water well drilling functions, into the field of general construction work, such extension of work would come under the appropriate rates listed elsewhere in this wage determination.

- For Work Hours, Shift Differentials, Overtime Rates, and Recognized Holidays see the "Operating Engineers" section of this wage determination.

**Effective Dates:**

	07/01/2017		01/01/2018	07/01/2018	01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total	Total	Total
49.32	30.70	80.02	81.02	82.37	83.37	85.72

**CLASSIFICATIONS:**

Driller

**Effective Dates:**

	07/01/2017		01/01/2018	07/01/2018	01/01/2019	07/01/2019
Rate	Fringe	Total	Total	Total	Total	Total
42.48	30.70	73.18	74.18	75.53	76.53	78.88

**CLASSIFICATIONS:**

Driller's Helper

**OPERATING ENGINEERS MARINE-DREDGING**    **Rates Expiration Date : 09/30/2018**

NOTE: Boat crews carrying explosive material (dynamite, pourfex, and other similar materials) shall be paid at 120% of the hourly wage rate for hours engaged in handling of said materials. Employees required to possess a Hazardous Material Certification as a condition of employment shall be compensated at 120% of the hourly wage rate.

**OVERTIME:**

Hours in excess of 40 per week, and all hours on Saturdays and Sundays, shall be paid at time and one-half the hourly rate. All hours on holidays shall be paid at double the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Martin Luther King Day, Good Friday, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday.

**Effective Dates:**

**10/01/2017**

Rate	Fringe	Total
38.18	14.33	52.51

**CLASSIFICATIONS:**

Lead Dredgerman, Operator, Leverman

Licensed Tug Operator (over 1000 HP)

**Effective Dates:**

**10/01/2017**

Rate	Fringe	Total
33.03	13.92	46.95

**CLASSIFICATIONS:**

Derrick Operator, Spider/Spill Barge Operator

Engineer, Electrician, Chief Welder, Chief Mate

Fill Placer, Operator II

Licensed Boat Operator

Maintenance Engineer

**Effective Dates:**

**10/01/2017**

Rate	Fringe	Total
31.09	13.77	44.86

**CLASSIFICATIONS:**

Certified Welder

**OPERATING ENGINEERS MARINE-DREDGING**     **Rates Expiration Date : 09/30/2018**

**Effective Dates:**

**10/01/2017**

Rate	Fringe	Total
30.24	13.40	43.64

**CLASSIFICATIONS:**

Mate, Drag Barge Operator, Steward, Assistant Fill Placer

Welder

**Effective Dates:**

**10/01/2017**

Rate	Fringe	Total
29.26	13.32	42.58

**CLASSIFICATIONS:**

Boat Operator

**Effective Dates:**

**10/01/2017**

Rate	Fringe	Total
24.30	12.62	36.92

**CLASSIFICATIONS:**

Shoreman, Deckhand, Rodman, Scowman

MICROSURFACING/SLURRY SEAL     Rates Expiration Date : 02/28/2018

THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:

Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Mercer, Ocean, Salem

\*\*\*IN ALL OTHER COUNTIES use the Heavy and General Laborers - North "Slurry Seal Laborer" rates.\*\*\*

SHIFT DIFFERENTIALS:

Any shift starting at 3:30 PM or later shall receive an additional \$0.35/hr

OVERTIME:

Hours in excess of 8 per day or 40 per week shall be paid at time and one-half the hourly rate. All hours on holidays shall be paid at double the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Washington's Birthday, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day.

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
36.50	21.27	57.77

**CLASSIFICATIONS:**

Foreman

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
33.80	21.27	55.07

**CLASSIFICATIONS:**

Box man

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
31.75	21.27	53.02

**CLASSIFICATIONS:**

Microsurface/Slurry Preparation

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
31.75	21.27	53.02

**CLASSIFICATIONS:**

Squeegee man



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**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
30.30	21.27	51.57

**CLASSIFICATIONS:**

Cleaner, Taper

ASPHALT LABORERS - SOUTH    Rates Expiration Date : 02/28/2018

"THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY: Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Mercer, Ocean, Salem

{For apprentice rates refer to "Laborer - Heavy & General" apprentice rates in any county rate package}

The regular workday consists of 8 hours, starting at 7:00 AM or 8:00 AM.

**SHIFT DIFFERENTIALS:**

- Shifts must start at 3:00 PM, 4:00 PM, 12:00 AM, or 1:00 AM, to be considered shift work, except when the project owner mandates special hours of work in the job specifications, in which case those hours may be considered shift work.
- When such hours are mandated by the project owner, a shift that begins before midnight on Friday and ends on Saturday morning, or that begins at or after 8:00 PM on Sunday and ends on Monday morning may be paid at the shift differential rate.
- Shifts shall receive an additional \$2.50 per hour.

**OVERTIME:**

- Hours in excess of 8 per day, Monday through Friday, or outside of the regular workday that are not shift work, and all hours on Saturdays, shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with Friday used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate.

**RECOGNIZED HOLIDAYS:** New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans Day may be substituted for the day after Thanksgiving. However, in the trading of Veterans Day for the day after Thanksgiving, if overtime is worked on Veterans Day, it shall be paid at double the hourly rate.

**Hazardous Waste Work:**

- where Level A, B, or C protection is required: + \$3.00/hr
- other Hazardous Waste site: + \$1.00/hr

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
41.00	29.03	70.03

**CLASSIFICATIONS:**

Paving Foreman

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
39.55	29.03	68.58

**CLASSIFICATIONS:**

Head Raker

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
39.40	29.03	68.43

**CLASSIFICATIONS:**

Raker, Screedman, Luteman

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**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
39.15	29.03	68.18

**CLASSIFICATIONS:**

Tampers, Smoothers, Kettlemen,  
Painters, Shovelers, Roller Boys

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
39.25	29.03	68.28

**CLASSIFICATIONS:**

Milling Controller

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
39.45	29.03	68.48

**CLASSIFICATIONS:**

Traffic Control Coordinator

**TEST BORING PRELIMINARY TO CONSTRUCTION-NORTH**     **Rates Expiration Date : 10/16/2018**

THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:  
Bergen, Essex, Hudson, Middlesex, Morris, Passaic, Somerset, Union

**SHIFT DIFFERENTIAL:**

Employees on a shift other than between the hours of 8:00 AM and 5:00 PM shall receive an additional \$1.00 per hour.

**OVERTIME:**

Hours in excess of 8 per day, Monday through Friday, and all hours on Saturday shall be paid at time and one-half the regular rate. All hours on Sundays and holidays shall be paid at double the regular rate.

**RECOGNIZED HOLIDAYS:** New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day, and Christmas Day. Sunday holidays observed the following Monday.

Hazardous Waste Pay (for Levels A, B, and C): an additional 10% of the hourly rate, per hour.

A newly hired Helper with no experience in the industry shall be paid as follows:

- 1st year on the job - 70% of Helper wage rate
- 2nd year on the job - 80% of Helper wage rate
- 3rd year on the job - 90% of Helper wage rate
- All helpers receive full fringe benefit rate.

**Effective Dates:**

**10/17/2017**

Rate	Fringe	Total
31.62	25.55	57.17

**CLASSIFICATIONS:**

Helper (4th year helper)

**Effective Dates:**

**10/17/2017**

Rate	Fringe	Total
39.69	25.55	65.24

**CLASSIFICATIONS:**

Driller

**Effective Dates:**

**10/17/2017**

Rate	Fringe	Total
45.73	25.55	71.28

**CLASSIFICATIONS:**

Foreman

**HEAVY & GENERAL LABORERS - NORTH**     **Rates Expiration Date : 02/28/2018**

THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:

Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Passaic, Somerset, Sussex, Union, Warren

{For apprentice rates refer to "Laborer - Heavy & General" apprentice rates in any county rate package}

The regular workday consists of 8 hours, starting at 7:00 AM or 8:00 AM.

**SHIFT DIFFERENTIALS:**

- Shifts must start at 3:00 PM, 4:00 PM, 12:00 AM, or 1:00 AM, to be considered shift work, except when the project owner mandates special hours of work in the job specifications, in which case those hours may be considered shift work.
- When such hours are mandated by the project owner, a shift that begins before midnight on Friday and ends on Saturday morning, or that begins at or after 8:00 PM on Sunday and ends on Monday morning may be paid at the shift differential rate.
- Shifts shall receive an additional \$2.50 per hour.

**OVERTIME:**

- Hours in excess of 8 per day, Monday through Friday, or outside of the regular workday that are not shift work, and all hours on Saturdays, shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with Friday used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate.

**RECOGNIZED HOLIDAYS:** New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans Day may be substituted for the day after Thanksgiving. However, in the trading of Veterans Day for the day after Thanksgiving, if overtime is worked on Veterans Day, it shall be paid at double the hourly rate.

**Hazardous Waste Work:**

- where Level A, B, or C protection is required: + \$3.00/hr
- other Hazardous Waste site: + \$1.00/hr

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
38.75	29.03	67.78

**CLASSIFICATIONS:**

**"D" Rate:**

basic, landscape, asphalt, slurry seal, or railroad track laborer; utility meter installer; flagman; salamander tender; pitman; dumpman; rakers or tampers on cold patch work; wrappers or coaters of pipe; waterproofer; timberman; wagon drill or drill master helper; powder carrier; magazine tender; signal man; power buggy operator; tree cutter; operator of basic power tools

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
39.45	29.03	68.48

**CLASSIFICATIONS:**

**"C" Rate:**

pipe layer; laser man; conduit or duct line layer; operator of jack hammer, chipping hammer, pavement breaker, concrete cutter, asphalt cutter, sheet hammer, or walk-behind saw cutter; sandblaster; acetylene cutting or burning; wagon drill, directional drill, or hydraulic drill operator; drill master; core driller; traffic control coordinator; asphalt raker or lute man

**HEAVY & GENERAL LABORERS - NORTH**      **Rates Expiration Date : 02/28/2018**

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
39.70	29.03	68.73

**CLASSIFICATIONS:**

"B" Rate:

concrete finisher; setter of brick or stone pavers; stone cutter; form setter; manhole, catch basin, or inlet builder; asphalt screedman; rammer; hardscaping; gunite nozzle man

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
43.25	29.03	72.28

**CLASSIFICATIONS:**

"A" Rate:

blaster

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
41.00	29.03	70.03

**CLASSIFICATIONS:**

"FOREMAN" Rate:

labor foreman, asphalt foreman, drill foreman, pipe foreman, grade foreman, finisher foreman, concrete foreman

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
42.00	29.03	71.03

**CLASSIFICATIONS:**

"GENERAL FOREMAN" Rate

**HEAVY & GENERAL LABORERS - SOUTH**    **Rates Expiration Date : 02/28/2018**

THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:

Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Mercer, Ocean, Salem

{For apprentice rates refer to "Laborer - Heavy & General" apprentice rates in any county rate package}

The regular workday consists of 8 hours, starting at 7:00 AM or 8:00 AM.

**SHIFT DIFFERENTIALS:**

- Shifts must start at 3:00 PM, 4:00 PM, 12:00 AM, or 1:00 AM, to be considered shift work, except when the project owner mandates special hours of work in the job specifications, in which case those hours may be considered shift work.
- When such hours are mandated by the project owner, a shift that begins before midnight on Friday and ends on Saturday morning, or that begins at or after 8:00 PM on Sunday and ends on Monday morning may be paid at the shift differential rate.
- Shifts shall receive an additional \$2.50 per hour.

**OVERTIME:**

- Hours in excess of 8 per day, Monday through Friday, or outside of the regular workday that are not shift work, and all hours on Saturdays, shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with Friday used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate.

**RECOGNIZED HOLIDAYS:** New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans Day may be substituted for the day after Thanksgiving. However, in the trading of Veterans Day for the day after Thanksgiving, if overtime is worked on Veterans Day, it shall be paid at double the hourly rate.

**Hazardous Waste Work:**

- where Level A, B, or C protection is required: + \$3.00/hr
- other Hazardous Waste site: + \$1.00/hr

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
38.75	29.03	67.78

**CLASSIFICATIONS:**

basic, landscape, or railroad track laborer; utility meter installer; flagman; salamander tender; pitman; dumpman; rakers or tampers on cold patch work; wrappers or coaters of pipe; waterproofers; tree cutter, timberman

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
39.45	29.03	68.48

**CLASSIFICATIONS:**

wagon drill or drill master helper; powder carrier; magazine tender; signal man

**HEAVY & GENERAL LABORERS - SOUTH**      **Rates Expiration Date : 02/28/2018**

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
39.45	29.03	68.48

**CLASSIFICATIONS:**

pipe layer; laser man; conduit or duct line layer; operator of jack hammer, chipping hammer, pavement breaker, concrete cutter, asphalt cutter, sheet hammer, or walk-behind saw cutter; sandblaster; acetylene cutting or burning

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
39.45	29.03	68.48

**CLASSIFICATIONS:**

wagon or directional drill operator; drill master

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
43.25	29.03	72.28

**CLASSIFICATIONS:**

blaster

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
41.00	29.03	70.03

**CLASSIFICATIONS:**

labor foreman, drill foreman, pipe foreman, grade foreman, finisher foreman, concrete foreman

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
42.00	29.03	71.03

**CLASSIFICATIONS:**

general foreman



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Effective Dates:

03/01/2017

Rate	Fringe	Total
39.70	29.03	68.73

**CLASSIFICATIONS:**

concrete finisher; setter of brick or stone pavers; stone cutter; form setter; manhole, catch basin, or inlet builder; rammer; gunite nozzle man

PIPELINE - MAINLINE TRANSMISSION     Rates Expiration Date : 06/03/2018

These rates apply to the following: welding on Transportation Mainline pipe lines (cross-country pipe lines, or any segments thereof, transporting coal, gas, oil, water or other transportable materials, vapors or liquids, including portions of such pipe lines within private property boundaries up to the final metering station or connection - the point where a valve, consumer connection, or town border station divides mainline transmission lines or higher pressure lateral and branch lines from lower pressure distribution systems).

PER DIEM PAYMENT:

In addition to the total wage rate paid for each craft, the following per diem (per day) amounts must also be paid - Pipeline Journeyman: \$42.50; Pipeline Journeyman Welder: \$102.50; and Pipeline Helper: \$42.50. Note: in order to receive the per diem payment an employee must work a minimum of 8 hours in a 24 hour period.

NOTES:

- Journeymen employed as "stringer bead" welders and journeymen who are regularly employed as "hot-pass" welders shall receive \$1.00 per hour more than other journeymen.
- Welders running "stringer bead" or "hot-pass" on "cutouts" or "tie-ins" on a production basis shall be paid \$1.00 per hour above the journeymen rate.
- Whenever a welder helper is employed using a power buffer or power grinder immediately behind the stringer bead and/or hot-pass welders, and the pipe gang is set on a production basis, the helper shall be paid \$2.00 per hour above the helper rate.
- If back welding is performed inside a pipe under either or both of the following conditions, the welder engaged in the welding will receive \$3.00 per hour above the regular rate for the job only for the days on which such back welding is performed:
  - The employer elects, as a regular procedure, to back weld each line-up. This condition is not intended to apply to occasional back welding performed by the pipe gang to repair a bead, to rectify a "high-lo" condition or wall thickness, etc.
  - A welder is required to back weld a completed weld behind the firing line.
- If the welder helper is required to go inside the pipe for the purpose of brushing, buffing and grinding the weld, they shall receive a wage rate \$1.00 per hour above the regular helper rate for the days involved.
- Welders working on "hot work" shall be paid \$2.00 per hour above the regular rate for each day engaged in such work. "Hot work" is defined as work on lines in service where there is the danger of fire or explosion.

The regular workday shall be 8 hours, between 8:00 AM and 4:30 PM.

OVERTIME:

Hours in excess of 8 per day, and all hours on Sundays shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on holidays shall be paid at double the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, July 4th, Labor Day, Thanksgiving Day, and Christmas Day. Sunday holidays observed the following Monday.

**Effective Dates:**

**06/05/2017**

Rate	Fringe	Total
54.58	28.97	83.55

**CLASSIFICATIONS:**

Pipeline Journeyman Welder

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PIPELINE - MAINLINE TRANSMISSION      Rates Expiration Date : 06/03/2018

**Effective Dates:**

**06/05/2017**

Rate	Fringe	Total
54.58	28.97	83.55

**CLASSIFICATIONS:**

Pipeline Journeyman

**Effective Dates:**

**06/05/2017**

Rate	Fringe	Total
33.27	19.97	53.24

**CLASSIFICATIONS:**

Pipeline Helper

**PIPELINE - GAS DISTRIBUTION**      **Rates Expiration Date : 10/31/2020**

These rates apply to the following: welding on gas line distribution systems (that portion of the gas distribution system placed in streets, roads, subways, tunnels, viaducts, highways and easements which serves the users of gas).

**SHIFT DIFFERENTIALS:**

An "irregular" shift may start any time from 5:00 PM to 12:00 AM, Monday through Friday, and shall receive an additional 15% of the regular rate per hour, inclusive of benefits.

**OVERTIME:**

Hours in excess of forty per week, and all hours on Saturdays shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.

**RECOGNIZED HOLIDAYS:** New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day, and Christmas Day. Sunday holidays observed the following Monday.

**Effective Dates:**

<b>11/01/2016</b>			<b>11/05/2017</b>	<b>11/01/2018</b>	<b>11/01/2019</b>
Rate	Fringe	Total	Total	Total	Total
57.58	21.55	79.13	81.38	82.96	84.63

**CLASSIFICATIONS:**

Pipeline Journeyman Welder

**Effective Dates:**

<b>11/01/2016</b>			<b>11/05/2017</b>	<b>11/01/2018</b>	<b>11/01/2019</b>
Rate	Fringe	Total	Total	Total	Total
57.58	21.55	79.13	81.38	82.96	84.63

**CLASSIFICATIONS:**

Pipeline Journeyman

**Effective Dates:**

<b>11/01/2016</b>			<b>11/05/2017</b>	<b>11/01/2018</b>	<b>11/01/2019</b>
Rate	Fringe	Total	Total	Total	Total
37.16	15.74	52.90	54.42	56.00	57.67

**CLASSIFICATIONS:**

Pipeline Helper

**ASPHALT LABORERS- NORTH**    **Rates Expiration Date : 02/28/2018**

THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:

Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Passaic, Somerset, Sussex, Union, Warren

{For apprentice rates refer to "Laborer - Heavy & General" apprentice rates in any county rate package}

The regular workday consists of 8 hours, starting at 7:00 AM or 8:00 AM.

**SHIFT DIFFERENTIALS:**

- Shifts must start at 3:00 PM, 4:00 PM, 12:00 AM, or 1:00 AM, to be considered shift work, except when the project owner mandates special hours of work in the job specifications, in which case those hours may be considered shift work.
- When such hours are mandated by the project owner, a shift that begins before midnight on Friday and ends on Saturday morning, or that begins at or after 8:00 PM on Sunday and ends on Monday morning may be paid at the shift differential rate.
- Shifts shall receive an additional \$2.50 per hour.

**OVERTIME:**

- Hours in excess of 8 per day, Monday through Friday, or outside of the regular workday that are not shift work, and all hours on Saturdays, shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with Friday used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate.

**RECOGNIZED HOLIDAYS:** New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans Day may be substituted for the day after Thanksgiving. However, in the trading of Veterans Day for the day after Thanksgiving, if overtime is worked on Veterans Day, it shall be paid at double the hourly rate.

**Hazardous Waste Work:**

- where Level A, B, or C protection is required: + \$3.00/hr
- other Hazardous Waste site: + \$1.00/hr

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
41.00	29.03	70.03

**CLASSIFICATIONS:**

Asphalt Foreman

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
39.70	29.03	68.73

**CLASSIFICATIONS:**

Asphalt Screedman

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
39.45	29.03	68.48

**CLASSIFICATIONS:**

Asphalt Raker or Lute Man

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NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT  
PREVAILING WAGE RATE DETERMINATION

ASPHALT LABORERS- NORTH     Rates Expiration Date : 02/28/2018

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
38.75	29.03	67.78

**CLASSIFICATIONS:**

Asphalt Laborer

**ELECTRICIAN- UTILITY WORK (NORTH)**     **Rates Expiration Date : 12/03/2017**

Electrician-Utility Work (North)

(For apprentice rates refer to Electrician-Utility Work (North) in any county rate package).

These rates apply to work contracted for by the following utility companies:

Public Service Electric & Gas Co. of NJ, GPU Energy, Borough of Madison Electric Department, Sussex Rural Electric Cooperative, Rockland Utilities, and Butler Municipal Electric Co.

These rates do not apply to work on substations or switching stations.

For Utility work contracted for by a utility company other than those listed above or those listed under "Electrician-Utility Work (South), see the "Outside Commercial Rates" for the county in which the jobsite is located.

\* FOR OUTSIDE COMMERCIAL RATES PLEASE SEE COUNTY RATES

The regular workday is 8 hours, between 6:00 AM and 6:00 PM.

FOR EMERGENCY WORK ONLY: (emergency work is defined as work caused by storm, catastrophe, act of god, and circumstances beyond the control of the employer)-all hours of work shall be paid at double the hourly rate.

SHIFT DIFFERENTIALS:

Shift work must run for a minimum of 5 consecutive workdays.

2nd shift (between the hours of 4:30 PM and 1:00 AM): 8 hours of work + 17.3% of the regular rate, inclusive of benefits.

3rd shift (between the hours of 12:30 AM and 9:00 AM): 8 hours of work + 31.4% of the regular rate per hour, inclusive of benefits.

OVERTIME:

Hours in excess of 8 per day, or before or after the regular workday Monday through Friday, that is not shift work, and all hours on Saturday shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the hourly rate, inclusive of benefits.

Four 10-hour days may worked, at straight time, between 7:00 AM and 6:30 PM, Monday through Thursday.

RECOGNIZED HOLIDAYS:

New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day and Christmas Day, or day on which they are legally observed.

**Effective Dates:**

**12/04/2016**

Rate	Fringe	Total
52.26	35.01	87.27

**CLASSIFICATIONS:**

Chief Lineman

**Effective Dates:**

**12/04/2016**

Rate	Fringe	Total
49.31	33.03	82.34

**CLASSIFICATIONS:**

Journeyman Lineman

ELECTRICIAN- UTILITY WORK (NORTH)      Rates Expiration Date : 12/03/2017

**Effective Dates:**

**12/04/2016**

Rate	Fringe	Total
49.31	33.03	82.34

**CLASSIFICATIONS:**

Special License Operator

**Effective Dates:**

**12/04/2016**

Rate	Fringe	Total
48.81	32.70	81.51

**CLASSIFICATIONS:**

Transit Man

**Effective Dates:**

**12/04/2016**

Rate	Fringe	Total
47.33	31.71	79.04

**CLASSIFICATIONS:**

Line Equipment Operator

**Effective Dates:**

**12/04/2016**

Rate	Fringe	Total
41.42	27.75	69.17

**CLASSIFICATIONS:**

Dynamite Man

**Effective Dates:**

**12/04/2016**

Rate	Fringe	Total
58.18	38.98	97.16

**CLASSIFICATIONS:**

General Foreman

**Effective Dates:**

**12/04/2016**

Rate	Fringe	Total
56.70	37.98	94.68

**CLASSIFICATIONS:**

Assistant General Foreman



ELECTRICIAN- UTILITY WORK (NORTH)      Rates Expiration Date : 12/03/2017

**Effective Dates:**

**12/04/2016**

Rate	Fringe	Total
55.22	36.99	92.21

**CLASSIFICATIONS:**

Line Foreman

**Effective Dates:**

**12/04/2016**

Rate	Fringe	Total
39.94	26.75	66.69

**CLASSIFICATIONS:**

Straight Light Mechanical Leader

**Effective Dates:**

**12/04/2016**

Rate	Fringe	Total
37.97	25.43	63.40

**CLASSIFICATIONS:**

Groundman Winch Operator

**Effective Dates:**

**12/04/2016**

Rate	Fringe	Total
37.97	25.43	63.40

**CLASSIFICATIONS:**

Groundman Truck Operator

**Effective Dates:**

**12/04/2016**

Rate	Fringe	Total
37.47	25.10	62.57

**CLASSIFICATIONS:**

Straight Light Mechanic

**Effective Dates:**

**12/04/2016**

Rate	Fringe	Total
37.47	25.10	62.57

**CLASSIFICATIONS:**

Line Equipment Mechanic

ELECTRICIAN- UTILITY WORK (NORTH)      Rates Expiration Date : 12/03/2017

**Effective Dates:**

**12/04/2016**

Rate	Fringe	Total
32.05	21.47	53.52

**CLASSIFICATIONS:**

Groundman 2nd Year

**Effective Dates:**

**12/04/2016**

Rate	Fringe	Total
29.58	19.81	49.39

**CLASSIFICATIONS:**

Groundman 1st Year

**Effective Dates:**

**12/04/2016**

Rate	Fringe	Total
48.81	32.70	81.51

**CLASSIFICATIONS:**

Line Equipment Foreman

**ELECTRICIAN- UTILITY WORK (SOUTH)**    **Rates Expiration Date : 12/02/2017**

Electrician-Utility Work (South)

(For apprentice rates refer to Electrician-Utility Work (South) in any county rate package).

These rates apply to work contracted for by the following utility company:

Atlantic City Electric.

These rates do not apply to work on substations or switching stations.

For utility work contracted for by a utility company other than the one listed above or those listed under "Electrician-Utility Work (North), see the "Outside Commercial Rates" for the county in which the jobsite is located.

\* FOR OUTSIDE COMMERCIAL RATES PLEASE SEE COUNTY RATES

The regular workday is 8 hours, between 7:00 AM and 4:30 PM.

FOR EMERGENCY WORK ONLY: (emergency work is defined as work caused by storm, catastrophe, act of god, and circumstances beyond the control of the employer)- all hours of work shall be paid at double the hourly rate.

**SHIFT DIFFERENTIALS:**

Shift work must run for a minimum of 5 consecutive workdays.

When two (2) or three (3) shifts are worked the following shall apply:

1st shift (between the hours of 8:00 AM and 4:30 PM)

2nd shift (between the hours of 4:30 PM and 12:30 AM): 8 hours of work + 10% of the regular rate of pay for 7.5 hours worked.

3rd shift (between the hours of 12:30 AM and 8:00 AM): 8 hours of work + 15% of the regular rate of pay for 7 hours worked.

**OVERTIME:**

Hours in excess of 8 per day, or before or after the regular workday Monday through Friday, that is not shift work, and all hours on Saturday shall be paid at time and one-half the regular rate. All hours on Sundays and Holidays shall be paid double the hourly rate.

Four 10-hour days may be worked, at straight time, between 6:00 AM and 6:00 PM, Monday through Thursday with Friday used as a make-up day.

**RECOGNIZED HOLIDAYS:**

New Year's Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day and Christmas Day or on days celebrated.

**WORKING RULES:**

There shall be a Foreman in charge of each work crew. No crews are to exceed twelve (12) men, including Foremen.

There shall be a General Foreman designated for transmission work when three (3) or more crews are on the same job and for distribution work where there are more than twenty (20) employees on site.

A small job crew shall consist of five (5) or less employees, one (1) of the Journeyman Linemen in the crew shall be designated as a Small Job Foreman.

Work performed from ladders and/or mechanical lift equipment shall be the work of Linemen and/or Apprentices.

On new construction, fitting and framing poles, towers or structures may be done by Journeymen and/or Apprentices. Groundmen may assist, but may not perform any work which would be performed by Linemen if assembled in the air.

There shall be a Journeyman Lineman in each pole setting, erection, grounding, wire and cable-pulling crew of more than three (3) men.

**Effective Dates:**

**12/04/2016**

Rate	Fringe	Total
58.38	45.19	103.57

**CLASSIFICATIONS:**

General Foreman

ELECTRICIAN- UTILITY WORK (SOUTH)      Rates Expiration Date : 12/02/2017

**Effective Dates:**

**12/04/2016**

Rate	Fringe	Total
52.00	41.37	93.37

**CLASSIFICATIONS:**

Foreman

**Effective Dates:**

**12/04/2016**

Rate	Fringe	Total
49.26	39.74	89.00

**CLASSIFICATIONS:**

Small Job Foreman

**Effective Dates:**

**12/04/2016**

Rate	Fringe	Total
45.61	37.54	83.15

**CLASSIFICATIONS:**

Heavy Equipment Operator

**Effective Dates:**

**12/04/2016**

Rate	Fringe	Total
45.61	37.54	83.15

**CLASSIFICATIONS:**

Cable Splicer

**Effective Dates:**

**12/04/2016**

Rate	Fringe	Total
45.61	37.54	83.15

**CLASSIFICATIONS:**

Journeyman Lineman

**Effective Dates:**

**12/04/2016**

Rate	Fringe	Total
45.61	37.54	83.15

**CLASSIFICATIONS:**

Journeyman Welder

**ELECTRICIAN- UTILITY WORK (SOUTH)**      **Rates Expiration Date : 12/02/2017**

**Effective Dates:**

**12/04/2016**

Rate	Fringe	Total
45.61	37.54	83.15

**CLASSIFICATIONS:**

Journeyman Painter

**Effective Dates:**

**12/04/2016**

Rate	Fringe	Total
36.49	32.08	68.57

**CLASSIFICATIONS:**

Light Equipment Operator

**Effective Dates:**

**12/04/2016**

Rate	Fringe	Total
31.93	29.37	61.30

**CLASSIFICATIONS:**

Groundman Truck Driver

**Effective Dates:**

**12/04/2016**

Rate	Fringe	Total
29.65	27.99	57.64

**CLASSIFICATIONS:**

Groundman 3rd Year

**Effective Dates:**

**12/04/2016**

Rate	Fringe	Total
27.37	26.66	54.03

**CLASSIFICATIONS:**

Groundman 2nd Year

**Effective Dates:**

**12/04/2016**

Rate	Fringe	Total
25.09	25.29	50.38

**CLASSIFICATIONS:**

Groundman 1st Year

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PREVAILING WAGE RATE DETERMINATION

ELECTRICIAN- UTILITY WORK (SOUTH)      Rates Expiration Date : 12/02/2017

Effective Dates:

12/04/2016

Rate	Fringe	Total
20.07	22.27	42.34

CLASSIFICATIONS:

Flagman

HEAVY & GENERAL LABORERS- NEW TRANS HUDSON TUNNELS      Rates Expiration Date : 02/28/2018

**\*\*THESE RATES APPLY TO CONSTRUCTION ON NEW TRANS HUDSON TUNNELS ONLY\*\***

{For apprentice rates refer to "Laborer - Heavy & General" apprentice rates in any county rate package}

The regular workday consists of 8 hours, starting at 7:00 AM or 8:00 AM.

**SHIFT DIFFERENTIALS:**

- Shifts must start at 3:00 PM, 4:00 PM, 12:00 AM, or 1:00 AM, to be considered shift work, except when the project owner mandates special hours of work in the job specifications, in which case those hours may be considered shift work.
- When such hours are mandated by the project owner, a shift that begins before midnight on Friday and ends on Saturday morning, or that begins at or after 8:00 PM on Sunday and ends on Monday morning may be paid at the shift differential rate.
- Shifts shall receive an additional \$2.50 per hour.

**OVERTIME:**

- Hours in excess of 8 per day, Monday through Friday, or outside of the regular workday that are not shift work, and all hours on Saturdays, shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with Friday used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate.

**RECOGNIZED HOLIDAYS:** New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans Day may be substituted for the day after Thanksgiving. However, in the trading of Veterans Day for the day after Thanksgiving, if overtime is worked on Veterans Day, it shall be paid at double the hourly rate.

**Hazardous Waste Work:**

- where Level A, B, or C protection is required: + \$3.00/hr
- other Hazardous Waste site: + \$1.00/hr

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
62.25	29.03	91.28

**CLASSIFICATIONS:**

Walking Boss & Superintendent

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
61.80	29.03	90.83

**CLASSIFICATIONS:**

Heading Foreman, Shaft Foreman, Rod Foreman, Electrical Foreman, Rigging Foreman

**HEAVY & GENERAL LABORERS- NEW TRANS HUDSON TUNNELS**      **Rates Expiration Date : 02/28/2018**

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
61.05	29.03	90.08

**CLASSIFICATIONS:**

Iron Foreman, Caulking Foreman, Form Foreman, Cement Finishing Foreman, Concrete Foreman, Track Foreman, Clean-up Foreman, Grout Foreman

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
64.80	29.03	93.83

**CLASSIFICATIONS:**

Blaster

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
60.23	29.03	89.26

**CLASSIFICATIONS:**

Top Labor Foreman

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
59.70	29.03	88.73

**CLASSIFICATIONS:**

Skilled Men (including Caulker, Powder Carrier, all other skilled men)

Skilled Men (including Miner, Drill Runner, Iron Man, Conveyor Man, Maintenance Man, Safety Miner, Rigger, Block Layer, Cement Finisher, Rod Man)

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
59.48	29.03	88.51

**CLASSIFICATIONS:**

Semi-Skilled Men (including Bell or Signal Man top or bottom, Form Worker & Mover, Concrete Worker, Shaft Man, Tunnel Laborer, Caulker's Helper, all other semi-skilled)

Semi-Skilled Men (including Miner's Helper, Chuck Tender, Track Man, Nipper, Brake Man, Derail Man, Cable Man, Hose Man, Gravel Man, Form Man)



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HEAVY & GENERAL LABORERS- NEW TRANS HUDSON TUNNELS      Rates Expiration Date : 02/28/2018

**Effective Dates:**

**03/01/2017**

Rate	Fringe	Total
58.73	29.03	87.76

**CLASSIFICATIONS:**

All others (including Powder Watchman, Change House Attendant, Top Laborer, Job Steward)

## **SECTION 01 11 00 - SUMMARY OF WORK (SINGLE PRIME CONTRACT)**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

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

#### **1.2 PROJECT DESCRIPTION**

- A. The Project consists of the construction of interior alterations which consist of but are not limited to demolition, new plumbing, new fire protection, new mechanical, new electric, and new finish work required by the Contract Documents for the County of Union. The site is located at 9 Elizabethtown Plaza, Elizabeth, NJ. The extent of the contract work is indicated in the Contract Documents.

- 1. Local custom and trade union jurisdictional settlement do not control the Scope of Work.

- B. The Contractor shall employ his workers for overtime work if required to meet the completion dates, at no additional cost to the Owner.
- C. The scope of the work shall not be limited to what is specifically called out on the drawings or specifications, but shall include any and all selective demolition as well as any cutting and patching as may be required to accomplish the intended construction.

#### **1.3 USE OF PREMISES**

- A. The Contractor shall limit his use of the premises to construction activities in areas indicated; allow for Owner occupancy and use by the public.
  - 1. Confine operations to areas within contract limits indicated. Portions of the site beyond areas in which construction operations are indicated are not to be disturbed.
  - 2. Keep driveways and entrances serving the premises clear and available to the Owner and the Owner's employees at all times. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on site.
- B. Maintain the existing building in a weather tight condition throughout the construction period. Repair damage caused by constructions operations. Take all precautions necessary to protect the building and its occupants during the construction period.

1.4 OWNER OCCUPANCY

- A. The Owner will occupy the site during the entire construction period. Cooperate with the Owner during construction operations to minimize conflicts and to facilitate Owner usage. Perform the work so as not to interfere with the Owner's operations.

1.5 PROJECT REQUIREMENTS FOR MOISTURE CONTROL WITHIN THE BUILDING

- A. The Project consists of construction of a new facility and environmental systems. The Contractor is responsible for the start-up and functioning of the environmental systems within the building.
- B. Building Enclosure: The Contractor shall be responsible for a timely enclosure of the building envelope, whether temporary or permanent, to prevent weather infiltration into the building once substrates (which will receive finishes) begin to be installed.
- C. Concrete Slabs: The Contractor shall be responsible for proper curing of the concrete slabs, and for the proper moisture content as it relates to the applicable floor finishes. The Contractor shall provide Calcium Chloride (ASTM F 1869), Relative Humidity (ASTM F 2170), and PH (ASTM F-710) tests in order to assure compliance with the scheduled floor finishes.
- D. Where interior finishes require conditioning of the space and substrates for a period of time prior to the installation of the finishes, the Contractor shall be fully responsible for timely enclosure, environmental start up and conditioning of the spaces in order to bring the substrates into compliance with the finish requirements, as to not delay the Work in accordance with the project schedule.
  - 1. When environmental systems are not in operation in time to provide conditioning of the spaces as required for the finish installation, temporary environmental systems shall be utilized with no additional cost to the Owner.
- E. Protection: The Contractor shall be responsible for protection of all in-place work which shall include, but not be limited to, temporary coverings and enclosures to prevent deterioration or otherwise detrimental exposure of all products in place. Protection shall be in place at the end of each work day.

1.6 KNOWLEDGE OF CONTRACT REQUIREMENTS

- A. The Contractor and his Subcontractor's, Sub-Subcontractor's and material men shall consult in detail the General Conditions, Supplementary Conditions, all Divisions and Sections of the Specifications, all Drawings and all Addenda for instructions and requirements pertaining to the Work, and at his and their cost, shall provide all labor, materials, equipment and services necessary to furnish, install and complete the work in strict conformance with all provisions thereof.
- B. The Scope of Work for the Contract is not necessarily limited to the description of each Section of the Specifications and the illustrations shown on the Drawings. Include all minor items not expressly indicated in the Contract Documents, or as might be found necessary as a result of field conditions, in order to complete the work as it is intended, without any gaps between the various subdivisions of work of the Contractor and his Subcontractors.

- C. The Contractor will be held to be thoroughly familiar with all conditions affecting labor in the neighborhood of the project including, but not limited to, Unions, incentive pay, procurement, living and commuting conditions and to have informed his Subcontractors and Sub-Subcontractors thereof.

#### 1.7 CONTRACT DOCUMENTS INFORMATION

- A. The Contract Documents are prepared in accordance with available information as to existing conditions and locations. If, during construction, conditions are revealed at variance with the Contract Documents, notify the Architect promptly so that supplementary instructions may be issued.
- B. The Specifications determine the kinds and methods of installation of the various materials, the Drawings establish the quantities, dimensions and details of materials, the schedules on the Drawings give the location, type and extent of the materials.
- C. Should the Drawings, Specifications or schedules disagree in themselves or with either or both of the others, the better quality or greater quantity of work or materials shall be performed and provided, unless otherwise directed in writing by the Architect.
- D. Dimensions given on the Drawings govern scale measurements and large scale drawings govern small scale drawings, except as to anything omitted unless such omission is expressly noted on the larger scale drawings.
- E. The techniques or methods of specifying to record requirements varies throughout text, and may include "prescriptive", "open generic/descriptive", "compliance with standards", "performance", "proprietary", or a combination of these. The method used for specifying one unit of work has no bearing on requirements for another unit of work.
- F. Whenever a material, article or piece of equipment is referred to in the singular number in the Contract Documents, it shall be the same as referring to it in the plural. As many such materials, articles or pieces of equipment shall be provided as are required to complete the work.
- G. With the approval of the Architect and without additional cost to the Owner, the Contractor shall make all necessary changes or modifications to locations as may be necessary to suit requirements and conditions at the building and for the proper and conveniently accessible location of all parts of systems within the project.
- H. Small details not usually shown or specified, but necessary for the proper installation and operation of the work, shall be provided.
- I. Cap all incomplete lines, ducts, conduits, openings, etc., until ready for final connection, after which they shall be thoroughly cleaned and left unobstructed.

#### **PART 2 - PRODUCTS (Not applicable).**

#### **PART 3 - EXECUTION (Not applicable).**

#### **END OF SECTION 01 11 00**

## **SECTION 01 11 05 - TIME OF COMPLETION**

### **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 PROJECT SCHEDULE**

- A. Final Completion (issuance of Certificate of Occupancy/Certificate of Final Approval) shall be as specified in the Bid Document Submission, Time of Completion.
  - 1. Prepare and submit itemized Submittal Schedule no later than 15 Calendar days after Notice to Proceed.
  - 2. Prior to any onsite work commencing, submit Construction Schedule as defined in Specification Section 01 33 00 no later than 10 Calendar days after Notice to Proceed.
  - 3. Complete Submission to the Architect of all required submittals (shop drawings, samples, catalog cuts, etc.) no later than 30 Calendar days after Notice to Proceed.
  - 4. "On site," work shall be coordinated with the Owner's operations, see Division 01, "Summary of Work" for spaces occupied during construction.
  - 5. It is imperative that the contractor properly staff the project (including overtime and after hours work with no additional cost to the Owner) in order to meet Final Completion. The Owner and Owner's representative will be closely monitoring the progress of the work throughout the project to ensure that the manpower and progress of the work is sufficient to meet the contract schedule.
  - 6. "On site," work shall be coordinated with the Owner's operations; Court is in session from 9am-5pm Monday thru Friday. Noisy construction work will not be allowed during court. All noisy construction work will be prior to the start of court or after court is complete. All areas outside of new Jury Room shall be 100% cleaned and ready for occupants daily.
- B. Liquidated damages provisions as specified in the General Specifications, included hereto and as modified by this Contract shall apply to the substantial completion date for the entire project.

**END OF SECTION 01 11 05**

## **SECTION 01 21 00 - 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.
  - 1. Certain items are specified in the Contract Documents by allowances. Allowances have been established in lieu of additional requirements and to defer selection of actual materials and equipment to a later date when direction will be provided to the Contractor. If necessary, additional requirements will be issued by Change Order.
- B. Types of allowances include the following:
  - 1. Contingency allowances.

#### **1.3 SELECTION AND PURCHASE**

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

#### **1.4 SUBMITTALS**

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

- D. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

#### 1.5 COORDINATION

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

#### 1.6 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 labor and material costs only will be billed against the contingency allowance. All overhead, profit, supervision, project management, delivery, installation, taxes, insurance, equipment rental, and similar costs ordered by Owner under the contingency allowance shall be included in the overall lump sum of the Bid.
- C. At Project closeout, credit unused amounts remaining in the contingency allowance to Owner by Change Order.

#### 1.7 ADJUSTMENT OF ALLOWANCES

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

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

**PART 3 - EXECUTION**

3.1 EXAMINATION

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

3.2 PREPARATION

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

3.3 SCHEDULE OF ALLOWANCES

- A. Allowance No. 1: Contingency Allowance: Include a contingency allowance of \$25,000.00 for use according to Owner's instructions.

**END OF SECTION 01 21 00**



## **SECTION 01 25 00 - PRODUCT SUBSTITUTIONS**

### **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. This Section specifies administrative and procedural requirements for handling requests for substitutions made after award of the Contract.
- B. Standards: Refer to Section "Reference Standards and Definitions" for applicability of industry standards to products specified.
- C. Procedural requirements governing the Contractor's selection of products and product options are included under Section "Materials and Equipment."

#### **1.3 DEFINITIONS**

- A. Definitions used in this Article are not intended to change or modify the meaning of other terms used in the Contract Documents.
- B. Substitutions: Requests for changes in products, materials, equipment, and methods of construction required by Contract Documents proposed by the Contractor after award of the Contract are considered requests for "substitutions." The following are not considered substitutions:
  - a. Substitutions requested by Bidders during the bidding period, and accepted prior to award of Contract, are considered as included in the Contract Documents and are not subject to requirements specified in this Section for substitutions.
  - b. Revisions to Contract Documents requested by the Owner or Architect.
  - c. Specified options of products and construction methods included in Contract Documents.
  - d. The Contractor's determination of and compliance with governing regulations and orders issued by governing authorities.

#### **1.4 SUBMITTALS**

- A. Substitution Request Submittal: Requests for substitution will be considered if received within 15 days after Notice to Proceed. Requests received more than 15 days after Notice to Proceed may be considered or rejected at the discretion of the Architect.

1. Submit 3 copies of each request for substitution for consideration. Submit requests in the form and in accordance with procedures required for Change Order proposals.
2. Identify the product, or the fabrication or installation method to be replaced in each request. Include related Specification Section and Drawing numbers. Provide complete documentation showing compliance with the requirements for substitutions, and the following information, as appropriate:
  - a. Product Data, including Drawings and descriptions of products, fabrication and installation procedures.
  - b. Samples, where applicable or requested.
  - c. A detailed comparison of significant qualities of the proposed substitution with those of the Work specified. Significant qualities may include elements such as size, weight, durability, performance and visual effect.
  - d. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by the Owner and separate Contractors, that will become necessary to accommodate the proposed substitution.
  - e. A statement indicating the substitution's effect on the Contractor's Construction Schedule compared to the schedule without approval of the substitution. Indicate the effect of the proposed substitution on overall Contract Time.
  - f. Cost information, including a proposal of the net change, if any in the Contract Sum.
  - g. Certification by the Contractor that the substitution proposed is equal-to or better in every significant respect to that required by the Contract Documents, and that it will perform adequately in the application indicated. Include the Contractor's waiver of rights to additional payment or time, that may subsequently become necessary because of the failure of the substitution to perform adequately.
3. Architect's Action: Within one week of receipt of the request for substitution, the Architect will request additional information or documentation necessary for evaluation of the request. Within 2 weeks of receipt of the request, or one week of receipt of the additional information or documentation, whichever is later, the Architect will notify the Contractor of acceptance or rejection of the proposed substitution. If a decision on use of a proposed substitute cannot be made or obtained within the time allocated, use the product specified by name. Acceptance will be in the form of a Change Order.
  - a. The Architect will review each request for substitution only once. The Contractor will be required to reimburse the Architect at his hourly rate, for any reviews which are required, or requested, beyond the initial review.

## **PART 2 - PRODUCTS (Not Applicable)**

## **PART 3 - EXECUTION**

### **3.1 SUBSTITUTIONS**

- A. Substitutions may be permitted by the Architect, if, in his opinion, the requirements of the proposed substitution comply with the requirements specified for the material, article or piece of equipment; however, the Architect is not required to permit substitution pursuant to; "Whitten Corporation vs.

Paddock, Incorporated,” United States District Court, Massachusetts, April 12, 1974, affirmed by the Federal First Circuit Court, December 14, 1974, and the United States Supreme Court, 1988.

- B. The Architect has no obligation, after award of contract, to consider any brand other than those named in the Contract Documents. However, the Contractor may submit substitutes to the Architect for review, fully documented and certified, and accompanied by his proposal for a deduction in the Contract Sum.
- C. Conditions: The Contractor's substitution request will be received and considered by the Architect when one or more of the following conditions are satisfied, as determined by the Architect; otherwise requests will be returned without action except to record noncompliance with these requirements.
- a. Extensive revisions to Contract Documents are not required.
  - b. Proposed changes are in keeping with the general intent of Contract Documents.
  - c. The request is timely, fully documented and properly submitted.
  - d. The request is directly related to an "or equal" clause or similar language in the Contract Documents.
  - e. The specified product or method of construction cannot be provided within the Contract Time. The request will not be considered if the product or method cannot be provided as a result of failure to pursue the Work promptly or coordinate activities properly.
  - f. The specified product or method of construction cannot receive necessary approval by a governing authority, and the requested substitution can be approved.
  - g. A substantial advantage is offered the Owner, in terms of cost, time, energy conservation or other considerations of merit, after deducting offsetting responsibilities the Owner may be required to bear. Additional responsibilities for the Owner may include additional compensation to the Architect for redesign and evaluation services, increased cost of other construction by the Owner or separate Contractors, and similar considerations.
  - h. The specified product or method of construction cannot be provided in a manner that is compatible with other materials, and where the Contractor certifies that the substitution will overcome the incompatibility.
  - i. The specified product or method of construction cannot be coordinated with other materials, and where the Contractor certifies that the proposed substitution can be coordinated.
  - j. The specified product or method of construction cannot provide a warranty required by the Contract Documents and where the Contractor certifies that the proposed substitution provide the required warranty.
  - k. Where a proposed substitution involves more than one prime Contractor, each Contractor shall cooperate with the other Contractors involved to coordinate the Work, provide uniformity and consistency, and to assure compatibility of products.
- D. The Contractor's submittal and Architect's acceptance of Shop Drawings, Product Data or Samples that relate to construction activities not complying with the Contract Documents does not constitute an acceptable or valid request for substitution, nor does it constitute approval.
- E. Refer to SUBSTITUTION REQUEST FORMS ON THE FOLLOWING PAGES.

**END OF SECTION 01 25 00**

**REQUEST FOR SUBSTITUTION**

Submit a copy of this form for each requested substitution. Fill in all blanks, check all boxes that apply and attach all necessary supporting data.

**SUBSTITUTION NO.:** \_\_\_\_\_

Specified Item: \_\_\_\_\_

Specification Section(s)/Paragraph(s): \_\_\_\_\_

Drawing Number(s): \_\_\_\_\_

Proposed Substitute: \_\_\_\_\_

(include, as applicable, manufacturer's name & address, trade name & model number of product and name of fabricator or supplier)

Reason for Proposed Substitution:

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

Net Change to Contract Sum:     No Change                       Deduct \$ \_\_\_\_\_     Add \$ \_\_\_\_\_

Change to Contract Time:         No Change                       \_\_\_\_\_ Days     \_\_\_\_\_

The following required supporting documents are attached (Check all that apply):

Complete Product Data

Itemized comparison of properties of proposed product to specified product.

List of other projects on which proposed has been used, with project name, design professional's name and owner contact.

List of maintenance services and replacement materials available.

Statement of effect of substitution on construction schedule.

Description of change that will be required in other work or products if substitute product is approved.

**Additional Information:**

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

## REQUEST FOR SUBSTITUTION

The undersigned testifies that he/she:

- Is submitting this substitution request within the limits set forth in the Contract Documents.
- Has investigated the proposed product and determined that it is equal or better than the specified product.
- Will provide the same warranty for the proposed product as for the specified product.
- Will coordinate installation and make other changes as required for the work to be complete in all respects, including: (a) redesign and (b) additional components and capacity required by other work affected by the change.
- Waives all claims for additional costs for evaluation of the substitution request, redesign if required, and reapproval by authorities having jurisdiction, if required.
- Waives reimburse the Owner for additional costs for evaluation of the substitution request, redesign if required, and reapproval by authorities having jurisdiction, if required.

Contractor's Signature: \_\_\_\_\_

Typed or Printed Name: \_\_\_\_\_

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

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

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

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

Owner Approval: \_\_\_\_\_ Date: \_\_\_\_\_

Construction Manager Approval: \_\_\_\_\_ Date: \_\_\_\_\_  
If Applicable

USA Architects, P.A. Approval: \_\_\_\_\_ Date: \_\_\_\_\_

Consulting Engineer Approval: \_\_\_\_\_ Date: \_\_\_\_\_

## **SECTION 01 26 00 - MODIFICATION PROCEDURES**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

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

#### **1.2 SUMMARY**

- A. This section specifies administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Sections: The following sections contain requirements that relate to this section:
  - 1. Division 01 Section "Submittals" for requirements for the Contractor's Construction Schedule.
  - 2. Division 01 Section "Application for Payment" for administrative procedures governing applications for payment.
  - 3. Division 01 Section "Product Substitutions" for administrative procedures for handling requests for substitutions made after award of the Contract.

#### **1.3 CHANGE ORDER PROPOSAL REQUESTS**

- A. Owner-Initiated Proposal Requests: Proposed changes in the Work that will require adjustment to the Contract Sum or Contract Time will be issued by the Architect, with a detailed description of the proposed change and supplemental or revised Drawings and Specifications, if necessary.
  - 1. Proposal requests issued by the Architect are for information only. Do not consider them an instruction either to stop work in progress, or to execute the proposed change.
  - 2. Unless otherwise indicated in the proposal request, within 20 days of receipt of the proposal request, submit to the Architect for the Owner's review an estimate of cost necessary to execute the proposed change.
    - a. Include a list of quantities of products to be purchased and unit costs, along with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.
    - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
    - c. Include a statement indicating the effect the proposed change in the Work will have on the Contract Time.

- B. Contractor-Initiated Change Order Proposal Requests: When latent or other unforeseen conditions require modifications to the Contract, the Contractor may propose changes by submitting a request for a change to the Architect.
  - 1. Include a statement outlining the 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 Contract Time.
  - 2. Include a list of quantities of products to be purchased and unit costs along with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.
  - 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts, if allowed and or applicable.
  - 4. Comply with requirements in Section "Product Substitutions" if the proposed change in the Work requires the substitution of one product or system for a product or system specified.
- C. Proposal Request Form: Use AIA Document G 709 for Change Order Proposal Requests.

#### 1.4 CHANGES IN THE WORK

- A. Tabulate cost breakdown into subcontracts and trades for each of which the quantity, labor, material, other cost and resulting final cost per unit shall be indicated. Quantity, labor, material, other cost and cost per unit generally include but are not necessarily limited to the following:
  - 1. Quantity; total number of items for each portion or unit of work as determined from the change.
  - 2. Labor; on site labor for the handling and installation of material from point of delivery at site.
  - 3. Material; cost of material as delivered to the site for installation and erection.
  - 4. Other cost; rental equipment, depreciation, site office, administration, overhead and profit, testing survey and layout, samples and all other costs not included in labor and material.
- B. When a change in the work includes a category or categories of work both added to and deducted from the Contract, the total quantities of added work and of deleted work shall be determined separately for each category and the appropriate unit price or net cost of the work shall be applied to the difference between the two total quantities.
- C. Unit prices shall be inclusive of all costs and shall be applied to units of measure as defined in the specifications for each category of work.
- D. For all extra work performed by the Contractor, the gross cost to the Owner shall include the net cost of the work to the Contractor plus an allowance for overhead and profit not to exceed, (See General Specifications), of the net cost.

- E. For all extra work performed by a Subcontractor, the gross cost to the Owner shall include the net cost of the work by the Subcontractor plus an allowance for overhead and profit not to exceed, (See General Specifications), of his net cost, plus the General Contractor's overhead and profit not to exceed, (See General Specifications), of the Subcontractor's net cost. In no case shall the total allowance for overhead and profit exceed, (See General Specifications), of the net cost of the work.
- F. Net cost of extra work shall be the actual or prorated cost of:
  - 1. In all cases to be in compliance with the General Specifications.
- G. After all the allowance contingency has been used, changes orders shall include gross costs. Gross cost shall be net costs plus items listed in the General Specifications. Overhead & Profit shall include; construction superintendent, supervision, engineering, insurance, taxes, administrative and site office expenses and all other general expenses.

#### 1.5 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: When the Owner and Contractor are not in total agreement on the terms of a Change Order Proposal Request, the Architect may issue a Construction Change Directive on AIA Form G714, instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
  - 1. The Construction Change Directive will contain a complete description of the change in the Work and designate the method to be followed to determine change in the Contract Sum or 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 the change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

#### 1.6 CHANGE ORDER PROCEDURES

- A. Upon the Owner's approval of a Change Order Proposal Request, the Architect will issue a Change Order for signatures of the Owner and Contractor on AIA Form G701, as provided in the Conditions of the Contract.

### **PART 2 - PRODUCTS (Not Applicable)**

### **PART 3 - EXECUTION (Not Applicable)**

### **END OF SECTION 01 26 00**



## **SECTION 01 29 00 - APPLICATIONS FOR PAYMENT**

### **PART 1 - GENERAL**

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements governing the Contractor's Applications for Payment.
  - 1. Coordinate the Schedule of Values and Applications for Payment with the Contractor's Construction Schedule, List of Subcontracts, and Submittal Schedule.

#### 1.3 SCHEDULE OF VALUES

- A. The Contractor shall coordinate preparation of the Schedule of Values with preparation of the Contractor's Construction Schedule.
  - 1. Correlate line items in the Schedule of Values with other required administrative schedules and forms, including:
    - a. Contractor's construction schedule.
    - b. Application for Payment form.
    - c. List of subcontractors.
    - d. Schedule of alternates.
    - e. List of products.
    - f. List of principal suppliers and fabricators.
  - 2. Submit the Schedule of Values to the Engineer/Architect and Owner at the earliest feasible date, but in no case later than 14 days before the date scheduled for submittal of the initial Application for Payment.
    - a. Submit 3 copies of Schedule of Values to Engineer/Architect and Owner.
- B. Format and Content: Use the Project Manual Table of Contents as a guide to establish the format for the Schedule of Values.
  - 1. Identification: Include the following Project identification on the Schedule of Values:
    - a. Project name and location.
    - b. Name of the Architect.
    - c. Project number.

- d. Contractor's name and address.
  - e. Date of submittal.
2. Arrange the Schedule of Values in a tabular form with separate columns to indicate the following for each item listed:
    - a. Generic name.
    - b. Related Specification Section.
    - c. Name of subcontractor.
    - d. Name of manufacturer or fabricator.
    - e. Name of supplier.
    - f. Change Orders (numbers) that have affected value.
    - g. Dollar value.
    - h. Percentage of Contract Sum to the nearest one-hundredth percent, adjusted to total 100 percent.
  3. Provide a breakdown of the Contract Sum in sufficient detail to facilitate continued evaluation of Applications for Payment and progress reports. Break principal subcontract amounts down into several line items.
  4. Round amounts off to the nearest whole dollar; the total shall equal the Contract Sum.
  5. For each part of the Work where an Application for Payment may include materials or equipment, purchased or fabricated and stored, but not yet installed, provide separate line items on the Schedule of Values for initial cost of the materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
  6. Tabulate schedule into subcontracts and trades for each of which the quantity, labor, materials, other cost and resulting final cost per unit shall be indicated. Quantity, labor, materials, other cost and cost per unit generally include but are not necessarily limited to the following:
    - a. Quantity; total number of times for each portion or unit of work as determined from the Contract Documents.
    - b. Labor; on site labor for the handling and installation of material from point of delivery at site.
    - c. Material; cost of materials as delivered to the site for installation and erection.
    - d. Other cost; rental equipment, depreciation, site office, administration, overhead and profit, testing, survey and layout, samples and all other costs not included in labor and material.
    - e. Cost per unit; total of labor, material and other Cost for each portion or unit of work derived from the total quantity of same.

#### 1.4 PROGRESS PAYMENTS

- A. Based upon application for payments submitted to the Architect and Owner, by the Contractor, on the specified day of each month and Certificate of Payment certified by the Engineer/Architect, the Owner will make progress payments on account of the Contract Sum to the Contractor as follows:

1. In making progress payments, there shall be retained two percent (2%) of the approved amount when the outstanding balance of the contract exceeds \$500,000, and 5% of the amount due on each partial payment when the outstanding balance of the contract is \$500,000 or less, until final completion and acceptance of all work covered by the Contract, including the completion of all corrective or punch list items.
2. For each day delay in the Contractor's submission of an application for payment acceptable to the Engineer/Architect and Owner, the Owner may delay one day in making his progress payment.

1.5 APPLICATIONS FOR PAYMENT:

- A. The Contractor's monthly application for payment shall be in the same schedule form as the schedule of values, reflecting the same items. Unit costs shall be realistic for their part of the work.
- B. Each Application for Payment shall be consistent with previous applications and payments as approved by and paid for by the Owner.
  1. The initial Application for Payment, the Application for Payment at time of Substantial Completion, and the final Application for Payment involve additional requirements.
- C. Payment Application Times: Each Payment Application shall be made at the end of each month and shall be based upon the entire month's completed work. A "pencil copy" shall be submitted on or about the 25<sup>th</sup> of each month showing the projected completion of work for the month, for review.
- D. In accordance with [N.J.S.A. 2A:30A-2a](#) the following payment procedure shall be in effect:
  1. The **alternate procedure** for local units applies when local policies **require governing body** approval authorizing the payment of bills. In addition to ensuring the contractor has performed in accordance with the contract and that the work has been approved and certified by the owner or the owner's "authorized approving agent," the following provisions apply:
    2. The 20th calendar day deadline of the default procedure to approve and certify, or decide to withhold full or partial payment **is deferred until the public meeting following 20 calendar days of the billing date**, at which time the bill must be approved for payment or notice provided as to why the bill or any portion of it will not be approved.
    3. If the billing is approved, the 30-day payment requirement of the default is replaced by the requirement that the bill be paid in the payment cycle following the meeting.
- E. Payment Application Forms: Use AIA Document G 702 and Continuation Sheets G 703 as the form for Application for Payment.
- F. Application Preparation: Complete every entry on the form, including notarization and execution by person authorized to sign legal documents on behalf of the Contractor. Incomplete applications will be returned without action.

1. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions have been made.
  2. Include amounts of Change Orders and Construction Change Directives issued prior to the last day of the construction period covered by the application.
- G. Transmittal: Submit 3 executed copies of each Application for Payment to the Owner by means ensuring receipt within 24 hours; each copy shall be complete, including waivers of lien and similar attachments, when required.
1. Transmit each copy with a transmittal form listing attachments, and recording appropriate information related to the application in a manner acceptable to the Architect.
- H. Waivers of Mechanics Lien: Submit waivers of mechanics lien from every entity who may lawfully be entitled to file a mechanics lien arising out of the Contract, and related to the Work covered by the payment.
1. Submit final Application for Payment with final waivers from every entity involved with performance of Work covered by the application who could lawfully be entitled to a lien.
  2. Waiver Forms: Submit waivers of lien on forms, and executed in a manner, acceptable to Owner.
- I. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of the first Application for Payment include the following:
1. List of subcontractors.
  2. List of principal suppliers and fabricators.
  3. Schedule of Values.
  4. Contractor's Construction Schedule (preliminary if not final).
  5. Schedule of principal products.
  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 governing authorities for performance of the Work.

12. Initial progress report.
  13. Report of pre-construction meeting.
  14. Certificates of insurance and insurance policies.
  15. Performance and payment bonds (if required).
  16. Data needed to acquire Owner's insurance.
- J. Final Payment Application: Administrative actions and submittals which must precede or coincide with submittal of the final payment Application for Payment include the following:
1. Completion of Project closeout requirements.
  2. Completion of punch list items.
  3. Transmittal of required Project construction records to Owner.
  4. Proof that taxes, fees and similar obligations have been paid.
  5. Removal of temporary facilities and services.
  6. Removal of surplus materials, rubbish and similar elements.
  7. Contractor's Affidavit of Payments of Debts & Claims - AIA Document G706.
  8. Contractor's Affidavit of Release of Liens - AIA Document G706A.
  9. Consent of Surety to Final Payment - AIA Document G707.

#### 1.6 WAIVER OF LIENS

- A. The Contractor, for himself, and for all Subcontractors and material men, agrees that no mechanic's lien or other claim shall be filed or maintained by the Contractor or by any Subcontractor, material man, laborer or any other person whatsoever for, or on account of any work performed or materials furnished under this Contract. This agreement shall execute and deliver a separate waiver of Liens in form and substance satisfactory to the Owner contemporaneously with the execution of the Owner-Contractor Agreement and before any work is begun at the site.
- B. In every subcontract entered into by the Contractor after execution of this Contract or in connection herewith, the Contractor shall incorporate a provision, similar to the foregoing paragraph, to the effect that neither the Subcontractor nor any party acting through or under him shall file or maintain any mechanic's lien or other claim against the Owner in connection with the Work.

## **PART 2 - PRODUCTS (Not Applicable)**

Improvements to the Jury Waiting Room  
In the City of Elizabeth for the  
County of Union, New Jersey

USA # 2017-011

**PART 3 - EXECUTION (Not Applicable)**

**END OF SECTION 01 29 00**

## **SECTION 01 31 13 - PROJECT 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. This Section specifies administrative and supervisory requirements necessary for Project coordination including, but not necessarily limited to:
  - 1. Coordination as a responsibility of each contractor.
  - 2. Special responsibility of the General Contractor for coordination.
  - 3. Administrative and supervisory personnel.
  - 4. General installation provisions.
  - 5. Cleaning and protection.
- B. Field engineering is included in Section "Field Engineering".
- C. Progress meetings, coordination meetings and pre-installation conferences are included in Section "Project Meetings".
- D. Requirements for the Contractor's Construction Schedule are included in Section "Submittals".

#### **1.3 COORDINATION**

- A. Coordination: Each Contractor shall coordinate construction activities included under various Sections of these Specifications to assure efficient and orderly installation of each part of the Work. Coordinate construction operations included under different Sections of the Specifications that are dependent upon each other for proper installation, connection, and operation.
  - 1. Where installation of one part of the Work is dependent on installation of other components, either before or after its own installation, schedule construction activities in the sequence required to obtain the best results.
  - 2. Where availability of space is limited, coordinate installation of different components to assure maximum accessibility for required maintenance, service and repair.

3. Make adequate provisions to accommodate items scheduled for later installation.

#### 1.4 SPECIAL RESPONSIBILITIES OF THE GENERAL CONTRACTOR AS PRINCIPAL PROJECT COORDINATOR

- A. Where necessary, prepare memoranda for distribution to each party involved outlining special procedures required for coordination. Include such items as required notices, reports, and attendance at meetings.
  1. Prepare similar memoranda for the Owner and separate Contractors where coordination of their Work is required.
- B. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
  1. Preparation of schedules.
  2. Installation and removal of temporary facilities.
  3. Delivery and processing of submittals.
  4. Progress meetings.
  5. Project Close-out activities.
- C. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.
  1. Salvage materials and equipment involved in performance of, but not actually incorporated in, the Work. Refer to other sections for disposition of salvaged materials that are designated as Owner's property.

#### 1.5 SUBMITTALS

- A. Coordination Drawings: The General Contractor shall prepare and submit coordination Drawings based on appropriate information from each prime, where close and careful coordination is required for installation of products and materials fabricated off-site by separate entities, and where limited space availability necessitates maximum utilization of space for efficient installation of different components.
  1. Show the interrelationship of components shown on separate Shop Drawings.
  2. Indicate required installation sequences.
  3. Comply with requirements contained in Section "Submittals."



4. Refer to Division 23 Section "Basic Mechanical Requirements," and Division 26 Section "Basic Electrical Requirements" for specific coordination Drawing requirements for mechanical and electrical installations, for each building.
- B. Staff Names: Within 10 days of Notice to Proceed, submit a list of the Contractor's principal staff assignments, including the Superintendent and other personnel in attendance at the site; identify individuals, their duties and responsibilities; list their addresses and telephone numbers.
  1. Post copies of the list in the Project meeting room, the temporary field office, and each temporary telephone.

**PART 2 - PRODUCTS (Not Applicable).**

**PART 3 - EXECUTION**

3.1 GENERAL INSTALLATION PROVISIONS

- A. Inspection of Conditions: Require the Installer of each major component to inspect both the substrate and conditions under which Work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.
- B. Manufacturer's Instructions: Comply with manufacturer's installation instructions and recommendations, to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in Contract Documents.
- C. Inspect materials or equipment immediately upon delivery and again prior to installation. Reject damaged and defective items.
- D. Provide attachment and connection devices and methods necessary for securing Work. Secure Work true to line and level. Allow for expansion and building movement.
- E. Visual Effects: Provide uniform joint widths in exposed Work. Arrange joints in exposed Work to obtain the best visual effect. Refer questionable choices to the Architect for final decision.
- F. Recheck measurements and dimensions, before starting each installation.
- G. Install each component during weather conditions and Project status that will ensure the best possible results. Isolate each part of the completed construction from incompatible material as necessary to prevent deterioration.
- H. Coordinate temporary enclosures with required inspections and tests, to minimize the necessity of uncovering completed construction for that purpose.
- I. Mounting Heights: Where mounting heights are not indicated, install individual components at standard mounting heights recognized within the industry for the particular application indicated. Refer questionable mounting height decisions to the Architect for final decision.

3.2 CLEANING AND PROTECTION

- A. During handling and installation, clean and protect construction in progress and adjoining materials in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- B. Clean and maintain completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- C. Limiting Exposures: Supervise construction activities to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period. Where applicable, such exposures include, but are not limited to, the following:
  - 1. Excessive static or dynamic loading.
  - 2. Excessive internal or external pressures.
  - 3. Excessively high or low temperatures.
  - 4. Thermal shock.
  - 5. Excessively high or low humidity.
  - 6. Air contamination or pollution.
  - 7. Water or ice.
  - 8. Solvents.
  - 9. Chemicals.
  - 10. Light.
  - 11. Radiation.
  - 12. Puncture.
  - 13. Abrasion.
  - 14. Heavy traffic.
  - 15. Soiling, staining and corrosion.
  - 16. Bacteria.
  - 17. Rodent and insect infestation.
  - 18. Combustion.

19. Electrical current.
20. High speed operation,
21. Improper lubrication,
22. Unusual wear or other misuse.
23. Contact between incompatible materials.
24. Destructive testing.
25. Misalignment.
26. Excessive weathering.
27. Unprotected storage.
28. Improper shipping or handling.
29. Theft.
30. Vandalism.

**END OF SECTION 01 31 13**

## **SECTION 01 33 00 - SUBMITTALS**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

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

#### **1.2 SUMMARY**

- A. This Section specifies administrative and procedural requirements for submittals required for performance of the Work, including;
  - a. Each Prime Contractor's construction schedule.
  - b. The Overall Project Schedule.
  - c. Submittal schedule.
  - d. Daily construction reports.
  - e. Shop Drawings.
  - f. Product Data and Samples.
- B. Administrative Submittals: Refer to other Division-1 Sections and other Contract Documents for requirements for administrative submittals. Such submittals include, but are not limited to:
  - a. Permits.
  - b. Applications for payment.
  - c. Performance and payment bonds.
  - d. Insurance certificates.
  - e. List of Subcontractors.
- C. The Schedule of Values submittal is included in Section "Applications for Payment."
- D. Inspection and test reports are included in Section "Quality Control Services."

#### **1.3 SUBMITTAL PROCEDURES**

- A. Shop drawings, product data and samples will not be processed by Architect until list of subcontractors, material suppliers and fabricators is submitted as required by General and Supplementary Conditions.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
  - 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 elements of the Work so processing will not be delayed by the need to review submittals concurrently for coordination.
    - a. The Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
  3. Processing: Allow sufficient review time so that installation will not be delayed as a result of the time required to process submittals, including time for re-submittals.
    - a. Allow two weeks for initial review. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. The Architect will promptly advise the Contractor when a submittal being processed must be delayed for coordination.
    - b. If an intermediate submittal is necessary, process the same as the initial submittal.
    - c. Allow two weeks for reprocessing each submittal.
    - d. No extension of Contract Time will be authorized because of failure to transmit submittals to the Architect sufficiently in advance of the Work to permit processing.
- C. Submittal Preparation: Place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block.
1. Provide a space approximately 4" x 5" on the label or beside the title block on Shop Drawings to record the Contractor's review and approval markings and the action taken.
  2. Include the following information on the label for processing and recording action taken.
    - a. Project name.
    - b. Date.
    - c. Name and address of Architect.
    - d. Name and address of Contractor.
    - e. Name and address of subcontractor.
    - f. Name and address of supplier.
    - g. Name of manufacturer.
    - h. Number and title of appropriate Specification Section.
    - i. Drawing number and detail references, as appropriate.
- D. Submittal Transmittal: Package each submittal appropriately for transmittal and handling. Transmit each submittal from Contractor to Architect using a transmittal form. Submittals received from sources other than the Contractor will be returned without action.
1. On the transmittal Record relevant information and requests for data. On the form, or separate sheet, record deviations from Contract Document requirements, including minor variations and limitations. Include Contractor's certification that information complies with Contract Document requirements.
- E. Contractor is responsible for all printing and distribution to all interested Contractors, subcontractors and suppliers. After Architect's review, prints bearing Architect's review stamp shall be forwarded by Contractor directly to Owner, Owner's Representative and Contractor's Superintendent at site. Contractor shall forward additional approved copies to all interested Contractors, subcontractors and suppliers on project.

- F. All shop drawings, samples and/or material or equipment submittals shall bear the Contractor's stamp or seal stating that the Contractor has reviewed the submittals and they conform to the requirements of the Contract Documents.
1. By submitting shop drawings, product data, samples, and similar submittals, the Contractor represents that he has determined and verified:
    - a. Dimensions, quantities, field dimensions, and relationship to existing Work.
    - b. Coordination with Work to be installed later.
    - c. Work on shop drawings is accurate and clearly shown.
    - d. Work equipment will fit into assigned spaces with sufficient access for servicing and maintenance.
    - e. Coordination with information on previously accepted shop drawings, product data, samples, or similar submittals.
    - f. Full compliance with requirements of Contract Documents.
  2. In reviewing shop drawings, product data, samples and similar submittals, the Architect/Engineer shall be entitled to rely upon the Contractor's representation that information in submittals is correct and accurate.
  3. Submittals that are returned or rejected because of insufficient Contractor review or coordination shall not be justification for a claim for an extension of time.

#### 1.4 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Bar-Chart Schedule: Each prime contractor shall prepare a fully developed, horizontal bar-chart type Contractor's construction schedule, and submit same to the General Contractor within 10 days of the date established for "Commencement of the Work". The General Contractor/Project Coordinator will appropriately adjust each primes schedule to incorporate it into the Overall Project Construction Schedule as indicated below:
- a. Provide a separate time bar for each significant construction activity. Provide a continuous vertical line to identify the first working day of each week. Use the same breakdown of units of the Work as indicated in the "Schedule of Values".
  - b. Within each time bar indicate estimated completion percentage in 10 percent increments. As Work progresses, place a contrasting mark in each bar to indicate Actual Completion.
  - c. Prepare the schedule on a sheet, or series of sheets, of stable transparency, or other reproducible media, of sufficient width to show data for the entire construction period.
  - d. Secure time commitments for performing critical elements of the Work from parties involved. Coordinate each element on the schedule with other construction activities; include minor elements involved in the sequence of the Work. Show each activity in proper sequence. Indicate graphically sequences necessary for completion of related portions of the Work.
  - e. Coordinate the Contractor's construction schedule with the schedule of values, list of subcontracts, submittal schedule, progress reports, payment requests and other schedules.
  - f. Indicate completion in advance of the date established for Substantial Completion. Indicate Substantial Completion on the schedule to allow time for the Architect's procedures necessary for certification of Substantial Completion.

- B. Phasing: Provide notations on the schedule to show how the sequence of the Work is affected by requirements for phased completion to permit Work by separate Contractors and partial occupancy by the Owner prior to Substantial Completion.
- C. Work Stages: Indicate important stages of construction for each major portion of the Work, including testing and installation.
- D. Area Separations: Provide a separate time bar to identify each major construction area for each major portion of the Work. Indicate where each element in an area must be sequenced or integrated with other activities.
- E. Distribution: Following response to the initial submittal, print and distribute copies to the Architect, Owner, subcontractors, and other parties required to comply with scheduled dates. Post copies in the Project meeting room and temporary field office.
- F. Schedule Updating: Revise the schedule after each meeting or activity, where revisions have been recognized or made. Issue the updated schedule concurrently with report of each meeting.

#### 1.5 SUBMITTAL SCHEDULE

- A. After development and acceptance of the Contractor's construction schedule and the Overall Project Schedule, prepare a complete schedule of submittals. Submit the schedule within 10 days of the date required for establishment of the Contractor's construction schedule. All submittals shall be made within 30 days of the date of Notice to Proceed.
  - 1. Coordinate submittal schedule with the list of subcontracts, schedule of values and the list of products as well as the Contractor's construction schedule.
  - 2. Prepare the schedule in chronological order; include submittals required during the first 90 days of construction. Provide the following information:
    - a. Scheduled date for the first submittal.
    - b. Related Section number.
    - c. Submittal category.
    - d. Name of subcontractor.
    - e. Description of the part of the Work covered.
- B. Distribution: Following response to initial submittal, print and distribute copies to the Architect, Owner, subcontractors, and other parties required to comply with submittal dates indicated. Post copies in the Project meeting room and field office.
- C. Schedule Updating: Revise the schedule after each meeting or activity, where revisions have been recognized or made. Issue the updated schedule concurrently with report of each meeting.

#### 1.6 DAILY CONSTRUCTION REPORTS

- A. Prepare a daily construction report, recording the following information concerning events at the site; and submit duplicate copies to the Architect at weekly intervals:

- a. List of subcontractors at the site.
- b. Approximate count of personnel at the site.
- c. High and low temperatures, general weather conditions.
- d. Accidents and unusual events.
- e. Meetings and significant decisions.
- f. Stoppages, delays, shortages, losses.
- g. Meter readings and similar recordings.
- h. Emergency procedures.
- i. Orders and requests of governing authorities.
- j. Change Orders received, implemented.
- k. Services connected, disconnected.
- l. Equipment or system tests and start-ups.
- m. Partial Completions, occupancies.
- n. Substantial Completions authorized.

#### 1.7 SHOP DRAWINGS

- A. Submit newly prepared information, drawn to accurate scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not considered Shop Drawings.
- B. Shop Drawings include fabrication and installation drawings, setting diagrams, schedules, patterns, templates and similar drawings. Include the following information:
  - a. Dimensions.
  - b. Identification of products and materials included.
  - c. Compliance with specified standards.
  - d. Notation of coordination requirements.
  - e. Notation of dimensions established by field measurement.
  - f. Sheet Size: Except for templates, patterns and similar full- size Drawings, submit Shop Drawings on sheets at least 8-1/2" x 11" but no larger than 36" x 48".
  - g. Initial Submittal: Submit six (6) blue- or black-line prints for the Architect's review; all but one print will be returned.
    - 1) One of the prints returned shall be marked-up and maintained as a "Record Document".
  - h. Do not use Shop Drawings without an appropriate final stamp indicating action taken in connection with construction.
- C. Coordination drawings are a special type of Shop Drawing that show the relationship and integration of different construction elements that require careful coordination during fabrication or installation to fit in the space provided or function as intended.
  1. Preparation of coordination Drawings is specified in section "Project Coordination" and may include components previously shown in detail on Shop Drawings or Product Data.
  2. Submit coordination Drawings for integration of different construction elements. Show sequences and relationships of separate components to avoid conflicts in use of space.



## 1.8 PRODUCT DATA

- A. Collect Product Data into a single submittal for each element of construction or system. Product Data includes printed information such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams and performance curves. Where Product Data must be specially prepared because standard printed data is not suitable for use, submit as "Shop Drawings."
1. Mark each copy to show applicable choices and options. Where printed Product Data includes information on several products, some of which are not required, mark copies to indicate the applicable information. Include the following information:
    - a. Manufacturer's printed recommendations.
    - b. Compliance with recognized trade association standards.
    - c. Compliance with recognized testing agency standards.
    - d. Application of testing agency labels and seals.
    - e. Notation of dimensions verified by field measurement.
    - f. Notation of coordination requirements.
  2. Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.
  3. Submittals: Submit six (6) copies of each required submittal; The Architect or Engineer will retain one, and will return the others marked with action taken and corrections or modifications required.
    - a. Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.
  4. Distribution: Furnish copies of final submittal to installers, subcontractors, suppliers, manufacturers, fabricators, and others required for performance of construction activities. Show distribution on transmittal forms.
    - a. Do not proceed with installation until an applicable copy of Product Data applicable is in the installer's possession.
    - b. Do not permit use of unmarked copies of Product Data in connection with construction.

## 1.9 SAMPLES

- A. Submit full-size, fully fabricated Samples cured and finished as specified and physically identical with the material or product proposed. Samples include partial sections of manufactured or fabricated components, cuts or containers of materials, color range sets, and swatches showing color, texture and pattern.
1. Mount, display, or package Samples in the manner specified to facilitate review of qualities indicated. Include the following:
    - a. Generic description of the Sample.

- b. Sample source.
    - c. Product name or name of manufacturer.
    - d. Compliance with recognized standards.
    - e. Availability and delivery time.
  2. Submit Samples for review of kind, color, pattern, and texture, for a final check of these characteristics with other elements, and for a comparison of these characteristics between the final submittal and the actual component as delivered and installed.
    - a. Where variation in color, pattern, texture or other characteristics are inherent in the material or product represented, submit multiple units (not less than 3), that show approximate limits of the variations.
    - b. Refer to other Specification Sections for requirements for Samples that illustrate workmanship, fabrication techniques, details of assembly, connections, operation and similar construction characteristics.
  3. Preliminary submittals: Where Samples are for selection of color, pattern, texture or similar characteristics from a range of standard choices, submit a full set of choices for the material or product.
    - a. Preliminary submittals will be reviewed and returned with the Architect's mark indicating selection and other action.
  4. Submittals: Except for Samples illustrating assembly details, workmanship, fabrication techniques, connections, operation and similar characteristics, submit 3 sets; one will be returned marked with the action taken.
  5. Maintain sets of Samples, as returned, at the Project site, for quality comparisons throughout the course of construction.
    - a. Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.
    - b. Sample sets may be used to obtain final acceptance of the construction associated with each set.
- B. Distribution of Samples: Prepare and distribute additional sets to subcontractors, manufacturers, fabricators, suppliers, installers, and others as required for performance of the Work. Show distribution on transmittal forms.
1. Field Samples specified in individual Sections are special types of Samples. Field Samples are full-size examples erected on site to illustrate finishes, coatings, or finish materials and to establish the standard by which the Work will be judged.
    - a. Comply with submittal requirements to the fullest extent possible. Process transmittal forms to provide a record of activity.

#### 1.10 ARCHITECT'S ACTION

- A. Except for submittals for record, information or similar purposes, where action and return is required or requested, the Architect will review each submittal, mark to indicate action taken, and return promptly.

1. Compliance with specified characteristics is the Contractor's responsibility.
- B. Action Stamp: The Architect will stamp each submittal with a uniform, self-explanatory action stamp.
- C. Unsolicited Submittals: Unsolicited Submittals and Submittals not required by the Contract Documents may not be reviewed, may be discarded or returned to the sender without action.
- D. Repetitive Submittals: The Architect will take appropriate action TWICE (2) times, for each item submitted. Submittals requiring more than two (2) reviews due to inadequate or incomplete information, shall be subject to a review fee for each subsequent submittal. This fee shall be based upon the hourly rate of the Architect, charged to the Owner, and deducted from the Contract amount.

**PART 2 - PRODUCTS (Not Applicable).**

**PART 3 - EXECUTION (Not Applicable).**

**END OF SECTION 01 33 00**

## **SECTION 01 40 00- QUALITY CONTROL SERVICES**

### **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. This Section specifies administrative and procedural requirements for quality control services.
- B. Quality control services include inspections and tests and related actions including reports, performed by independent agencies, governing authorities, and the Contractor. They do not include Contract enforcement activities performed by the Architect.
- C. Inspection and testing services are required to verify compliance with requirements specified or indicated. These services do not relieve the Contractor of responsibility for compliance with Contract Document requirements.
- D. Requirements of this Section relate to customized fabrication and installation procedures, not production of standard products.
  - 1. Specific quality control requirements for individual construction activities are specified in the Sections that specify those activities. Those requirements, including inspections and tests, cover production of standard products as well as customized fabrication and installation procedures.
  - 2. Inspections, test and related actions specified are not intended to limit the Contractor's quality control procedures that facilitate compliance with Contract Document requirements.
  - 3. Requirements for the Contractor to provide quality control services required by the Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.

#### **1.3 RESPONSIBILITIES**

- A. Contractor Responsibilities: The Contractor shall provide inspections, tests and similar quality control services, specified in individual Specification Sections and required by governing authorities, except where they are specifically indicated to be the Owner's responsibility, or are provided by another identified entity; these services include those specified to be performed by an independent agency and not by the Contractor. Costs for these services shall be included in the Contract Sum.
  - 1. The Contractor shall employ and pay an independent agency, to perform specified quality control services.

- a. Where the Owner has engaged a testing agency or other entity for testing and inspection of a part of the Work, and the Contractor is also required to engage an entity for the same or related element, the Contractor shall not employ the entity engaged by the Owner, unless otherwise agreed in writing with the Owner.
2. Retesting: The Contractor is responsible for retesting where results of required inspections, tests or similar services prove unsatisfactory and do not indicate compliance with Contract Document requirements, regardless of whether the original test was the Contractor's responsibility.
  - a. Cost of retesting construction revised or replaced by the Contractor is the Contractor's responsibility.
3. Associated Services: The Contractor shall cooperate with agencies performing required inspections, tests and similar services and provide reasonable auxiliary services as requested. Notify the agency sufficiently in advance of operations to permit assignment of personnel. Auxiliary services required include but are not limited to:
  - a. Providing access to the Work and furnishing incidental labor and facilities necessary to facilitate inspections and tests.
  - b. Taking adequate quantities of representative samples of materials that require testing or assisting the agency in taking samples.
  - c. Providing facilities for storage and curing of test samples, and delivery of samples to testing laboratories.
  - d. Security and protection of samples and test equipment at the Project site.
- B. Duties of the Testing Agency: The independent testing agency engaged to perform inspections, sampling and testing of materials and construction specified in individual Specification Sections shall cooperate with the Architect and Contractor in performance of its duties, and shall provide qualified personnel to perform required inspections and tests.
  - a. The agency shall notify the Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
  - b. The agency is not authorized to release, revoke, alter or enlarge requirements of the Contract Documents, or approve or accept any portion of the Work.
  - c. The agency shall not perform any duties of the Contractor.
- C. Coordination: The Contractor and each agency engaged to perform inspections, tests and similar services shall coordinate the sequence of activities to accommodate required services with a minimum of delay. In addition the Contractor and each agency shall coordinate activities to avoid the necessity of removing and replacing construction to accommodate inspections and tests.
  1. The Contractor is responsible for scheduling times for inspections, tests, taking samples and similar activities.

#### 1.4 SUBMITTALS

- A. The independent testing agency shall submit a certified written report of each inspection, test or similar service, to the Architect, in duplicate, unless the Contractor is responsible for the service. If the Contractor is responsible for the service, submit a certified written report of each inspection, test or similar service through the Contractor, in duplicate.

1. Submit additional copies of each written report directly to the governing authority, when the authority so directs.
2. Report Data: Written reports of each inspection, test or similar service shall include, but not be limited to:
  - a. Date of issue.
  - b. Project title and number.
  - c. Name, address and telephone number of testing agency.
  - d. Dates and locations of samples and tests or inspections.
  - e. Names of individuals making the inspection or test.
  - f. Designation of the Work and test method.
  - g. Identification of product and Specification Section.
  - h. Complete inspection or test data.
  - i. Test results and an interpretation of test results.
  - j. Location of sample or test in project.
  - k. Ambient conditions at the time of sample-taking and testing.
  - l. Professional opinion as to whether Work complies with Contract Documents requirements.
  - m. Name and signature of laboratory inspector.
  - n. Recommendations on retesting.

#### 1.5 QUALITY ASSURANCE

- A. Qualification for Service Agencies: Engage inspection and testing service agencies, including independent testing laboratories, which are prequalified as complying with "Recommended Requirements for Independent Laboratory Qualification" by the American Council of Independent Laboratories, and which specialize in the types of inspections and tests to be performed.
  1. Each independent inspection and testing agency engaged on the Project shall be authorized by authorities having jurisdiction to operate in the State in which the Project is located.

#### 1.6 TRADESMEN & WORKMANSHIP

- A. Ensure that tradesmen performing work at site are skilled and knowledgeable in methods and craftsmanship needed to produce required quality levels for workmanship in completed work. Remove and replace work which does not comply with workmanship standards as specified and as recognized in the construction industry for applications indicated. Remove and replace other work damaged or deteriorated by faulty workmanship or its replacement.

### **PART 2 - PRODUCTS (Not Applicable).**

### **PART 3 - EXECUTION**

#### **3.1 REPAIR AND PROTECTION**

- A. General: Upon completion of inspection, testing, sample-taking and similar services, repair damaged construction and restore substrates and finishes to eliminate deficiencies, including deficiencies in visual qualities of exposed finishes. Comply with Contract Document requirements for "Cutting and Patching."
- B. Protect construction exposed by or for quality control service activities, and protect repaired construction.
- C. Repair and protection is the Contractor's responsibility, regardless of the assignment of responsibility for inspection, testing or similar services.

#### **3.2 REPLACEMENT OF WORK**

- A. Within 24 hours after rejection of work pursuant to the General Conditions, remove all materials and equipment so rejected and immediately replace work, at the Contractor's cost, to the satisfaction of the Architect. Should the work of the Owner or other Contractors be damaged by such removal or replacement, the Contractor shall reimburse the Owner or other Contractors for all costs incurred for correcting damage.

**END OF SECTION 01 40 00**

## **SECTION 01 42 19 - REFERENCE STANDARDS AND DEFINITIONS**

### **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 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. Indicated: The term "indicated" refers to graphic representations, notes or schedules on the Drawings, or other Paragraphs or Schedules in the Specifications, and similar requirements in the Contract Documents. Where terms such as "shown," "noted," "scheduled," and "specified" are used, it is to help the reader locate the reference; no limitation on location is intended.
- C. Directed: Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean "directed by the Architect," "requested by the Architect," and similar phrases.
- D. Approve: The term "approved," where used in conjunction with the Architect's action on the Contractor's submittals, applications, and requests, is limited to the Architect's duties and responsibilities as stated in the Conditions of the Contract.
- E. Regulation: The term "Regulations" includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. Furnish: The term "furnish" is used to mean "supply and deliver to the Project site, ready for unloading, unpacking, assembly, installation, and similar operations."
- G. Install: The term "install" is used to describe operations at project site including the actual "unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations."
- H. Provide: The term "provide" means "to furnish and install, complete and ready for the intended use."
- I. Installer: An "Installer" is the Contractor or an entity engaged by the Contractor, either as an employee, subcontractor, or contractor of lower tier for performance of a particular construction activity, including installation, erection, application, and similar operations. Installers are required to be experienced in the operations they are engaged to perform.



1. The term "experienced," when used with the term "Installer," means having a minimum of five previous projects similar in size and scope to this Project, being familiar with the special requirements indicated, and having complied with requirements of the authority having jurisdiction.
  2. Trades: Use of titles such as "carpentry" is not intended to imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespersons of the corresponding generic name.
  3. Assignment of Specialists: Certain Sections of the Specifications require that specific construction activities shall be performed by specialists who are recognized experts in the operations to be performed. The specialists must be engaged for those activities, and assignments are requirements over which the Contractor has no choice or option. Nevertheless, the ultimate responsibility for fulfilling Contract requirements remains with the Contractor.
    - a. This requirement shall not be interpreted to conflict with enforcement of building codes and similar regulations governing the Work. It is also not intended to interfere with local trade union jurisdictional settlements and similar conventions.
- J. Project Site is the space available to the Contractor for performance of construction activities, either exclusively or in conjunction with others performing other work as part of the Project. The extent of the Project Site is shown on the Drawings and may or may not be identical with the description of the land on which the Project is to be built.
- K. Testing Laboratories: A "testing laboratory" is an independent entity engaged to perform specific inspections or tests, either at the Project Site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests.
- 1.3 SPECIFICATION FORMAT AND CONTENT EXPLANATION
- A. Specification Format: These Specifications are organized into Divisions and Sections based on the Construction Specifications Institute's 50 Division format and MASTERFORMAT numbering system.
- B. Specification Content: This Specification uses certain conventions in the use of language and the intended meaning of certain terms, words, and phrases when used in particular situations or circumstances. These conventions are explained as follows:
1. Abbreviated Language: Language used in Specifications and other Contract Documents is the abbreviated type. Words and meanings shall be interpreted as appropriate. Words that are implied, but not stated shall be interpolated as the sense required. Singular words will be interpreted as plural and plural words interpreted as singular where applicable and the context of the Contract Documents so indicates.
  2. Imperative and streamlined language is used generally in the Specifications. Requirements expressed in the imperative mode are to be performed by the Contractor. At certain

locations in the text, for clarity, subjective language is used to describe responsibilities that must be fulfilled indirectly by the Contractor, or by others when so noted.

#### 1.4 INDUSTRY STANDARDS

- A. **Applicability of Standards:** Except where the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. **Publication Dates:** Comply with the standard in effect as of the date of the Contract Documents.
- C. **Copies of Standards:** Each entity engaged in construction on the Project is required to be familiar with industry standards applicable to that entity's construction activity. Copies of applicable standards are not bound with the Contract Documents.
  - 1. Where copies of standards are needed for performance of a required construction activity, the Contractor shall obtain copies directly from the publication source.
- D. **Abbreviations and Names:** Trade association names and titles of general standards are frequently abbreviated. Where such acronyms or abbreviations are used in the Specifications or other Contract Documents, they mean the recognized name of the trade association, standards generating organization, authority having jurisdiction, or other entity applicable to the context of the text provision. Refer to the "Encyclopedia of Associations," published by Gale Research Co., available in most libraries.

#### 1.5 SUBMISSIONS

- A. For the Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, and similar documents, correspondence and records established in conjunction with compliance with standards and regulations bearing upon performance of the work.

### **PART 2 - PRODUCTS (Not Applicable)**

### **PART 3 - EXECUTION (Not Applicable)**

**END OF SECTION 01 42 19**

## **SECTION 01 50 00 - TEMPORARY CONSTRUCTION FACILITIES AND CONTROLS**

### **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. This Section specifies requirements for temporary services and facilities, including utilities, construction and support facilities, security and protection.
  - 1. Pay for all fees and permits. Pay all usage costs required for temporary services.
- B. Temporary construction and support facilities required include but are not limited to:
  - a. Field offices and storage sheds.
  - b. Sanitary facilities, including drinking water.
  - c. Light and Temporary Heat and Ventilation.
  - d. Telephone service.
  - e. Temporary enclosures, including building security.
  - f. Hoists.
  - g. Temporary Project identification signs and bulletin boards.
  - h. Waste disposal services, Rodent and pest control.
  - i. Construction aids and miscellaneous services and facilities.
- C. Security and protection facilities required include but are not limited to:
  - a. Temporary fire protection.
  - b. Barricades, warning signs, lights.
  - c. Environmental protection.

#### **1.3 DIVISION OF RESPONSIBILITIES**

- A. Each Contractor is responsible for:
  - a. Installation, operation, maintenance and removal of each temporary service or facility usually considered as its own normal construction activity, as well as the costs and use charges associated with each such service or facility.
  - b. Plug in electric power cords and extension cords, and supplementary plug in task lighting and special lighting necessary exclusively for its own activities.
  - c. Field offices, storage sheds and Waste disposal services.
  - d. Telephone service.
  - e. Hoisting requirements.
  - f. Secure lockup of its own tools, materials and equipment.

- g. Construction aids and miscellaneous services exclusively for its own work activities.

#### 1.4 USE CHARGES

- A. Electric power from the Owner's existing system may be used.
- B. Other entities using temporary services and facilities include, but are not limited to:
  - a. Other non-prime Contractors.
  - b. The Owner's work forces.
  - c. The Architect and his consultants.
  - d. Testing Agencies
  - e. Personnel of government agencies.

#### 1.5 QUALITY ASSURANCE

- A. Regulations: Comply with industry standards and applicable laws and regulations of authorities having jurisdiction, including but not limited to:
  - a. Building Code requirements.
  - b. Health and safety regulations.
  - c. Utility company regulations.
  - d. Police, Fire Department and Rescue Squad rules.
  - e. Environmental protection regulations.
- B. Standards: Comply with NFPA Code 241, "Building Construction and Demolition Operations", ANSI-A10 Series standards for "Safety Requirements for Construction and Demolition", and NECA Electrical Design Library "Temporary Electrical Facilities."
  - 1. Refer to "Guidelines for Bid Conditions for Temporary Job Utilities and Services", prepared jointly by AGC and ASC, for industry recommendations.
  - 2. Electrical Service: Comply with NEMA, NECA and UL standards and regulations for temporary electric service. Install service in compliance with the National Electric Code (NFPA 70), latest editions.
  - 3. Assigned responsibilities for installation and operation of temporary utilities are not intended to interfere with the normal application of trade regulations and union jurisdiction.
- C. Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.

#### 1.6 PROJECT CONDITIONS

- A. Temporary Utilities: Prepare a schedule indicating dates for implementation and termination of each temporary utility. At the earliest feasible time, when acceptable to the Owner, change over from use of temporary service to use of the permanent service.

- B. Conditions of Use: Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Take necessary fire prevention measures. Do not overload facilities, or permit them to interfere with progress. Do not allow hazardous dangerous or unsanitary conditions, or public nuisances to develop or persist on the site.

## **PART 2 - PRODUCTS**

### 2.1 MATERIALS

- A. General: Provide new materials; if acceptable to the Architect, undamaged previously used materials in serviceable condition may be used. Provide materials suitable for the use intended.
- B. Tarpaulins: Provide waterproof, fire-resistant, UL labeled tarpaulins with flame-spread rating of 15 or less. For temporary enclosures provide translucent nylon reinforced laminated polyethylene or polyvinyl chloride fire retardant tarpaulins.
- C. Water: Provide potable water approved by local health authorities.

### 2.2 EQUIPMENT

- A. General: Provide new equipment; if acceptable to the Architect, undamaged, previously used equipment in serviceable condition may be used. Provide equipment suitable for use intended.
- B. Electrical Outlets: Provide properly configured NEMA polarized outlets to prevent insertion of 110-120 volt plugs into higher voltage outlets. Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button and pilot light, for connection of power tools and equipment.
- C. Electrical Power Cords: Provide grounded extension cords; use "hard-service" cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords, if single lengths will not reach areas where construction activities are in progress.
- D. Lamps and Light Fixtures: Provide general service incandescent lamps of wattage required for adequate illumination. Provide guard cages or tempered glass enclosures, where exposed to breakage. Provide exterior fixtures where exposed to moisture.
- E. Temporary Toilet Units: Provide self-contained single-occupant toilet units of the chemical, aerated recirculation, or combustion type, properly vented and fully enclosed with a glass fiber reinforced polyester shell or similar nonabsorbent material.
- F. First Aid Supplies: Comply with governing regulations.
- G. Fire Extinguishers: Provide hand-carried, portable UL-rated, class "A" fire extinguishers for temporary offices and similar spaces. In other locations provide hand-carried, portable, UL-rated, class "ABC" dry chemical extinguishers, or a combination of extinguishers of NFPA recommended classes for the exposures.

1. Comply with NFPA 10 and 241 for classification, extinguishing agent and size required by location and class of fire exposure.

### 2.3 TEMPORARY HEAT

- A. The General Contractor shall provide temporary heating, equipment and fuel, when required for temporary protection of concrete, masonry finishes and other work including the work of other prime contracts, by methods meeting approval of the Architect in conformance with NFPA Pamphlet No. 241. Owner's electrical power shall not be used as primary source of heat energy.
- B. The General Contractor shall maintain proper ventilating as required and as necessary so that the structure will have the circulation of air necessary for proper curing and protection of the work.

## **PART 3 - EXECUTION**

### 3.1 INSTALLATION

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

### 3.2 TEMPORARY UTILITY INSTALLATION

- A. Temporary Electric Power Service: Provide weatherproof, grounded electric power service and distribution system of sufficient size, capacity, and power characteristics during construction period. Include meters, transformers, overload protected disconnects, automatic ground-fault interrupters and main distribution switch gear.
  1. Except where overhead service must be used, install electric power service underground.
  2. Power Distribution System: Install wiring overhead, and rise vertically where least exposed to damage. Where permitted, wiring circuits not exceeding 125 Volts, AC 20 ampere rating, and lighting circuits may be nonmetallic sheathed cable where overhead and exposed for surveillance.

### 3.3 TEMPORARY CONSTRUCTION AND SUPPORT FACILITIES INSTALLATION

- A. Locate field offices, storage sheds, sanitary facilities and other temporary construction and support facilities for easy access.

1. Maintain temporary construction and support facilities until near Substantial Completion. Remove prior to Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to the Owner.
- B. Provide incombustible construction for offices, shops and sheds located within the construction area, or within 30 feet of building lines. Comply with requirements of NFPA 241.
- C. Temporary Enclosures: Provide temporary enclosure for protection of construction in progress and completed, from exposure, foul weather, other construction operations and similar activities.
  1. Install tarpaulins securely, with incombustible wood framing and other materials. Close openings of 25 square feet or less with plywood or similar materials.
  2. Close openings through floor or roof decks and horizontal surfaces with load-bearing wood-framed construction.
  3. Where temporary wood or plywood enclosure exceeds 100 square feet in area, use UL-labeled fire-retardant treated material for framing and main sheathing.
  4. The Contractor shall provide constant protection against rain, wind, storms, frost or heat so as to maintain the work, materials, apparatus and fixtures free from damage. At the end of each day's work, cover work likely to be damaged.
  5. Wherever a Contractor provides openings through walls or slabs, each location shall be adequately protected at the end of each working day with temporary enclosures to make these areas tight. Openings through exterior walls shall be water tight.
- D. Temporary Lifts and Hoists: Provide facilities for hoisting materials and employees. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.
  1. The Contractor shall provide and operate all hoists and derricks and furnish and erect all ladders and scaffolding required by him and his subcontractors, constructed to afford proper protection to craftsmen, their work and other work in progress and previously executed. Hoists, derricks and other apparatus shall be equipped with safety devices required by law and shall be so placed as not to interfere with, or damage, any work or property.
- E. Collection and Disposal of Waste: Collect waste from construction areas and elsewhere daily. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly. Do not hold materials more than 7 days during normal weather or 3 days when the temperature is expected to rise above 80 deg F (27 deg C). Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material in a lawful manner.

### 3.4 PROJECT SIGNS

- A. Signs needed to direct deliveries will be permitted with the approval of the Owner required before erection on the site.

### 3.5 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Temporary Fire Protection: Install and maintain temporary fire protection facilities of the types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 10 "Standard for Portable Fire Extinguishers," and NFPA 241 "Standard for Safeguarding Construction, Alterations and Demolition Operations."
1. Locate fire extinguishers where convenient and effective for their intended purpose.
  2. Store combustible materials in containers in fire-safe locations.
  3. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire protection facilities, stairways and other access routes for fighting fires. Prohibit smoking in hazardous fire exposure areas.
  4. Provide supervision of welding operations, combustion type temporary heating units, and similar sources of fire ignition.
  5. No welding, cutting by torch, or Work utilizing or causing inflammable waste shall be done unless adequate fire protection is provided and maintained for the duration of the Work in the area or operations.
  6. No fires for any purpose will be permitted on the Project. Remove all refuse from the Owner's property.
- B. Barricades, Warning Signs and Lights: Comply with standards and code requirements for erection of structurally adequate barricades. Paint with appropriate colors, graphics and warning signs to inform personnel and the public of the hazard being protected against. Where appropriate and needed provide lighting, including flashing red or amber lights.
- C. The Contractor shall provide barricades, guard lights and other appurtenances in the area of his operations for the protection of workmen and public as required by applicable regulations, and for the protection of streets, lighting, hydrants, walks, curbs and adjacent grounds and planting, for the duration of such operations. He shall bear the costs of damage caused by him, his Subcontractor or the employees of each. Warning lights shall be blinker type, battery or electrically operated. Open flame torches are not permitted.
- D. Environmental Protection: Provide protection, operate temporary facilities and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways and subsoil might be contaminated or polluted, or that other undesirable effects might result. Avoid use of tools and equipment which produce harmful noise. Restrict use of noise making tools and equipment to hours that will minimize complaints from persons or firms near the site.

### 3.6 OPERATION, TERMINATION AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.



- B. Maintenance: Maintain facilities in good operating condition until removal.
- C. Termination and Removal: Unless the Architect requests that it be maintained longer, remove each temporary facility when the need has ended, or replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with the temporary facility. Repair damaged Work, clean exposed surfaces and replace construction that cannot be satisfactorily repaired.
  - 1. Materials and facilities that constitute temporary facilities are property of the Contractor. The Owner reserves the right to take possession of Project identification signs.
  - 2. If the Contractor fails to carry out his responsibilities in providing temporary utilities, as set forth above, the Owner reserves the right to take action as he deems proper for the protection and conduct of the Work and to deduct the cost thereof from the amount due the Contractor.

**END OF SECTION 01 50 00**

## **SECTION 01 60 00 - MATERIALS AND EQUIPMENT**

### **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. This Section specifies administrative and procedural requirements governing the Contractor's selection of products for use in the Project.
- B. The Contractor's Construction Schedule and the Schedule of Submittals are included under Section "Submittals."
- C. Standards: Refer to Section "Definitions and Standards" for applicability of industry standards to products specified.

#### 1.3 DEFINITIONS

- A. Definitions used in this Article are not intended to change the meaning of other terms used in the Contract Documents, such as "specialties," "systems," "structure," "finishes," "accessories," and similar terms. Such terms are self-explanatory and have well recognized meanings in the construction industry.
  - 1. "Products" are items purchased for incorporation in the Work, whether purchased for the Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
    - a. "Named Products" are items identified by manufacturer's product name, including make or model designation, indicated in the manufacturer's published product literature, that is current as of the date of the Contract Documents.
    - b. "Foreign Products", as distinguished from "domestic products," are items substantially manufactured (50 percent or more of value) outside of the United States and its possessions; or produced or supplied by entities substantially owned (more than 50 percent) by persons who are not citizens of nor living within the United States and its possessions.
  - 2. "Materials" are products that are substantially shaped, cut, worked, mixed, finished, refined or otherwise fabricated, processed, or installed to form a part of the Work.
  - 3. "Equipment" is a product with operational parts, whether motorized or manually operated, that requires service connections such as wiring or piping.

1.4 QUALITY ASSURANCE

- A. Source Limitations: To the fullest extent possible, provide products of the same kind, from a single source.
1. When specified products are available only from sources that do not or cannot produce a quantity adequate to complete project requirements in a timely manner, consult with the Architect for a determination of the most important product qualities before proceeding. Qualities may include attributes relating to visual appearance, strength, durability, or compatibility. When a determination has been made, select products from sources that produce products that possess these qualities, to the fullest extent possible.
- B. Compatibility of Options: When the Contractor is given the option of selecting between two or more products for use on the Project, the product selected shall be compatible with products previously selected, even if previously selected products were also options.
1. Each prime Contractor is responsible for providing products and construction methods that are compatible with products and construction methods of other prime or separate Contractors.
  2. If a dispute arises between prime Contractors over concurrently selectable, but incompatible products, the Architect will determine which products shall be retained and which are incompatible and must be replaced.
- C. Foreign Product Limitations: Except under one or more of the following conditions, provide domestic products, not foreign products, for inclusion in the Work:
1. No available domestic product complies with the Contract Documents.
  2. Domestic products that comply with Contract Document are only available at prices or terms that are substantially higher than foreign products that also comply with the Contract Documents.
- D. Nameplates: Except for required labels and operating data, do not attach or imprint manufacturer's or producer's nameplates or trademarks on exposed surfaces of products which 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 after installation, on an 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 an easily accessible surface which is inconspicuous in occupied spaces. The nameplate shall contain the following information and other essential operating data:
    - a. Name of product and manufacturer.
    - b. Model and serial number.
    - c. Capacity.
    - d. Speed.
    - e. Ratings.

## 1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store and handle products in accordance with the manufacturer's recommendations, using means and methods that will prevent damage, deterioration and loss, including theft.
  - 1. Schedule delivery to minimize long-term storage at the 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 the site in the manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting and installing.
  - 4. Inspect products upon delivery to ensure compliance with the Contract Documents, and to ensure that products are undamaged and properly protected.
  - 5. Store products at the site in a manner that will facilitate inspection and measurement of quantity or counting of units.
  - 6. Store heavy materials away from the Project structure in a manner that will not endanger the supporting construction.
  - 7. Store products subject to damage by the elements above ground, under cover in a weathertight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within range required by manufacturer's instructions.

## **PART 2 - PRODUCTS**

### 2.1 PRODUCT SELECTION

- A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, unused at the time of installation.
  - 1. Provide products complete with all accessories, trim, finish, safety guards and other devices and details needed for a complete installation and for the intended use and effect.
  - 2. Standard Products: Where available, provide standard products of types that have been produced and used successfully in similar situations on other projects.
- B. Product Selection Procedures: Product selection is governed by the Contract Documents and governing regulations, not by previous Project experience. Procedures governing product selection include the following:
  - 1. Proprietary Specification Requirements: Where only a single product or manufacturer is named, provide the product indicated. No substitutions will be permitted.

2. Semiproprietary Specification Requirements: Where three (3) or more products or manufacturers are named, provide one of the products indicated. No substitutions will be permitted.
  - a. Where products or manufacturers are specified by name, accompanied by the term "or equal," or "or approved equal" comply with the Contract Document provisions concerning "substitutions" to obtain approval for use of an unnamed product.
3. Non-Proprietary Specifications: When the Specifications list products or manufacturers that are available and may be incorporated in the Work, but do not restrict the Contractor to use of these products only, the Contractor may propose any available product that complies with Contract requirements. Comply with Contract Document provisions concerning "substitutions" to obtain approval for use of an unnamed product.
4. Descriptive Specification Requirements: Where Specifications describe a product or assembly, listing exact characteristics required, with or without use of a brand or trade name, provide a product or assembly that provides the characteristics and otherwise complies with Contract requirements.
5. Performance Specification Requirements: Where Specifications require compliance with performance requirements, provide products that comply with these requirements, and are recommended by the manufacturer for the application indicated. General overall performance of a product is implied where the product is specified for a specific application.
  - a. Manufacturer's recommendations may be contained in published product literature, or by the manufacturer's certification of performance.
6. Compliance with Standards, Codes and Regulations: Where the Specifications only require compliance with an imposed code, standard or regulation, select a product that complies with the standards, codes or regulations specified.
7. Visual Matching: Where Specifications require matching an established Sample, the Architect's decision will be final on whether a proposed product matches satisfactorily.
  - a. Where no product available within the specified category matches satisfactorily and also complies with other specified requirements, comply with provisions of the Contract Documents concerning "substitutions" for selection of a matching product in another product category, or for noncompliance with specified requirements.
8. Visual Selection: Where specified product requirements include the phrase "...as selected from manufacturer's standard colors, patterns, textures..." or a similar phrase, select a product and manufacturer that complies with other specified requirements. The Architect will select the color, pattern and texture from the product line selected.

**PART 3 - EXECUTION**

3.1 INSTALLATION OF PRODUCTS:

- A. Comply with manufacturer's instructions and recommendations for installation of products in the applications indicated. Anchor each product securely in place, accurately located and aligned with other Work.
- B. Fiber, plastic, lead plugs and shields and any device using wood screws are not acceptable as fastening devices to plaster, tile, concrete or masonry. Use expansion bolts or driven devices in solid construction and toggle bolts in hollow construction.
- C. Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

3.2 PROTECTION

- A. Each Prime Contractor shall be responsible for proper care and protection, and shall protect and be responsible for damage to his work or materials from the date of the Contract until final payment is made and shall make good, without cost to the Owner, all damage or loss that may occur during this period. All materials which may be affected by the weather shall be covered and protected to keep them free from damage while they are being transported to and stored on the site. Should any material be found defective or in any way contrary to the contract, this material, no matter in what stage of completion, may be rejected by the Architect and shall be removed from the premises at once.

**END OF SECTION 01 60 00**

## **SECTION 01 70 00 - PROJECT CLOSEOUT**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

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

#### **1.2 SUMMARY**

- A. This Section specifies administrative and procedural requirements for project closeout, including but not limited to:
  - a. Inspection procedures.
  - b. Project Record Document and Operating and Maintenance Manual submittal.
  - c. Submittal of warranties.
  - d. Final cleaning.
- B. Other administrative submittals required for project closeout (Final Payment) are enumerated in the Division 01 Section, Applications for Payment.
- C. Closeout requirements for specific construction activities are included in the appropriate Sections in Divisions 02 through 49.

#### **1.3 SUBSTANTIAL COMPLETION**

- A. Preliminary Procedures: Before requesting inspection for certification of Substantial Completion, complete the following. List exceptions in the request.
  - 1. In the Application for Payment that coincides with, or follows, when Substantial Completion is claimed, show 100 percent completion for the portion of the Work claimed as substantially complete. Include supporting documentation for completion as indicated in these Contract Documents and a statement showing an accounting of changes to the Contract Sum.
    - a. If 100 percent completion cannot be shown, include a list of incomplete items, the value of incomplete construction, and reasons the Work is not complete.
  - 2. Advise Owner of pending insurance change-over requirements.
  - 3. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications and similar documents.
  - 4. Obtain and submit releases enabling the Owner unrestricted use of the Work and access to services and utilities; include occupancy permits, operating certificates and similar releases.

5. Submit record drawings, maintenance manuals, final damage or settlement survey, property survey, and similar final record information.
6. Deliver tools, spare parts, extra stock, and similar items.
7. Complete final clean up requirements, including touch-up painting. Touch-up and otherwise repair and restore marred exposed finishes.

- B. Inspection Procedures: On receipt of a request for inspection, the Architect will either proceed with inspection or advise the Contractor of unfilled requirements. The Architect will prepare the Certificate of Substantial Completion following inspection, or advise the Contractor of construction that must be completed or corrected before the certificate will be issued.
- a. The Architect will repeat inspection when requested and assured that the Work has been substantially completed.
  - b. Results of the completed inspection will form the basis of requirements for final acceptance.

#### 1.4 FINAL ACCEPTANCE

- A. Preliminary Procedures: Before requesting final inspection for certification of final acceptance and final payment, complete the following. List exceptions in the request.
1. Contractors Affidavit of Payments, Debts and Claims. AIA Document G706.
  2. Submit Contractors Affidavit of Release of liens AIA DocumentG706A.
  3. Submit consent of surety to final payment. AIA Document G707.
  4. Submit the final payment request with releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.
  5. Submit a certified copy of the Architect's final inspection list (punch list) of items to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance, and the list has been endorsed and dated by the Architect.
  6. Submit Contractor's statement that his final application, as presented, is the final bill and no other claims will be presented.
  7. Submit a final liquidated damages settlement statement.
  8. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
- B. Reinspection Procedure: The Architect will reinspect the Work upon receipt of notice that the Work, including inspection list items from earlier inspections, has been completed, except items whose completion has been delayed because of circumstances acceptable to the Architect.



1. Upon completion of reinspection, the Architect will prepare a certificate of final acceptance, or advise the Contractor of Work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.
2. If necessary, reinspection will be repeated, but at the expense of the Contractor who will reimburse the Owner for these services by the Architect.

#### 1.5 RECORD DOCUMENT SUBMITTALS

- A. General: Do not use record documents for construction purposes; protect from deterioration and loss in a secure, fire-resistive location; provide access to record documents for the Architect's reference during normal working hours.
- B. Record Drawings: Maintain a clean, undamaged set of blue or black line white-prints of Contract Drawings and Shop Drawings. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark whichever drawing is most capable of showing conditions fully and accurately; where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.
  - a. Mark record sets with red erasable pencil; use other colors to distinguish between variations in separate categories of the Work.
  - b. Mark new information that is important to the Owner, but was not shown on Contract Drawings or Shop Drawings.
  - c. Note related Change Order numbers where applicable.
  - d. Organize record drawing sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dates and other identification on the cover of each set.
- C. Record Specifications: Maintain one complete copy of the Project Manual, including addenda, and one copy of other written construction documents such as Change Orders and modifications issued in printed form during construction. Mark these documents to show substantial variations in actual Work performed in comparison with the text of the Specifications and modifications. Give particular attention to substitutions, selection of options and similar information on elements that are concealed or cannot otherwise be readily discerned later by direct observation. Note related record drawing information and Product Data. Upon completion of the Work, submit record Specifications to the Architect for the Owner's records.
- D. Record Product Data: Maintain one copy of each Product Data submittal. Mark these documents to show significant variations in actual Work performed in comparison with information submitted. Include variations in products delivered to the site, and from the manufacturer's installation instructions and recommendations. Give particular attention to concealed products and portions of the Work which cannot otherwise be readily discerned later by direct observation. Note related Change Orders and mark-up of record drawings and Specifications. Upon completion of mark-up, submit complete set of record Product Data to the Architect for the Owner's records.
- E. Record Sample Submitted: Immediately prior to the date or dates of Substantial Completion, the Contractor will meet at the site with the Architect and the Owner's personnel to determine which of the submitted Samples that have been maintained during progress of the Work are to be transmitted to the Owner for record purposes. Comply with delivery to the Owner's Sample storage area.

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

## **PART 2 - PRODUCTS (Not Applicable)**

## **PART 3 - EXECUTION**

### **3.1 FINAL CLEANING**

- A. General: General cleaning during construction is required by the General Conditions and included in Section "Temporary Facilities".
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturer's instructions.
  - 1. Complete the following cleaning operations before requesting inspection for Certification of Substantial Completion.
    - a. Remove labels that are not permanent labels.
    - b. Clean exposed exterior and interior hard-surfaced finishes to a dust-free condition, free of stains, films and similar foreign substances. Restore reflective surfaces to their original reflective condition.
    - c. Clean the site, of rubbish, litter and other foreign substances. Sweep paved areas broom clean; remove stains, spills and other foreign deposits. Rake grounds that are neither paved nor planted, to a smooth even-textured surface.
- C. Removal of Protection: Remove temporary protection and facilities installed for protection of the Work during construction.
- D. Compliance: Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful or dangerous materials into drainage systems. Remove waste materials from the site and dispose of in a lawful manner.
  - 1. Where extra materials of value remaining after completion of associated Work have become the Owner's property, arrange for disposition of these materials as directed.

### **3.2 WARRANTIES & GUARANTEES**

- A. In connection with Contractor's correction of warranted work which has failed, remove and replace other work of project which has been damaged as a result of such failure, or must be removed and replaced to provide access for correction of warranted work.

Improvements to the Jury Waiting Room  
In the City of Elizabeth for the  
County of Union, New Jersey

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- B. The Contractor shall provide a written warranty covering all work performed by him for a period of one year.

**END OF SECTION 01 70 00**

## **SECTION 01 73 29 - CUTTING AND PATCHING**

### **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. This Section specifies administrative and procedural requirements for cutting and patching.
- B. Refer to other Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.
- C. Demolition of selected portions of the building for alterations is included in Section "Selective Demolition."

#### **1.3 SUBMITTALS**

- A. Cutting and Patching Proposal: Where approval of procedures for cutting and patching is required before proceeding, submit a proposal describing procedures well in advance of the time cutting and patching will be performed and request approval to proceed. Include the following information, as applicable, in the proposal:
  - 1. Describe the extent of cutting and patching required and how it is to be performed; indicate why it cannot be avoided.
  - 2. Describe anticipated results in terms of changes to existing construction; include changes to structural elements and operating components as well as changes in the building's appearance and other significant visual elements.
  - 3. List products to be used and firms or entities that will perform Work.
  - 4. Indicate dates when cutting and patching is to be performed.
  - 5. List utilities that will be disturbed or affected, including those that will be relocated and those that will be temporarily out-of-service. Indicate how long service will be disrupted.
  - 6. Where cutting and patching involves addition of reinforcement to structural elements, submit details and engineering calculations to show how reinforcement is integrated with the original structure.

7. Approval by the Architect to proceed with cutting and patching does not waive the Architect's right to later require complete removal and replacement of a part of the Work found to be unsatisfactory.

#### 1.4 QUALITY ASSURANCE

- A. Requirements for Structural Work: Do not cut and patch structural elements in a manner that would reduce their load-carrying capacity or load-deflection ratio.
  1. Obtain approval of the cutting and patching proposal before cutting and patching the following structural elements:
    - a. Bearing and retaining walls.
    - b. Structural concrete.
    - c. Structural steel.
    - d. Lintels.
    - e. Timber and primary wood framing.
    - f. Structural decking.
    - g. Stair systems.
    - h. Miscellaneous structural metals.
    - i. Equipment supports.
    - j. Piping, ductwork, vessels and equipment.
- B. Operational and Safety Limitations: Do not cut and patch operating elements or safety related components in a manner that would result in reducing their capacity to perform as intended, or result in increased maintenance, or decreased operational life or safety.
  1. Obtain approval of the cutting and patching proposal before cutting and patching the following operating elements or safety related systems:
    - a. Primary operational systems and equipment.
    - b. Air or smoke barriers.
    - c. Water, moisture, or vapor barriers.
    - d. Membranes and flashings.
    - e. Fire protection systems.
    - f. Noise and vibration control elements and systems.
    - g. Control systems.
    - h. Communication systems.
    - i. Electrical wiring systems.
- C. Visual Requirements: Do not cut and patch construction exposed on the exterior or in occupied spaces, in a manner that would, in the Architect's opinion, reduce the building's aesthetic qualities, or result in visual evidence of cutting and patching. Remove and replace Work cut and patched in a visually unsatisfactory manner.

## **PART 2 - PRODUCTS**

### 2.1 MATERIALS

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

## **PART 3 - EXECUTION**

### 3.1 INSPECTION

- A. Before cutting existing surfaces, examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed. Take corrective action before proceeding, if unsafe or unsatisfactory conditions are encountered.
  - 1. Before proceeding, meet at the site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

### 3.2 PREPARATION

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

### 3.3 PERFORMANCE

- A. General: A Contractor, subcontractor or sub-subcontractor requiring changes in existing work shall have such changes performed by the trades skilled in performing the particular work and such changes shall be at the expense of the Contractor, subcontractor or sub-subcontractor requiring the change. Review changes with the Architect prior to proceeding with the work and include installation of such reinforcement of the work as the Architect may direct.
- B. Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.

1. Cut existing construction to provide for installation of other components or performance of other construction activities and the subsequent fitting and patching required to restore surfaces to their original condition.
  - C. Cutting: Cut existing construction using methods least likely to damage elements to be retained or adjoining construction. Where possible review proposed procedures with the original installer; comply with the original installer's recommendations.
    1. In general, where cutting is required use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut holes and slots neatly to size required with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
  - D. Patching: Patch with durable seams that are as invisible as possible. Comply with specified tolerances.
    1. Where feasible, inspect and test patched areas to demonstrate integrity of the installation.
    2. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
    3. Firestopping and draftstopping.
      - a. Where fire rated and/or smoke barrier construction (walls, floors or ceilings) are penetrated, all penetrations shall be fire-safed and sealed using appropriate fire rated materials and approved methods.
      - b. Where non-fire rated construction (walls, floors or ceilings) are penetrated, the penetration shall be sealed tight with approved draftstopping materials.
- 3.4 CLEANING
- A. Thoroughly clean areas and spaces where cutting and patching is performed or used as access. Remove completely paint, mortar, oils, putty and items of similar nature. Thoroughly clean piping, conduit and similar features before painting or other finishing is applied. Restore damaged pipe covering to its original condition.

**END OF SECTION 01 73 29**

## **SECTION 02 41 10 - SELECTIVE DEMOLITION**

### **PART 1 - GENERAL**

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes the following:
  - 1. Demolition and removal of various building elements as indicated on the drawings.
  - 2. Demolition and removal of existing above grade improvements.
  - 3. Demolition of all work as may be required to produce a finished product, whether indicated on the drawings or not.

#### 1.3 DEFINITIONS

- A. Remove: Remove and legally dispose of items except those indicated to be reinstalled, salvaged, or to remain the Owner's property.
- B. Existing to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by the A/E, items may be removed to a suitable, protected storage location during selective demolition and then cleaned and reinstalled in their original locations.

#### 1.4 QUALITY ASSURANCE

- A. Demolition Firm Qualifications: Engage an experienced firm that has successfully completed selective demolition Work similar to that indicated for this Project.
- B. Regulatory Requirements: Comply with governing EPA notification regulations before starting selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.



1.5 PROJECT CONDITIONS

- A. Owner will occupy portions of the building immediately adjacent to selective demolition area. Conduct selective demolition so that Owner's operations will not be disrupted. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.
- B. Owner assumes no responsibility for actual condition of buildings to be selectively demolished.
  - 1. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- C. Asbestos: It is not expected that asbestos will be encountered in the Work. If any materials suspected of containing asbestos are encountered, do not disturb the materials. Immediately notify the A/E and the Owner.
- D. Storage or sale of removed items or materials on-site will not be permitted.

1.6 SCHEDULING

- A. Arrange selective demolition schedule so as not to interfere with Owner's on-site operations.

1.7 WARRANTY

- A. Existing Special Warranty: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials so as not to void existing warranties.

**PART 2 - PRODUCTS**

2.1 REPAIR MATERIALS

- A. Use repair materials identical to existing materials.
  - 1. Where identical materials are unavailable or cannot be used for exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
  - 2. Use materials whose installed performance equals or surpasses that of existing materials.

### **PART 3 - EXECUTION**

#### **3.1 EXAMINATION**

- A. Verify that utilities have been disconnected and capped.
- B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- C. When unanticipated mechanical, electrical, or structural elements that conflict with the intended function or design are encountered, investigate and measure the nature and extent of the conflict. Promptly submit a written report to the A/E.
- D. Survey the condition of the building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of the structure or adjacent structures during selective demolition.
- E. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

#### **3.2 UTILITY SERVICES**

- A. Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
  - 1. Do not interrupt existing utilities serving occupied or operating facilities, except when authorized in writing by Owner and authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to Owner and to governing authorities.
    - a. Provide not less than 72 hours' notice to Owner if shutdown of service is required during changeover.
- B. Utility Requirements: Locate, identify, disconnect, and seal or cap off indicated utility services serving building to be selectively demolished.
  - 1. Arrange to shut off indicated utilities with utility companies.
  - 2. Where utility services are required to be removed, relocated, or abandoned, provide bypass connections to maintain continuity of service to other parts of the building before proceeding with selective demolition.
  - 3. Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal the remaining portion of pipe or conduit after bypassing.

- C. Utility Requirements: Refer to Authorities Having Jurisdiction (AHJ) for shutting off, disconnecting, removing, and sealing or capping utility services. Do not start selective demolition work until utility disconnecting and sealing have been completed and verified in writing.

### 3.3 PREPARATION

- A. Conduct demolition operations and remove debris to ensure minimum interference with roads, streets, walks, and other adjacent occupied and used facilities.
  - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.

### 3.4 PROTECTION

- A. Existing Facilities: Protect adjacent walkways, loading docks, building entries, and other building facilities during demolition operations. Maintain exits from existing buildings.
- B. Temporary Protection: Erect temporary protection, such as walks, fences, railings, canopies, and covered passageways, where required by authorities having jurisdiction and as indicated. Comply with requirements in Division 01 Section "Temporary Facilities and Controls."
  - 1. Protect adjacent buildings and facilities from damage due to demolition activities.
  - 2. Protect existing site improvements, appurtenances, and landscaping to remain.
  - 3. Erect a plainly visible fence around drip line of individual trees or around perimeter drip line of groups of trees to remain.
  - 4. Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
  - 5. Provide protection to ensure safe passage of people around building demolition area and to and from occupied portions of adjacent buildings and structures.
  - 6. Protect walls, windows, roofs, and other adjacent exterior construction that are to remain and that are exposed to building demolition operations.
  - 7. Erect and maintain dustproof partitions and temporary enclosures to limit dust, noise, and dirt migration to occupied portions of adjacent buildings.
- C. Remove temporary barriers and protections where hazards no longer exist. Where open excavations or other hazardous conditions remain, leave temporary barriers and protections in place.

### 3.5 POLLUTION CONTROLS

- A. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before start of selective demolition.

### 3.6 SELECTIVE DEMOLITION

- A. Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete Work within limitations of governing regulations and as follows:
1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition work above each floor or tier before disturbing supporting members on lower levels.
  2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. To minimize disturbance of adjacent surfaces, use hand or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
  3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
  4. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
  5. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
  6. Locate selective demolition equipment throughout the structure and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
  7. Dispose of demolished items and materials promptly. On-site storage or sale of removed items is prohibited.
  8. Return elements of construction and surfaces to remain to condition existing before start of selective demolition operations.

### 3.7 PATCHING AND REPAIRS

- A. Promptly patch and repair holes and damaged surfaces caused to adjacent construction by selective demolition operations.
- B. Patching is specified in Division 01 Section "Cutting and Patching."
- C. Where repairs to existing surfaces are required, patch to produce surfaces suitable for new materials.
- D. Restore exposed finishes of patched areas and extend finish restoration into adjoining construction to remain in a manner that eliminates evidence of patching and refinishing.

3.8 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site.
- B. Burning: Do not burn demolished materials.
- C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

**END OF SECTION 02 41 10**

## **SECTION 06 10 00 - ROUGH CARPENTRY**

### **PART 1 - GENERAL**

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes the following:
  - 1. Wood furring, grounds, nailers, and blocking.

#### 1.3 DEFINITIONS

- A. Rough Carpentry: Carpentry work not specified in other Sections and not exposed, unless otherwise specified.
- B. Exposed Framing: Dimension lumber not concealed by other construction and indicated to receive a stained or natural finish.

#### 1.4 SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
  - 1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.
  - 2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of treated materials based on testing by a qualified independent testing agency.
  - 3. For fire-retardant treatments specified to be High-Temperature (HT) type, include physical properties of treated lumber both before and after exposure to elevated temperatures, based on testing by a qualified independent testing agency according to ASTM D 5664.
  - 4. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.
  - 5. Include copies of warranties from chemical treatment manufacturers for each type of treatment.
- B. Fastener Patterns: Full-size templates for fasteners in exposed framing.

- C. Material Certificates: For dimension lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by the ALSC Board of Review.
- D. Research/Evaluation Reports: For the following, showing compliance with building code in effect for Project:
  - 1. Wood-preservative-treated wood.
  - 2. Fire-retardant-treated wood.
  - 3. Engineered wood products.
  - 4. Power-driven fasteners.
  - 5. Powder-actuated fasteners.
  - 6. Expansion anchors.
  - 7. Metal framing anchors.

#### 1.5 QUALITY ASSURANCE

- A. Single-Source Responsibility for Engineered Wood Products: Obtain each type of engineered wood product from one source and by a single manufacturer.
- B. Single-Source Responsibility for Fire-Retardant-Treated Wood: Obtain each type of fire-retardant-treated wood product from one source and by a single producer.

#### 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Keep materials under cover and dry. Protect from weather and contact with damp or wet surfaces. Stack lumber, plywood, and other panels. Provide for air circulation within and around stacks and under temporary coverings.
  - 1. For lumber and plywood pressure treated with waterborne chemicals, place spacers between each bundle to provide air circulation.

### **PART 2 - PRODUCTS**

#### 2.1 LUMBER, GENERAL

- A. Lumber Standards: Comply with DOC PS 20, "American Softwood Lumber Standard," and with applicable grading rules of inspection agencies certified by ALSC's Board of Review.
- B. Inspection Agencies: Inspection agencies, and the abbreviations used to reference them, include the following:
  - 1. NELMA - Northeastern Lumber Manufacturers Association.
  - 2. RIS - Redwood Inspection Service.
  - 3. SPIB - Southern Pine Inspection Bureau.
  - 4. WCLIB - West Coast Lumber Inspection Bureau.
  - 5. WWPA - Western Wood Products Association.

- C. Grade Stamps: Provide lumber with each piece factory marked with grade stamp of inspection agency evidencing compliance with grading rule requirements and identifying grading agency, grade, species, moisture content at time of surfacing, and mill.
  - 1. For exposed lumber, furnish pieces with grade stamps applied to ends or back of each piece, or omit grade stamps and provide grade-compliance certificates issued by inspection agency.
- D. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
  - 1. Provide dressed lumber, S4S, unless otherwise indicated.
  - 2. Provide dry lumber with 19 percent maximum moisture content at time of dressing for **2-inch nominal (38-mm actual)** thickness or less, unless otherwise indicated.

## 2.2 WOOD-PRESERVATIVE-TREATED MATERIALS

- A. General: Where lumber or plywood is indicated as preservative treated or is specified to be treated, comply with applicable requirements of AWWA C2 (lumber) and AWWA C9 (plywood). Mark each treated item with the Quality Mark Requirements of an inspection agency approved by ALSC's Board of Review.
- B. Pressure treat aboveground items with waterborne preservatives (containing Preventol A8, copper azole CA-B, or equivalent) to a minimum retention of **0.25 lb/cu. ft. (4.0 kg/cu. m)**, to provide a limited lifetime warranty. After treatment, kiln-dry lumber and plywood to a maximum moisture content of 19 and 15 percent, respectively. Treatment process must meet or exceed current EPA regulations regarding the use of the treatment product. Treat indicated items and the following:
  - 1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
  - 2. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.
  - 3. Wood framing members less than **18 inches (460 mm)** above grade.
  - 4. Wood floor plates installed over concrete slabs directly in contact with earth.
- C. Complete fabrication of treated items before treatment, where possible. If cut after treatment, apply field treatment complying with AWWA M4 to cut surfaces. Inspect each piece of lumber or plywood after drying and discard damaged or defective pieces.
- D. The use of CCA preservatives is NOT permitted.
- E. All fasteners, flashings, brackets and hangers that come in contact with the pressure treated wood, in any fashion, shall be stainless steel (grade 304 or 316), or high grade galvanized steel G-185 min. (1.85 oz of zinc per sq.ft. of metal). Where pressure treated wood comes in contact with galvanized decking, other galvanized materials, or aluminum, provide a 30# felt isolation pad to completely separate the products.



### 2.3 FIRE-RETARDANT-TREATED MATERIALS

- A. General: Where fire-retardant-treated wood is indicated, comply with applicable requirements of AWPA C20 (lumber) and AWPA C27 (plywood). Identify fire-retardant-treated wood with appropriate classification marking of UL; U.S. Testing; Timber Products Inspection, Inc.; or another testing and inspecting agency acceptable to authorities having jurisdiction.
- B. Acceptable Products:
  - 1. Pyro-Guard and Exterior Fire-X manufactured by Hoover Treated Wood Products, Inc.
  - 2. D-Blaze manufactured by Viance LLC.

### 2.4 MISCELLANEOUS LUMBER

- A. General: Provide lumber for support or attachment of other construction, including rooftop equipment curbs and support bases, cant strips, bucks, nailers, blocking, furring, grounds, stripping, and similar members.
- B. Fabricate miscellaneous lumber from dimension lumber of sizes indicated and into shapes shown.
- C. Moisture Content: 19 percent maximum for lumber items not specified to receive wood preservative treatment.
- D. Grade: For dimension lumber sizes, provide No. 3 or Standard grade lumber per ALSC's NGRs of any species. For board-size lumber, provide No. 3 Common grade per NELMA, NLGA, or WWPA; No. 2 grade per SPIB; or Standard grade per NLGA, WCLIB or WWPA of any species.

## **PART 3 - EXECUTION**

### 3.1 INSTALLATION, GENERAL

- A. Discard units of material with defects that impair quality of rough carpentry and that are too small to use with minimum number of joints or optimum joint arrangement.
- B. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted.
- C. Fit rough carpentry to other construction; scribe and cope as required for accurate fit. Correlate location of furring, nailers, blocking, grounds, and similar supports to allow attachment of other construction.
- D. Apply field treatment complying with AWPA M4 to cut surfaces of preservative-treated lumber and plywood.
- E. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
  - 1. NES NER-272 for power-driven fasteners.
  - 2. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.

- F. Use common wire nails, unless otherwise indicated. Use finishing nails for finish work. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood; predrill as required.
- G. Use hot-dip galvanized (G-185) or stainless-steel nails where rough carpentry is exposed to weather, in ground contact, in contact with wood preservative materials, or in area of high relative humidity.
- H. Countersink nail heads on exposed carpentry work and fill holes with wood filler.

### 3.2 WOOD GROUNDS, NAILERS, BLOCKING, AND SLEEPERS

- A. Install wood grounds, nailers, blocking, and sleepers where shown and where required for screeding or attaching other work. Form to shapes shown and cut as required for true line and level of attached work. Coordinate locations with other work involved.
- B. Attach to substrates to support applied loading. Recess bolts and nuts flush with surfaces, unless otherwise indicated. Build into masonry during installation of masonry work. Where possible, anchor to formwork before concrete placement.
- C. Install permanent grounds of dressed, preservative-treated, key-beveled lumber not less than **1-1/2 inches (38 mm)** wide and of thickness required to bring face of ground to exact thickness of finish material. Remove temporary grounds when no longer required.

**END OF SECTION 06 10 00**

## **SECTION 07 84 00 - FIRESTOPPING**

### **PART 1 - GENERAL**

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes firestopping for the following:
  - 1. Penetrations through fire-resistance-rated assembled partitions including both empty openings and openings containing cables, pipes, ducts, conduits, and other penetrating items.
  - 2. Sealant joints in fire-resistance-rated construction.

#### 1.3 SYSTEM PERFORMANCE REQUIREMENTS

- A. General: Provide firestopping systems that are produced and installed to resist the spread of fire, according to requirements indicated, and the passage of smoke and other gases.
- B. T-Rated Through-Penetration Firestop Systems: Provide through-penetration firestop systems with T ratings, in addition to F ratings, as determined per ASTM E 814, where indicated and where systems protect penetrating items exposed to contact with adjacent materials in occupiable floor areas.
- C. Fire-Resistive Joint Sealants: Provide joint sealants with fire-resistance ratings indicated, as determined per ASTM E 119, but not less than that equaling or exceeding the fire-resistance rating of the construction in which the joint occurs.
- D. For firestopping exposed to view, traffic, moisture, and physical damage, provide products that do not deteriorate when exposed to these conditions.
  - 1. For piping penetrations for plumbing and wet-pipe sprinkler systems, provide moisture-resistant through-penetration firestop systems.
  - 2. For floor penetrations with annular spaces exceeding 4 inches (100 mm) or more in width and exposed to possible loading and traffic, provide firestop systems capable of supporting the floor loads involved either by installing floor plates or by other means.
  - 3. For penetrations involving insulated piping, provide through-penetration firestop systems not requiring removal of insulation.

- E. For firestopping exposed to view, provide products with flame-spread values of less than 25 and smoke-developed values of less than 450, as determined per ASTM E 84.

#### 1.4 SUBMITTALS

- A. General: Submit the following according to Conditions of Contract and Division 01 Specification Sections.
- B. Product data for each type of product specified.
  - 1. Certification by firestopping manufacturer that products supplied comply with local regulations controlling use of volatile organic compounds (VOCs) and are nontoxic to building occupants.

#### 1.5 QUALITY ASSURANCE

- A. Fire-Test-Response Characteristics: Provide firestopping that complies with the following requirements and those specified under the "System Performance Requirements" article:
  - 1. Through-penetration firestop systems are identical to those tested per ASTM E 814 under conditions where positive furnace pressure differential of at least **0.01 inch of water (2.5 Pa)** is maintained at a distance of **0.78 inch (20 mm)** below the fill materials surrounding the penetrating items in the test assembly. Provide rated systems complying with the following requirements:
    - a. Through-penetration firestop systems correspond to those indicated by reference to through-penetration firestop system designations listed by UL in their "Fire Resistance Directory," by Warnock Hersey, or by another qualified testing and inspecting agency.
- B. Information on drawings referring to specific design designations of through-penetration firestop systems is intended to establish requirements for performance based on conditions that are expected to exist during installation. Any changes in conditions and designated systems require the Architect's prior approval. Submit documentation showing that the performance of proposed substitutions equals or exceeds that of the systems they would replace and are acceptable to authorities having jurisdiction.
- C. Installer Qualifications: Engage an experienced Installer who has completed firestopping that is similar in material, design, and extent to that indicated for Project and that has performed successfully.
- D. Single-Source Responsibility: Obtain through-penetration firestop systems for each kind of penetration and construction condition indicated from a single manufacturer.
- E. Provide firestopping products containing no detectable asbestos as determined by the method specified in 40 CFR Part 763, Subpart F, Appendix A, Section 1, "Polarized Light Microscopy."
- F. Coordinating Work: Coordinate construction of openings and penetrating items to ensure that designated through-penetration firestop systems are installed per specified requirements.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver firestopping products to Project site in original, unopened containers or packages with intact and legible manufacturers' labels identifying product and manufacturer; date of manufacture; lot number; shelf life, if applicable; qualified testing and inspecting agency's classification marking applicable to Project; curing time; and mixing instructions for multicomponent materials.
- B. Store and handle firestopping materials to prevent their deterioration or damage due to moisture, temperature changes, contaminants, or other causes.

1.7 PROJECT CONDITIONS

- A. Environmental Conditions: Do not install firestopping when ambient or substrate temperatures are outside limits permitted by firestopping manufacturers or when substrates are wet due to rain, frost, condensation, or other causes.
- B. Ventilation: Ventilate firestopping per firestopping manufacturers' instructions by natural means or, where this is inadequate, forced air circulation.

1.8 SEQUENCING AND SCHEDULING

- A. Notify Owner's inspection agency at least 1 week in advance of firestopping installations; confirm dates and times on days preceding each series of installations.
- B. Do not cover up those firestopping installations that will become concealed behind other construction until Owner's inspection agency and authorities having jurisdiction, if required, have examined each installation.

**PART 2 - PRODUCTS**

2.1 FIRESTOPPING, GENERAL

- A. Compatibility: Provide firestopping composed of components that are compatible with each other, the substrates forming openings, and the items, if any, penetrating the firestopping under conditions of service and application, as demonstrated by firestopping manufacturer based on testing and field experience.
- B. Accessories: Provide components for each firestopping system that are needed to install fill materials and to comply with "System Performance Requirements" article in Part 1. Use only components specified by the firestopping manufacturer and approved by the qualified testing and inspecting agency for the designated fire-resistance-rated systems. Accessories include but are not limited to the following items:
  - 1. Temporary forming materials.

2. Substrate primers.
3. Collars.
4. Steel sleeves.

C. Applications: Provide firestopping systems composed of materials specified in this Section that comply with system performance and other requirements.

## 2.2 FILL MATERIALS FOR THROUGH-PENETRATION FIRESTOP SYSTEMS

A. Silicone Sealant: Moisture-curing, single-component, silicone-based, neutral-curing elastomeric sealant of grade indicated below:

1. Grade: Pourable (self-leveling) formulation for openings in floors and other horizontal surfaces and nonsag formulation for openings in vertical and other surfaces requiring a nonslumping/ gunnable sealant, unless indicated firestop system limits use to nonsag grade for both opening conditions.

B. Available Products: Subject to compliance with requirements, products that may be incorporated in the Work include, but are not limited to, the following:

1. Silicone Sealants:
  - a. Dow Corning Firestop Sealant 2000, Dow Corning Corp.
  - b. Dow Corning Firestop Sealant SL 2003, Dow Corning Corp.
  - c. Pensil 100 Firestop Sealant, General Electric Co.
  - d. CS240 Firestop Sealant, Hilti Construction Chemicals, Inc.
  - e. Metacaulk 835, The RectorSeal Corporation.
  - f. Metacaulk 880, The RectorSeal Corporation.
  - g. Fyre-Sil, Tremco Inc.
  - h. Fyre-Sil S/L, Tremco Inc.

## 2.3 FIRE-RESISTIVE ELASTOMERIC JOINT SEALANTS

A. Elastomeric Sealant Standard: Provide manufacturer's standard chemically curing, elastomeric sealants of base polymer indicated that complies with ASTM C 920 requirements, including those referenced for Type, Grade, Class, and Uses, and requirements specified in this Section applicable to fire-resistive joint sealants.

B. Sealant Colors: Provide color of exposed joint sealants to comply with the following:

1. Provide selections made by Architect from manufacturer's full range of standard colors for products of type indicated.

C. Single-Component, Neutral-Curing Silicone Sealant: Type S; Grade NS; Class 25; exposure-related Use NT, and joint-substrate-related Uses M, G, A, and (as applicable to joint substrates indicated) O.

1. Additional Movement Capability: Provide sealant with the capability to withstand the following percentage changes in joint width existing at time of installation, when tested for adhesion and cohesion under maximum cyclic movement per ASTM C 719, and remain in compliance with other requirements of ASTM C 920 for uses indicated:
  - a. 50 percent movement in both extension and compression for a total of 100 percent movement.

D. Available Products: Subject to compliance with requirements, products that may be incorporated in the Work include, but are not limited to, the following:

1. Single-Component, Neutral-Curing, Silicone Sealant:
  - a. Dow Corning 790, Dow Corning Corp.
  - b. Dow Corning 795, Dow Corning Corp.
  - c. Silpruf, General Electric Co.
  - d. Ultraglaze, General Electric Co.
  - e. 864, Pecora Corp.

#### 2.4 MIXING

- A. For those products requiring mixing prior to application, comply with firestopping manufacturer's directions for accurate proportioning of materials, water (if required), type of mixing equipment, selection of mixer speeds, mixing containers, mixing time, and other procedures needed to produce firestopping products of uniform quality with optimum performance characteristics for application indicated.

### **PART 3 - EXECUTION**

#### 3.1 EXAMINATION

- A. Examine substrates and conditions, with Installer present, for compliance with requirements for opening configurations, penetrating items, substrates, and other conditions affecting performance of firestopping. Do not proceed with installation until unsatisfactory conditions have been corrected.

#### 3.2 PREPARATION

- A. Surface Cleaning: Clean out openings and joints immediately prior to installing firestopping to comply with recommendations of firestopping manufacturer and the following requirements:
  1. Remove all foreign materials from surfaces of opening and joint substrates and from penetrating items that could interfere with adhesion of firestopping.
  2. Clean opening and joint substrates and penetrating items to produce clean, sound surfaces capable of developing optimum bond with firestopping. Remove loose particles remaining from cleaning operation.

3. Remove laitance and form release agents from concrete.
- B. Priming: Prime substrates where recommended by firestopping manufacturer using that manufacturer's recommended products and methods. Confine primers to areas of bond; do not allow spillage and migration onto exposed surfaces.
- C. Masking Tape: Use masking tape to prevent firestopping from contacting adjoining surfaces that will remain exposed upon completion of Work and that would otherwise be permanently stained or damaged by such contact or by cleaning methods used to remove smears from firestopping materials. Remove tape as soon as it is possible to do so without disturbing firestopping's seal with substrates.

### 3.3 INSTALLING THROUGH-PENETRATION FIRESTOPS

- A. Install forming/damming materials and other accessories of types required to support fill materials during their application and in the position needed to produce the cross-sectional shapes and depths required to achieve fire ratings of designated through-penetration firestop systems. After installing fill materials, remove combustible forming materials and other accessories not indicated as permanent components of firestop systems.
- B. Install fill materials for through-penetration firestop systems by proven techniques to produce the following results:
  1. Completely fill voids and cavities formed by openings, forming materials, accessories, and penetrating items.

### 3.4 INSTALLING FIRE-RESISTIVE JOINT SEALANTS

- A. General: Comply with the "System Performance Requirements" article in Part 1, with ASTM C 1193, and with the sealant manufacturer's installation instructions and drawings pertaining to products and applications indicated.
- B. Install joint fillers to provide support of sealants during application and at position required to produce the cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability and develop fire-resistance rating required.
- C. Install sealants by proven techniques that result in sealants directly contacting and fully wetting joint substrates, completely filling recesses provided for each joint configuration, and providing uniform, cross-sectional shapes and depths relative to joint width that optimum sealant movement capability. Install sealants at the same time joint fillers are installed.
- D. Tool nonsag sealants immediately after sealant application and prior to the time skinning or curing begins. Form smooth, uniform beads of configuration indicated or required to produce fire-resistance rating, as well as to eliminate air pockets, and to ensure contact and adhesion of sealants with sides of joint. Remove excess sealant from surfaces adjacent to joint. Do not use tooling agents that discolor sealants or adjacent surfaces or are not approved by sealant manufacturer.



3.5 CLEANING

- A. Clean off excess fill materials and sealants adjacent to openings and joints as work progresses by methods and with cleaning materials approved by manufacturers of firestopping products and of products in which opening and joints occur.
- B. Protect firestopping during and after curing period from contact with contaminating substances or from damage resulting from construction operations or other causes so that they are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated firestopping immediately and install new materials to produce firestopping complying with specified requirements.

**END OF SECTION 07 84 00**

## **SECTION 07 92 00 - JOINT SEALANTS**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

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

#### **1.2 SUMMARY**

- A. This Section includes, but is not limited to, joint sealants for the following locations:
  - 1. Sealant Type 1: Exterior joints in vertical surfaces and horizontal non-traffic surfaces as indicated below:
    - a. Control and expansion joints in unit masonry.
    - b. Joints of stonework set with mortar including copings and cornices.
    - c. Perimeter joints of frames of doors and windows.
    - d. Other joints as indicated.
  - 2. Sealant Type 2: Interior and exterior joints in horizontal traffic surfaces as indicated below:
    - a. Control, expansion, and isolation joints in cast-in-place concrete slabs, sidewalks, tile and carpet flooring.
  - 3. Sealant Type 3: Interior joints in vertical surfaces and horizontal non-traffic surfaces as indicated below:
    - a. Control and expansion joints on exposed interior surfaces of exterior walls.
    - b. Perimeter joints of exterior openings where indicated.
    - c. Vertical control joints on exposed surfaces of interior unit masonry and concrete walls and partitions.
    - d. Perimeter joints between interior wall surfaces and frames of interior doors, windows, and elevator entrances.
    - e. Perimeter joints of toilet fixtures.
    - f. Other joints as indicated.
  - 4. Sealant Type 4: Interior sanitary joints in vertical and horizontal surfaces as indicated below:
    - a. Perimeter joints of fixtures in bathroom, lavatory and kitchen applications.
  - 5. Sealant Type 5: Interior construction fire rated joints indicated on the drawings:
    - a. Expansion and control joints on interior masonry and concrete walls.
    - b. Perimeter joints between interior wall surfaces and frames of interior doors and windows.

### 1.3 SUBMITTALS

- A. General: Submit the following in accordance with Conditions of Contract and Division 01 Specification Sections.
- B. Product Data: For each joint-sealant product indicated.
- C. Samples for Initial Selection: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.
- D. Samples for Verification: For each kind and color of joint sealant required, provide Samples with joint sealants in ~~1/2-inch~~ (13-mm-) wide joints formed between two ~~6-inch~~ (150-mm-) long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.
- E. Joint-Sealant Schedule: Include the following information:
  - 1. Joint-sealant application, joint location, and designation.
  - 2. Joint-sealant manufacturer and product name.
  - 3. Joint-sealant formulation.
  - 4. Joint-sealant color.

### 1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced Installer who has completed joint sealant applications similar in material, design, and extent to that indicated for Project that have resulted in construction with a record of successful in-service performance for a period of three years.
- B. Single Source Responsibility for Joint Sealant Materials: Obtain joint sealant materials from a single manufacturer for each different product required.

### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project site in original unopened containers or bundles with labels indicating manufacturer, product name and designation, color, expiration period for use, pot life, curing time, and mixing instructions for multicomponent materials.
- B. Store and handle materials in compliance with manufacturer's recommendations to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.

### 1.6 PROJECT CONDITIONS

- A. Environmental Conditions: Do not proceed with installation of joint sealants under the following conditions:
  - 1. When ambient and substrate temperature conditions are outside the limits permitted by joint sealant manufacturer.

2. When ambient and substrate temperature conditions are outside the limits permitted by joint sealant manufacturer or below 40 deg F (4 deg C).

3. When joint substrates are wet.

B. Joint Width Conditions: Do not proceed with installation of joint sealants where joint widths are less than allowed by joint sealant manufacturer for application indicated.

C. Joint Substrate Conditions: Do not proceed with installation of joint sealants until contaminants capable of interfering with their adhesion are removed from joint substrates.

#### 1.7 SEQUENCING AND SCHEDULING

A. Sequence installation of joint sealants to occur not less than 21 nor more than 30 days after completion of waterproofing, unless otherwise indicated.

#### 1.8 WARRANTY

A. Special Installer's Warranty: Installer's standard form in which Installer agrees to repair or replace elastomeric joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period. Provide five (5) year written warranty covering correction of defective work within a five year period after Date of Substantial Completion.

B. Special Manufacturer's Warranty: Provide ten (10) year material warranty from date of Substantial Completion for silicone sealants, provide five (5) year material warranty from date of Substantial Completion for urethane sealants and provide two (2) year material warranty from date of Substantial Completion for acrylic latex sealants.

### PART 2 - PRODUCTS

#### 2.1 MATERIALS, GENERAL

A. Compatibility: Provide joint sealants, joint fillers, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.

B. Colors: Provide color of exposed joint sealants to comply with the following:

1. Provide selections made by Architect from manufacturer's full range of standard and special colors for products of type indicated.

#### 2.2 SEALANTS

A. Sealant Type 1: For sealing exterior joints, provide a multi-component polyurethane sealant complying with ASTM C-920.

1. Provide "Dynatrol II" sealant by Pecora, Dymeric 240 FC by Tremco or approved equal.
- B. Sealant Type 2: For sealing interior or exterior joints, provide a multi-component high performance polyurethane sealant complying with ASTM C-920.
  1. Provide Urexpan NR-200/Dynatred sealant by Pecora or approved equal.
- C. Sealant Type 3: For all interior joints, provide an acrylic latex, one part non sag sealant compound; recommended by manufacturer for general use as an interior exposed building construction sealant complying with ASTM C-834.
  1. Provide one of the following:
    - a. AC -20 + Silicone by Pecora Corporation, Tremflex 834 by Tremco or approved equal.
- D. Sealant Type 4: For use at all joints at plumbing fixtures, provide one-part silicone sealant complying with ASTM C-920 and USDA approval.
  1. Provide one of the following:
    - a. Pecora 898 Silicone, Tremco Tremsil 200 or approved equal.

### 2.3 FIRE RATED EXPANSION JOINTS

- A. Sealant Type 5: Construction fire rated joints as indicated on the drawings with the following components complying with ANSI/UL 263 and ASTM E-119, one to four hour ratings.
  1. Joint Filler, "Ultra Block" or "Fibrex Mineral Wool" as recommended by Pecora, in thickness required to fill joints.
  2. Joint Sealant, "Dynatrol II" two part polyurethane as manufactured by Pecora.

### 2.4 JOINT SEALANT BACKING

- A. General: Provide sealant backings of material and type that are nonstaining; are compatible with joint substrates, sealants, primers and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- B. Plastic Foam Joint Fillers: Preformed, compressible, resilient, nonstaining, nonwaxing, nonextruding strips of flexible plastic foam of material indicated below and of size, shape, and density to control sealant depth and otherwise contribute to producing optimum sealant performance:
  1. Closed-cell polyethylene foam, nonabsorbent to liquid water and gas, nonoutgassing in unruptured state.
  2. Open-cell polyurethane foam, nonoutgassing backer rod.
- C. Elastomeric Tubing Joint Fillers: Neoprene, butyl, EPDM, or silicone tubing complying with ASTM D 1056, nonabsorbent to water and gas, capable of remaining resilient at temperatures down

to **-26 deg F (-32 deg C)**. Provide products with low compression set and of size and shape to provide a secondary seal, to control sealant depth, and otherwise contribute to optimum sealant performance.

- D. Bond-Breaker Tape: Polyethylene tape or other plastic tape as recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

1. Provide Pecora #531 Bond-breaker Tape, or approved equal.

## 2.5 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint sealant-substrate tests and field tests.
- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming in any way joint substrates and adjacent nonporous surfaces, and formulated to promote optimum adhesion of sealants with joint substrates.
- C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint sealant performance. Do not proceed with installation of joint sealants until unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with recommendations of joint sealant manufacturer and the following requirements:
1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.

2. Clean concrete, masonry, unglazed surfaces of ceramic tile, and similar porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining from above cleaning operations by vacuuming or blowing out joints with oil-free compressed air.
  3. Remove laitance and form release agents from concrete.
  4. Clean metal, glass, porcelain enamel, glazed surfaces of ceramic tile, and other nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.
- B. Joint Priming: Prime joint substrates where indicated or where recommended by joint sealant manufacturer based on preconstruction joint sealant-substrate tests or prior experience. Apply primer to comply with joint sealant manufacturer's recommendations. Confine primers to areas of joint sealant bond; do not allow spillage or migration onto adjoining surfaces.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

### 3.3 INSTALLATION OF JOINT SEALANTS

- A. General: Comply with joint sealant manufacturer's printed installation instructions applicable to products and applications indicated, except where more stringent requirements apply.
- B. Installation of Sealant Backings: Install sealant backings to comply with the following requirements:
1. Install joint fillers of type indicated to provide support of sealants during application and at position required to produce the cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
    - a. Do not leave gaps between ends of joint fillers.
    - b. Do not stretch, twist, puncture, or tear joint fillers.
    - c. Remove absorbent joint fillers that have become wet prior to sealant application and replace with dry material.
  2. Install bond breaker tape between sealants where backer rods are not used between sealants and joint fillers or back of joints.
- C. Installation of Sealants: Install sealants by proven techniques that result in sealants directly contacting and fully wetting joint substrates, completely filling recesses provided for each joint configuration, and providing uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability. Install sealants at the same time sealant backings are installed.
- D. Tooling of Nonsag Sealants: Immediately after sealant application and prior to time skinning or curing begins, tool sealants to form smooth, uniform beads of configuration indicated, to eliminate

air pockets, and to ensure contact and adhesion of sealant with sides of joint. Remove excess sealants from surfaces adjacent to joint. Do not use tooling agents that discolor sealants or adjacent surfaces or are not approved by sealant manufacturer.

1. Provide concave joint configuration, unless otherwise indicated.

#### 3.4 CLEANING

- A. Clean off excess sealants or sealant smears adjacent to joints as work progresses by methods and with cleaning materials approved by manufacturers of joint sealants and of products in which joints occur.

#### 3.5 PROTECTION

- A. Protect joint sealants during and after curing period from contact with contaminating substances or from damage resulting from construction operations or other causes so that they are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so that and installations with repaired areas are indistinguishable from original work.

**END OF SECTION 07 92 00**



## **SECTION 08 11 13 - STEEL DOORS AND FRAMES**

### **PART 1 - GENERAL**

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes steel doors and frames.

#### 1.3 SUBMITTALS

- A. General: Submit each item in this Article according to the Conditions of the Contract and Division 01 Specification Sections.
- B. Product Data for each type of door and frame specified, including details of construction, materials, dimensions, hardware preparation, core, label compliance, sound ratings, profiles, and finishes.
- C. Door Schedule: Submit schedule of doors and frames using same reference numbers for details and openings as those on Contract Drawings.
  - 1. Indicate coordination of glazing frames and stops with glass and glazing requirements.

#### 1.4 QUALITY ASSURANCE

- A. Provide doors and frames complying with ANSI/SDI 100 "Recommended Specifications for Standard Steel Doors and Frames" and as specified.
- B. Fire-Rated Door Assemblies: Units that comply with NFPA 80, are identical to door and frame assemblies tested for fire-test-response characteristics per ASTM E 152, and are labeled and listed by UL, Warnock Hersey, or another testing and inspecting agency acceptable to authorities having jurisdiction.
  - 1. Oversize Fire-Rated Door Assemblies: For units exceeding sizes of tested assemblies, provide certification by a testing agency acceptable to authorities having jurisdiction that doors conform to all standard construction requirements of tested and labeled fire-rated door assemblies except for size.

## 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver doors and frames cardboard-wrapped or crated to provide protection during transit and job storage. Provide additional protection to prevent damage to finish of factory-finished doors and frames.
- B. Inspect doors and frames on delivery for damage. Minor damages may be repaired provided refinished items match new work and are acceptable to Architect; otherwise, remove and replace damaged items as directed.
- C. Store doors and frames at building site under cover. Place units on minimum 4-inch- (100-mm-) high wood blocking. Avoid using nonvented plastic or canvas shelters that could create a humidity chamber. If cardboard wrappers on doors become wet, remove cartons immediately. Provide minimum 1/4-inch (6-mm) spaces between stacked doors to promote air circulation.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following, or equal:
  - 1. Steel Doors and Frames:
    - a. Amweld Building Products, Inc., or approved equal.
    - b. Ceco Door Products, or approved equal.
    - c. Curries Co., or approved equal.
    - d. Fenestra Corp., or approved equal.
    - e. Kewanee Corp., or approved equal.
    - f. Pioneer Industries, or approved equal.
    - g. Republic Builders Products, or approved equal.
    - h. Steelcraft, or approved equal.

### 2.2 MATERIALS

- A. Hot-Rolled Steel Sheets and Strip: Commercial-quality carbon steel, pickled and oiled, complying with ASTM A 569 (ASTM A 569M).
- B. Cold-Rolled Steel Sheets: Carbon steel complying with ASTM A 366 (ASTM A 366M), commercial quality, or ASTM A 620 (ASTM A 620M), drawing quality, special killed.
- C. Galvanized Steel Sheets: Zinc-coated carbon steel complying with ASTM A 526 (ASTM A 526M), commercial quality, or ASTM A 642 (ASTM A 642M), drawing quality, hot-dip galvanized according to ASTM A 525, with A 60 or G 60 (ASTM A 525M, with Z 180 or ZF 180) coating designation, mill phosphatized.

- D. Supports and Anchors: Fabricated from not less than **0.0478-inch- (1.2-mm-)** thick steel sheet; **0.0516-inch- (1.3-mm-)** thick galvanized steel where used with galvanized steel frames.
- E. Inserts, Bolts, and Fasteners: Manufacturer's standard units. Where items are to be built into exterior walls, hot-dip galvanize complying with ASTM A 153, Class C or D as applicable.

## 2.3 DOORS

- A. Steel Doors: Provide **1-3/4-inch- (44-mm-)** thick doors of materials and ANSI/SDI 100 grades and models specified below, or as indicated on Drawings or schedules:
  - 1. Exterior Doors: Grade III extra heavy duty **16-gauge** galvanized steel sheet stiles and rails and **(16 gauge)** thick galvanized raised panel steel sheet flush panels with foamed in place insulating core.
  - 2. Interior Doors: Grade I, standard-duty, seamless design, minimum **(16-gauge)** thick cold-rolled steel sheet faces. Provide steel stiffeners inside door.

## 2.4 FRAMES

- A. Provide metal frames for doors, transoms, sidelights, borrowed lights, and other openings, according to ANSI/SDI 100, and of types and styles as shown on Drawings and schedules. Conceal fastenings, unless otherwise indicated. Fabricate frames of minimum **0.0635-inch- (16-gauge)** thick cold-rolled steel sheet for interior locations and 14 gauge galvanized at exterior locations.
  - 1. Fabricate frames with mitered or coped corners, continuously welded construction for exterior and new masonry applications and knocked down for field assembly at existing masonry application and existing gypsum board and steel stud partitions.
- B. Hardware Reinforcement: Fabricate according to ANSI/SDI A250.6 with reinforcement plates from same material as frames.
- C. Door Silencers: Except on weatherstripped frames, drill stops to receive 3 silencers on strike jambs of single-door frames and 2 silencers on heads of double-door frames.
- D. Plaster Guards: Provide minimum **0.0179-inch- (0.45-mm-)** thick steel plaster guards or mortar boxes at back of hardware cutouts where mortar or other materials might obstruct hardware operation and to close off interior of openings.
- E. Grout: Grout all frames in masonry construction.

## 2.5 FABRICATION

- A. Fabricate steel door and frame units to be rigid, neat in appearance, and free from defects, warp, or buckle. Where practical, fit and assemble units in manufacturer's plant. Clearly identify work that

cannot be permanently factory assembled before shipment, to assure proper assembly at Project site. Comply with ANSI/SDI 100 requirements.

- B. Tolerances: Comply with SDI 117 "Manufacturing Tolerances Standard Steel Doors and Frames."
- C. Fabricate concealed stiffeners, reinforcement, edge channels, louvers, and moldings from either cold- or hot-rolled steel sheet.
- D. Galvanized Steel Doors, Panels, and Frames: For the following locations, fabricate doors, panels, and frames from galvanized steel sheet according to SDI 112. Close top and bottom edges of doors flush as an integral part of door construction or by addition of minimum **0.0635-inch- (1.6-mm-)** thick galvanized steel channels, with channel webs placed even with top and bottom edges. Seal joints in top edges of doors against water penetration.
  - 1. At exterior locations.
- E. Exposed Fasteners: Unless otherwise indicated, provide countersunk flat or oval heads for exposed screws and bolts.
- F. Thermal-Rated (Insulating) Assemblies: At exterior locations and elsewhere as shown or scheduled, provide doors fabricated as thermal-insulating door and frame assemblies and tested according to ASTM C 236 or ASTM C 976 on fully operable door assemblies.
  - 1. Unless otherwise indicated, provide thermal-rated assemblies with U-value rating of **0.41 Btu/sq. ft. x h x deg F (2.33 W/sq. m x K)** or better.
- G. Hardware Preparation: Prepare doors and frames to receive mortised and concealed hardware according to final door hardware schedule and templates provided by hardware supplier. Comply with applicable requirements of SDI 107 and ANSI A115 Series specifications for door and frame preparation for hardware.
  - 1. For concealed overhead door closers, provide space, cutouts, reinforcing, and provisions for fastening in top rail of doors or head of frames, as applicable.
- H. Reinforce doors and frames to receive surface-applied hardware. Drilling and tapping for surface-applied hardware may be done at Project site.
- I. Locate hardware as indicated on Shop Drawings or, if not indicated, according to the Door and Hardware Institute's (DHI) "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
- J. Glazing Stops: Minimum **0.0359-inch- (0.9-mm-)** thick steel or **0.040-inch- (1-mm-)** thick aluminum.
  - 1. Provide nonremovable stops on outside of exterior doors and on secure side of interior doors for glass, louvers, and other panels in doors.

2.6 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual" for recommendations relative to applying and designating finishes.
- B. Apply primers and organic finishes to doors and frames after fabrication.

2.7 STEEL SHEET FINISHES

- A. Surface Preparation: Solvent-clean surfaces to comply with SSPC-SP 1 to remove dirt, oil, grease, and other contaminants that could impair paint bond. Remove mill scale and rust, if present, from uncoated steel to comply with SSPC-SP 5 (White Metal Blast Cleaning) or SSPC-SP 8 (Pickling).
- B. Pretreatment: Immediately after surface preparation, apply a conversion coating of type suited to organic coating applied over it.
- C. Factory Priming for Field-Painted Finish: Apply shop primer that complies with ANSI A224.1 acceptance criteria, is compatible with finish paint systems indicated, and has capability to provide a sound foundation for field-applied topcoats. Apply primer immediately after surface preparation and pretreatment.

**PART 3 - EXECUTION**

3.1 INSTALLATION

- A. General: Install steel doors, frames, and accessories according to Shop Drawings, manufacturer's data, and as specified.
- B. Placing Frames: Comply with provisions of SDI 105, unless otherwise indicated. Set frames accurately in position, plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is completed, remove temporary braces and spreaders, leaving surfaces smooth and undamaged.
  - 1. Except for frames located in existing concrete, masonry, or gypsum board assembly construction, place frames before constructing enclosing walls and ceilings.
  - 2. In masonry construction, install at least 3 wall anchors per jamb adjacent to hinge location on hinge jamb and at corresponding heights on strike jamb. Acceptable anchors include masonry wire anchors and masonry T-shaped anchors.
  - 3. At existing concrete or masonry construction, install at least 3 completed opening anchors per jamb adjacent to hinge location on hinge jamb and at corresponding heights on strike jamb. Set frames and secure to adjacent construction with bolts and masonry anchorage devices.

4. In metal-stud partitions, install at least 3 wall anchors per jamb at hinge and strike levels. In steel-stud partitions, attach wall anchors to studs with screws.
  5. In in-place gypsum board partitions, install knock-down, slip-on, drywall frames.
  6. Install fire-rated frames according to NFPA 80.
- C. Door Installation: Fit hollow-metal doors accurately in frames, within clearances specified in ANSI/SDI 100.
1. Fire-Rated Doors: Install with clearances specified in NFPA 80.
  2. Smoke-Control Doors: Comply with NFPA 105.

### 3.2 ADJUSTING AND CLEANING

- A. Prime Coat Touchup: Immediately after erection, sand smooth any rusted or damaged areas of prime coat and apply touchup of compatible air-drying primer.
- B. Protection Removal: Immediately before final inspection, remove protective wrappings from doors and frames.

**END OF SECTION 08 11 13**

**SECTION 08 71 00 - DOOR HARDWARE**

**PART 1 - GENERAL**

**1.1 SUMMARY:**

A. Section Includes: Finish Hardware for door openings, except as otherwise specified herein.

1. Door hardware for steel (hollow metal) doors.
2. Door hardware for aluminum doors.
3. Door hardware for wood doors.
4. Door hardware for other doors indicated.
5. Keyed cylinders as indicated.

B. Related Sections:

1. Division 6: Rough Carpentry.
2. Division 8: Aluminum Doors and Frames
3. Division 8: Hollow Metal Doors and Frames.
4. Division 8: Wood Doors.
5. Division 26 Electrical
6. Division 28: Electronic Security

C. References: Comply with applicable requirements of the following standards. Where these standards conflict with other specific requirements, the most restrictive shall govern.

1. Builders Hardware Manufacturing Association (BHMA)
2. NFPA 101 Life Safety Code
3. NFPA 80 -Fire Doors and Windows
4. ANSI-A156.xx- Various Performance Standards for Finish Hardware
5. UL10C – Positive Pressure Fire Test of Door Assemblies
6. ANSI-A117.1 – Accessible and Usable Buildings and Facilities
7. DHI /ANSI A115.IG – Installation Guide for Doors and Hardware
8. ICC – International Building Code

D. Intent of Hardware Groups

1. Should items of hardware not definitely specified be required for completion of the Work, furnish such items of type and quality comparable to adjacent hardware and appropriate for service required.
2. Where items of hardware aren't definitely or correctly specified, are required for completion of the Work, a written statement of such omission, error, or other discrepancy to be submitted to Architect, prior to date specified for receipt of bids for clarification by addendum; or, furnish such items in the type and quality established by this specification, and appropriate to the service intended.

1.2 SUBSTITUTIONS:

- A. Comply with Division 1.

1.3 SUBMITTALS:

- A. Comply with Division 1.
- B. Special Submittal Requirements: Combine submittals of this Section with Sections listed below to ensure the "design intent" of the system/assembly is understood and can be reviewed together.

- C. Product Data: Manufacturer's specifications and technical data including the following:

- 1. Detailed specification of construction and fabrication.
- 2. Manufacturer's installation instructions.
- 3. Wiring diagrams for each electric product specified. Coordinate voltage with electrical before submitting.
- 4. Submit 6 copies of catalog cuts with hardware schedule.

- D. Shop Drawings - Hardware Schedule: Submit 6 complete reproducible copy of detailed hardware schedule in a vertical format.

- 1. List groups and suffixes in proper sequence.
- 2. Completely describe door and list architectural door number.
- 3. Manufacturer, product name, and catalog number.
- 4. Function, type, and style.
- 5. Size and finish of each item.
- 6. Mounting heights.
- 7. Explanation of abbreviations and symbols used within schedule.
- 8. Detailed wiring diagrams, specially developed for each opening, indicating all electric hardware, security equipment and access control equipment, and door and frame rough-ins required for specific opening.

- E. Templates: Submit templates and "reviewed Hardware Schedule" to door and frame supplier and others as applicable to enable proper and accurate sizing and locations of cutouts and reinforcing.

- 1. Templates, wiring diagrams and "reviewed Hardware Schedule" of electrical terms to electrical for coordination and verification of voltages and locations.

- F. Samples: (If requested by the Architect)

- 1. 1 sample of Lever and Rose/Escutcheon design, (pair).
- 2. 3 samples of metal finishes

- G. Contract Closeout Submittals: Comply with Division 1 including specific requirements indicated.

- 1. Operating and maintenance manuals: Submit 3 sets containing the following.



- a. Complete information in care, maintenance, and adjustment, and data on repair and replacement parts, and information on preservation of finishes.
  - b. Catalog pages for each product.
  - c. Name, address, and phone number of local representative for each manufacturer.
  - d. Parts list for each product.
2. Copy of final hardware schedule, edited to reflect, "As installed".
  3. Copy of final keying schedule
  4. As installed "Wiring Diagrams" for each piece of hardware connected to power, both low voltage and 110 volts.
  5. One set of special tools required for maintenance and adjustment of hardware, including changing of cylinders.

#### 1.4 QUALITY ASSURANCE

##### A. Comply with Division 1.

1. Statement of qualification for distributor and installers.
2. Statement of compliance with regulatory requirements and single source responsibility.
3. Distributor's Qualifications: Firm with 3 years experience in the distribution of commercial hardware.
  - a. Distributor to employ full time Architectural Hardware Consultants (AHC) for the purpose of scheduling and coordinating hardware and establishing keying schedule.
  - b. Hardware Schedule shall be prepared and signed by an AHC.
4. Installer's Qualifications: Firm with 3 years experienced in installation of similar hardware to that required for this Project, including specific requirements indicated.
5. Regulatory Label Requirements: Provide testing agency label or stamp on hardware for labeled openings.
  - a. Provide UL listed hardware for labeled and 20 minute openings in conformance with requirements for class of opening scheduled.
  - b. Underwriters Laboratories requirements have precedence over this specification where conflict exists.
6. Single Source Responsibility: Except where specified in hardware schedule, furnish products of only one manufacturer for each type of hardware.

##### B. Review Project for extent of finish hardware required to complete the Work. Where there is a conflict between these Specifications and the existing hardware, notify the Architect in writing and furnish hardware in compliance with the Specification unless otherwise directed in writing by the Architect.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Packing and Shipping: Comply with Division 1.
  - 1. Deliver products in original unopened packaging with legible manufacturer's identification.
  - 2. Package hardware to prevent damage during transit and storage.
  - 3. Mark hardware to correspond with "reviewed hardware schedule".
  - 4. Deliver hardware to door and frame manufacturer upon request.
- B. Storage and Protection: Comply with manufacturer's recommendations.

1.6 PROJECT CONDITIONS:

- A. Coordinate hardware with other work. Furnish hardware items of proper design for use on doors and frames of the thickness, profile, swing, security and similar requirements indicated, as necessary for the proper installation and function, regardless of omissions or conflicts in the information on the Contract Documents.
- B. Review Shop Drawings for doors and entrances to confirm that adequate provisions will be made for the proper installation of hardware.

1.7 WARRANTY:

- A. Refer to Conditions of the Contract
- B. Special Manufacturer's Warranty:
  - 1. Closers: Thirty years
  - 2. Exit Devices: Five Years
  - 3. Locksets & Cylinders: Ten years
  - 4. All other Hardware: Two years.

1.8 OWNER'S INSTRUCTION:

- A. Instruct Owner's personnel in operation and maintenance of hardware units.

1.9 MAINTENANCE:

- A. Extra Service Materials: Deliver to Owner extra materials from same production run as products installed. Package products with protective covering and identify with descriptive labels. Comply with Division 1 Closeout Submittals Section.
  - 1. Special Tools: Provide special wrenches and tools applicable to each different or special hardware component.
  - 2. Maintenance Tools: Provide maintenance tools and accessories supplied by hardware component manufacturer.
  - 3. Delivery, Storage and Protection: Comply with Owner's requirements for delivery, storage and protection of extra service materials.

- B. Maintenance Service: Submit for Owner's consideration maintenance service agreement for electronic products installed.

PART 2 - PRODUCTS

2.1 MANUFACTURERS:

- A. The following manufacturers are approved subject to compliance with requirements of the Contract Documents. Approval of manufacturers other than those listed shall be in accordance with Division 1.

<u>Item:</u>	<u>Manufacturer:</u>
Hinges	Ives
Continuous Hinges	ABH
Grade 1 Locksets	Schlage
Cylinders	Corbin Russwin-Match Existing
Closers	LCN
Push Pull Plates	Ives
Push/Pull Bars	Ives
Protection Plates	Ives
Overhead Stops	ABH
Door Stops	Ives
Flush Bolts	Ives
Card Readers	By Others
Door Position Switches	Schlage Electronics
Threshold & Gasketing	Reese
Key Cabinet	Telkee

2.2 MATERIALS:

- A. Hinges: Shall be Concealed bearing hinges
1. Template screw hole locations
  2. Concealed Bearings
  3. Equip with easily seated, non-rising pins.
  4. Non Removable Pin screws shall be slotted stainless steel screws.
  5. Bearing assembly is to be installed after plating.
  6. Sufficient size to allow 180-degree swing of door
  7. Provide hinge type as listed in schedule.
  8. Furnish 3 hinges per leaf to 7 foot 6 inch height. Add one for each additional 30 inches in height or fraction thereof.
  9. Tested and approved by BHMA for all applicable ANSI Standards for type, size, function and finish
  10. UL10C listed for Fire rated doors.
- B. Pin and Barrel Continuous Hinges:
1. Certified by BHMA for ANSI A156.26, Grade 1

2. Fabricated from 14 gauge material
  3. UL and ULC listed for fire-rated 4' x 8' single doors and 8' x 8' pairs up to 3 hour.
  4. Slim barrel design
  5. Twin nylon self lubricating bearings located between all knuckles except top and bottom.
  6. Two stainless steel bearings top and bottom, to prevent sagging if nylon bearings degrade during a fire.
  7. Limited Lifetime warranty
- C. Mortise Type Locks and Latch sets:
1. Tested and approved by BHMA for ANSI A156.13, Series 1000, Operational and Security Grade 1, Extra-Heavy Duty, and be UL10C listed.
  2. 3/4 inch throw latch bolt
  3. Provide sufficient curved strike lip to protect door trim
  4. Functions and design as indicated in the hardware groups.
- D. Exit Devices shall:
1. Tested and approved by BHMA for ANSI 156.3, Grade 1
  2. Furnish UL or recognized independent laboratory certified mechanical operational testing.
  3. Provide a deadlocking latch bolt
  4. Non-fire rated exit devices shall have cylinder dogging.
  5. Lever design shall match lockset lever design
  6. Provide strikes as required by application.
  7. Fire exit devices to be listed for UL10C
  8. UL listed for Accident Hazard
  9. Shall consist of a push pad, the actuating portion of which extends across, shall not be less than one half the width of the door leaf.
- E. Cylinders:
1. Provide the necessary cylinder housings, collars, rings & springs as recommended by the manufacturer for proper installation.
  2. Provide the proper cylinder cams or tail piece as required to operate all locksets and other keyed hardware items listed in the hardware sets.
  3. Coordinate and provide as required for related sections.
- F. Door Closers shall:
1. Tested and approved by BHMA for ANSI 156.4, Grade 1
  2. UL10C certified
  3. Conform to ANSI 156.4
  4. Metal covers
  5. Separate adjusting valves for closing and latching speed, and back check

6. Provide adapter plates, shim spacers and blade stop spacers as required by frame and door conditions
  7. Full rack and pinion type closer
  8. Mount closers **on non-public side of door**, unless otherwise noted in specification
  9. Closers shall be non-handed, non-sized and multi-sized.
- G. Door Stops: Provide a dome floor or wall stop for every opening as listed in the hardware sets.
1. Wall stop and floor stop shall be wrought bronze, brass or stainless steel.
  2. Provide fastener suitable for wall construction.
  3. Coordinate reinforcement of walls where wall stop is specified.
  4. Provide dome stops where wall stops are not practical. Provide spacers or carpet riser for floor conditions encountered
- H. Over Head Stops: Provide a Surface mounted or concealed overhead when a floor or wall stop cannot be used or when listed in the hardware set.
1. Surface overhead stops shall be heavy duty bronze or stainless steel.
- I. Push Plates: Provide with four beveled edges ANSI J301, .050 thickness, size as indicated in hardware set. Furnish oval-head countersunk screws to match finish.
- J. Pulls with plates: Provide with four beveled edges ANSI J301, .050 thickness Plates with ANSI J401 Pull as listed in hardware set. Provide proper fasteners for door construction.
- K. Push Pull Bars: Provide ANSI J504, .1" Diameter. Pull and push bar model and series as listed in hardware set. Provide proper fasteners for door construction.
- L. Kick plates: Provide with four beveled edges ANSI J102, 16 inches high by width less 2 inches on single doors and 1 inch on pairs of doors. Furnish oval-head countersunk screws to match finish.
- M. Door Bolts: Flush bolts for wood or metal doors.
1. Manual flush bolts, Certified ANSI/BHMA 156.16 at openings where allowed local authority.
  2. Provide Dust Proof Strike, Certified ANSI/BHMA 156.16 at doors with flush bolts without thresholds.
- N. Power Supply: Provide power supply for (EL) Electric Latch Retraction exit devices
1. UL Listed for class II output
  2. Include circuit breakers for protection of motherboard
  3. 115 Volt AC input= 115 Volt at 4 Amps
  4. Control module shall include Fire alarm terminal and Auxiliary contacts for remote signaling.

- O. Power Transfer: Power transfer device shall be of door and frame edge mount design. Manufactured to be concealed when door is closed. Housing made from cast materials with stainless steel tubular two piece spring loaded pivot parts. Furnish with pre-installed wires in quantity indicated or as needed for electric hardware. Cutout size to be approximately 1.25 inches wide x 9 inches long. Back plates are made of 14 gage steel. Provide 4 screw mounting holes countersunk with flathead screws. Units shall allow 180 degree opening of doors. Units "UL Listed" as Miscellaneous Fire Door Accessory. Coordinate position in door and frame with other hardware applications.
  - P. Seals: All seals shall be finished to match adjacent frame color. Seals shall be furnished as listed in schedule. Material shall be UL listed for labeled openings.
  - Q. Weather stripping: Provide at head and jambs only those units where resilient or flexible seal strip is easily replaceable. Where bar-type weather strip is used with parallel arm mounted closers install weather strip first.
    - 1. Weather strip shall be resilient seal of (Neoprene, Polyurethane, Vinyl, Pile, Nylon Brush, Silicone)
    - 2. UL10C Positive Pressure rated seal set when required.
  - R. Door Bottoms/Sweeps: Surface mounted or concealed door bottom where listed in the hardware sets.
    - 1. Door seal shall be resilient seal of (Neoprene, Polyurethane, Nylon Brush, Silicone)
    - 2. UL10C Positive Pressure rated seal set when required.
  - S. Thresholds: Thresholds shall be aluminum beveled type with maximum height of ½" for conformance with ADA requirements. Furnish as specified and per details. Provide fasteners and screws suitable for floor conditions.
  - T. Provide one wall mounted Telkee, series key cabinet complete with hooks, index and tags to accommodate 50% expansion. Coordinate mounting location with architect.
  - U. Silencers: Furnish silencers on all interior frames, 3 for single doors, 2 for pairs. Omit where any type of seals occur.
- 2.3 FINISH:
- A. Designations used in Schedule of Finish Hardware - 3.5, and elsewhere to indicate hardware finishes are those listed in ANSI/BHMA A156.18 including coordination with traditional U.S. finishes shown by certain manufacturers for their products
  - B. Powder coat door closers to match other hardware, unless otherwise noted.
  - C. Aluminum items shall be finished to match predominant adjacent material. Seals to coordinate with frame color.

2.4 KEYS AND KEYING:

- A. Provide construction keying with All Brass Cores during the construction period. Permanent keys (prepared according to the accepted keying schedule) will be furnished to the Owner.
- B. Cylinders: Coordinate keying requirements with requirements of Owner's existing Corbin keying system
- C. Transmit Master keys and other Security keys to hardware supplier.
- D. Furnish keys in the following quantities:
  - 1. 3 each Master keys
  - 2. 3 each Change keys each keyed core
  - 3. 5 each Construction master keys
  - 4. 100 Key blanks
- E. Final keying requirements are to be determined by the Owner

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verification of conditions: Examine doors, frames, related items and conditions under which Work is to be performed and identify conditions detrimental to proper and or timely completion.
  - 1. Do not proceed until unsatisfactory conditions have been corrected.

3.2 HARDWARE LOCATIONS:

- A. Mount hardware units at heights indicated in the following publications except as specifically indicated or required to comply with the governing regulations.
  - 1. Recommended Locations for Builder's Hardware for Standard Steel Doors and Frames, by the Door and Hardware Institute (DHI).
  - 2. Recommended locations for Architectural Hardware for flush wood doors (DHI).
  - 3. WDMA Industry Standard I.S.-1A-04, Industry Standard for Architectural wood flush doors.

3.3 INSTALLATION:

- A. Install each hardware item per manufacturer's instructions and recommendations. Do not install surface mounted items until finishes have been completed on the substrate.

Set units level, plumb and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.

- B. Conform to local governing agency security ordinance.
- C. Install Conforming to ICC/ANSI A117.1 Accessible and Usable Building and Facilities.
  - 1. Adjust door closer sweep periods so that from the open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches from the latch, measured to the landing side of the door.
- D. Installed hardware using the manufacturers fasteners provided. Drill and tap all screw holes located in metallic materials. Do not use "Riv-Nuts" or similar products.

3.4 FIELD QUALITY CONTROL AND FINAL ADJUSTMENT

- A. Contractor/Installers, Field Services: After installation is complete, contractor shall inspect the completed door openings on site to verify installation of hardware is complete and properly adjusted, in accordance with both the Contract Documents and final shop drawings.
  - 1. Check and adjust closers to ensure proper operation.
  - 2. Check latch set, lockset, and exit devices are properly installed and adjusted to ensure proper operation.
    - a. Verify levers are free from binding.
    - b. Ensure latch bolts and dead bolts are engaged into strike and hardware is functioning.
  - 3. Report findings, in writing, to architect indicating that all hardware is installed and functioning properly. Include recommendations outlining corrective actions for improperly functioning hardware if required.

3.5 SCHEDULE OF FINISH HARDWARE:

**Manufacturer List**

<u>Code</u>	<u>Name</u>
AB	ABH Manufacturing
BY	By Others
CR	Corbin Russwin
IV	Ives
LC	LCN
RS	Reese Enterprises Inc.
SC	Schlage
VD	Von Duprin

**Finish List**

<u>Code</u>	<u>Description</u>
626	Satin Chromium Plated
628	Satin Aluminum, Clear Anodized



630	Satin Stainless Steel
652	Satin Chromium Plated
689	Aluminum Painted
GR	Grey
US27	Satin Aluminum
US26D	Chromium Plated, Dull
US32D	Stainless Steel, Dull

**Option List**

<u>Code</u>	<u>Description</u>
PT	Power Transfer Prep
B4E	Beveled 4 Edges
NRP	NON Removable Pin Hinge
CSK	Counter Sunk Screws

**Hardware Sets**

**SET # 1 Door 101, 105**

1 Continuous Hinge	A500	630	AB
1 Exit Device	98EO-ALK	630	VD
1 Mortise Cylinder	Match Existing	626	CR
1 Closer	4040XP-S Cush	689	LCN
1 Door Position Switch	679-05HM	BLK	SC
1 Set Weather Strip	775AHead & Jamb	AL	RS
1 Rain Drip/Sweep	354A	AL	RS
1 Threshold	S483A	AL	RS

**SET # 2 Door 102**

2 Continuous Hinge	A500	630	AB
1 Exit Device	9827NL-ALK-LX	630	VD
1 Exit Device	9827EO-ALK-LX	630	VD
1 Rim Cylinder	Match Existing	630	VD
2 Mortise Cylinder	Match Existing	626	CR
2 Closer	4040XP-S Cush	689	LCN
2 Door Position Switch	7766	US27	SC
1 Set Weather Strip	775AHead & Jamb	AL	RS
2 Rain Drip/Sweep	354A	AL	RS
1 Threshold	S483A	AL	RS

**SET # 3 Door 103**

3 Hinges	3CB1HW 4.5x4.5NRP	652	IV
1 Electrified Lock	L9092EU-06A-CON-32P Less Cyl	626	SC
1 Mortise Cylinder	Match existing	626	CR
1 Closer	4040XP-Cush	689	LCN
1 Card Reader	By Others		BY
1 Power Supply	PS902		SC
1 Power Transfer	EPT10-CON	628	VD

DOOR HARDWARE

08 71 00 - 11

1	Frame Side Wire Harness	CON-6W For EPT10		VD
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Note 1: Valid card allows unlocking of electrified lock.

**SET # 4 Door 104**

1	Continuous Hinge	A500-PT	630	AB
1	Exit Device	EL98NL-CON	630	VD
1	Rim Cylinder	Match existing	626	CR
1	Closer	4040XP-S Cush	689	LC
1	Card Reader	By Others		BY
1	Power Supply	PS914		VD
1	Power Transfer	EPT10-CON	628	VD
1	Frame Side Wire Harness	CON-6W For EPT10		VD
1	Door Position Switch	679-05HM	BLK	SC
1	Set Weather Strip	775AHead & Jambs	AL	RS
2	Rain Drip/Sweep	354A	AL	RS
1	Threshold	S483A	AL	RS

Note 1: Valid card enables electrified latch retraction, allowing the door to be pulled open.

**SET # 5 Door 106**

6	Hinges	3CB1HW 4.5x4.5 NRP	652	IV
2	Exit Devices	98L-F-06	630	VD
1	Key Removable Mullion	KR9954	SP28	VD
1	Mortise Cylinder	For Mullion Match Existing	626	CR
2	Rim Cylinder	Match existing	626	CR
2	Closer	4040XP-S-Cush	689	LCN
2	Kick Plate	8400-10"-B-CS-2"LDW	630	IV
1	Set Seals	F797B Head & Jambs	BLK	RS

**SET # 6 Door 107, 108**

3	Hinges	3CB1HW 4.5x4.5	652	IV
1	Privacy Set	L9040-06A	626	SC
1	Closer	4040XP-Cush	689	LCN
1	Mop Plate	8400-4"-B4E-CSK-2"LDW	630	IV
3	Silencers	SR64	GR	IV

**SET # 7 Door 109, 110**

6	Hinges	3CB1HW 4.5x4.5 NRP	652	IV
1	Pair Flush Bolts	FB358	626	IV
1	Dust Proof Strike	DP2	626	IV
1	Storeroom Lock	L9080-06A	626	SC
1	Mortise Cylinder	Match existing	626	CR
2	Overhead Stop	4423	630	AB
1	Set Sound seals	770 Head & Jambs	AL	RS
2	Automatic Door Bottom	330C	AL	RS
1	Threshold	S105A (If there is carpet)	AL	RS

Note: If the floor does not have carpet the threshold can be deleted.

Improvements to the Jury Waiting Room  
In the City of Elizabeth for the  
County of Union, New Jersey

USA # 2017-011

**SET # 8 Door 111**

2 Continuous Hinge	A500	630	AB
2 Exit Device	9827EO-ALK-LX	630	VD
2 Mortise Cylinder	Match Existing	626	CR
2 Closer	4040XP-S Cush	689	LCN
2 Door Position Switch	679-05HM	BLK	SC
1 Extended Rain Drip	R201A	AL	RS
1 Set Weather Strip	775AHead & Jambs	AL	RS
2 Rain Drip/Sweep	354A	AL	RS
1 Threshold	S483A	AL	RS

**END OF SECTION**

## **SECTION 08 80 00 - GLAZING**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

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

#### **1.2 SUMMARY**

- A. This Section includes glazing for the following products, including those specified in other Sections where glazing requirements are specified by reference to this Section:
  - 1. Vision lites.

#### **1.3 DEFINITIONS**

- A. Manufacturer is used in this Section to refer to a firm that produces primary glass or fabricated glass as defined in the referenced glazing standard.

#### **1.4 SYSTEM PERFORMANCE REQUIREMENTS**

- A. General: Provide glazing systems that are produced, fabricated, and installed to withstand normal thermal movement, wind loading, and impact loading (where applicable), without failure including loss or glass breakage attributable to the following: defective manufacture, fabrication, and installation; failure of sealants or gaskets to remain watertight and airtight; deterioration of glazing materials; and other defects in construction.

#### **1.5 SUBMITTALS**

- A. General: Submit the following according to Conditions of Contract and Division 01 Specification Sections.
- B. Product data for each glass product and glazing material indicated.
- C. Samples for selection purposes of 12-inch (300 mm) square samples of each type of glass indicated except for clear monolithic glass products, and 12-inch (300 mm) long samples of each color required (except black) for each type of sealant or gasket exposed to view. Install sealant or gasket sample between two strips of material representative in color of the adjoining framing system.

1.6 QUALITY ASSURANCE

- A. Glazing Publications: Comply with published recommendations of glass product manufacturers and organizations below, except where more stringent requirements are indicated. Refer to these publications for glazing terms not otherwise defined in this Section or in referenced standards.
  - 1. FGMA Publications: "FGMA Glazing Manual."
  - 2. AAMA Publications: AAMA TIR-A7 "Sloped Glazing Guidelines" and "Glass Design for Sloped Glazing."
  - 3. LSGA Publications: "LSGA Design Guide."
  - 4. SIGMA Publications: TM-3000 "Vertical Glazing Guidelines" and TB-3001 "Sloped Glazing Guidelines."
- B. Safety Glass: Products complying with ANSI Z97.1 and testing requirements of 16 CFR Part 1201 for Category II materials.
  - 1. Subject to compliance with requirements, provide safety glass permanently marked with certification label of Safety Glazing Certification Council (SGCC) or other certification agency acceptable to authorities having jurisdiction.
- C. Glazing for Fire-Rated Door Assemblies: Glazing for assemblies that comply with NFPA 80 and that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire-protection ratings indicated, based on testing according to NFPA 252.
- D. Insulating Glass Certification Program: Provide insulating glass units permanently marked either on spacers or at least one component lite of units with appropriate certification label of inspecting and testing agency indicated below:
  - 1. Insulating Glass Certification Council (IGCC).
- E. Glazier Qualifications: Engage an experienced glazier who has completed glazing similar in material, design, and extent to that indicated for Project with a record of successful in-service performance.
- F. Single-Source Responsibility for Glass: Obtain glass from one source for each product indicated below:
  - 1. Primary glass of each (ASTM C 1036) type and class indicated.
- G. Single-Source Responsibility for Glazing Accessories: Obtain glazing accessories from one source for each product and installation method indicated.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Protect glazing materials to comply with manufacturer's directions and as needed to prevent damage to glass and glazing materials from condensation, temperature changes, direct exposure to sun, or other causes.

1. Where insulating glass units will be exposed to substantial altitude changes, comply with insulating glass fabricator's recommendations for venting and sealing to avoid hermetic seal ruptures.

## 1.8 PROJECT CONDITIONS

- A. Environmental Conditions: Do not proceed with glazing when ambient and substrate temperature conditions are outside the limits permitted by glazing materials manufacturer or when glazing channel substrates are wet from rain, frost, condensation, or other causes.

1. Install liquid sealants at ambient and substrate temperatures above 40 deg F (4 deg C).

## 1.9 WARRANTY

- A. General: Warranties specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under requirements of the Contract Documents.

- B. Manufacturer's Warranty on Insulating Glass: Submit written warranty signed by manufacturer of insulating glass agreeing to furnish replacements for insulating glass units that deteriorate, f.o.b. point of manufacture, freight allowed Project site, within specified warranty period indicated below. Deterioration of insulating glass is defined as failure of hermetic seal under normal use that is not attributed to glass breakage or to maintaining and cleaning insulating glass contrary to manufacturer's written instructions. Evidence of failure is the obstruction of vision by dust, moisture, or film on interior surfaces of glass. Warranty covers only deterioration due to normal conditions of use and not to handling, installing, protecting, and maintaining practices contrary to glass manufacturer's published instructions.

1. Warranty Period: Manufacturer's standard but not less than 10 years after date of Substantial Completion.

## PART 2 - PRODUCTS

### 2.1 HEAT-TREATED FLOAT GLASS PRODUCTS, GENERAL

- A. Fabrication Process: By horizontal (roller-hearth) process with roll-wave distortion parallel to bottom edge of glass as installed, unless otherwise indicated.

- B. Flatness Tolerances

1. Roller-Wave or Ripple: The deviation from flatness at any peak shall be targeted not to exceed 0.003" as measured per peak to valley for 1/4" (6mm) thick glass.
2. Bow and Warp: The bow and warp tolerances shall target a not exceed 1/32" per linear foot.

## 2.2 HEAT-TREATED FLOAT GLASS

- A. Uncoated, Clear, Heat-Treated Float Glass: ASTM C 1048, Condition A (uncoated surfaces), Type I (transparent glass, flat), Class 1 (clear), Quality q3 (glazing select), kind as indicated below.
  - 1. Kind FT (fully tempered) where indicated or required.
    - a. Safety Glazing shall comply with the CPSC 16 CFR, Part 1201 "Safety Standard for Architectural Glazing."
- B. Uncoated, Tinted, Heat-Treated Float Glass: ASTM C 1048, Condition A (uncoated surfaces), Type I (transparent glass, flat), Class 2 (tinted heat-absorbing and light-reducing), Quality q3 (glazing select), with tint color and performance characteristics for 6 mm thick glass matching those indicated for annealed primary tinted float glass; kind as indicated below:
  - 1. Kind FT (fully tempered) where indicated.
  - 2. Color: As selected by Architect from manufacturer's standard tint, with visible light transmittance of 50-52 percent and shading coefficient of 0.69-0.71 for 1/4" thick glass.
- C. Manufacturers: Subject to compliance with requirements, provide heat-treated glass by one of the following companies.
  - 1. Saint-Gobain, or approved equal ( eliminate this )
  - 2. **J.E. Berkowitz, L.P. ( 1-800-2577827 ) JUST KIDDING MITCH (JOHN)**
  - 3. Falconer Glass Industries, or approved equal. ( eliminate this )
  - 4. Guardian Industries Corp., or approved equal.
  - 5. PPG Industries
  - 6. Pilkington Building Products

## 2.3 LAMINATED GLASS

- A. Manufacturers: Subject to compliance with requirements, provide heat-treated glass by one of the following companies.
  - 1. PPG, Basis of Design, or approved equal.
    - a. SolarCool (2) Solargray + Low E.
  - 2. Guardian Industries Corp., or approved equal.
  - 3. Saint-Gobain, or approved equal.
- B. Laminated Glass: ASTM C 1172, and complying with testing requirements in 16 CFR 1201 for Category II materials, and with other requirements specified. Use materials that have a proven record of no tendency to bubble, discolor, or lose physical and mechanical properties after fabrication and installation.

1. Construction: Laminate glass with polyvinyl butyral interlayer or cast-in-place and cured-transparent-resin interlayer to comply with interlayer manufacturer's written recommendations.
2. Interlayer Thickness: Provide thickness not less than that indicated and as needed to comply with requirements. Two (2) 3/16" glass with 30-mil (0.76mm) polyvinyl butyral interlayer.
3. Interlayer Color: Clear unless otherwise indicated.
4. Interior Lite.

## 2.4 INSULATING GLASS PRODUCTS

- A. Sealed Insulating Glass Units: Preassembled units consisting of organically sealed lites of glass separated by dehydrated air spaces complying with ASTM E 774 and with other requirements indicated.
1. For properties of individual glass lites making up units, refer to requirements specified elsewhere in this Section applicable to types, classes, kinds, and conditions of glass products comprising lites of insulating glass units.
  2. Provide heat-treated, coated float glass of kind indicated or, Kind FT (fully tempered) where safety glass is designated or required.
  3. Performance characteristics designated for coated insulating glass are nominal values based on manufacturer's published test data for units with lites 6 mm thick and nominal **1/2-inch (13 mm)** dehydrated space between lites, unless otherwise indicated.
  4. U-values are expressed as **Btu/hr x sq. ft. x deg F (W/sq. m x K)**.
  5. Provide tinted exterior lite and clear interior lite in color as selected by Architect.
- B. Glass Insulating-Glass Units:
1. Overall Unit Thickness: 1".
  2. Interspace Content: Air.
  3. Interspace Dimension: 1/2".
  4. Exterior Lite Thickness: 1/4".
  5. Interior Lite Thickness: 1/4".
  6. Specified Design Wind Loads: As indicated.

## 2.5 ELASTOMERIC GLAZING SEALANTS

- A. General: Provide products of type indicated, complying with the following requirements:
1. Compatibility: Select glazing sealants and tapes of proven compatibility with other materials they will contact, including glass products, seals of insulating glass units, and glazing channel



substrates, under conditions of installation and service, as demonstrated by testing and field experience.

2. Suitability: Comply with sealant and glass manufacturer's recommendations for selecting glazing sealants and tapes that are suitable for applications indicated and conditions existing at time of installation.
3. Colors: Provide color of exposed joint sealants to comply with the following:
  - a. Provide selections made by Architect from manufacturer's full range of standard colors for products of type indicated.

- B. 1 Part Silicone Rubber Glazing Sealant: Elastomeric silicone sealant complying with FS TT-D-001543, Class A non-sag. Provide acid type recommended by manufacturer where only non-porous bond surfaces are contacted; provide non-acid type recommended by manufacturer where one or more porous bond surfaces are contacted.

## 2.6 GLAZING TAPES

- A. Butyl Rubber Glazing Tape: Partly-vulcanized, self-adhesive, non-staining, elastomeric butyl rubber tape. 98% solids, intended for 35% compression, no appreciable deterioration for 3000 hour test in Atlas Weatherometer; either plain or pre-shimmed as required for proper installation of glass.

## 2.7 MISCELLANEOUS GLAZING MATERIALS

- A. Cleaners, Primers and Sealers: Type recommended by sealant or gasket manufacturer.
- B. Setting Blocks: Elastomeric material with a Shore A durometer hardness of 85 plus or minus 5.
- C. Spacers: Elastomeric blocks or continuous extrusions with a Shore A durometer hardness required by glass manufacturer to maintain glass lites in place for installation indicated.
- D. Edge Blocks: Elastomeric material of hardness needed to limit glass lateral movement (side-walking).
- E. Plastic Foam Joint Fillers: Preformed, compressible, resilient, nonstaining, nonextruding, nonoutgassing, strips of closed-cell plastic foam of density, size, and shape to control sealant depth and otherwise contribute to produce optimum sealant performance.

## 2.8 FABRICATION OF GLASS AND OTHER GLAZING PRODUCTS

- A. Fabricate glass and other glazing products in sizes required to glaze openings indicated for Project, with edge and face clearances, edge and surface conditions, and bite complying with recommendations of product manufacturer and referenced glazing standard as required to comply with system performance requirements.

### **PART 3 - EXECUTION**

#### **3.1 EXAMINATION**

- A. Examine glass framing, with glazier present, for compliance with the following:
  - 1. Manufacturing and installation tolerances, including those for size, squareness, offsets at corners.
  - 2. Presence and functioning of weep system.
  - 3. Minimum required face or edge clearances.
  - 4. Effective sealing between joints of glass-framing members.
- B. Do not proceed with glazing until unsatisfactory conditions have been corrected.

#### **3.2 PREPARATION**

- A. Clean glazing channels and other framing members receiving glass immediately before glazing. Remove coatings that are not firmly bonded to substrates.

#### **3.3 GLAZING, GENERAL**

- A. Comply with combined recommendations of manufacturers of glass, sealants, gaskets, and other glazing materials, except where more stringent requirements are indicated, including those in referenced glazing publications.
- B. Glazing channel dimensions as indicated on Drawings provide necessary bite on glass, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances. Adjust as required by Project conditions during installation.
- C. Protect glass from edge damage during handling and installation as follows:
  - 1. Use a rolling block in rotating glass units to prevent damage to glass corners. Do not impact glass with metal framing. Use suction cups to shift glass units within openings; do not raise or drift glass with a pry bar. Rotate glass lites with flares or bevels on bottom horizontal edges so edges are located at top of opening, unless otherwise indicated by manufacturer's label.
  - 2. Remove damaged glass from Project site and legally dispose of off site. Damaged glass is glass with edge damage or other imperfections that, when installed, weaken glass and impair performance and appearance.
- D. Apply primers to joint surfaces where required for adhesion of sealants, as determined by preconstruction sealant-substrate testing.

- E. Install elastomeric setting blocks in sill rabbets, sized and located to comply with referenced glazing standard, unless otherwise required by glass manufacturer. Set blocks in thin course of compatible sealant suitable for heel bead.
- F. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites.
- G. Provide spacers for glass sizes larger than **50 united inches (1250 mm)** (length plus height) as follows:
  - 1. Locate spacers inside, outside, and directly opposite each other. Install correct size and spacing to preserve required face clearances, except where gaskets and glazing tapes are used that have demonstrated ability to maintain required face clearances and comply with system performance requirements.
- H. Provide edge blocking to comply with requirements of referenced glazing publications, unless otherwise required by glass manufacturer.
- I. Set glass lites in each series with uniform pattern, draw, bow, and similar characteristics.
- J. Where wedge-shaped gaskets are driven into one side of channel to pressurize sealant or gasket on opposite side, provide adequate anchorage so gasket cannot walk out when installation is subjected to movement.
- K. Miter cut wedge-shaped gaskets at corners and install gaskets in manner recommended by gasket manufacturer to prevent corners from pulling away; seal corner joints and butt joints with sealant recommended by gasket manufacturer.

#### 3.4 PROTECTION AND CLEANING

- A. Protect exterior glass from breakage immediately after installation by attaching crossed streamers to framing held away from glass. Do not apply markers to glass surface. Remove nonpermanent labels, and clean surfaces.
- B. Remove and replace glass that is broken, chipped, cracked, abraded, or damaged in any way, including natural causes, accidents and vandalism, during construction period.
- C. Wash glass on both faces in each area of Project not more than 4 days prior to date scheduled for inspections that establish date of Substantial Completion. Wash glass as recommended by glass manufacturer.

**END OF SECTION 08 80 00**

## SECTION 08 90 00 - LOUVERS AND VENTS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes the following:
  - 1. Fixed metal wall louvers.

#### 1.3 DEFINITIONS

- A. Louver Terminology: Refer to Air Movement and Control Association (AMCA) 501 for definitions of terms for metal louvers not otherwise defined in this Section or in referenced standards.

#### 1.4 PERFORMANCE REQUIREMENTS

- A. Structural Performance: Engineer, fabricate, and install exterior metal wall louvers to withstand the effects of loads and stresses from wind and normal thermal movement without evidencing permanent deformation of louver components including blades, frames, and supports; noise or metal fatigue caused by louver blade rattle or flutter; or permanent damage to fasteners and anchors.
  - 1. Wind Load: Uniform pressure (velocity pressure) of **20 lbf per sq. ft. (960 Pa)**, acting inwards or outwards.
  - 2. Normal thermal movement is defined as that resulting from the following maximum change (range) in ambient temperature. Base design calculations on actual surface temperatures of metals due to both solar heat gain and nighttime sky heat loss.
    - a. Temperature Change (Range): **100 deg F (56 deg C)**.
- B. Air-Performance, Water-Penetration, and Air-Leakage Ratings: Provide louvers complying with performance requirements indicated as demonstrated by testing manufacturer's stock units of height and width indicated. Test units according to AMCA 500.
  - 1. Perform testing on unpainted, cleaned, degreased units.
  - 2. Perform water-penetration testing on louvers without screens.

3. Equivalent Air-Performance Ratings: Louvers having less free area than that specified or having a lower free area velocity at the static pressure loss specified may be considered for the Work provided their total air performance is equivalent to that specified. The burden of proof of equivalency is on the Contractor. For louvers to be considered equivalent, the product of their free area, for the size specified, and their free area velocity at the static pressure loss specified must be at least equal to the product of the specified free area and velocity. Also, their free area velocity at the static pressure loss specified must not result in water penetration of more than **0.01 oz. per sq. ft. (3.1 g/sq. m)** of free area, and they must meet all other requirements.

#### 1.5 SUBMITTALS

- A. General: Submit each item in this Article according to the Conditions of the Contract and Division 1 Specification Sections.
- B. Product data for each type of product specified.

#### 1.6 QUALITY ASSURANCE

- A. Single-Source Responsibility: Obtain louvers and vents from one source and by a single manufacturer where alike in one or more respects regarding type, design, and factory-applied color finish.
- B. SMACNA Standard: Comply with SMACNA "Architectural Sheet Metal Manual" recommendations for fabrication, construction details, and installation procedures.

#### 1.7 PROJECT CONDITIONS

- A. Field Measurements: Check actual louver openings by accurate field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
  1. Where field measurements cannot be made without delaying the Work, guarantee opening dimensions and proceed with fabricating louvers without field measurements. Coordinate construction to ensure that actual opening dimensions correspond to guaranteed dimensions.

### **PART 2 - PRODUCTS**

#### 2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following:
  1. Louvers:
    - a. Industrial Louvers, Inc. Thin Line Series or approved equal.

## 2.2 MATERIALS

- A. Aluminum Extrusions: **ASTM B 221 (ASTM B 221M)**, Alloy 6063-T5 or T-52.
- B. Aluminum Sheet: **ASTM B 209 (ASTM B 209M)**, Alloy 3003 or 5005 with temper as required for forming, or as otherwise recommended by metal producer to produce required finish.
- C. Fasteners: Of same basic metal and alloy as fastened metal or 300 series stainless steel, unless otherwise indicated. Do not use metals that are corrosive or incompatible with joined materials.
  - 1. Use types and sizes to suit unit installation conditions.
  - 2. Use Phillips flat-head screws for exposed fasteners, unless otherwise indicated.
- D. Anchors and Inserts: Of type, size, and material required for type of loading and installation indicated. Use nonferrous metal or hot-dip galvanized anchors and inserts for exterior installations and elsewhere as required for corrosion resistance. Use toothed steel or expansion bolt devices for drilled-in-place anchors.
- E. Bituminous Paint: Cold-applied asphalt mastic complying with SSPC-Paint 12 except containing no asbestos fibers.
- F. Galvanizing Repair Paint: High-zinc-dust-content paint for regalvanizing welds in galvanized steel, with dry film containing not less than 94 percent zinc dust by weight, and complying with DOD-P-21035 or SSPC-Paint 20.

## 2.3 FABRICATION, GENERAL

- A. General: Fabricate louvers and vents to comply with requirements indicated for design, dimensions, materials, joinery, and performance.
- B. Assemble louvers in shop to minimize field splicing and assembly. Disassemble units as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation.
- C. Maintain equal louver blade spacing, including separation between blades and frames at head and sill, to produce uniform appearance.
- D. Fabricate frames, including integral sills, to fit in openings of sizes indicated, with allowances made for fabrication and installation tolerances of louvers, adjoining construction, and perimeter sealant joints.
- E. Include supports, anchorages, and accessories required for complete assembly.

#### 2.4 FIXED, EXTRUDED-ALUMINUM WALL LOUVERS

- A. Horizontal, Drainable, Fixed-Blade Louvers: Extruded-aluminum frames and louver blades, designed to collect and drain water to exterior at sill by means of gutters in front edges of blades and channels in jambs and mullions, complying with the following requirements:
1. Louver Depth: 1-3/8 inches, unless otherwise indicated.
  2. Frame Thickness: 0.063 inch, unless otherwise indicated.
  3. Blade Thickness: 0.063 inch, unless otherwise indicated.
  4. Performance Requirements: As follows, determined by testing units 48 inches (1220 mm) wide by 48 inches (1220 mm) high per AMCA 500:
    - a. Free Area: Not less than 50%
    - b. Static Pressure Loss: Not more than 0.14 inch wg (35 Pa) at an airflow of 900 fpm (4.57 m/s) free area intake velocity.
    - c. Water Penetration: Not more than 0.01 oz. per sq. ft. (3.1 g/sq. m) of free area at an airflow of 900 fpm (4.57 m/s) free area velocity when tested for 15 minutes.
  5. AMCA Seal: Mark units with the AMCA Certified Ratings Seal.

#### 2.5 LOUVER SCREENS

- A. General: Provide louvers with screens at locations indicated.
1. Screen Location for Fixed Louvers: Interior face, unless otherwise indicated.
  2. Screening Type: Bird screening, unless otherwise indicated.
- B. Secure screens to louver frames with stainless-steel machine screws, spaced 6 inches (150 mm) maximum from each corner and at 12 inches (300 mm) o.c. between.
- C. Louver Screen Frames: Fabricate screen frames with mitered corners to louver sizes indicated and to comply with the following requirements:
1. Metal: Same kind and form of metal as indicated for louver frames to which screens are attached.
    - a. Reinforce extruded-aluminum screen frames at corners with clips.
  2. Finish: Same finish as louver frames to which louver screens are attached.
  3. Type: Rewirable frames with a driven spline or insert for securing screen mesh.

2.6 FINISHES, GENERAL

- A. Comply with NAAMM "Metal Finishes Manual" for recommendations relative to applying and designating finishes.
- B. Finish louvers after assembly.

2.7 ALUMINUM FINISHES

- A. Finish designations prefixed by AA conform to the system established by the Aluminum Association for designating aluminum finishes.
- B. Provide finish to match adjacent window finishes. Finishes include both anodized and Kynar.
- C. Finish: nonspecular as fabricated; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class I, clear coating **0.7 mil (0.018 mm)** or thicker] complying with AAMA 607.1.
- D. High-Performance Organic Coating Finish: AA-C12C42R1x (Chemical Finish: cleaned with inhibited chemicals; Chemical Finish: acid chromate-fluoride-phosphate conversion coating; Organic Coating: as specified below). Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturer's instructions.
  - 1. Fluoropolymer 2-Coat Coating System: Manufacturer's standard 2-coat, thermocured system composed of specially formulated inhibitive primer and fluoropolymer color topcoat containing not less than 70 percent polyvinylidene fluoride resin by weight; complying with AAMA 605.2.
    - a. Color and Gloss: As required to match existing.

**PART 3 - EXECUTION**

3.1 PREPARATION

- A. Coordinate setting drawings, diagrams, templates, instructions, and directions for installation of anchorages that are to be embedded in concrete or masonry construction. Coordinate delivery of such items to Project site.

3.2 INSTALLATION

- A. Locate and place louver units plumb, level, and at indicated alignment with adjacent work.
- B. Use concealed anchorages where possible. Provide brass or lead washers fitted to screws where required to protect metal surfaces and to make a weathertight connection.
- C. Form closely fitted joints with exposed connections accurately located and secured.



- D. Provide perimeter reveals and openings of uniform width for sealants and joint fillers, as indicated.
- E. Repair finishes damaged by cutting, welding, soldering, and grinding operations required for fitting and jointing. Restore finishes so there is no evidence of corrective work. Return items that cannot be refinished in the field to the shop, make required alterations, and refinish entire unit, or provide new units.
- F. Protect galvanized- and nonferrous-metal surfaces from corrosion or galvanic action by applying a heavy coating of bituminous paint on surfaces that will be in contact with concrete, masonry, or dissimilar metals.
- G. Install concealed gaskets, flashings, joint fillers, and insulation, as louver installation progresses, where required to make louver joints weathertight. Comply with Division 7 Section "Joint Sealants" for sealants applied during installation of louver.

### 3.3 ADJUSTING AND PROTECTION

- A. Protect louvers and vents from damage of any kind during construction period including use of temporary protective coverings where needed and approved by louver manufacturer. Remove protective covering at time of Substantial Completion.
- B. Restore louvers and vents damaged during installation and construction period, so that no evidence remains of correction work. If results of restoration are unsuccessful, as judged by Architect, remove damaged units and replace with new units.
  - 1. Clean and touch up minor abrasions in finishes with air-dried coating that matches color and gloss of, and is compatible with, factory-applied finish coating.
- C. Test operation of adjustable wall louvers and adjust as needed to produce fully functioning units that comply with requirements.

### 3.4 CLEANING

- A. Periodically clean exposed surfaces of louvers and vents that are not protected by temporary covering to remove fingerprints and soil during construction period. Do not let soil accumulate until final cleaning.
- B. Before final inspection, clean exposed surfaces with water and a mild soap or detergent not harmful to finishes. Rinse surfaces thoroughly and dry.

**END OF SECTION 08 90 00**

## **SECTION 10 14 00 - SIGNAGE**

### **PART 1 - GENERAL**

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes the following types of signs:
  - 1. Panel signs.

#### 1.3 SUBMITTALS

- A. General: Submit the following according to the Conditions of the Contract and Division 01 Specification Sections.
- B. Product data for each type of sign specified, including details of construction relative to materials, dimensions of individual components, profiles, and finishes.
- C. Shop drawings showing fabrication and erection of signs. Include plans, elevations, and large-scale sections of typical members and other components. Show anchors, grounds, layout, reinforcement, accessories, and installation details.
- D. Samples: Provide the following samples of each sign component for initial selection of color, pattern and surface texture as required and for verification of compliance with requirements indicated.
  - 1. Samples for selection of color, pattern, and texture selected and compliance with requirements indicated:
    - a. Cast Acrylic Sheet and Plastic Laminate: Provide a sample panel not less than 8-1/2 inches by 11 inches for each material, color, texture, and pattern required. On each panel include a representative sample of the graphic image process required, showing graphic style, and colors and finishes of letters, numbers, and other graphic devices.

#### 1.4 QUALITY ASSURANCE

- A. Sign Fabricator Qualifications: Firm experienced in producing signs similar to those indicated for this Project, with a record of successful in-service performance, and sufficient production capacity to produce sign units required without causing delay in the Work.

- B. Single-Source Responsibility: For each separate sign type required, obtain signs from one source of a single manufacturer.
- C. Design Concept: The Drawings indicate sizes, profiles, and dimensional requirements of signs and are based on the specific types and models indicated. Sign units by other manufacturers may be considered provided deviations in dimensions and profiles do not change the design concept as judged by the Architect. The burden of proof of equality is on the proposer.

#### 1.5 PROJECT CONDITIONS

- A. Field Measurements: Take field measurements prior to preparation of shop drawings and fabrication to ensure proper fitting. Show recorded measurements on final shop drawings. Coordinate fabrication schedule with construction progress to avoid delay.

### **PART 2 - PRODUCTS**

#### 2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following:
  - 1. Manufacturers of Panel Signs:
    - a. ASI Sign Systems, Inc.
    - b. Best Manufacturing Company.
    - c. Beyond Signs, Inc.
    - d. Clarke Systems.
    - e. Mohawk Sign Systems.
    - f. Vomar Products, Inc.

#### 2.2 MATERIALS

- A. Cast Acrylic Sheet: Provide cast (not extruded or continuous cast) methyl methacrylate monomer plastic sheet, in sizes and 3/8" thickness, with a minimum flexural strength of 16,000 psi when tested according to ASTM D 790, with a minimum allowable continuous service temperature of 176 deg F (80 deg C), and of the following general types:
  - 1. Opaque Sheet: Provide colored opaque acrylic sheet in colors and finishes as selected from the manufacturer's standards.
- B. Fasteners: Use concealed fasteners fabricated from metals that are not corrosive to the sign material and mounting surface.
- C. Anchors and Inserts: Use nonferrous metal or hot-dipped galvanized anchors and inserts for exterior installations and elsewhere as required for corrosion resistance. Use toothed steel or lead expansion

bolt devices for drilled-in-place anchors. Furnish inserts, as required, to be set into concrete or masonry work.

## 2.3 PANEL SIGNS

- A. Panel Signs: Comply with requirements indicated for materials, thicknesses, finishes, colors, designs, shapes, sizes, and details of construction.
  - 1. Produce smooth, even, level sign panel surfaces, constructed to remain flat under installed conditions within a tolerance of plus or minus 1/16 inch measured diagonally.
- B. Unframed Panel Signs: Fabricate signs with edges mechanically and smoothly finished to conform with the following requirements:
  - 1. Edge Condition: Square cut.
  - 2. Edge Color for Plastic Laminate: Edge color same as background.
  - 3. Corner Condition: Corners rounded.
- C. Graphic Content and Style: Provide sign copy that complies with the requirements indicated for size, style, spacing, content, position, material, finishes, and colors of letters, numbers, and other graphic devices.
- D. Raised Copy: Machine-cut copy characters from matte-finished opaque acrylic sheet and chemically weld onto the acrylic sheet forming sign panel face. Produce precisely formed characters with square cut edges free from burrs and cut marks.
  - 1. Panel Material: Matte-finished opaque acrylic sheet.
  - 2. Raised Copy Thickness: Not less than 1/32 inch.
  - 3. Helvetica Medium - 1 inch high letters.
- E. Tactile and Braille Sign: Manufacturer's standard process for producing text and symbols complying with ADA-ABA Accessibility Guidelines and with ICC/ANSI A117.1. Text shall be accompanied by Grade 2 Braille. Produce precisely formed characters with square-cut edges free from burrs and cut marks; Braille dots with domed or rounded shape.
  - 1. Raised-Copy Thickness: Not less than 1/32 inch (0.8 mm).
- F. Provide signs for all rooms with name and room number as shown in Room Finish Schedule on drawings, subject to Owner's final sign schedule. Omit corridors and vestibules.
  - 1. Room Number Signs: 3" high x 6" wide.
  - 2. Room Name Signs: 3" high x 9" wide or as required to suit copy indicated.

- G. Barrier Free Accessibility Sign: Provide 6" x 6" signs at accessible rooms, including toilets and stalls, displaying international symbol of accessibility.
- H. Exit Signage
  - 1. All exits shall have signs stating "EXIT" conspicuously posted at each exit door.
  - 2. Signs shall be 6" wide x 6" high
  - 3. Provide tactile and Braille signage complying with ADA-ABA Accessibility Guidelines and with ICC/ANSI A117.1.
- I. Equipment Room Identification (IBC 914.2)
  - 1. All rooms containing controls for air-conditioning systems, sprinkler risers and valves or other fire detection, suppression or control areas.
  - 2. White reflective NFPA 170 symbols or text on red reflective background. Coordinate with local fire department and building official.
  - 3. Permanently installed and readily visible.

## 2.4 FINISHES

- A. Colors and Surface Textures: For exposed sign material that requires selection of materials with integral or applied colors, surface textures or other characteristics related to appearance, provide color matches indicated, or if not indicated, as selected by the Architect from the manufacturer's standards.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. General: Locate sign units and accessories where indicated, using mounting methods of the type described and in compliance with the manufacturer's instructions.
  - 1. Install signs level, plumb, and at the height indicated, with sign surfaces free from distortion or other defects in appearance.
- B. Wall-Mounted Panel Signs: Attach panel signs to wall surfaces using the methods indicated below:
  - 1. Silicone-Adhesive Mounting: Use liquid silicone adhesive recommended by the sign manufacturer to attach sign units to irregular, porous, or vinyl-covered surfaces. Use double-sided vinyl tape where recommended by the sign manufacturer to hold the sign in place until the adhesive has fully cured.

3.2 CLEANING AND PROTECTION

- A. After installation, clean soiled sign surfaces according to the manufacturer's instructions. Protect units from damage until acceptance by the Owner.

**END OF SECTION 10 14 00**

## **SECTION 10 28 00 - TOILET AND BATH ACCESSORIES**

### **PART 1 - GENERAL**

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes toilet and bath accessory items as scheduled.

#### 1.3 SUBMITTALS

- A. General: Submit the following according to Conditions of Contract and Division 01 Specifications Sections.
- B. Product data for each toilet accessory item specified, including construction details relative to materials, dimensions, gages, profiles, mounting method, specified options, and finishes.

#### 1.4 QUALITY ASSURANCE

- A. Inserts and Anchorages: Furnish accessory manufacturers' standard inserts and anchoring devices that must be set in concrete or built into masonry. Coordinate delivery with other work to avoid delay.
- B. Single-Source Responsibility: Provide products of same manufacturer for each type of accessory unit and for units exposed to view in same areas, unless otherwise acceptable to Architect.

#### 1.5 PROJECT CONDITIONS

- A. Coordination: Coordinate accessory locations, installation, and sequencing with other work to avoid interference with and ensure proper installation, operation, adjustment, cleaning, and servicing of toilet accessory items.

## **PART 2 - PRODUCTS**

### **2.1 ACCEPTABLE MANUFACTURERS**

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering toilet accessories that may be incorporated in the Work include, but are not limited to, the following:
1. American Specialties, Inc.
  2. Bobrick Washroom Equipment, Inc.
  3. Bradley Corporation.
  4. Brey Krause Manufacturing Co.

### **2.2 MATERIALS, GENERAL**

- A. Stainless Steel: AISI Type 302/304, with polished No. 4 finish, **0.034 inch (0.9 mm)** minimum thickness.
- B. Brass: Leaded and unleaded, flat products, ASTM B 19; rods, shapes, forgings, and flat products with finished edges, **ASTM B 16 (ASTM B 16M)**; Castings, ASTM B 30.
- C. Sheet Steel: Cold-rolled, commercial quality **ASTM A 366 (ASTM A 366M)**, **0.04 inch (1.0 mm)** minimum. Surface preparation and metal pretreatment as required for applied finish.
- D. Galvanized Steel Sheet: **ASTM A 527 G60 (ASTM A 527M Z180)**.
- E. Chromium Plating: Nickel and chromium electro-deposited on base metal, ASTM B 456, Type SC 2.
- F. Baked Enamel Finish: Factory-applied, gloss white, baked acrylic enamel coating.
- G. Mirror Glass: Nominal 6.0 mm thick, conforming to ASTM C 1036, Type I, Class 1, Quality q2, and with silvering, electro-plated copper coating, and protective organic coating. Provide tempered glass at all mirrors.
- H. Galvanized Steel Mounting Devices: ASTM A 153, hot-dip galvanized after fabrication.
- I. Fasteners: Screws, bolts, and other devices of same material as accessory unit, or of galvanized steel where concealed.

### **2.3 TOILET TISSUE DISPENSERS**

- A. Roll-In-Reserve Dispenser: Fabricate of stainless steel for mounting indicated below, size to store and dispense either **4-1/2 inch (113 mm)** diameter or **5 inch (125 mm)** diameter core tissue rolls,



with reserve roll placed in service by automatic release or by action of manual release bar. Hinge front of unit with pivot hinge and secure with tumbler lockset.

1. Mounting: Surface mounted, concealed anchorage.
2. Mounting: Partition mounted, designed to serve two adjacent toilet compartments, two rolls for each.
3. Bradley Model 5402 5422.

## 2.4 GRAB BARS

- A. Stainless Steel Type: Provide grab bars with wall thickness not less than **0.05 inch (1.3 mm)** and as follows:
1. Mounting: Concealed, manufacturer's standard flanges and anchorages.
  2. Clearance: **1-1/2 inch (38 mm)** clearance between wall surface and inside face of bar.
  3. Gripping Surfaces: Manufacturer's standard nonslip texture.
  4. Heavy-Duty Size: Outside diameter of **1-1/2 inches (38 mm)**

## 2.5 SANITARY NAPKIN DISPOSAL UNITS

- A. Surface-Mounted Type: Fabricate of stainless steel with seamless exposed walls, tightly self-closing top cover and locking bottom panel with continuous, stainless steel piano hinge.
1. Bradley Model 4722-15.

## 2.6 SOAP DISPENSERS

- A. Liquid Soap Dispenser, Horizontal Tank Type: fabricate for surface mounting, sized for 40 fluid ounces minimum capacity. Provide stainless steel piston, springs, and internal parts designed to dispense soap in measured quantity by pump action. Provide cover type 304 stainless steel in #4 finish, with unbreakable window type refill indicator.
1. Equip unit with push type valve for dispensing soap in liquid form.
  2. Bradley Model 6542.

## 2.7 MIRROR UNITS

- A. Standard Stainless Steel Framed Mirror Units: Mirror shall be framed with one-piece, roll-formed stainless steel with 3/4" face and neatly mitered corners. Double-strength continuous integral

stiffener on all sides. Back of unit shall be galvanized steel. Separate mounting brackets for concealed mounting. Mirror shall be of first quality 1/4" **tempered** glass, guaranteed for 15 years against silver spoilage and protected by shock absorbing, neoprene tubing with Poly-Glaze protective finish.

1. Bradley Model 781, sizes 1830.

## 2.8 FABRICATION

- A. General: Only a maximum **1-1/2 inch (38 mm)** diameter, unobtrusive stamped manufacturer logo, as approved by Architect, is permitted on exposed face of toilet or bath accessory units. On either interior surface not exposed to view or back surface, provide additional identification by either a printed, waterproof label or a stamped nameplate, indicating manufacturer's name and product model number.
- B. General: No names or labels are permitted on exposed faces of toilet and bath accessory units. On either interior surface not exposed to view or on back surface, provide identification of each accessory item either by a printed, waterproof label or a stamped nameplate indicating manufacturer's name and product model number.
- C. Surface-Mounted Toilet Accessories, General: Except where otherwise indicated, fabricate units with tight seams and joints, exposed edges rolled. Hang doors or access panels with continuous stainless steel piano hinge. Provide concealed anchorage wherever possible.
- D. Recessed Toilet Accessories, General: Except where otherwise indicated, fabricate units of all-welded construction, without mitered corners. Hang doors or access panels with full-length, stainless steel piano hinge. Provide anchorage that is fully concealed when unit is closed.
- E. Framed Mirror Units, General: Fabricate frames for glass mirror units to accommodate wood, felt, plastic, or other glass edge protection material. Provide mirror backing and support system that will permit rigid, tamperproof glass installation and prevent moisture accumulation, as follows:
  1. Provide galvanized-steel backing sheet, not less than **0.034 inch (0.9 mm)** and full mirror size, with nonabsorptive filler material. Corrugated cardboard is not an acceptable filler material.
- F. Mirror Unit Hangers: Provide system for mounting mirror units that will permit rigid, tamperproof, and theftproof installation, as follows:
  1. One-piece, galvanized-steel, wall-hanger device with spring-action locking mechanism to hold mirror unit in position with no exposed screws or bolts.
  2. Heavy-duty wall brackets of galvanized steel, equipped with concealed locking devices requiring a special tool to remove.
- G. Keys: Provide universal keys for access to toilet accessory units requiring internal access for servicing, resupply, etc. Provide minimum of six keys to Owner's representative.

2.9 WARM-AIR DRYERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
  - 1. Basis-of-Design Product: Bradley Model 2873, or approved equal.
  - 2. Mounting: Surface mounted.
  - 3. Operation: Touch-button activated with timed power cut-off switch.
    - a. Operation Time: 80 seconds.
  - 4. Cover Material and Finish: Cast iron, with enamel finish in color selected by Architect.

**PART 3 - EXECUTION**

3.1 INSTALLATION

- A. Install toilet accessory units according to manufacturers' instructions, using fasteners appropriate to substrate as recommended by unit manufacturer. Install units plumb and level, firmly anchored in locations and at heights indicated.
- B. Secure mirrors to walls in concealed, tamperproof manner with special hangers, toggle bolts, or screws. Set units plumb, level, and square at locations indicated, according to manufacturer's instructions for type of substrate involved.
- C. Install grab bars to withstand a downward load of at least **250 lbf (1100 N)**, complying with ASTM F 446.

3.2 ADJUSTING AND CLEANING

- A. Adjust toilet accessories for proper operation and verify that mechanisms function smoothly. Replace damaged or defective items.
- B. Clean and polish all exposed surfaces strictly according to manufacturer's recommendations after removing temporary labels and protective coatings.

**END OF SECTION 10 28 00**

## **SECTION 21 00 10 – GENERAL REQUIREMENTS (FIRE PROTECTION)**

### **PART 1 - GENERAL**

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this and the other sections of Division 21.

#### 1.2 SUMMARY

- A. This Section includes general administrative and procedural requirements for Fire Protection/Sprinkler system installations. It is intended to supplement Division 1 sections. Any conflicts shall be brought to the attention of the Architect/Engineer for clarification.
- B. This Contractor shall also include the following specification sections as part of Division 21 contract requirements:
  - 1. Section 23 0010 – General Requirements
- C. Related Sections include the following:
  - 1. Division 01 Section “Construction Waste Management”

#### 1.3 CONTRACTOR

- A. The term Contractor as used throughout this Division of the Specifications shall be understood to mean the Fire Protection Contractor or firm awarded the Contract for the Fire Protection/Sprinkler work. For projects with one prime contractor, the Fire Protection Contractor shall be understood to mean the sub-contractor to the prime Contractor.

#### 1.4 DRAWINGS

- A. The Fire Protection work is generally indicated on the Fire Protection/Sprinkler Drawings, but additional related information and details may appear on other project drawings, and these shall become a part of each Contract. All project drawings are intended to be complimentary.
  - 1. Refer to the Architectural drawings, when applicable, for information such as locations of fire rated assemblies, ceiling types and heights, chase dimensions, structural steel dimensions, etc.
  - 2. The Architectural Drawings and details shall govern the location and arrangement of equipment, mounting heights, and similar conditions within finished spaces.

3. Notify the Architect of any discrepancies between any of the drawings and/or the specifications.
- B. The Drawings are diagrammatic in nature and indicate the general configuration of the work. All work that will be required for the actual installation is not necessarily indicated due to the scale of the drawings. Coordinate the actual installation of all work with all other building system components and other Contractors, and provide all necessary coordination, offsets, accessories, materials, etc. as part of the work.

**PART 2 - PRODUCTS (NOT APPLICABLE)**

**PART 3 - EXECUTION**

3.1 CONSTRUCTION WASTE MANAGEMENT

- A. The contractor, subcontractors, and their personnel shall follow the procedures and practices for waste separation, collection and transport as defined in the contractor's "Waste Management Plan" as required by Division 01 Section "Construction Waste Management."

**END OF SECTION 21 00 10**

**SECTION 21 00 50 - BASIC MATERIALS AND METHODS (FIRE PROTECTION)**

**PART 1 - GENERAL**

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this and the other sections of Division 21.

1.2 SUMMARY

- A. This Section includes limited scope general construction materials and methods for application with fire protection installations as follows:

1. Piping materials and construction
2. Miscellaneous metals
3. Painting and finishing
4. Sleeves and seals
  - a. Sleeves
  - b. Escutcheons
5. Joint sealers
6. Fire stop systems
7. Anchor bolts
8. Concrete and masonry work

- B. Related Sections include the following:

1. Division 01 Section "Construction Waste Management"

1.3 DEFINITIONS

- A. Finished Spaces: Spaces other than mechanical and electrical equipment rooms, furred spaces, pipe and duct chases, unheated spaces immediately below roof, spaces above ceilings, unexcavated spaces, crawlspaces, and tunnels.
- B. Exposed, Interior Installations: Exposed to view indoors. Examples include finished occupied spaces and mechanical equipment rooms.

- C. Concealed, Interior Installations: Concealed from view and protected from physical contact by building occupants. Examples include above ceilings and chases.

#### 1.4 SUBMITTALS

- A. Product Data: For all specified materials and products.
- B. Shop Drawings: Detail fabrication and installation for metal and wood supports and anchorage for electrical materials and equipment.
- C. Firestop: For each firestop system show construction conditions, relationships to adjoining construction, dimensions, description of materials and finishes, component connections, anchorage methods, hardware and installation procedures, plus the following:
  - 1. Firestop design designation of testing and inspecting agency acceptable to authorities having jurisdiction that confirms compliance with requirements for each condition.
  - 2. Refer to Division 7, Thermal and Moisture Protection, for additional requirements related to Firestop Systems.

#### 1.5 QUALITY ASSURANCE

- A. Steel Support Welding: Qualify processes and operators according to AWS D1.1, "Structural Welding Code--Steel."
- B. Steel Pipe Welding: Qualify processes and operators according to ASME Boiler and Pressure Vessel Code: Section IX, "Welding and Brazing Qualifications."
  - 1. Comply with provisions in ASME B31 Series, "Code for Pressure Piping."
  - 2. Certify that each welder has passed AWS qualification tests for welding processes involved and that certification is current.

#### 1.6 PROJECT CONDITIONS

- A. Maintain and protect existing building services, which transit the area affected by selective demolition. Provide temporary utility services to affected areas.
- B. Environmental Conditions: Apply joint sealers under temperature and humidity conditions within the limits permitted by the joints sealer manufacturer. Do not apply joint sealers to wet substrates.

### **PART 2 - PRODUCTS**

2.1 PIPE, TUBE, AND FITTINGS

- A. Refer to individual Division 21 sections for pipe and fitting materials and joining method requirements.
- B. Pipe Threads: ASME B1.20.1 for factory-threaded pipe and pipe fittings.

2.2 JOINING MATERIALS

- A. Refer to individual Division 21 piping Sections for special joining materials not listed below.
- B. Pipe-Flange Gasket Materials: Suitable for chemical and thermal conditions of piping system contents.
  - 1. ASME B16.21, nonmetallic, flat, asbestos-free, 1/8-inch maximum thickness unless thickness or specific material is indicated.
    - a. Full-Face Type: For flat-face, Class 125, cast-iron and cast-bronze flanges.
    - b. Narrow-Face Type: For raised-face, Class 250, cast-iron and steel flanges.
  - 2. AWWA C110, rubber, flat face, 1/8 inch thick, unless otherwise indicated; and full-face or ring type, unless otherwise indicated.
- C. Flange Bolts and Nuts: ASME B18.2.1, carbon steel, unless otherwise indicated.
- D. Plastic, Pipe-Flange Gasket, Bolts, and Nuts: Type and material recommended by piping system manufacturer, unless otherwise indicated.
- E. Solder Filler Metals: ASTM B 32, lead-free alloys. Include water-flushable flux according to ASTM B 813.
  - 1. Brazing Filler Metals: AWS A5.8, BCuP Series, copper-phosphorus alloys for general-duty brazing, unless otherwise indicated; and AWS A5.8, BAg1, silver alloy for refrigerant piping, unless otherwise indicated.
  - 2. Welding Filler Metals: Comply with AWS D10.12 for welding materials appropriate for wall thickness and chemical analysis of steel pipe being welded.
  - 3. Solvent Cements for Joining CPVC Plastic Piping: ASTM F 493.

2.3 MISCELLANEOUS METALS AND LUMBER

- A. Miscellaneous metal shall be as follows:
  - 1. Steel plates, shapes, bars, and bar grating: ASTM A 36.
  - 2. Cold-Formed Steel Tubing: ASTM A 500.



3. Hot-Rolled Steel Tubing: ASTM A 501.
4. Steel Pipe: ASTM A 53, Schedule 40, welded.
5. Fasteners: Zinc-coated, type, grade, and class as required.

B. Miscellaneous lumber shall be as follows:

1. Framing Materials: Standard Grade, light-framing-size lumber of any species. Number 3 Common or Standard Grade boards complying with WCLIB or AWWA rules, or Number 3 boards complying with SPIB rules. Lumber shall be preservative treated in accordance with AWPB LP-2, and kiln dried to a moisture content of not more than 19 percent.
2. Construction Panels: Plywood panels; APA C-D PLUGGED INT, with exterior glue; thickness as indicated, or if not indicated, not less than 15/32 inches.

2.4 ACCESS DOORS AND PANELS

- A. Refer to Division 8 Sections for material requirements related to Access Doors and Panels.

2.5 SLEEVES

- A. Provide sleeves where required to protect conduit and cable penetrations. Each sleeve shall extend through its respective foundation, floor, or wall and shall be cut flush with each surface unless otherwise required.
1. Sleeve diameter shall allow for installation of specified sealant or seals.
  2. All sleeves shall be coordinated with general construction work and secured in place
- B. Sleeves through floor slabs or exterior aboveground masonry walls: ASTM A53, Type E, Grade B, Schedule 40, galvanized steel pipe finished with smooth ends.
- C. Sleeves through below grade foundations: Cast iron or ductile-iron pipe finished with smooth ends.
- D. Sleeves through exterior below grade 'basement' or tunnel walls: Mechanical sleeve seal as specified below.
- E. Sleeves through interior walls, partitions or suspended ceilings: Galvanized-steel sheet, 0.0239-inch minimum thickness; round tube closed with welded longitudinal joint.
- F. Floor sleeves shall extend 1 inch above the finished floor. Sleeve shall provide 1/2" space between floor sleeves and passing conduit and shall be caulked with waterproof sealant or fire sealant where required.

## 2.6 MECHANICAL SLEEVE SEALS

- A. Description: Modular sealing element unit, designed for field assembly, to fill annular space between pipe and sleeve.
  - 1. Manufacturers:
    - a. Advance Products & Systems, Inc.
    - b. Calpico, Inc.
    - c. Metraflex Co.
    - d. Pipeline Seal and Insulator, Inc.
  - 2. Sealing Elements: interlocking links shaped to fit surface of pipe. Include type and number required for pipe material and size of pipe.
  - 3. Pressure Plates: Carbon steel. Include two for each sealing element.
  - 4. Connecting Bolts and Nuts: Stainless steel of length required to secure pressure plates to sealing elements. Include one for each sealing element.

## 2.7 JOINT SEALERS

- A. Refer to Division 7 Sections for material requirements related to Joint Sealants.
- B. Joint fillers and other related materials compatible with each other and with joint substrates under conditions of service and application. Colors shall be as selected by the Architect from manufacturer's standard colors.

## 2.8 FIRESTOP SYSTEMS

- A. Refer to Division 7, Thermal and Moisture Protection, for material requirements related to Firestop Systems

## 2.9 ESCUTCHEONS

- A. Description: Manufactured wall and ceiling escutcheons and floor plates, with an ID to closely fit around conduit and an OD that completely covers opening.
- B. One-Piece, Cast-Brass Type: Polished chrome-plated with set screw.
- C. Split-Casting, Cast-Brass Type: Polished chrome-plated with concealed hinge and set screw.
- D. One-Piece, Stamped-Steel Type: With set screw or spring clips and chrome-plated finish.

## 2.10 GROUT

- A. Description: ASTM C 1107, Grade B, non-shrink and nonmetallic, dry hydraulic-cement grout.
  - 1. Characteristics: Post-hardening, volume-adjusting, non-staining, non-corrosive, nongaseous, and recommended for interior and exterior applications.
  - 2. Design Mix: 3000-psi, 28-day compressive strength.
  - 3. Packaging: Premixed and factory packaged.

## 2.11 CONCRETE

- A. Refer to Division 3 Concrete for materials requirements related to Concrete work.

## **PART 3 - EXECUTION**

### 3.1 CONSTRUCTION WASTE MANAGEMENT

- A. The contractor, subcontractors, and their personnel shall follow the procedures and practices for waste separation, collection and transport as defined in the contractor's "Waste Management Plan" as required by Division 01 Section "Construction Waste Management."

### 3.2 PIPING SYSTEMS - COMMON REQUIREMENTS

- A. Install piping according to the following requirements and Division 21 Sections specifying piping systems.
- B. Drawing plans, schematics, and diagrams indicate general location and arrangement of piping systems. Indicated locations and arrangements were used to size pipe and calculate friction loss, expansion, pump sizing, and other design considerations. Install piping as indicated unless deviations to layout are approved on Coordination Drawings.
- C. Piping Installation:
  - 1. Install piping in concealed locations, unless otherwise indicated and except in equipment rooms and service areas. Install piping above accessible ceilings to allow sufficient space for ceiling panel removal.
  - 2. Install piping indicated to be exposed and piping in equipment rooms and service areas at right angles or parallel to building walls. Diagonal runs are prohibited unless specifically indicated otherwise.
  - 3. Install piping to permit valve servicing.
  - 4. Install piping at indicated slopes. Install piping free of sags and bends.

5. Install fittings for changes in direction and branch connections.
6. Select system components with pressure rating equal to or greater than system operating pressure.
7. Install escutcheons for penetrations of walls, ceilings, and floors according to the following:
  - a. New Piping:
    - 1) Piping with Fitting or Sleeve Protruding from Wall: One-piece, deep-pattern type.
    - 2) Chrome-Plated Piping: One-piece, cast-brass type with polished chrome-plated finish.
    - 3) Insulated Piping: One-piece, stamped-steel type with spring clips.
    - 4) Bare Piping at Wall and Floor Penetrations in Finished Spaces: One-piece, cast-brass type with polished chrome-plated finish.
    - 5) Bare Piping at Wall and Floor Penetrations in Finished Spaces: One-piece, stamped-steel type.
    - 6) Bare Piping at Ceiling Penetrations in Finished Spaces:
    - 7) Bare Piping at Ceiling Penetrations in Finished Spaces:
    - 8) Bare Piping in Unfinished Service Spaces:

D. Pipe Sleeves:

1. Sleeves are not required for core-drilled holes. Permanent sleeves are not required for holes formed by removable PE sleeves.
2. Install sleeves for pipes passing through concrete and masonry walls and concrete floor and roof slabs.
3. Install sleeves for pipes passing through concrete and masonry walls, gypsum-board partitions, and concrete floor and roof slabs.
4. Cut sleeves to length for mounting flush with both surfaces.
  - a. Exception: Extend sleeves installed in floors of mechanical equipment areas or other wet areas 2 inches above finished floor level. Extend cast-iron sleeve fittings below floor slab as required to secure clamping ring if ring is specified.
5. Install sleeves in new walls and slabs as new walls and slabs are constructed.
  - a. Install sleeves that are large enough to provide 1/4-inch annular clear space between sleeve and pipe or pipe insulation. Use the following sleeve materials:
    - 1) Steel Pipe Sleeves: For pipes smaller than NPS 6.
    - 2) Steel Sheet Sleeves: For pipes NPS 6 and larger, penetrating gypsum-board partitions.
    - 3) Stack Sleeve Fittings: For pipes penetrating floors with membrane waterproofing. Secure flashing between clamping flanges. Install section of cast-iron soil pipe to extend sleeve to 2 inches above finished floor level.

- b. Seal space outside of sleeve fittings with grout.
- c. Except for underground wall penetrations, seal annular space between sleeve and pipe or pipe insulation, using joint sealants appropriate for size, depth, and location of joint. Refer to Division 07 Section "Joint Sealants" for materials and installation.

### 3.3 PIPING JOINT CONSTRUCTION

- A. Join pipe and fittings according to the following requirements and Division 21 Sections specifying piping systems.
- B. Ream ends of pipes and tubes and remove burrs. Bevel plain ends of steel pipe.
- C. Remove scale, slag, dirt, and debris from inside and outside of pipe and fittings before assembly.
- D. Soldered Joints: Apply ASTM B 813, water-flushable flux, unless otherwise indicated, to tube end. Construct joints according to ASTM B 828 or CDA's "Copper Tube Handbook," using lead-free solder alloy complying with ASTM B 32.
- E. Brazed Joints: Construct joints according to AWS's "Brazing Handbook," "Pipe and Tube" Chapter, using copper-phosphorus brazing filler metal complying with AWS A5.8.
- F. Threaded Joints: Thread pipe with tapered pipe threads according to ASME B1.20.1. Cut threads full and clean using sharp dies. Ream threaded pipe ends to remove burrs and restore full ID. Join pipe fittings and valves as follows:
  - 1. Apply appropriate tape or thread compound to external pipe threads unless dry seal threading is specified.
  - 2. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged. Do not use pipe sections that have cracked or open welds.
- G. Welded Joints: Construct joints according to AWS D10.12, using qualified processes and welding operators according to Part 1 "Quality Assurance" Article.
- H. Flanged Joints: Select appropriate gasket material, size, type, and thickness for service application. Install gasket concentrically positioned. Use suitable lubricants on bolt threads.
- I. Plastic Pressure Piping Gasketed Joints: Join according to ASTM D 3139.

### 3.4 EQUIPMENT INSTALLATION – COMMON REQUIREMENTS

- A. Install equipment to allow maximum possible headroom unless specific mounting heights are not indicated.

- B. Install equipment level and plumb, parallel and perpendicular to other building systems and components in exposed interior spaces, unless otherwise indicated.
- C. Install equipment to facilitate service, maintenance, and repair or replacement of components. Connect equipment for ease of disconnecting, with minimum interference to other installations. Extend grease fittings to accessible locations.
- D. Install equipment to allow right of way for piping installed at required slope

### 3.5 ERECTION OF SUPPORTS AND ANCHORAGE

- A. Cut, fit, and place miscellaneous metal fabrications accurately in location, alignment, and elevation to support and anchor mechanical materials and equipment.
- B. Field Welding: Comply with AWS "Structural Welding Code."
- C. Cut, fit, and place wood grounds, nailers, blocking, and anchorage accurately in location, alignment, and elevation to support and anchor mechanical materials and equipment.
- D. Select fastener sizes that will not penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood members.
- E. Attach to substrates as required to support applied loads.

### 3.6 ANCHORS

- A. Direct all pipe motion to expansion joints by heavy clamps and/or structural steel sections clamped or welded to structural members as required and/or as shown on drawings. Points at which anchors are located and secured shall be approved by the Engineer so that no structural members shall be unduly strained. Where possible, anchor points shall be on members running parallel to the piping being anchored.

### 3.7 ERECTION OF SUPPORTS AND ANCHORAGES

- A. Refer to Division 05 Section "Metal Fabrications" for structural steel.
- B. Cut, fit, and place miscellaneous metal supports accurately in location, alignment, and elevation to support and anchor materials and equipment.
- C. Field Welding: Comply with AWS D1.1.
- D. Cut, fit, and place wood grounds, nailers, blocking, and anchorages to support, and anchor materials and equipment.

- E. Select fastener sizes that will not penetrate members if opposite side will be exposed to view or will receive finish materials. Tighten connections between members. Install fasteners without splitting wood members.
- F. Attach to substrates as required to support applied loads
- G. Direct all conduit or equipment motion to expansion joints by heavy clamps and/or structural steel sections clamped or welded to structural members as required and/or as indicated. Points at which anchors are located and secured shall be approved by the Architect/Engineer such that no structural members shall be unduly strained. Where possible, anchor points shall be on members running parallel to the piping being anchored

3.8 JOINT SEALER APPLICATION

- A. Refer to Division 7, Thermal and Moisture Protection, for installation requirements related to Firestop Systems

3.9 FIRESTOP SYSTEMS

- A. Refer to Division 7, Thermal and Moisture Protection, for installation requirements related to Firestop Systems

**END OF SECTION 21 00 50**

**SECTION 21 10 00 – WATER BASED FIRE-SUPPRESSION SPRINKLERS**

**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 fire-suppression sprinklers, piping, and equipment for the following building systems:
  - 1. Wet-pipe, fire-suppression sprinklers, including piping, valves, specialties, and automatic sprinklers.
- B. Total system design and installation for the area of alteration is the responsibility of this contractor. All work shall be in compliance with these specifications, the drawings, and NFPA 13. Where there are conflicts between the specifications and NFPA 13, NFPA 13 shall govern. The drawings and specifications are diagrammatic and show the intent of the design. Actual configuration, layout, quantities, etc is the responsibility of this contractor.
- C. Location of heads is diagrammatic and may not show complete coverage. This contractor shall review the architectural drawings and determine exact location, spacing, and number of heads required to provide proper coverage to meet the requirements of NFPA 13. This may include additional heads at soffits, under ducts, and in concealed spaces. Pipe path is also shown diagrammatic. This contractor shall coordinate the installation of all piping with the other trades also installing work in same spaces. No piping shall be run exposed unless specifically stated on the drawings or where approved by the Owner or Architect. This includes sprinkler test and drain piping.
- D. Related Sections include the following:
  - 1. Division 01 Section “Construction Waste Management”

1.3 DEFINITIONS

- A. CPVC: Chlorinated polyvinyl chloride plastic.
- B. Working Plans: Documents, including drawings, calculations, and material specifications prepared according to NFPA 13 for obtaining approval from authorities having jurisdiction.
- C. NFPA: National Fire Protection Association



#### 1.4 SYSTEM PERFORMANCE REQUIREMENTS

- A. Design sprinkler piping according to the following and obtain approval from authorities having jurisdiction:
1. Include 10 percent margin of safety for available water flow and pressure.
  2. Include losses through water-service piping, valves, and backflow preventers.
  3. Sprinkler Occupancy Hazard Classifications: As follows:
    - a. Building Service Areas: Ordinary Hazard, Group 1.
    - b. Electrical Equipment Rooms: Ordinary Hazard, Group 1.
    - c. General Storage Areas: Ordinary Hazard, Group 1.
    - d. Mechanical Equipment Rooms: Ordinary Hazard, Group 1.
    - e. Office and Public Areas: Light Hazard.
  4. Minimum Density for Automatic-Sprinkler Piping Design shall be as listed in the latest version of NFPA 13 or as follows whichever is higher.
    - a. Light-Hazard Occupancy: 0.10 gpm over 1500-sq. ft.
    - b. Ordinary-Hazard, Group 1 Occupancy: 0.15 gpm over 1500-sq. ft.
    - c. Special Occupancy Hazard: As determined by authorities having jurisdiction.
  5. Maximum Protection Area per Sprinkler shall be as listed in the latest version of NFPA 13 or as follows whichever is lower.
    - a. Office Space: 225 sq. ft.
    - b. Storage Areas: 130 sq. ft.
    - c. Mechanical Equipment Rooms: 130 sq. ft.
    - d. Electrical Equipment Rooms: 130 sq. ft.
    - e. Other Areas: According to NFPA 13 recommendations, unless otherwise indicated.
- B. Components and Installation: Capable of producing piping systems with 175-psig minimum working-pressure rating, unless otherwise indicated.
- C. Maximum velocity in any sprinkler pipe shall be 20 feet per second.

#### 1.5 SUBMITTALS

- A. Product Data: For the following:
1. Pipe and fitting materials and methods of joining for sprinkler piping.
  2. Grooved joint couplings and fitting shall be referred to on drawings and product submittals, and be identified by the manufacturer's listed model or series designation.
  3. Pipe hangers and supports.

4. Piping seismic restraints.
  5. Valves, including specialty valves, accessories, and devices.
  6. Alarm devices. Include electrical data.
  7. Fire department connections. Include type; number, size, and arrangement of inlets; caps and chains; size and direction of outlet; escutcheon and marking; and finish.
  8. Sprinklers, escutcheons, and guards. Include sprinkler flow characteristics, mounting, finish, and other pertinent data.
- B. Approved Sprinkler Piping Drawings: Working plans, prepared according to NFPA 13, that have been approved by authorities having jurisdiction. Include hydraulic calculations.
1. Sprinklers shall be referred to on drawings and product submittals, and be specifically identified by the manufacturer's listed model or series designation. Trade names and other abbreviated listings are not allowed.
- C. Field Test Reports and Certificates: Indicate and interpret test results for compliance with performance requirements and as described in NFPA 13. Include "Contractor's Material and Test Certificate for Aboveground Piping" and "Contractor's Material and Test Certificate for Underground Piping."
- D. Maintenance Data: For each type of sprinkler specialty to include in maintenance manuals specified in Division 1.
- 1.6 QUALITY ASSURANCE
- A. Engineering Responsibility: Preparation of working plans, calculations, and field test reports by a qualified professional engineer. Base calculations on results of fire-hydrant flow test.
- B. 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 fire-suppression piping that are similar to those indicated for this Project in material, design, and extent.
- C. Manufacturer Qualifications: Firms whose equipment, specialties, and accessories are listed by product name and manufacturer in UL's "Fire Protection Equipment Directory" and FM's "Fire Protection Approval Guide" and that comply with other requirements indicated.
1. All grooved couplings, and fittings, valves and specialties shall be the products of a single manufacturer. Grooving tools shall be of the same manufacturer as the grooved components.
  2. All castings used for coupling housings, fittings, valve bodies, etc., shall be date stamped for quality assurance and traceability.

- D. Sprinkler Components: Listing/approval stamp, label, or other marking by a testing agency acceptable to authorities having jurisdiction.
- E. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction.
- F. NFPA Standards: Equipment, specialties, accessories, installation, and testing complying with the following:
  - 1. NFPA 13, "Installation of Sprinkler Systems."

#### 1.7 EXTRA MATERIALS

- A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  - 1. Sprinkler Cabinets: Finished, wall-mounting steel cabinet and hinged cover, with space for a minimum of twelve spare sprinklers plus sprinkler wrench. Include the number of sprinklers required by NFPA 13 and wrench for sprinklers. Include separate cabinet with sprinklers and wrench for each type of sprinkler on Project.

#### 1.8 COORDINATION

- A. Coordinate layout and installation of sprinklers with other construction that penetrates ceilings, including light fixtures, HVAC equipment, and partition assemblies.
- B. Coordinate location of piping in the ceiling space with other trades. Refer to 23 0010 requirements for coordination drawings.

### **PART 2 - PRODUCTS**

#### 2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
  - 1. Specialty Valves and Devices:
    - a. Reliable Automatic Sprinkler Co., Inc.
    - b. Victaulic Company.
    - c. Viking Corp.
  - 2. Water-Flow Indicators and Supervisory Switches:
    - a. Potter Electric Signal Co.
    - b. Reliable Automatic Sprinkler Co., Inc.

- c. System Sensor, Inc.
  - d. Viking Corp.
  - e. Watts Industries, Inc.; Water Products Div.
3. Sprinkler Drain and Alarm Test Fittings:
- a. Victaulic Co. of America.
  - b. Reliable Automatic Sprinkler Co., Inc
4. Sprinklers:
- a. Reliable Automatic Sprinkler Co., Inc.
  - b. Victaulic Company.
  - c. Viking Corp.
5. Valves:
- a. American Cast Iron Pipe Co.; Waterous Co.
  - b. McWane, Inc.; Clow Valve Co. Div.
  - c. Stockham Valves & Fittings, Inc.
  - d. Milwaukee Valve Co., Inc.
  - e. Stockham Valves & Fittings, Inc.
  - f. Victaulic Co. of America.

## 2.2 PIPING MATERIALS

- A. Refer to Part 3 "Piping Applications" Article for applications of pipe, tube, fitting, and joining materials.

## 2.3 STEEL PIPE AND FITTINGS

- A. Threaded-End, Standard-Weight Steel Pipe: ASTM A 53/A 53M, ASTM A 135, or ASTM A 795, hot-dip galvanized where indicated with factory or field-formed threaded ends.
- 1. Cast-Iron Threaded Flanges: ASME B16.1.
  - 2. Malleable-Iron Threaded Fittings: ASME B16.3.
  - 3. Gray-Iron Threaded Fittings: ASME B16.4.
  - 4. Steel Threaded Pipe Nipples: ASTM A 733, made of ASTM A 53/A 53M or ASTM A 106, Schedule 40, seamless steel pipe hot-dip galvanized where indicated. Include ends matching joining method.
  - 5. Steel Threaded Couplings: ASTM A 865, hot-dip galvanized-steel pipe where indicated.
- B. Plain-End, Standard-Weight Steel Pipe: ASTM A 53/A 53M, ASTM A 135, or ASTM A 795 hot-dip galvanized-steel pipe where indicated.

1. Locking-Lug Fittings: UL 213, ductile-iron body with retainer lugs that require one-quarter turn to secure pipe in fitting.
    - a. Manufacturers:
      - 1) Anvil International, Inc.
  2. Steel Welding Fittings: ASTM A 234/A 234M, and ASME B16.9 or ASME B16.11.
  3. Steel Flanges and Flanged Fittings: ASME B16.5.
- C. Grooved-End, Standard-Weight Steel Pipe: ASTM A 53/A 53M, ASTM A 135, or ASTM A 795, hot-dip galvanized where indicated, with factory or field-formed, square-cut or roll grooved ends.
1. Grooved-Joint Piping Systems:
    - a. Manufacturers:
      - 1) Victaulic Co. of America.
      - 2) Anvil International
      - 3) Grinnell
    - b. Grooved-End Fittings: UL-listed, ASTM A 536, ductile-iron casting with OD matching steel-pipe OD. Short-pattern, with flow equal to standard pattern fittings. Basis of Design: Victaulic FireLock.
    - c. Grooved-End-Pipe Couplings: UL 213 and AWWA C606, rigid pattern, unless otherwise indicated; gasketed fitting matching steel-pipe OD. Include ductile-iron housing with keys matching steel-pipe and fitting grooves, [prelubricated] rubber gasket listed for use with housing, and ASTM A449 electroplated steel bolts and nuts.
      - 1) Rigid Type: Coupling housings with offsetting, angle-pattern bolt pads shall be used to provide system rigidity and support and hanging in accordance with NFPA-13. Couplings shall be fully installed at visual pad-to-pad offset contact. Couplings that require exact gapping of bolt pads at specific torque ratings are not permitted. Victaulic Style 107H/107N (Quick-Vic™). Installation ready rigid coupling for direct stab installation without field disassembly.
      - 2) Flexible Type: Use in locations where vibration attenuation and stress relief are required. 2" (DN50) through 8" (DN0200), Victaulic Style 177 (Quick-Vic™), Installation ready flexible coupling; or Victaulic Style 75 or 77 standard flexible couplings.
- D. Plain-End, Schedule 10 Steel Pipe: ASTM A 135 or ASTM A 795, Schedule 10 in NPS 5 (DN 125) and smaller; and NFPA 13-specified wall thickness in NPS 6 to NPS 10 (DN 150 to DN 250).
1. Steel Welding Fittings: ASTM A 234/A 234M, and ASME B16.9 or ASME B16.11.
  2. Steel Flanges and Flanged Fittings: ASME B16.5.
  3. Grooved-Joint Piping Systems:

- a. Manufacturers:
  - 1) Victaulic Co. of America.
  - 2) Anvil International
  - 3) Grinnell
- b. Grooved-End Fittings: UL-listed, ASTM A 536, ductile-iron casting with OD matching steel-pipe OD. Short-pattern, with flow equal to standard pattern fittings. Basis of Design: Victaulic FireLock.
- c. Grooved-End-Pipe Couplings: UL 213 and AWWA C606, rigid pattern, unless otherwise indicated; gasketed fitting matching steel-pipe OD. Include ductile-iron housing with keys matching steel-pipe and fitting grooves, prelubricated rubber gasket listed for use with housing, and ASTM A449 electroplated steel bolts and nuts.
  - 1) Rigid Type: Coupling housings with offsetting, angle-pattern bolt pads shall be used to provide system rigidity and support and hanging in accordance with NFPA-13. Couplings shall be fully installed at visual pad-to-pad offset contact. Couplings that require exact gapping of bolt pads at specific torque ratings are not permitted. Victaulic Style 107H/107N (Quick-Vic™). Installation ready rigid coupling for direct stab installation without field disassembly.
  - 2) Flexible Type: Use in locations where vibration attenuation and stress relief are required. 2" (DN50) through 8" (DN200), Victaulic Style 177 (Quick-Vic™), Installation ready flexible coupling; or Victaulic Style 75 or 77 standard flexible couplings.

## 2.4 DIELECTRIC FITTINGS

- A. Assembly shall be copper alloy, ferrous, and insulating materials with ends matching piping system.
- B. Dielectric Unions: Factory-fabricated assembly, designed for 250-psig (1725-kPa) minimum working pressure at 180 deg F (82 deg C). Include insulating material that isolates dissimilar materials and ends with inside threads according to ASME B1.20.1.
- C. Dielectric Flanges: Factory-fabricated companion-flange assembly, for 175-psig (1200-kPa) minimum working-pressure rating as required for piping system.
- D. Dielectric Flange Insulation Kits: Components for field assembly shall include CR or phenolic gasket, PE or phenolic bolt sleeves, phenolic washers, and steel backing washers.
- E. Dielectric Couplings: Galvanized steel with inert and noncorrosive thermoplastic lining and threaded ends and 300-psig (2070-kPa) working-pressure rating at 225 deg F (107 deg C).
- F. Dielectric Nipples: Electroplated steel with inert and noncorrosive thermoplastic lining, with combination of plain, threaded, or grooved ends and 300-psig (2070-kPa) working-pressure rating at 225 deg F (107 deg C).

## 2.5 PIPE AND TUBE FITTINGS

- A. Ductile-Iron Fittings: AWWA C110, ductile-iron or cast-iron type; or AWWA C153, ductile-iron, compact mechanical-joint type. Include cement-mortar lining and seal coat according to AWWA C104 and glands, rubber gaskets, and bolts and nuts according to AWWA C111.
- B. Cast-Iron Threaded Flanges: ASME B16.1.
- C. Cast-Iron Threaded Fittings: ASME B16.4.
- D. Malleable-Iron Threaded Fittings: ASME B16.3.
- E. Steel, Threaded Couplings: ASTM A 865.
- F. Steel Welding Fittings: ASTM A 234/A 234M, ASME B16.9, or ASME B16.11.
- G. Steel Flanges and Flanged Fittings: ASME B16.5.
- H. Steel, Grooved-End Fittings: UL-listed and FM-approved, ASTM A 536, ductile iron; with dimensions matching steel pipe and ends factory grooved according to AWWA C606. Short-pattern, with flow equal to standard pattern fittings. Basis of Design: Victaulic FireLock.
- I. Stainless Steel, Press-Seal Fittings: FM-approved, 300-psig pressure rating; with steel housing, EPDM O-rings, and pipe stop; for use with Schedule 10S, plain-end, stainless steel pipe. Include UL 45-listed fitting manufacturer's pressure-sealing tools.
- J. Cast-Copper-Alloy Fittings: ASME B16.18.
- K. Wrought-Copper Fittings: ASME B16.22.

## 2.6 FLEXIBLE CONNECTORS

- A. Flexible connectors shall have materials suitable for system fluid. Include **250-psig (1725-kPa)** minimum working-pressure rating and ends according to the following:
  - 1. NPS 2 (DN 50) and Smaller: Threaded.
  - 2. NPS 2-1/2 (DN 65) and Larger: Flanged.
  - 3. Option for NPS 2-1/2 (DN 65) and Larger: Grooved for use with grooved-end-pipe couplings.
- B. Bronze-Hose, Flexible Connectors: Corrugated, bronze, inner tubing covered with bronze wire braid. Include copper-tube ends or bronze flanged ends, braze welded to hose.
- C. Stainless-Steel-Hose/Steel Pipe, Flexible Connectors: Corrugated, stainless-steel, inner tubing covered with stainless-steel wire braid. Include steel nipples or flanges, welded to hose.
- D. Stainless-Steel-Hose/Stainless-Steel Pipe, Flexible Connectors: Corrugated, stainless-steel, inner tubing covered with stainless-steel wire braid. Include stainless-steel nipples or flanges, welded to hose.

## 2.7 JOINING MATERIALS

- A. Refer to Division 23 Section "Basic Mechanical Materials and Methods" for pipe-flange gasket materials and welding filler metals.
- B. Grooved Joint Lubricants: Lubricate gaskets in accordance with the manufacturer's published installation instructions, using lubricant compatible with the gasket elastomer and fluid media. Basis of Design: Victaulic Vic-Lube.
- C. Ductile-Iron, Keyed Couplings: UL 213 and AWWA C606, for ductile-iron pipe dimensions. Include ASTM A 536, ductile-iron housing, rubber gaskets, and steel bolts and nuts.
- D. Ductile-Iron, Flanged Joints: AWWA C115, ductile-iron or gray-iron pipe flanges, rubber gaskets, and steel bolts and nuts.
- E. Transition Couplings: AWWA C219, sleeve type, or other manufactured fitting the same size as, with pressure rating at least equal to, and with ends compatible with piping to be joined.

## 2.8 GENERAL-DUTY VALVES

- A. Refer to Division 23 Section "Valves" for gate, ball, butterfly, globe, and check valves not required to be UL listed and FM approved.

## 2.9 FIRE-PROTECTION-SERVICE VALVES

- A. General: UL listed and FM approved, with minimum 175-psig nonshock working-pressure rating. Valves for grooved-end piping may be furnished with grooved ends instead of type of ends specified.
- B. Gate Valves, NPS 2 and Smaller: UL 262; cast-bronze, threaded ends; solid wedge; OS&Y; and rising stem.
- C. Indicating Valves, NPS 2-1/2 and Smaller: UL 1091; butterfly or ball-type, bronze body with threaded ends; and weatherproof integral indicating device. Basis of Design: Victaulic Series 728.
  - 1. Indicator: Visual.
  - 2. Indicator: Electrical 115-V ac, prewired, single-circuit, supervisory switch.
  - 3. Indicator: Electrical 125-V ac, prewired, two-circuit, supervisory switch.
- D. Gate Valves, NPS 2-1/2 and Larger: UL 262, iron body, bronze mounted, taper wedge, OS&Y, and rising stem. Include replaceable, bronze, wedge facing rings and flanged or grooved ends. Basis of Design: Victaulic Series 771H.
- E. Butterfly Valves, NPS 2 and Larger: UL1091, ductile iron body with electroless nickel coated ductile iron disc, pressure responsive seat, and stainless steel stem. (Stem shall be offset from



the disc centerline to provide complete 360-degree circumferential seating.) Valve shall have an extended neck, with weatherproof actuator housing and two SPDT supervisory switches. Basis of Design: Victaulic Style 705.

- F. Swing Check Valves, NPS 2 and Smaller: UL 312 or MSS SP-80, Class 150; bronze body with bronze disc and threaded ends.
- G. Swing Check Valves, NPS 2-1/2 and Larger: UL 312, cast-iron body and bolted cap, with bronze disc or cast-iron disc with bronze-disc ring and flanged ends.
- H. Spring-Assisted Check Valves, NPS 2 and Larger: UL 312, ductile-iron body with stainless steel spring and shaft for vertical or horizontal installation, and grooved ends. Basis of Design: Victaulic Series 717.
- I. Split-Clapper Check Valves, NPS 4 and Larger: UL 312, cast-iron body with rubber seal, bronze-alloy discs, and stainless-steel spring and hinge pin.

## 2.10 SPECIALTY VALVES

- A. Alarm Check Valves: UL 193, 175-psig working pressure, designed for vertical installation, with ductile-iron body and grooved ends or cast-iron flanged inlet and outlet, bronze grooved seat with O-ring seals, and single-hinge pin and latch design. Include trim sets for bypass, drain, electric sprinkler alarm switch, pressure gages, retarding chamber, and fill-line attachment with strainer. Valve internal components shall be replaceable without removing the valve from the installed position. Basis of Design: Victaulic Series 751.
  - 1. Option: Grooved-end connections for use with keyed couplings.
  - 2. Drip Cup Assembly: Pipe drain without valves, and separate from main drain piping.

## 2.11 SPRINKLERS

- A. Automatic Sprinklers: With heat-responsive element complying with the following:
  - 1. UL 199, for applications except residential.
- B. Sprinkler body shall be die-cast, with a hex-shaped wrench boss integrally cast into the sprinkler body to reduce the risk of damage during installation. Wrenches shall be provided by the sprinkler manufacturer that directly engage the wrench boss. Basis of Design: Victaulic Company.
- C. Sprinkler Types and Categories: Nominal 1/2-inch orifice for "Ordinary" temperature classification rating, unless otherwise indicated or required by application.
- D. Sprinkler types shall be as scheduled on the drawings
- E. Sprinkler Finishes: Chrome-plated, bronze, and painted.

- F. Special Coatings: Wax, lead, and corrosion-resistant paint.
- G. Sprinkler Escutcheons: Materials, types, and finishes for the following sprinkler mounting applications. Escutcheons for concealed, flush, and recessed-type sprinklers are specified with sprinklers.
  - 1. Ceiling Mounting: Chrome-plated steel, one piece, flat.
  - 2. Ceiling Mounting: Chrome-plated steel, two piece, with 1-inch vertical adjustment.
  - 3. Ceiling Mounting: Plastic, white finish, one piece, flat.
  - 4. Sidewall Mounting: Chrome-plated steel, one piece, flat.
  - 5. Sidewall Mounting: Plastic, white finish, one piece, flat.
- H. Sprinkler Guards: Wire-cage type, including fastening device for attaching to sprinkler.
- I. Escutcheons and guards shall be listed, supplied, and approved for use with the sprinkler by the sprinkler manufacturer.
- J. In lieu of rigid pipe offsets or return bends for sprinkler drops, the Victaulic VicFlex™ Multiple-Use Flexible Stainless Steel Sprinkler Drop System may be used to locate sprinklers as required by final finished ceiling tiles and walls. The drop system shall consist of a braided type 304 stainless steel flexible tube, zinc plated steel 1" NPT Male threaded nipple for connection to branch-line piping, and a zinc plated steel reducer with a 1/2" or 3/4" NPT female thread for connection to the sprinkler head. The drop shall include a UL approved Series AH2 braided hose with a bend radius to 2" to allow for proper installation in confined spaces. The hose shall be listed for [(4) bends at 31" length] [(5) bends at 36" length] [(6) bends at 48" length] [(6) bends at 60" length] [(7) bends at 72" length]. Union joints shall be provided for ease of installation. The flexible drop shall attach to the ceiling grid using a one-piece open gate Series AB1 bracket. The bracket shall allow installation before the ceiling tile is in place. The braided drop system is UL listed and FM Approved for sprinkler services to 175 psi (1206 kPa)

## 2.12 SPECIALTY SPRINKLER FITTINGS

- A. Specialty Fittings: UL listed and FM approved; made of steel, ductile iron, or other materials compatible with piping.
- B. Press-Seal Fittings: UL 213, stainless steel housing with EPDM O-rings and pipe stop.
- C. Locking-Lug Fittings: UL 213, ductile-iron body with locking-lug ends.
- D. Mechanical-T Fittings: UL 213, ductile-iron housing with pressure-responsive gasket, bolts, and threaded or locking-lug outlet.
- E. Mechanical-Cross Fittings: UL 213, ductile-iron housing with pressure-responsive gaskets, bolts, and threaded or locking-lug outlets.
- F. Drop-Nipple Fittings: UL 1474, with threaded inlet, threaded outlet, and seals; adjustable.

- G. Sprinkler, Drain and Alarm Test Fittings: UL-listed, cast- or ductile-iron body; with threaded inlet and outlet, test valve, and orifice and sight glass.
- H. Sprinkler, Branch-Line Test Fittings: UL-listed, brass body; with threaded inlet and capped drain outlet and threaded outlet for sprinkler.
- I. Sprinkler, Inspector's Test Fittings: UL-listed, cast- or ductile-iron housing; with threaded inlet and drain outlet and sight glass.

#### 2.13 ALARM DEVICES

- A. General: Types matching piping and equipment connections.
- B. Water-Flow Indicators: UL 346; electrical-supervision, vane-type water-flow detector; with 250-psig pressure rating; and designed for horizontal or vertical installation. Include two single-pole, double-throw, circuit switches for isolated alarm and auxiliary contacts, 7 A, 125-V ac and 0.25 A, 24-V dc; complete with factory-set, field-adjustable retard element to prevent false signals and tamperproof cover that sends signal if removed. Basis of Design: System Sensor or approved equal.
- C. Pressure Switches: UL 753; electrical-supervision-type, water-flow switch with retard feature. Include single-pole, double-throw, normally closed contacts and design that operates on rising pressure and signals water flow. Basis of Design: System Sensor or approved equal.
- D. Valve Supervisory Switches: UL 753; electrical; single-pole, double throw; with normally closed contacts. Include design that signals controlled valve is in other than fully open position. Provide for all valves in the system. Basis of Design: System Sensor or approved equal.

#### 2.14 PRESSURE GAGES

- A. Pressure Gages: UL 393, 3-1/2- to 4-1/2-inch diameter dial with dial range of 0 to 250 psig.

### **PART 3 - EXECUTION**

#### 3.1 CONSTRUCTION WASTE MANAGEMENT

- A. The contractor, subcontractors, and their personnel shall follow the procedures and practices for waste separation, collection and transport as defined in the contractor's "Waste Management Plan" as required by Division 01 Section "Construction Waste Management."

#### 3.2 PREPARATION

- A. Report test results promptly and in writing.

### 3.3 PIPING APPLICATIONS

- A. Do not use welded joints with galvanized steel pipe.
- B. Flanges, unions, and transition and special fittings with pressure ratings the same as or higher than system's pressure rating may be used in aboveground applications, unless otherwise indicated.
- C. Sprinkler Feed Mains and Risers: Use the following:
  - 1. NPS 6 and Smaller: Standard-weight steel pipe with grooved ends; steel, grooved-end fittings; steel, keyed couplings; and grooved joints.
  - 2. NPS 3 and above: Schedule 10 steel pipe with roll-grooved ends; steel, grooved-end fittings; and grooved joints.
- D. Sprinkler Branch Piping: Use the following:
  - 1. Sprinkler-Piping Option: Mechanical-T bolted-branch-outlet fittings, NPS 2 and smaller, may be used downstream from sprinkler zone valves.
  - 2. NPS 2 and Smaller: Standard-weight steel pipe with threaded ends, cast- or malleable-iron threaded fittings, and threaded joints.
  - 3. NPS 2 and Smaller: Standard-weight steel pipe with grooved ends; steel, grooved-end fittings; steel, keyed couplings; and grooved joints.

### 3.4 VALVE APPLICATIONS

- A. Drawings indicate valve types to be used. Where specific valve types are not indicated, the following requirements apply:
  - 1. Fire-Protection-Service Valves: UL listed and FM approved for applications where required by NFPA 13.
    - a. Shutoff Duty: Use OS&Y type gate valves with tamper switches.
  - 2. General-Duty Valves: For applications where UL-listed and FM-approved valves are not required by NFPA 13.
    - a. Shutoff Duty: Use gate, ball, or butterfly valves.
    - b. Throttling Duty: Use globe, ball, or butterfly valves.

### 3.5 JOINT CONSTRUCTION

- A. Refer to Division 23 Section "Basic Mechanical Materials and Methods" for basic piping joint construction.

- B. Ductile-Iron-Piping, Grooved Joints: Use ductile-iron pipe with radius-cut-grooved ends; ductile-iron, grooved-end fittings; and ductile-iron, keyed couplings. Assemble joints with couplings, gaskets, lubricant, and bolts according to coupling manufacturer's written instructions.
- C. Steel-Piping, Grooved Joints: Use Schedule 40 steel pipe with cut or roll-grooved ends and Schedule 30 or thinner steel pipe with roll-grooved ends; steel, grooved-end fittings; and steel, keyed couplings. Assemble joints with couplings, gaskets, lubricant, and bolts according to coupling manufacturer's written instructions. Use gaskets listed for dry-pipe service for dry piping. A factory-trained field representative (direct employee) of the mechanical joint manufacture shall provide on-site training for contractor's field personnel in the proper use of grooving tools and installation of grooved piping products. The factory-trained representative shall periodically review the product installation and ensure best practices are being followed. Contractor shall remove and replace any improperly installed products.
- D. Mechanically Formed, Copper-Tube-Outlet Joints: Use UL-listed tool and procedure and follow forming equipment manufacturer's written instructions. Drill pilot hole in copper tube, form branch for collar, dimple tube to form seating stop, and braze branch tube into formed-collar outlet.
- E. Press-Seal-Fitting Joints: Use UL-listed tool and procedure and follow fitting manufacturer's written instructions. Include use of specific equipment, pressure-sealing tool, and accessories.
- F. Locking-Lug-Fitting, Twist-Locked Joints: Follow fitting manufacturer's written instructions.
- G. Dissimilar-Piping-Material Joints: Construct joints using adapters or couplings compatible with both piping materials. Use dielectric fittings if both piping materials are metal. Refer to Division 23 Section "Basic Mechanical Materials and Methods" for dielectric fittings.

### 3.6 PIPING INSTALLATION

- A. Locations and Arrangements: Drawing plans, schematics, and diagrams indicate general location and arrangement of piping. Install piping as indicated, as far as practical.
  - 1. Deviations from approved working plans for piping require written approval from authorities having jurisdiction. File written approval with Architect before deviating from approved working plans.
- B. Use approved fittings to make changes in direction, branch takeoffs from mains, and reductions in pipe sizes.
- C. Install unions adjacent to each valve in pipes NPS 2 and smaller. Unions are not required on flanged devices or in piping installations using grooved joints.
- D. Install flanges or flange adapters on valves, apparatus, and equipment having NPS 2-1/2 and larger connections.
- E. Unions and flanges for servicing and disconnect are not required in installations with grooved mechanical joint couplings. (The couplings shall serve as disconnect points.)

- F. Install "Inspector's Test Connections" in sprinkler piping, complete with shutoff valve, sized and located according to NFPA 13.
- G. Install sprinkler piping with drains for complete system drainage.
- H. Install sprinkler zone control valves, test assemblies, and drain risers adjacent to sprinkler risers when sprinkler branch piping is connected to sprinkler risers.
- I. Install ball drip valves to drain piping between fire department connections and check valves. Drain to floor drain or outside building.
- J. Install alarm devices in piping systems.
- K. Hangers and Supports: Comply with NFPA 13 for hanger materials and installation.
- L. Earthquake Protection: Install piping according to NFPA 13 to protect from earthquake damage.
- M. Install piping with grooved joints according to manufacturer's written instructions. Construct rigid piping joints, unless otherwise indicated.
- N. Install pressure gages on riser or feed main and at each sprinkler test connection. Include pressure gages with connection not less than NPS 1/4 and with soft metal seated globe valve, arranged for draining pipe between gage and valve. Install gages to permit removal, and install where they will not be subject to freezing.

### 3.7 SPECIALTY SPRINKLER FITTING INSTALLATION

- A. Install specialty sprinkler fittings according to manufacturer's written instructions.

### 3.8 VALVE INSTALLATION

- A. Gate Valves: Install fire-protection-service valves supervised-open, located to control sources of water supply except from fire department connections. Provide permanent identification signs indicating portion of system controlled by each valve.
- B. Install check valve in each water-supply connection. Install backflow preventers instead of check valves in potable-water supply sources.
- C. Alarm Check Valves: Install valves in vertical position for proper direction of flow, including bypass check valve and retard chamber drain-line connection.

### 3.9 SPRINKLER APPLICATIONS

- A. General: Use sprinklers according to the following applications:
  - 1. Rooms with Suspended Ceilings: Pendent, recessed, flush, and concealed sprinklers, as indicated.

2. Wall Mounting: Sidewall sprinklers.
3. Special Applications: Use extended-coverage, flow-control, and quick-response sprinklers where indicated.
4. Sprinkler Finishes: Use sprinklers with the following finishes:
  - a. Upright, Pendent, and Sidewall Sprinklers: Chrome-plated in finished spaces exposed to view; rough bronze in unfinished spaces not exposed to view; wax coated where exposed to acids, chemicals, or other corrosive fumes.
  - b. Concealed Sprinklers: Rough brass, with factory-painted white cover plate.
  - c. Flush Sprinklers: Bright chrome, with painted white escutcheon.
  - d. Recessed Sprinklers: Bright chrome, with bright chrome escutcheon.

### 3.10 SPRINKLER INSTALLATION

- A. Install sprinklers in patterns indicated.
- B. Install sprinklers in suspended ceilings in center of acoustical panels and tiles.
- C. Do not install pendent or sidewall, wet-type sprinklers in areas subject to freezing. Use dry-type sprinklers with water supply from heated space.
- D. Do not install any sprinklers that have been dropped, damaged, or show a visible loss of fluid. Never install any sprinkler with a cracked bulb.
- E. The sprinkler bulb protector shall be removed by hand. Do not use any tools or devices that could damage the bulb.

### 3.11 CONNECTIONS

- A. Connect piping to specialty valves, specialties, fire department connections, and accessories.
- B. Connect alarm devices to fire alarm.

### 3.12 LABELING AND IDENTIFICATION

- A. Install labeling and pipe markers on equipment and piping according to requirements in NFPA 13 and in Division 23 Section "Mechanical Identification."

### 3.13 FIELD QUALITY CONTROL

- A. Flush, test, and inspect sprinkler piping according to NFPA 13, "System Acceptance" Chapter.
- B. Replace piping system components that do not pass test procedures and retest to demonstrate compliance. Repeat procedure until satisfactory results are obtained.
- C. Report test results promptly and in writing to Architect and authorities having jurisdiction.

3.14 CLEANING

- A. Clean dirt and debris from sprinklers. Remove and replace sprinklers having paint other than factory finish.

3.15 PROTECTION

- A. Protect sprinklers from damage until Substantial Completion. Do not charge with water until permanent heat is on in the building.

3.16 COMMISSIONING

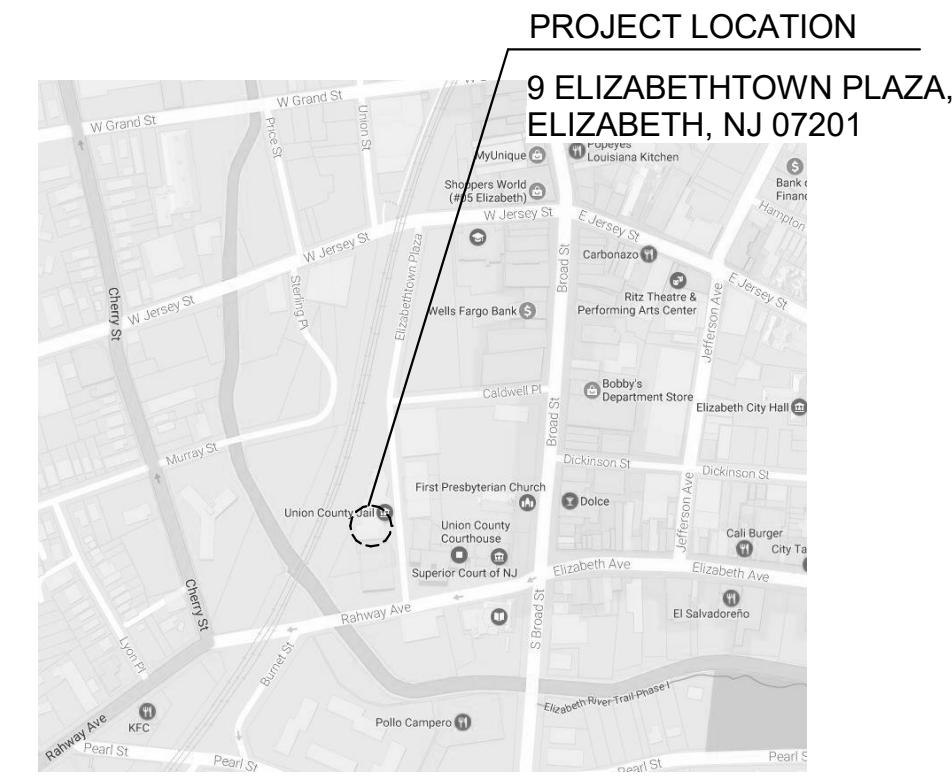
- A. Verify that specialty valves, trim, fittings, controls, and accessories are installed and operate correctly.
- B. Verify that specified tests of piping are complete.
- C. Verify that damaged sprinklers and sprinklers with paint or coating not specified are replaced with new, correct type.
- D. Verify that sprinklers are correct types, have correct finishes and temperature ratings, and have guards as required for each application.
- E. Verify that potable-water supplies have correct types of backflow preventers.
- F. Verify that fire department connections have threads compatible with local fire department equipment.
- G. Fill wet-pipe sprinkler piping with water.
- H. Energize circuits to electrical equipment and devices.
- I. Adjust operating controls and pressure settings.
- J. Coordinate with fire alarm tests. Operate as required.

3.17 DEMONSTRATION

- A. Demonstrate equipment, specialties, and accessories. Review operating and maintenance information.
- B. Schedule demonstration with Owner with at least seven days' advance notice.

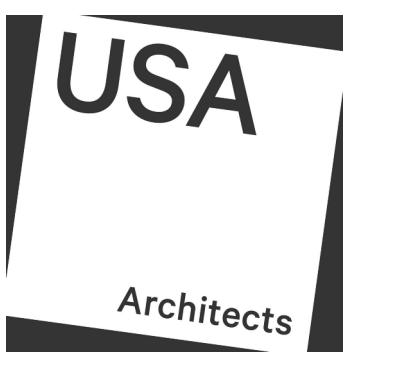
**END OF SECTION 21 10 00**





# IMPROVEMENTS TO THE JURY WAITING ROOM IN THE CITY OF ELIZABETH FOR THE COUNTY OF UNION, NEW JERSEY

2 BROAD STREET, ELIZABETH, NJ 07201



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Mitch Miller, AIA, FCSI, CCS  
Susan M. DeLair, AIA

1 LOCATION MAP  
SCALE: N.T.S.

**CSI DIVISION**  
**DIVISION 00 PROCUREMENT**

00.01 ALL BIDDERS, UPON SUBMITTING BIDS, HEREBY CERTIFY THAT THEY HAVE REVIEWED THE ENTIRE SET OF CONTRACT DOCUMENTS, (CONTRACT DOCUMENTS CONSIST OF A COMPLETE SET OF DRAWINGS AND THE ENTIRE PROJECT MANUAL, INCLUDING ALL DIVISIONS & ANY/ALL ADDENDA) AND ARE AWARE OF, AND AGREE TO MEET THE INTENT OF THE CONTRACT DOCUMENTS WHETHER EXPRESSED OR IMPLIED.

00.02 PRODUCT MANUFACTURERS IN CONJUNCTION WITH SUBCONTRACTORS AND PRIME CONTRACTOR(S) ARE RESPONSIBLE FOR ALL COMPONENTS AND CALCULATIONS AND/OR CERTIFICATIONS OF THEIR PRODUCT AND FOR PROVIDING COMPLETE SYSTEMS/ASSEMBLIES TO MEET THE DESIGN INTENT OF THE PROJECT.

00.03 THE BIDDER/CONTRACTOR IS REQUIRED TO VISIT THE SITE & EXAMINE THE EXISTING CONDITIONS TO HIS COMPLETE SATISFACTION PRIOR TO BIDDING. THE BIDDER/CONTRACTOR SHALL COMPARE THE EXISTING CONDITIONS TO THE DESIGN INTENT OF THE CONTRACT DOCUMENTS & SHALL IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING OF ANY/ALL DISCREPANCIES BEFORE SUBMITTING A BID. FAILURE TO DO SO WILL PLACE THE BURDEN OF RESPONSIBILITY ON THE CONTRACTOR TO PERFORM THE WORK AS INTENDED BY THE CONTRACT DOCUMENTS, AT NO ADDITIONAL COST TO THE OWNER.

**DIVISION 01 AVAILABLE INFORMATION**

01.01 ANY ADDITIONAL INFORMATION THAT IS NOT PART OF THE CONSTRUCTION DOCUMENTS, SUCH AS, BUT NOT LIMITED TO, SOIL REPORT(S), HAZARDOUS MATERIALS REPORT(S), EXISTING DRAWINGS, ETC., ARE INTENDED FOR REFERENCE ONLY AND ARE TO BE USED BY THE CONTRACTOR(S) AT HIS/HER OWN DISCRETION.

01.02 THE INDICATION OF SUBSTRATE & CONFIGURATION OF CONCEALED ITEMS & MATERIALS SHOWN ON THE CONSTRUCTION DOCUMENTS IS FOR GENERAL REFERENCE ONLY. THE CONTRACTOR(S) SHALL NOT BE ENTITLED TO ADDITIONAL COMPENSATION FOR ANY VARIANCE BETWEEN ACTUAL EXISTING CONDITIONS AND THAT REPRESENTED ON THE CONSTRUCTION DOCUMENTS.

01.03 ALL DIMENSIONS INDICATED ON THE CONSTRUCTION DOCUMENTS, OF EXISTING CONDITIONS, ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR(S) PRIOR TO SUBMITTING A BID.

**GENERAL REQUIREMENTS**

01.04 THE CONTRACTOR(S) SHALL DISCUSS & VERIFY, WITH ALL GOVERNING AUTHORITIES ALL CODE REQUIREMENTS INDICATED AND/OR REQUIRED FOR THE COMPLETE EXECUTION OF THE WORK AS INTENDED BY THE CONSTRUCTION DOCUMENTS.

01.05 THE CONTRACTOR(S) SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL CODES AND ORDINANCES HAVING JURISDICTION OVER THE PROJECT. THE CONTRACTOR(S) SHALL OBTAIN PERMITS & GIVE NOTICES TO SUCH AGENCIES IN AMPLE TIME FOR OFFICIALS TO CONDUCT INSPECTIONS AND OBTAIN TIMELY APPROVALS. FAILURE TO COMPLY WILL SOLELY BE THE RESPONSIBILITY OF THE CONTRACTOR(S).

01.06 THE CONTRACTOR(S) SHALL PROVIDE PROTECTION FOR THE PUBLIC, OWNER'S STAFF, AND CONSTRUCTION WORKERS IN AND AROUND THE CONSTRUCTION AREA & ADJACENT PROPERTY. ADEQUATE BARRIERS & SIGNAGE SHALL BE PROVIDED TO EXERCISE CONTROL OF SAFE INGRESS & EGRESS OF PREMISES. FIRE EXITS SHALL NOT BE BLOCKED. PROPER SITE SECURITY DURING WORKING & OFF-HOURS SHALL BE MAINTAINED. BARRICADE ALL UNSAFE OR POTENTIALLY DANGEROUS CONDITIONS. THE CONTRACTOR(S) SHALL FOLLOW O.S.H.A. STANDARDS DURING THE COURSE OF THE PROJECT.

01.07 DO NOT SCALE THE DRAWINGS. USE CALCULATED DIMENSIONS ONLY. NOTE THAT NOT ALL DIMENSIONS ARE GIVEN ON THE CONSTRUCTION DOCUMENTS. SOME DIMENSIONS ARE IMPLIED. IF THE CONTRACTOR IS NOT SURE OF A GIVEN DIMENSION, HE/SHE SHALL SUBMIT A REQUEST FOR INFORMATION (R.F.I.) AND/OR SHALL FIELD VERIFY EXISTING DIMENSIONS.

01.08 ALL INFORMATION FOR ALL TRADES CONTAINED WITHIN THE CONSTRUCTION DOCUMENTS SHALL BE USED TOGETHER & IN CONJUNCTION WITH ONE ANOTHER AS A WHOLE BODY OF INFORMATION FOR THE PROJECT. THE DRAWINGS & PROJECT MANUAL ARE COMPLEMENTARY & WHAT IS REQUIRED BY ONE, SHALL BE REQUIRED BY BOTH. NEITHER THE PRIME CONTRACTOR(S) NOR ANY SUBCONTRACTOR(S) SHALL BE RELIEVED OF THE RESPONSIBILITY TO PROVIDE ALL ITEMS REQUIRED BY THE INFORMATION & DESIGN INTENT INDICATED & IMPLIED. IN THE EVENT OF CONFLICTS BETWEEN DOCUMENTS, THE GREATER QUANTITY OR HIGHER QUALITY OF WORK SHALL PREVAIL AND BE PROVIDED.

01.09 ALL ITEMS LABELED "EXISTING" ARE EXISTING "TO REMAIN" UNLESS OTHERWISE INDICATED. ITEMS NOT LABELED "EXISTING" ARE TO BE PROVIDED. THE TERM "PROVIDE" SHALL MEAN FURNISH & INSTALL AS IT IS USED THROUGHOUT THE CONTRACT DOCUMENTS.

**SUMMARY WORK (SINGLE OVERALL PRIME CONTRACT)**

01.10 THE SCOPE OF THIS SINGLE OVERALL PRIME CONTRACT INCLUDES ALL THE WORK AS INDICATED ON THE DRAWINGS AND IN THE PROJECT MANUAL. THE SINGLE OVERALL PRIME CONTRACTOR BEARS SOLE SOURCE RESPONSIBILITY FOR THE DELIVERY OF THE PROJECT TO 100% COMPLETION.

**PROJECT COORDINATION (SINGLE OVERALL PRIME CONTRACT)**

01.11 THE SINGLE OVERALL PRIME CONTRACTOR BEARS SOLE SOURCE RESPONSIBILITY FOR THE COORDINATION OF THE WORK OF ALL SUBCONTRACTORS, SUB-SUBCONTRACTORS, MATERIAL SUPPLIERS, AND ALL PARTIES INVOLVED IN THE EXECUTION OF THE PROJECT.

**QUALITY REQUIREMENTS**

01.13 THE CONTRACTOR SHALL PROVIDE ALL MATERIAL, LABOR, SERVICES, ETC. TO COMPLETE THE ENTIRE WORK IN A MANNER ACCEPTABLE TO THE OWNER AND THE ARCHITECT. IT IS UNDERSTOOD THAT NOT EVERY DETAIL OR DIMENSION IS SHOWN IN THE CONTRACT DOCUMENTS, NOR ARE THEY NECESSARY FOR THE CONTRACTOR(S) TO PROVIDE A QUALITY PROJECT. THE CONTRACTOR SHALL SUBMIT A REQUEST FOR INFORMATION (R.F.I.) IF NEEDED TO CLARIFY THE INTENT OF ANY DETAIL OR OTHER INFORMATION, HOWEVER, SUCH REQUEST FOR INFORMATION SHALL NOT CONSTITUTE A CHANGE IN THE SCHEDULE, OR IN THE CONTRACT AMOUNT. NO WORK SHOULD BE INSTALLED IF THE CONTRACTOR IS UNSURE OF THE DESIGN INTENT. INSTALLATION OF ANY WORK THAT DOES NOT COMPLY WITH THE DESIGN INTENT, AS DETERMINED BY THE ARCHITECT, SHALL BE SUBJECT TO REPLACEMENT AT THE CONTRACTOR'S EXPENSE.

01.14 ALL CONSTRUCTION, EQUIPMENT, CONTENTS, ETC. SHALL BE PROTECTED BY EACH CONTRACTOR DURING THE ENTIRE PERFORMANCE OF THE WORK. AREAS DISTURBED OR DAMAGED BY THE CONTRACTOR SHALL BE COMPLETELY RESTORED, REPAIRED, OR REPLACED BY THE CONTRACTOR, TO THE OWNER'S COMPLETE SATISFACTION AT NO ADDITIONAL COST.

01.15 ALL UNUSED MATERIAL AND DEBRIS SHALL BE COMPLETELY REMOVED FROM THE SITE AND LEGALLY DISPOSED OF. NO ON-SITE STORAGE, BURNING, OR BURIAL OF DEBRIS SHALL BE PERMITTED. THE CONSTRUCTION SITE SHALL BE KEPT IN A CLEAN AND SAFE MANNER, INCLUDING, BUT NOT LIMITED TO DAILY BROOM CLEANING THROUGHOUT THE DURATION OF THE CONSTRUCTION PROJECT.

**TEMPORARY FACILITIES & ACCESS**

01.16 CONSTRUCTION ACCESS ROADS, CURB CUTS, SOIL EROSION CONTROL, & THE LOCATION OF ALL TEMPORARY FACILITIES (INCLUDING POWER, TELEPHONE, WATER, WASTE, ETC.) SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR (UNLESS OTHERWISE NOTED), & SHALL BE COORDINATED WITH UTILITY COMPANIES, MUNICIPAL AUTHORITIES, ETC. AS REQUIRED.

**PRODUCT REQUIREMENTS**

01.17 ALL MATERIALS AND PRODUCTS SHALL BE PROTECTED AND PROPERLY STORED AS PER MANUFACTURER'S RECOMMENDATION. ALL MATERIALS AND PRODUCTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S CURRENT PRINTED RECOMMENDATIONS TO MAINTAIN THE PROPER WARRANTIES.

01.18 PRIOR TO THE INSTALLATION OF ALL MAJOR BUILDING COMPONENTS, THE PRIME CONTRACTOR(S) SHALL CONDUCT A PRE-INSTALLATION AND COORDINATION MEETING WITH THE MANUFACTURER'S REPRESENTATIVE. INCLUDED IN THE MEETING SHALL BE ANY SUBCONTRACTOR AND PRODUCT MANUFACTURER AFFECTED BY THE SPECIFIC WORK. FAILURE OF THE PRIME CONTRACTOR(S) TO CONDUCT SUCH A MEETING, AND PROPERLY COORDINATE THE PROCESS, SHALL PLACE THE BURDEN FOR ANY & ALL PROBLEMS, RESULTING FROM SAID INSTALLATION, UPON THE PRIME CONTRACTOR(S) RESPONSIBLE FOR THAT PORTION OF THE WORK.

01.19 LONG LEAD ITEMS SHALL BE IDENTIFIED BY THE CONTRACTOR(S) WITH NOTIFICATION TO THE ARCHITECT IN A TIMELY MANNER. FAILURE BY THE CONTRACTOR(S) TO OBTAIN SUBMITTAL APPROVALS, AND TO ORDER LONG LEAD ITEMS, SO AS NOT TO DELAY THE PROGRESS OF THE WORK, WILL NOT JUSTIFY AN EXTENSION OF THE SCHEDULE FOR COMPLETION, NOR WILL IT CAUSE PRODUCT SUBSTITUTIONS IN ORDER TO MEET THE SCHEDULE.

**EXECUTION REQUIREMENTS**

01.20 MISCELLANEOUS WOOD, COLD FORMED, OR ROLLED STEEL SHAPES, WHETHER BLOCKING OR SUB-FRAMING WHICH ARE REQUIRED FOR THE INSTALLATION OF OTHER ITEMS NECESSARY FOR A COMPLETE PACKAGE SHALL BE PROVIDED WHETHER OR NOT SPECIFICALLY INDICATED ON THE DRAWINGS.

01.21 DIMENSIONS GIVEN FOR MASONRY OPENINGS ARE NOMINAL. GENERAL CONTRACTOR(S) SHALL COORDINATE THE FABRICATION OF DOOR, WINDOW, AND VISION PANEL FRAMES AND OTHER ITEMS TO BE INSTALLED IN MASONRY TO ACCOMMODATE ACTUAL DIMENSIONS VERIFIED IN THE FIELD WITH AND WITHOUT MORTAR JOINTS AS THEY OCCUR.

01.22 EACH PRIME CONTRACTOR SHALL PROVIDE ALL NECESSARY SHORING & BRACING TO SUPPORT EXISTING OR NEW CONSTRUCTION NOT FULLY SET UNTIL PERMANENT SUPPORTS ARE ERECTED. TAKE ALL NECESSARY MEASURES TO PREVENT COLLAPSE OF ANY ELEMENT OF NEW OR EXISTING CONSTRUCTION.

01.23 EACH PRIME CONTRACTOR SHALL FIRE STOP/SMOKE PROOF ANY/ALL PENETRATIONS AS REQUIRED TO MAINTAIN THE DESIGNATED FIRE RATINGS/SMOKE PROOFING OF THE CONSTRUCTION WHETHER EXISTING OR NEW. THE GENERAL CONTRACTOR SHALL ALSO EXTEND RATED CONSTRUCTION TO MAINTAIN CONTINUITY OF SAME THROUGH CONCEALED SPACES (VERTICAL & HORIZONTAL) AS REQUIRED.

01.24 ANY/ALL EQUIPMENT PROVIDED SHALL BE INSTALLED TO BE COMPLETELY FUNCTIONAL. EACH PIECE OF EQUIPMENT PROVIDED BY A PRIME CONTRACTOR, REQUIRING SERVICE CONNECTIONS BY ANOTHER PRIME CONTRACTOR SHALL BE COORDINATED BY THE GENERAL CONTRACTOR. STARTUP & TESTING OF EQUIPMENT SHALL BE PERFORMED & DOCUMENTED BY FACTORY AUTHORIZED PERSONNEL.

01.25 DETAILS & SECTIONS ON THE DRAWINGS ARE SHOWN AT SPECIFIC LOCATIONS & ARE INTENDED TO SHOW GENERAL REQUIREMENTS THROUGHOUT. DETAILS NOTED "TYPICAL" IMPLY ALL "LIKE-CONDITIONS" ARE TO BE TREATED SIMILARLY.

01.26 WORK NOT INDICATED IN PART OF THE DRAWING, BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PLACES SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST.

01.27 MINOR DETAILS OR INCIDENTAL ITEMS NOT USUALLY SHOWN OR SPECIFIED, BUT NECESSARY FOR THE PROPER & COMPLETE EXECUTION OF ANY PART OF THE WORK SHALL BE INCLUDED AS IF THEY WERE SPECIFICALLY INDICATED IN THE CONSTRUCTION DOCUMENTS.

**CUTTING AND PATCHING**

01.28 UNLESS OTHERWISE INDICATED, CUTTING AND PATCHING (EXCEPT FOR FINISHES) IS TO BE PERFORMED BY THE PRIME CONTRACTOR REQUIRING CUTTING AND PATCHING, WHETHER AS SELECTIVE DEMOLITION OR AS A MEANS OF ACCESSING OR CORRECTING UNSATISFACTORY WORK. PATCHING OF THE SUBSTRATE IS ALSO THE WORK OF THAT PRIME CONTRACTOR, HOWEVER THE PATCHING OF ALL FINISHES EXPOSED TO VIEW IS TO BE DONE BY THE GENERAL CONTRACTOR USING SKILLED TRADESMAN TRAINED FOR PATCHING THE PARTICULAR FINISH INVOLVED.

**SUBMITTALS AND SUBSTITUTIONS**

01.29 THE PROJECT HAS BEEN DESIGNED TO MEET A CERTAIN PROFESSIONAL STANDARD AND PRODUCTS HAVE BEEN SELECTED TO MEET SUCH STANDARDS. THE PRODUCTS SPECIFIED ARE THE PRODUCTS INTENDED TO BE USED. IN THE EVENT THAT SUBSTITUTIONS ARE SUBMITTED FOR REVIEW, A PROPER COMPARATIVE INFORMATION SHEET SHALL ALSO BE SUBMITTED. ALL REQUESTS FOR SUBSTITUTION SHALL BE MADE WITHIN THE FIRST 90 DAYS AFTER THE CONTRACTOR HAS BEEN AWARDED THE CONTRACT FOR CONSTRUCTION. NO SUBSTITUTION WILL BE CONSIDERED AFTER THIS PERIOD.

01.30 THE PRIME CONTRACTOR SHALL PROVIDE ALL REQUIRED SCHEDULES, SUCH AS BUT NOT LIMITED TO: SUBMISSION SCHEDULE, CONSTRUCTION SCHEDULE, & SCHEDULE OF VALUES PRIOR TO SUBMISSION OF THE FIRST APPLICATION FOR PAYMENT. NO APPLICATION FOR PAYMENT WILL BE APPROVED BY THE ARCHITECT UNTIL THIS PREREQUISITE IS COMPLIED WITH PROPERLY.

01.31 THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SUFFICIENTLY IN ADVANCE OF THE WORK TO ALLOW PROPER TIME FOR REVIEW. MATERIALS SHALL NOT BE FABRICATED OR DELIVERED TO THE SITE BEFORE THE SHOP DRAWINGS HAVE BEEN APPROVED.

01.32 SHOP DRAWINGS SHALL BE REVIEWED BY THE ARCHITECT/ENGINEER FOR BASIC CONFORMANCE TO THE DESIGN INTENT ONLY AFTER PRIOR APPROVAL BY THE RESPONSIBLE PRIME CONTRACTOR. THIS REVIEW DOES NOT RELIEVE THE CONTRACTOR OR HIS SUB-CONTRACTOR(S) OF RESPONSIBILITY FOR FULL COMPLIANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DIMENSIONS & CLEARANCES TO BE CONFIRMED & CORRELATED AT THE JOB SITE. FOR MATERIALS QUANTITIES & PROPER FABRICATION, FOR PROPER MEANS & METHODS, FOR PROPER SEQUENCES OF CONSTRUCTION, FOR THE PROPER COORDINATION WITH OTHER TRADES, AND FOR PROVIDING SAFE AND SATISFACTORY CONSTRUCTION OPERATIONS.

01.33 EACH CONTRACTOR IS ADVISED THAT CERTAIN COLOR SCHEDULE SELECTIONS MAY HAVE PREVIOUSLY BEEN MADE, REVIEWED, AND APPROVED BY THE OWNER & RETURNED TO THE CONTRACTOR FOR EXECUTION. ALL CONTRACTORS SHALL TAKE NOTE & HEREAFTER STRONGLY BE ADVISED THAT MATERIAL SUBSTITUTIONS SUBMITTED LATER MAY BE REQUIRED TO BE PROVIDED WITH CUSTOM COLORS, TEXTURES, & FINISHES BASED UPON SELECTIONS PREVIOUSLY APPROVED. MATERIAL SUBSTITUTIONS ARE SUBJECT TO REJECTION SOLELY ON APPEARANCE.

01.34 THE ARCHITECT WILL TAKE APPROPRIATE ACTION UP TO THREE (3) TIMES FOR EACH ITEM SUBMITTED. SUBMITTALS REQUIRING MORE THAN THREE (3) REVIEWS DUE TO INCORRECT OR INCOMPLETE INFORMATION SHALL BE SUBJECT TO A REVIEW FEE FOR EACH SUBSEQUENT SUBMITTAL. THIS FEE SHALL BE AT THE HOURLY RATE OF THE ARCHITECT & ENGINEER, AND SHALL BE PAID TO THE ARCHITECT PRIOR TO ANY ADDITIONAL CONSIDERATION. FEE PAID SHALL IN NO WAY CONSTITUTE AN OBLIGATION BY THE ARCHITECT TO APPROVE ANY SUBMITTAL THAT IN HIS/HER OPINION DOES NOT COMPLY WITH THE DESIGN INTENT OF THE CONTRACT DOCUMENTS. FURTHERMORE, ANY SUCH ADDITIONAL REVIEW TIME SHALL NOT BE A BASIS FOR AN EXTENSION OF TIME.

01.35 IF SUBSTITUTIONS ARE APPROVED, THE CONTRACTOR SHALL NOTIFY ALL OTHER TRADES AFFECTED BY THE SUBSTITUTION & FULLY COORDINATE THE IMPACT ON THE PROJECT. ANY ADDITIONAL COST RESULTING FROM SUBSTITUTIONS SHALL BE PAID BY THE CONTRACTOR PROPOSING THE SUBSTITUTION.

01.36 EACH PRIME CONTRACTOR SHALL PROVIDE, AS PART OF ITS REQUIRED CLOSE-OUT DOCUMENTS, A STANDARD WARRANTY AND COVERING ALL MATERIALS, PRODUCTS, AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE BY THE ARCHITECT. THIS STANDARD WARRANTY IS A BASIC REQUIREMENT OF EACH PRIME CONTRACTOR AND SHALL BE EXTENDED BY SPECIFIC WARRANTY REQUIREMENTS OF THE VARIOUS PRODUCTS AND SYSTEMS AS INDICATED THROUGHOUT THE CONTRACT DOCUMENTS.

**STANDARD WARRANTY**

02.01 THE ACTUAL SCOPE OF DEMOLITION SHALL NOT BE LIMITED TO WHAT IS SPECIFICALLY INDICATED ON THE DRAWINGS OR WITHIN THE PROJECT MANUAL, BUT SHALL INCLUDE ANY AND ALL COMPLETE OR SELECTIVE DEMOLITION AS MAY BE NECESSARY TO ACCOMPLISH THE INTENDED CONSTRUCTION. THIS APPLIES TO THE WORK OF ALL TRADES.

**DIVISION 02 DEMOLITION**

02.01 HANDRAILS & GUARDRAILS ARE SHOWN SCHEMATICALLY TO GIVE LOCATION & GENERAL REQUIREMENTS ONLY. THE CONTRACTOR IS RESPONSIBLE FOR THE TECHNICAL DESIGN OF SUCH, INCLUDING BUT NOT LIMITED TO POSTS AND RAIL WALL THICKNESS & LOCATION, WELDS, MECHANICAL ATTACHMENT, AND ALL CONNECTIONS. THE SYSTEM SHOULD WITHSTAND AN APPLIED LOAD OF 200 LB AT ANY POINT IN ANY DIRECTION AND MEET ALL CODES REGULATION SUCH DESIGN. SHOP DRAWINGS SHALL BE SUBMITTED FOR ARCHITECT'S REVIEW. THIS APPLIES TO BOTH INTERIOR & EXTERIOR CONDITIONS. ALL STAIRS, STEPS, RAMPS, BALCONIES, AND CHANGES IN ELEVATION SHALL BE PROVIDED WITH APPROPRIATE RAIL PROTECTION.

**DIVISION 03 EXTERIOR FERROUS METALS**

02.02 ALL FERROUS METAL USED ON OR EXPOSED TO THE EXTERIOR OF THE BUILDING INCLUDING BUT NOT LIMITED TO: STRUCTURAL AND MISCELLANEOUS FRAMING, WINDOWS, DOORS AND FRAMES, HANDRAILS, LINTELS, ETC. SHALL BE HOT-DIPPED AND GALVANIZED PRIOR TO INSTALLATION AND PAINTING.

**DIVISION 04 EXTERIOR WOOD**

02.01 EVERY HOLLOW WALLBOARD PARTITION THAT IS INDICATED TO RECEIVE ANY ACCESSORIES SUCH AS, BUT NOT LIMITED TO, TOILET ACCESSORIES, CABINETS, VANAS MOUNTED BACKBOARDS, ETC. SHALL BE PROVIDED WITH SOLID BLOCKING AND REINFORCEMENT WITHIN THE FRAMING TO ADEQUATELY SUPPORT THE INSTALLATION OF SUCH ITEMS.

02.02 ALL WOOD FRAMING LUMBER AND BLOCKING EXPOSED TO THE ELEMENTS OR USED IN CONTACT WITH MASONRY, CONCRETE, AND/OR ROOFING SHALL BE PRESSURE TREATED FOR RESISTANCE TO DETERIORATION FROM MOISTURE.

02.01 ANY AND ALL CONSTRUCTION JOINTS INCLUDING JOINTS BETWEEN DIFFERENT ITEMS AND MATERIALS, JOINTS SURROUNDING PENETRATIONS THROUGH MATERIALS, AND CRACKS WITHIN MATERIALS, ECT., WHETHER ON THE INTERIOR OR EXTERIOR OF THE BUILDING, SHALL BE FILLED WITH AN APPROPRIATE SEALANT AS REQUIRED. ON THE INTERIOR OF THE BUILDING, SAID SEALANT SHALL BE PAINTABLE. ON THE EXTERIOR OF THE BUILDING, SAID SEALANT SHALL BE WEATHERPROOF AND IN A COLOR SELECTED BY THE ARCHITECT.

02.01 THE PRIME CONTRACTOR SHALL SET A COORDINATION MEETING WITH THE GLASS SUPPLIER & THE ARCHITECT PRIOR TO FABRICATION & INSTALLATION OF GLAZING TO ASSURE THAT PROPER GLASS TYPE (SAFETY, FIRE RATED, WIRED, SPECIALTY, ETC.) IS PROVIDED IN CORRESPONDING LOCATIONS.

02.01 UNLESS FACTORY FINISHED, OR OTHERWISE SPECIFICALLY NOTED ON THE CONSTRUCTION DOCUMENTS, ALL EXPOSED SURFACES (BOTH INTERIOR & EXTERIOR OF THE BUILDING) SHALL BE PAINTED/COATED IN COLORS & TEXTURES AS SELECTED BY THE ARCHITECT/OWNER. NO SURFACES ARE TO BE LEFT UNFINISHED UNLESS SPECIFICALLY NOTED ON THE CONTRACT DOCUMENTS.

02.02 FIRE EXTINGUISHER TYPE, CABINET, QUANTITY, AND LOCATION SHALL BE REVIEWED AND COORDINATED BY THE CONTRACTOR WITH THE BUILDING OFFICIAL AND THE FIRE MARSHAL PRIOR TO THE COMMENCEMENT OF WORK TO INSURE COMPLIANCE WITH LOCAL REGULATIONS.

02.03 THE CONTRACTOR SHALL COORDINATE QUANTITIES, LOCATION & POWER NEEDS FOR ALL FOLDING WALLS, PARTITIONS, PROJECTION SCREENS, WALL CLOCKS, & ANY OTHER SPECIALTY ITEMS.

02.01 EQUIPMENT SUPPORT MEMBERS AS WELL AS PLUMBING & ELECTRICAL REQUIREMENTS SHALL BE COORDINATED IN A PRE-INSTALLATION CONFERENCE BY THE GENERAL CONTRACTOR WITH SUPPLIER/INSTALLER, ARCHITECT, & ANY OTHER CONTRACTOR AFFECTED BY THIS WORK.

02.01 FURNITURE SHOWN ON THE DRAWINGS IS INDICATED SCHEMATICALLY TO DEMONSTRATE ITS APPROXIMATE LOCATION AND THE INTENDED PURPOSE OF THE SPACE. IT IS NOT AN ACCURATE REPRESENTATION OF ACTUAL SIZE OR OTHER SPECIFICS OF THE OWNER'S NEW OR EXISTING FURNITURE. THE CONTRACTOR(S) SHALL COORDINATE WITH THE OWNER AND/OR FURNITURE SUPPLIER/INSTALLER FOR ACTUAL INFORMATION.

02.02 CASEWORK & MILLWORK SHALL BE FULLY COORDINATED BY THE CONTRACTOR FOR SIZE, COLOR, TEXTURE/FINISH, FINA LOCATION, POWER/DATA, & ALL OTHER REQUIREMENTS. SIGN-OFF BY THE OWNER IS REQUIRED PRIOR TO FABRICATION & INSTALLATION.

02.01 ALL WALLS, FLOORS, CEILINGS, SHAFTS, ETC. THAT ARE DESIGNATED WITH A SMOKE OR FIRE RESISTANCE RATING OR ARE REQUIRED AS SUCH BY CODE SHALL BE PROVIDED WITH SMOKE OR FIRE DAMPERS WHETHER SHOWN ON THE CONSTRUCTION DOCUMENTS OR NOT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR(S) AFFECTED TO ASSURE THAT THE SMOKE AND FIRE RESISTANCE INTEGRITY IS MAINTAINED WITH CONTINUITY.

02.01 CONVENIENCE & DATA OUTLETS, WALL SWITCHES, AND FIXTURES SHALL BE COORDINATED WITH THE LOCATION OF FURNITURE, MILLWORK, CASEWORK, ETC. PRIOR TO INSTALLATION. FAILURE TO COORDINATE THESE ITEMS MAY RESULT IN CHANGES IN THE FIELD AT THE EXPENSE OF THE PRIME CONTRACTOR.

**BUILDING CODE INFORMATION**  
**NEW JERSEY ADMINISTRATIVE CODES**

**APPLICABLE CONSTRUCTION CODES**

N.J.A.C. 5:23 UNIFORM CONSTRUCTION CODE (UCC)  
N.J.A.C. 5:70 UNIFORM FIRE CODE (UFC) AND THE STATE FIRE PREVENTION CODE  
N.J.A.C. 5:23-3.14 BUILDING SUBCODE (IBC(2015))  
N.J.A.C. 5:23-3.15 PLUMBING SUBCODE (NPS(2015))  
N.J.A.C. 5:23-3.16 ELECTRICAL SUBCODE (NEC(2014))  
N.J.A.C. 5:23-3.17 FIRE PROTECTION SUBCODE (SPECIFIC PORTIONS OF THE IBC, NEC, IMC, IFGC)  
N.J.A.C. 5:23-3.18 ENERGY SUBCODE (IECC(2015))  
N.J.A.C. 5:23-20 MECHANICAL SUBCODE (MCC(2015))  
N.J.A.C. 5:23-4 REHABILITATION SUBCODE  
N.J.A.C. 5:23-7 BARRIER FREE CODE

**USE GROUP:** EXISTING "BUSINESS"  
**CONSTRUCTION TYPE:** EXISTING "TYPE IIB"

**CHAPTER 5 - GENERAL BUILDING HEIGHTS AND AREAS**

TABLE 508.4 SEPARATION BETWEEN OCCUPANCY GROUP A + B = 1 HOUR IN A FULLY SPRINKLERED BUILDING.

**CHAPTER 7 - FIRE RESISTIVE CONSTRUCTION**

TABLE 721.1(2) RATED FIRE-RESISTANCE PERIODS FOR VARIOUS WALLS AND PARTITIONS

MATERIAL	ITEM NUMBER	CONSTRUCTION	MINIMUM FINISHED THICKNESS (2 HOUR)
5. GLAZED OR UNGLAZED FRACING TILE, NONLOADBEARING.	5-1.7	ONE 4" UNIT CORED 30 PERCENT MAXIMUM WITH 3/4" VERMICULITE GYPSUM PLASTER ON ONE SIDE.	4 1/2"

TABLE 721.1(3) MINIMUM PROTECTION FOR FLOOR AND ROOF SYSTEMS

FLOOR OR ROOF CONSTRUCTION	ITEM NUMBER	CEILING CONSTRUCTION	THICKNESS OF FLOOR OR ROOF SLAB - IN INCHES (1 HOUR)
1. SILICEOUS AGGREGATE CONCRETE.	1-1.1		3.5
2. CARBONATE AGGREGATE CONCRETE.	2-1.1	SLAB (NO CEILING REQUIRED), MINIMUM COVER OVER NON PRE-STRESSED REINFORCEMENT SHALL BE NOT LESS THAN 3/4"	3.2
3. SAND-LIGHTWEIGHT CONCRETE.	3-1.1		2.7
4. LIGHTWEIGHT CONCRETE.	4-1.1		2.5

**CHAPTER 9 - FIRE PROTECTION SYSTEMS:**

AUTOMATIC SPRINKLER SYSTEM WILL BE EXTENDED INTO AREA OF ALTERATION.

TABLE 3-2-1 - FIRE EXTINGUISHER SIZE AND PLACEMENT FOR CLASS A HAZARDS

NFPA 10 PORTABLE FIRE EXTINGUISHERS	MINIMUM RATED SINGLE EXTINGUISHER	MAXIMUM FLOOR AREA PER UNIT OF A	MAXIMUM FLOOR AREA FOR EXTINGUISHER	MAXIMUM TRAVEL DISTANCE TO EXTINGUISHER
	2-A	3000 SF.	11,250 SF.	75 FT.

**MANUAL FIRE ALARM SYSTEM**

	REQUIRED	PROVIDED
ASSEMBLY	NO	NO

**AUTOMATIC SMOKE DETECTION SYSTEM**

	REQUIRED	PROVIDED
ASSEMBLY	YES	YES

**SMOKE ALARMS**

	REQUIRED	PROVIDED
ASSEMBLY	YES	YES

**CHAPTER 9 - MEANS OF EGRESS**

**BUILDING AREA:** EXISTING / NO CHANGE  
**MEANS OF EGRESS:** PATH OF TRAVEL WITH SPRINKLER SYSTEM = 250 FT

**CHAPTER 7 - PLUMBING FIXTURES**

**PLUMBING FIXTURES:**

EXISTING SPACE "B" USE GROUP  
3000 SF / 100 = 30 (2/3) (1/2) = 10 MALE / 10 FEMALE

FIXTURES REQUIRED / PROVIDED		WATER CLOSETS		LAVATORIES		DRINKING FOUNTAINS	
		MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
TOTAL REQUIRED	2	2	2	2	2	2	1
EXISTING	1	1	1	1	1	1	1
NEW (A3)	1	1	1	1	1	1	0

NEW SPACE  
"A3" USE GROUP  
TOTAL OCCUPANCY LOAD = (426 (DESIGN LOAD) X 2/3) = 284 OCCUPANTS = 142 MALE / 142 FEMALE

**FIXTURES REQUIRED / PROVIDED**

	WATER CLOSETS		LAVATORIES		DRINKING FOUNTAINS	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
TOTAL REQUIRED	2	2	2	2	2	1
EXISTING	1	1	1	1	1	1
NEW (A3)	1	1	1	1	1	0

**DESIGN TEAM**

**ARCHITECT**  
USA Architects

**MEP**  
sae  
strunk-albert engineering

USA ARCHITECTS PLANNERS + INTERIOR DESIGNERS, P.A.  
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804 SEVEN BRIDGE RD.,  
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**DRAWING LIST**

TS-001 TITLE SHEET / CODE INFORMATION

**ARCHITECTURAL**

A-015 PARTITION TYPE SCHEDULE, DETAILS, + EGRESS PLAN  
A-100 DEMOLITION PLAN + PROPOSED FIRST FLOOR PLAN  
A-101 FINISH PLAN, ENLARGED PLANS, RCP, DOOR SCHEDULE

**PLUMBING**

P-100 GENERAL NOTES, SYMBOL LISTS & FLOOR PLANS - PLUMBING

**FIRE PROTECTION**

FP-100 GENERAL NOTES, SYMBOL LISTS & FLOOR PLANS - FIRE PROTECTION

**MECHANICAL**

M-001 GENERAL NOTES & SYMBOL LIST  
M-100 PARTIAL FIRST FLOOR PLAN - MECHANICAL  
M-101 ALTERNATE BID #1 - PARTIAL FIRST FLOOR PLAN - MECHANICAL  
M-500 DETAILS  
M-600 SCHEDULES & AUTOMATIC TEMPERATURE CONTROL

**ELECTRICAL**

E-001 GENERAL NOTES AND SYMBOL LIST  
E-100 PARTIAL FIRST FLOOR PLAN - ELECTRICAL DEMOLITION & NEW

AA

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**IMPROVEMENTS  
TO THE  
JURY WAITING ROOM  
IN THE  
CITY OF ELIZABETH  
FOR THE  
COUNTY OF UNION, NEW JERSEY**

2 BROAD STREET, ELIZABETH, NJ 07201

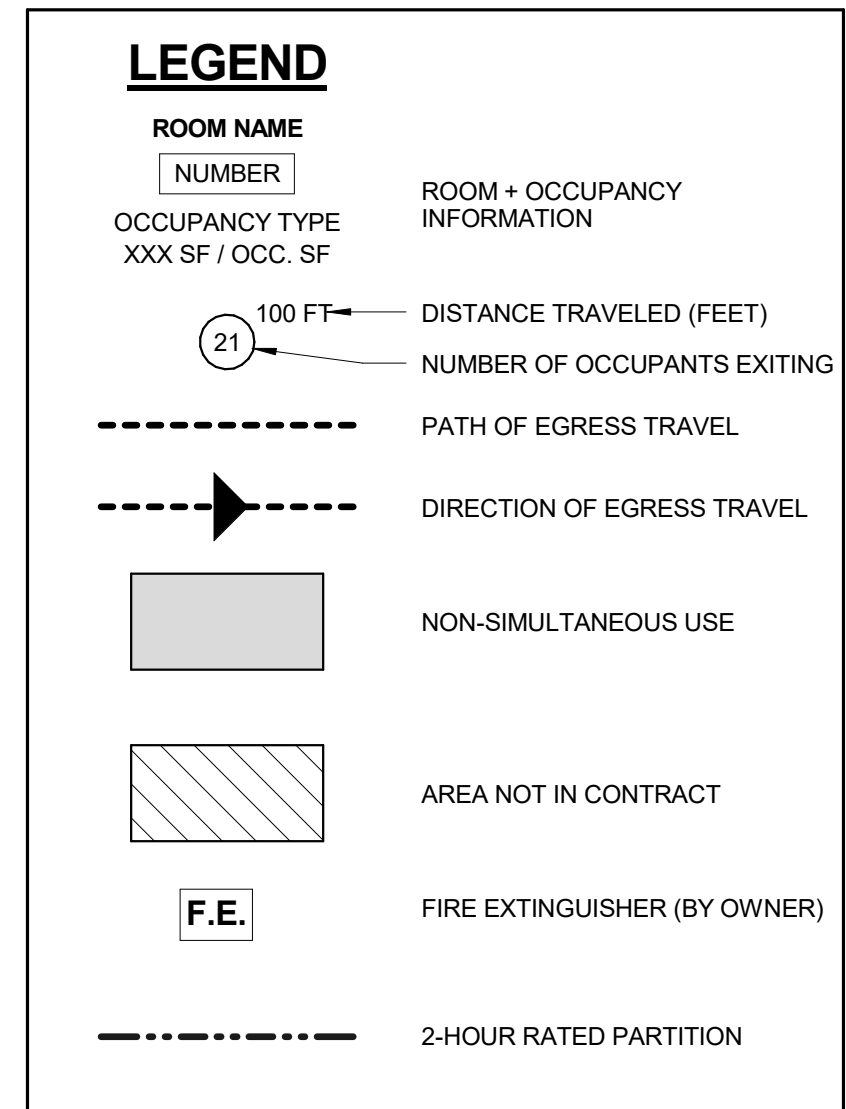
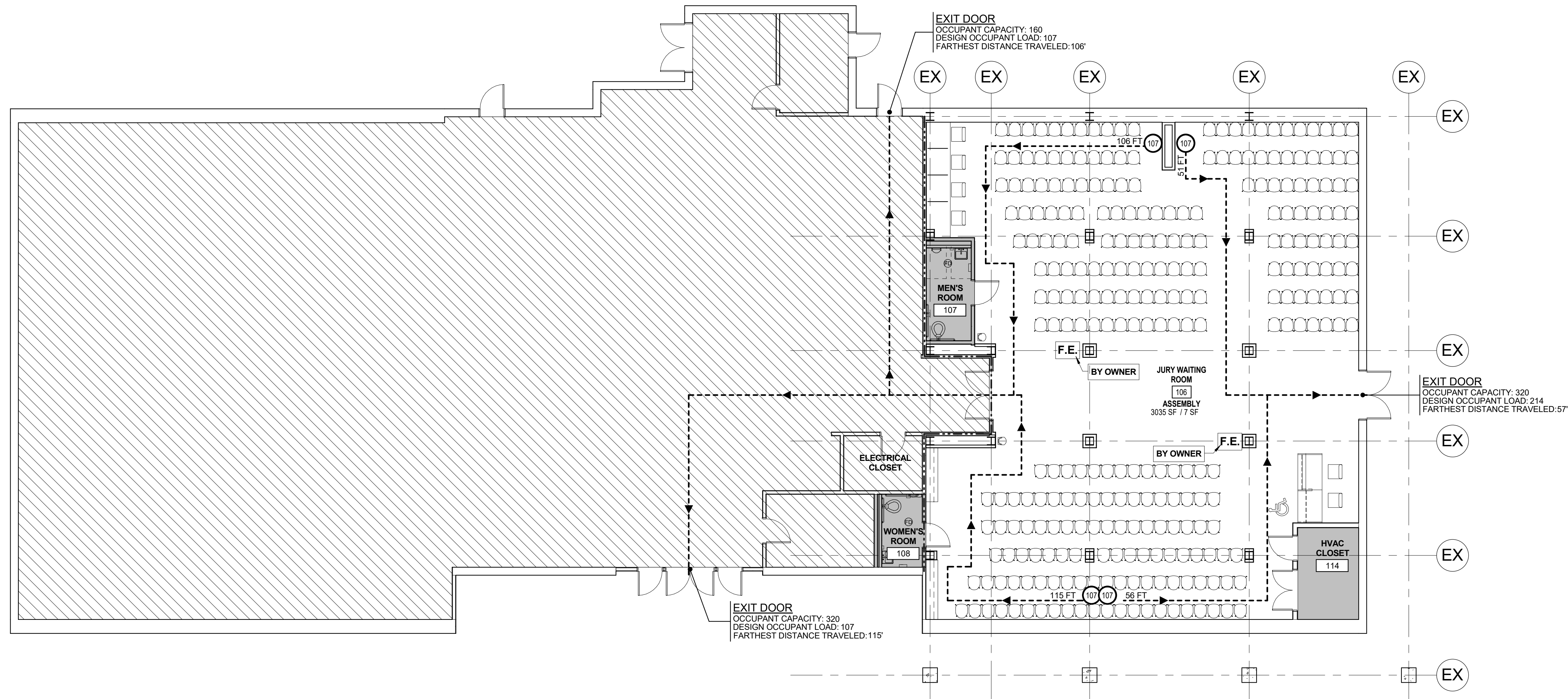
11.01.17 BID SET  
No. Date Issue or Revision

Drawing Title  
**TITLE SHEET /  
CODE  
INFORMATION**

Scale  
As indicated  
USA Project No.  
2017-011

Drawing Date  
11.01.17  
Drawing No.  
TS-001

Drawn By  
NP  
Checked By  
ApA



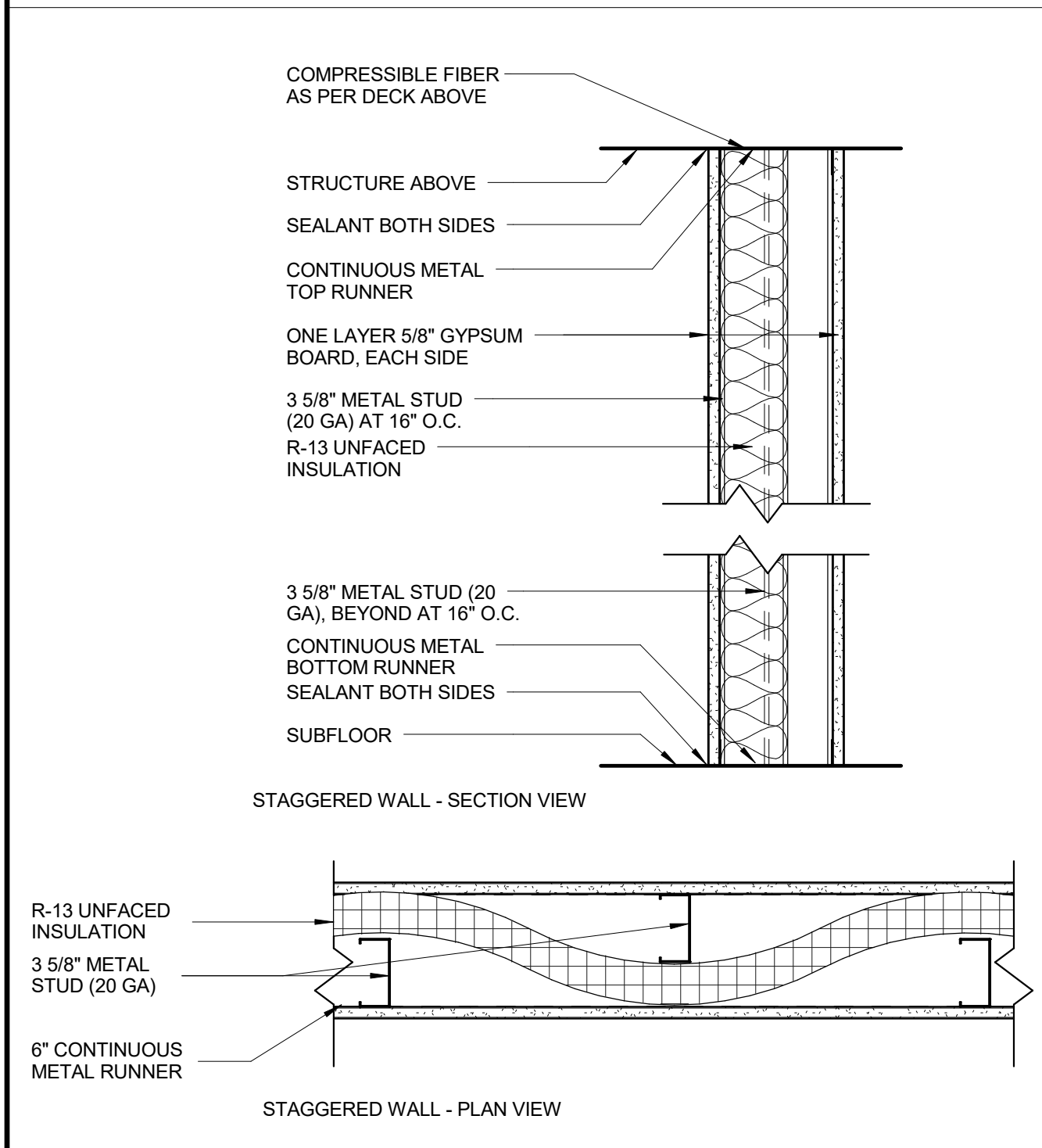
1 FIRST FLOOR PLAN - EGRESS PLAN (BY OWNER)  
SCALE: 1/8" = 1'-0"

*AA*

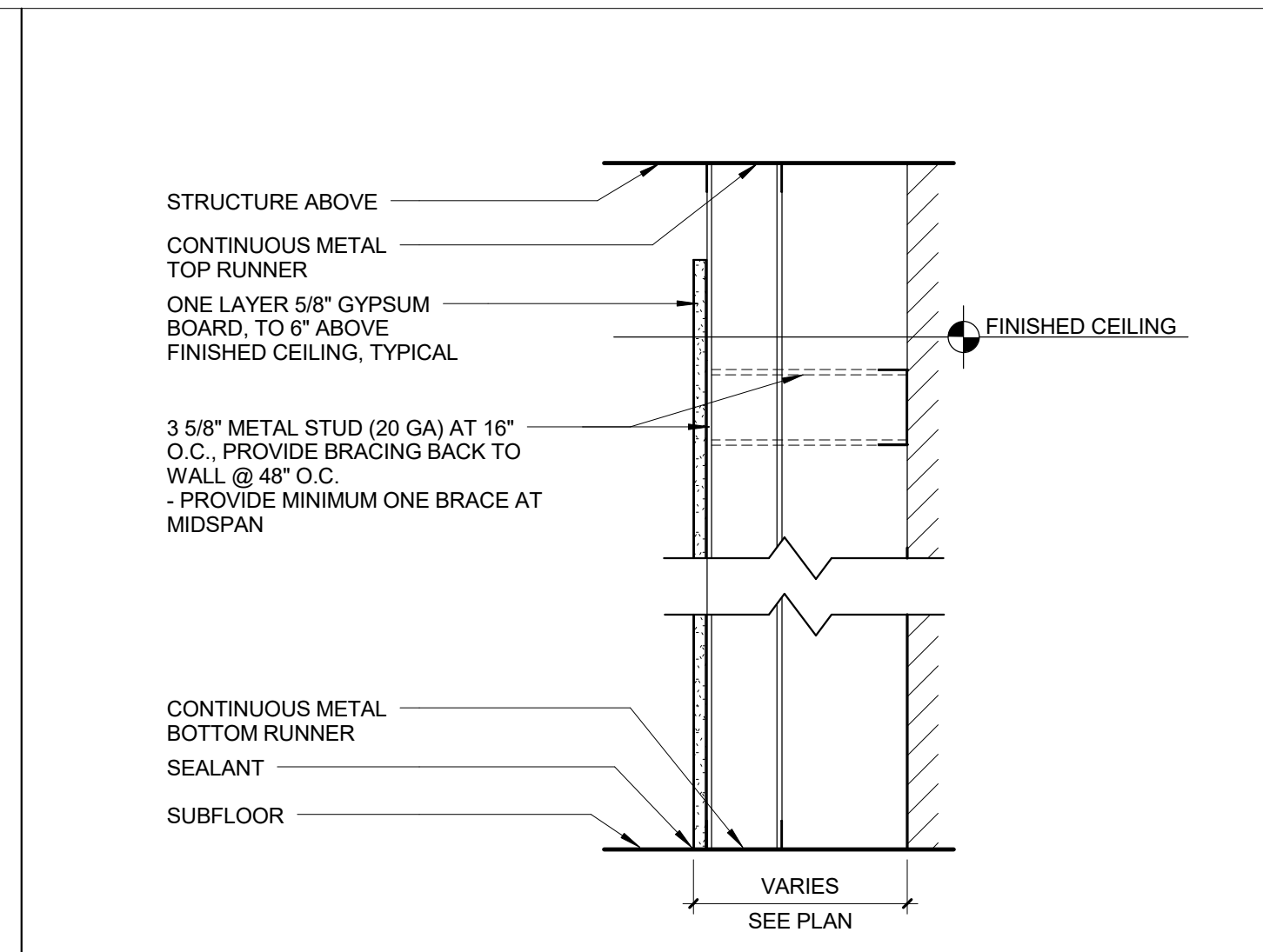
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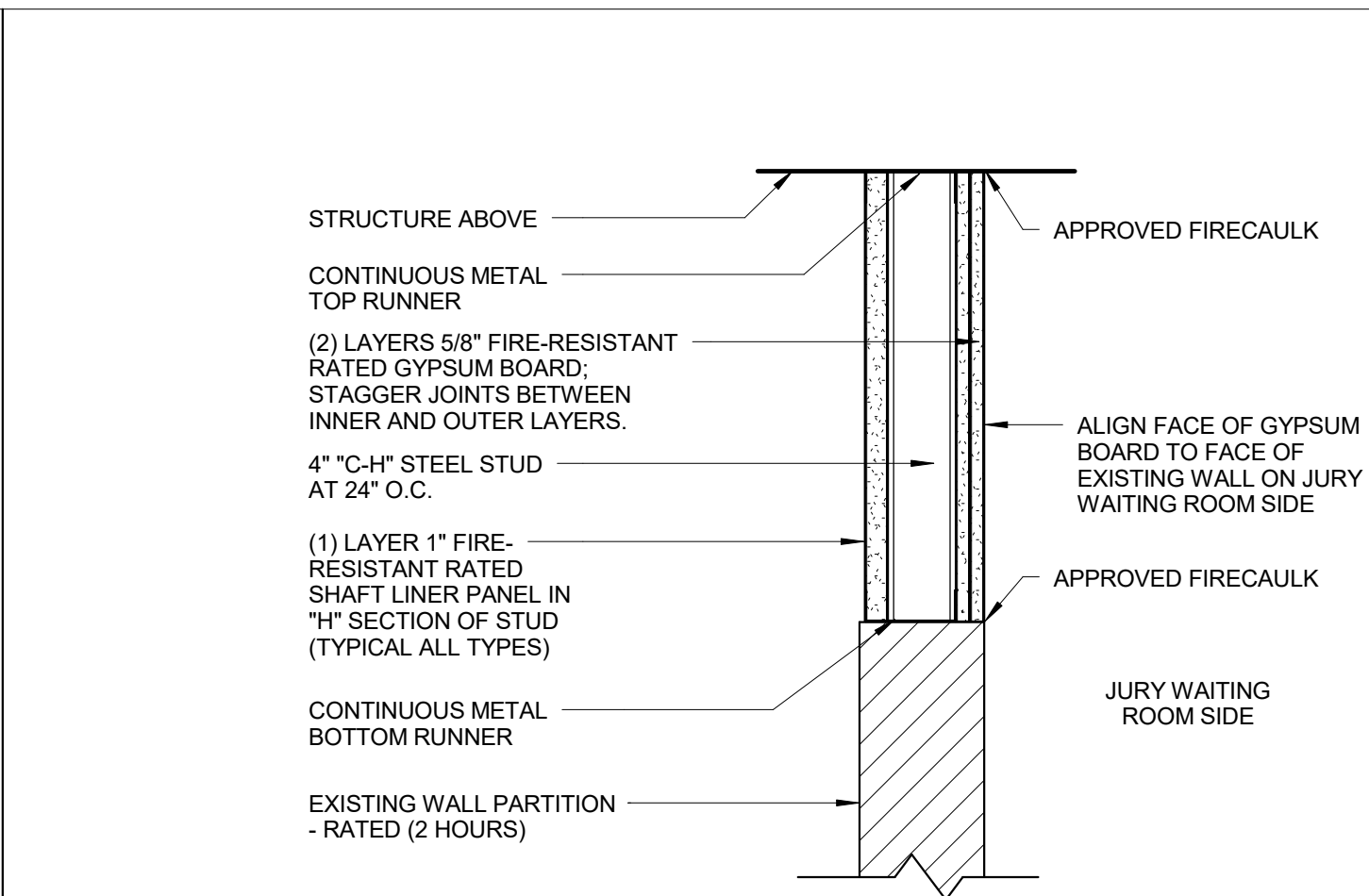
**IMPROVEMENTS**  
TO THE  
**JURY WAITING ROOM**  
IN THE  
**CITY OF ELIZABETH**  
FOR THE  
**COUNTY OF UNION, NEW JERSEY**  
2 BROAD STREET, ELIZABETH, NJ 07201



A GYPSUM PARTITION WALL TYPE (BY OWNER)



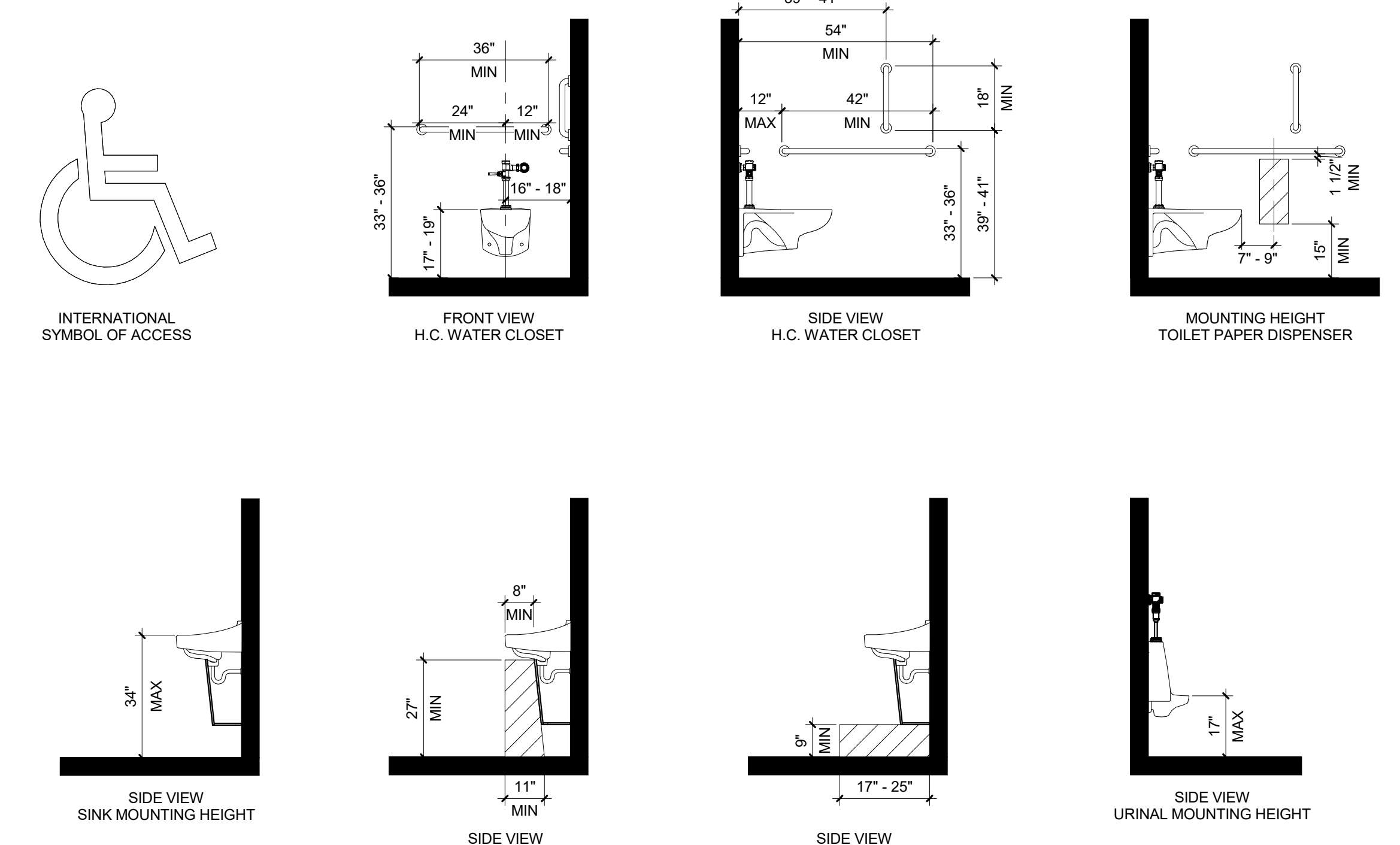
B GYPSUM PARTITION WALL TYPE (BY OWNER)



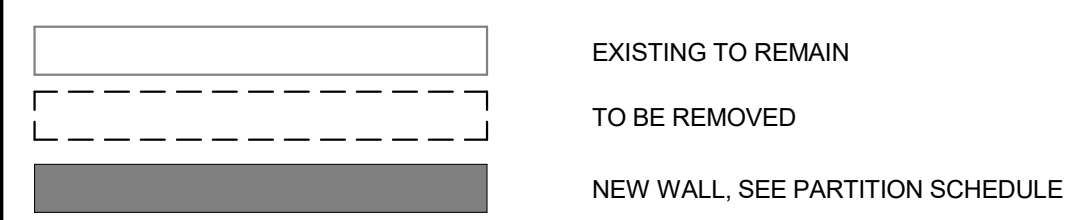
\*SHAFT PARTITION DESIGN BASED ON UL L438

C SHAFT PARTITION WALL TYPE, TYPICAL WHEN TOP OF EXISTING PARTITION DOES NOT GO UP TO DECK (BY OWNER)

**BARRIER FREE LEGEND**



11.01.17 BID SET	
No.	Date Issue or Revision
Drawing Title	
PARTITION TYPE SCHEDULE, DETAILS, + EGRESS PLAN	
Scale	USA Project No.
As indicated	2017-011
Drawing Date	Drawing No.
11.01.17	
Drawn By	Checked By
NP	APA
A-015	



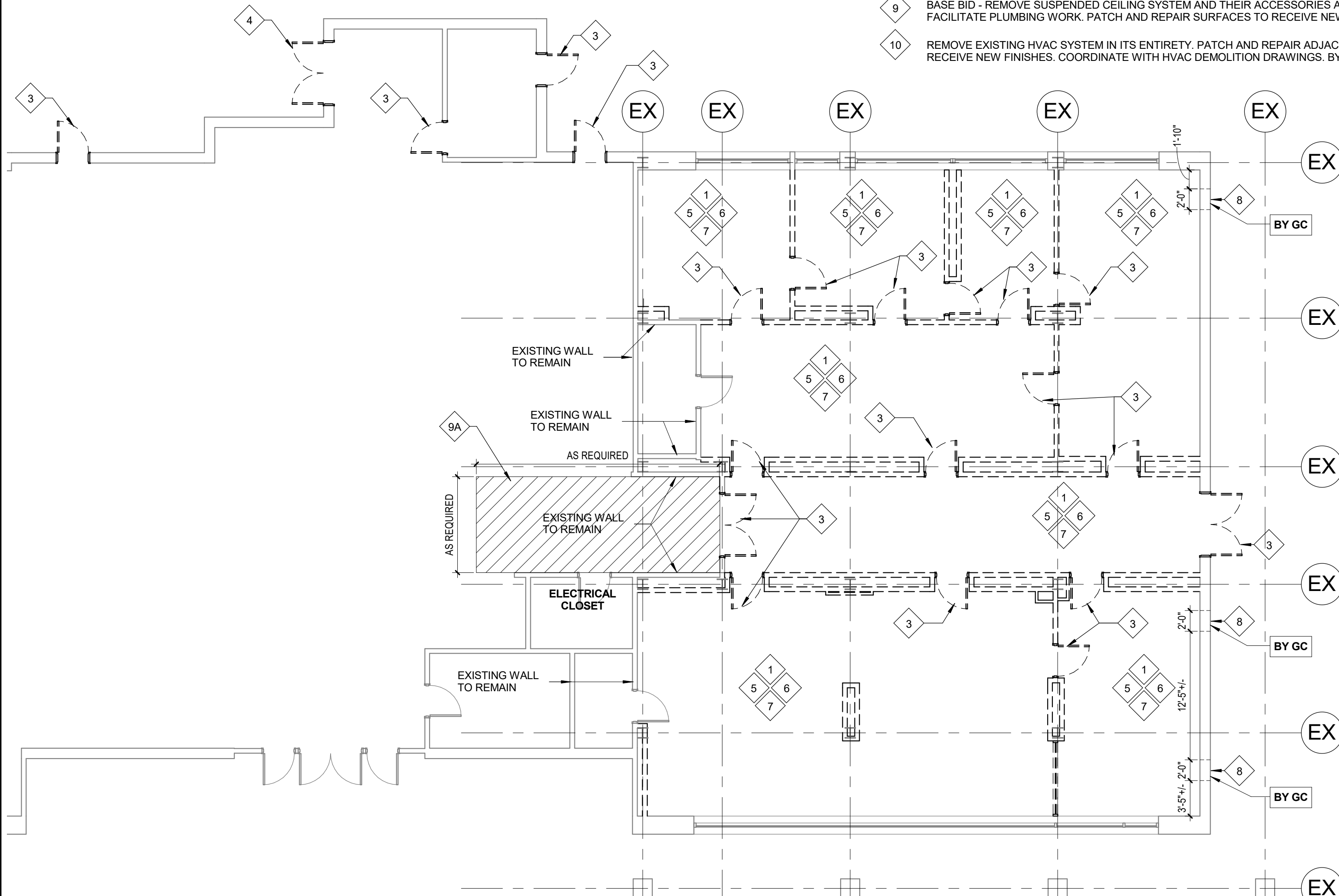
EXISTING TO REMAIN  
TO BE REMOVED  
NEW WALL, SEE PARTITION SCHEDULE

**GENERAL DEMOLITION NOTES (BY OWNER):**

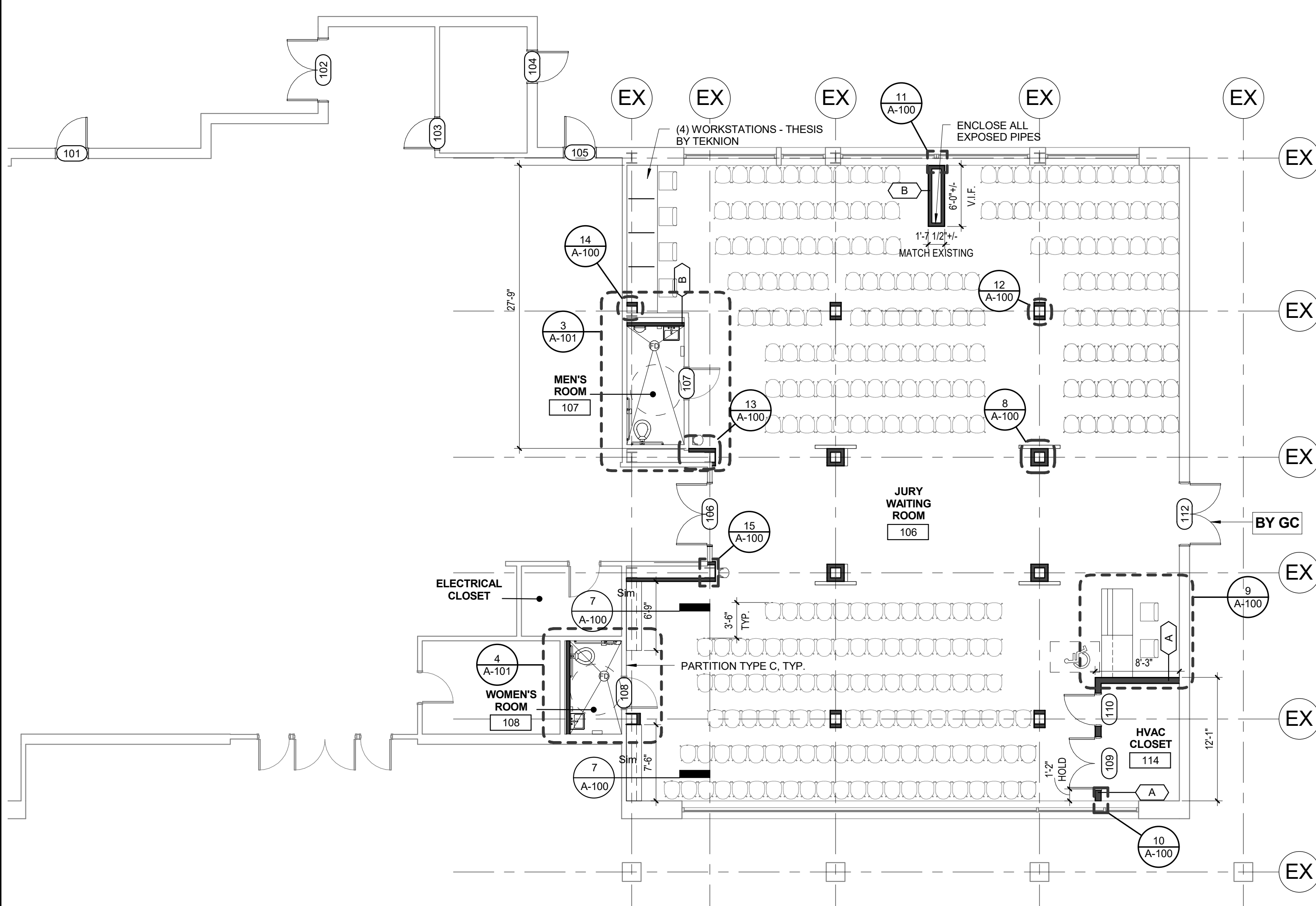
- CONTRACTOR MUST INSTALL AND MAINTAIN PLASTIC DUST BARRIERS DURING DEMOLITION AND CONSTRUCTION TO PROTECT THE GENERAL PUBLIC FROM DUST AND FUMES. LOCATE PARTITIONS REQUIRED TO PROTECT ADJACENT AREAS AND EQUIPMENT, AND CONTINUE EGRESS THROUGH THE SPACE. CONTRACTOR SHALL PROVIDE TEMPORARY EXIT WAYS AS REQUIRED BY LOCAL CODE ENFORCEMENT OFFICIAL DURING CONSTRUCTION.
- DO NOT CONSIDER DEMOLITION AND ALTERATION NOTES TO BE ALL INCLUSIVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSPECT AND ASSESS EACH SPACE AND TO FULFILL THE INTENT OF THE WORK INDICATED BY THE CONTRACT DOCUMENTS. VERIFY ALL DIMENSIONS WITHIN THE CONTRACT LIMITS. BRING DEVIATIONS FROM THE CONTRACT DOCUMENTS TO THE ATTENTION OF THE ARCHITECT. THE EXTENT OF DEMOLITION AND REMOVAL INCLUDES, BUT IS NOT LIMITED TO WORK SHOWN ON THE DRAWINGS. COORDINATE WITH MECHANICAL, ELECTRICAL, PLUMBING & STRUCTURAL DRAWINGS.
- REMOVE ANY MISCELLANEOUS PROJECTIONS, HANGERS, SCREWS AND NAILS FROM EXISTING SURFACES TO REMAIN. PATCH AND PREPARE SURFACES TO RECEIVE NEW FINISH.
- PATCH AND REPAIR ALL ADJACENT SURFACES WHICH ARE AFFECTED BY THE DEMOLITION OR REMOVAL OF ACCESSORIES TO THEIR ORIGINAL FORM AND PREPARE FOR NEW FINISH. COORDINATE WITH FINISH DRAWINGS.
- GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY CLEANUP OF CONSTRUCTION DEBRIS.
- BEFORE DEMOLITION BEGINS, CONTRACTOR SHALL COORDINATE SEQUENCE AND SCHEDULES FOR ALL WORK AND RELOCATION OR DISPOSAL OF ALL MATERIALS WITH OWNER.
- DEMOLITION PLANS ARE DIAGRAMMATIC. PRIOR TO SUBMITTING BID, GENERAL CONTRACTORS SHALL FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS AND BRING ANY AREAS IN QUESTION TO THE ATTENTION OF THE ARCHITECT.

**SELECTIVE DEMOLITION LEGEND (BY OWNER):**

- DEMOLITION SCOPE OF WORK ITEM TYPICAL THROUGHOUT ENTIRE ROOM / AREA
- DEMOLITION SCOPE OF WORK ITEM AT A SPECIFIC LOCATION
- REMOVE EXISTING WALLS IN THEIR ENTIRETY. PATCH AND REPAIR ADJACENT SURFACES TO RECEIVE NEW FINISHES.
- REMOVE PORTION OF EXISTING WALL IN ITS ENTIRETY. PATCH AND REPAIR ADJACENT SURFACES TO RECEIVE NEW FINISHES.
- REMOVE EXISTING DOOR FRAME, DOOR, AND HARDWARE IN THEIR ENTIRETY. PATCH AND REPAIR ADJACENT SURFACES TO RECEIVE NEW FINISHES.
- REMOVE EXISTING DOOR HARDWARE IN ITS ENTIRETY. PREPARE DOOR FOR NEW HARDWARE.
- REMOVE EXISTING SUSPENDED CEILING SYSTEM AND THEIR ACCESSORIES IN THEIR ENTIRETY. PATCH AND REPAIR SURFACES TO RECEIVE NEW FINISHES.
- REMOVE LIGHT FIXTURES, DIFFUSERS, AND RETURNS IN THEIR ENTIRETY. REFER TO MECHANICAL DRAWINGS.
- REMOVE EXISTING FLOOR FINISHES IN THEIR ENTIRETY TO CONCRETE SLAB. PATCH AND REPAIR SLAB TO RECEIVE NEW FLOOR FINISHES.
- REMOVE PORTION OF WALL IN ITS ENTIRETY TO RECEIVE A NEW LOUVER AT 11'-0" AFF. COORDINATE WITH MECHANICAL DWGS. REFER TO LINTEL SCHEDULE, BY GC.
- BASE BID - REMOVE SUSPENDED CEILING SYSTEM AND THEIR ACCESSORIES AS REQUIRED TO FACILITATE PLUMBING WORK. PATCH AND REPAIR SURFACES TO RECEIVE NEW FINISHES.
- REMOVE EXISTING HVAC SYSTEM IN ITS ENTIRETY. PATCH AND REPAIR ADJACENT SURFACES TO RECEIVE NEW FINISHES. COORDINATE WITH HVAC DEMOLITION DRAWINGS, BY GC.



1 DEMOLITION PLAN (BY OWNER, UNLESS OTHERWISE NOTED)  
SCALE: 1/8" = 1'-0"



2 PROPOSED FIRST FLOOR PLAN (BY OWNER, UNLESS OTHERWISE NOTED)  
SCALE: 1/8" = 1'-0"



3 PHOTO 1 - DEMOLITION (BY GC)



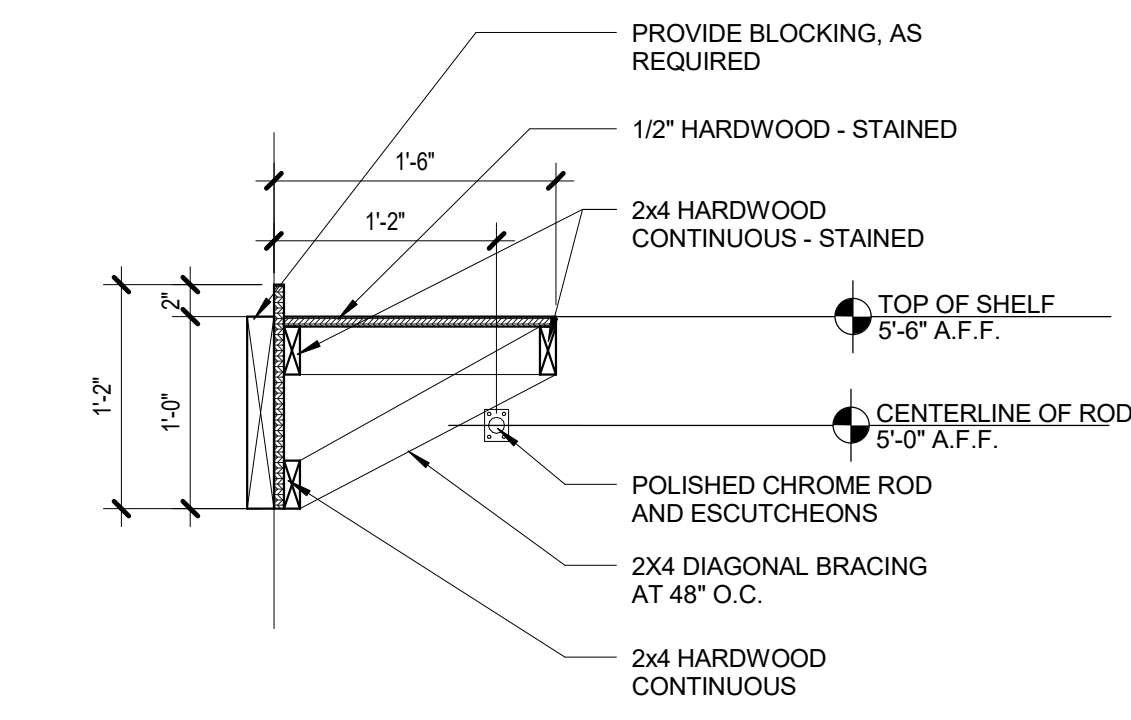
4 PHOTO 2 - DEMOLITION / NEW WORK (BY OWNER)  
SCALE: 1 : 10



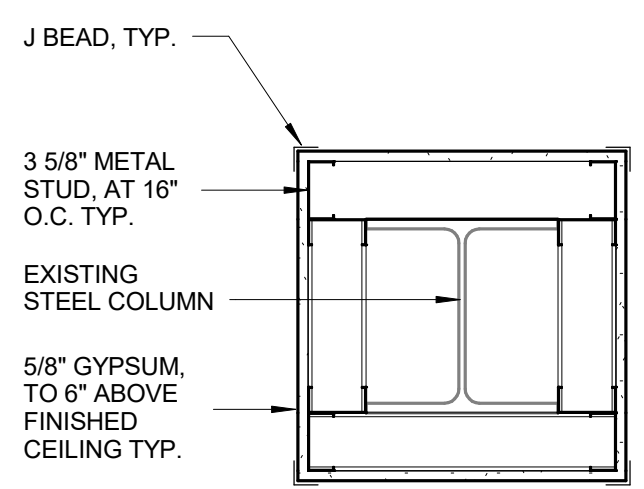
5 PHOTO 3 - NEW WORK (BY OWNER)



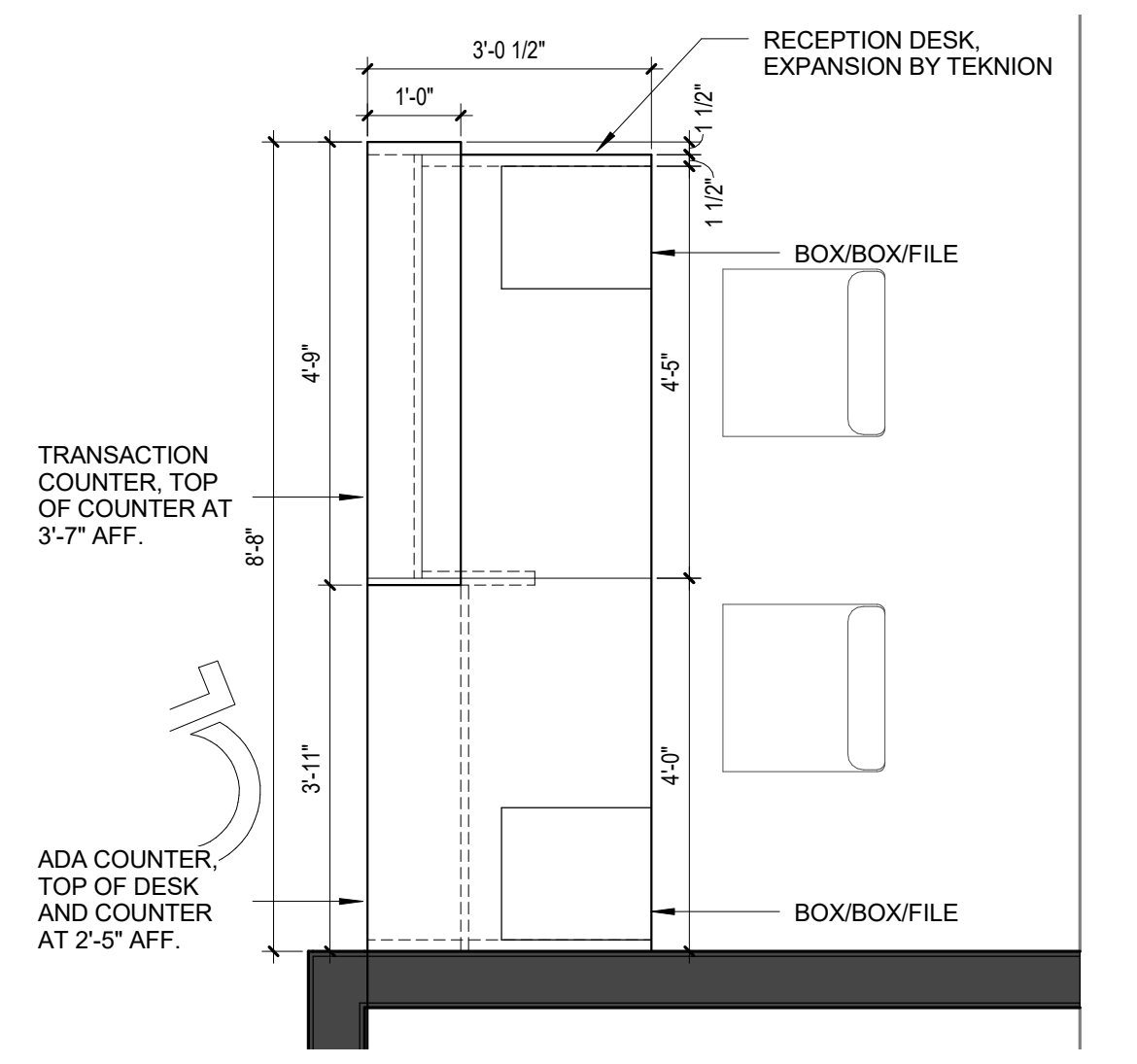
6 PHOTO 4 - NEW WORK (BY OWNER)



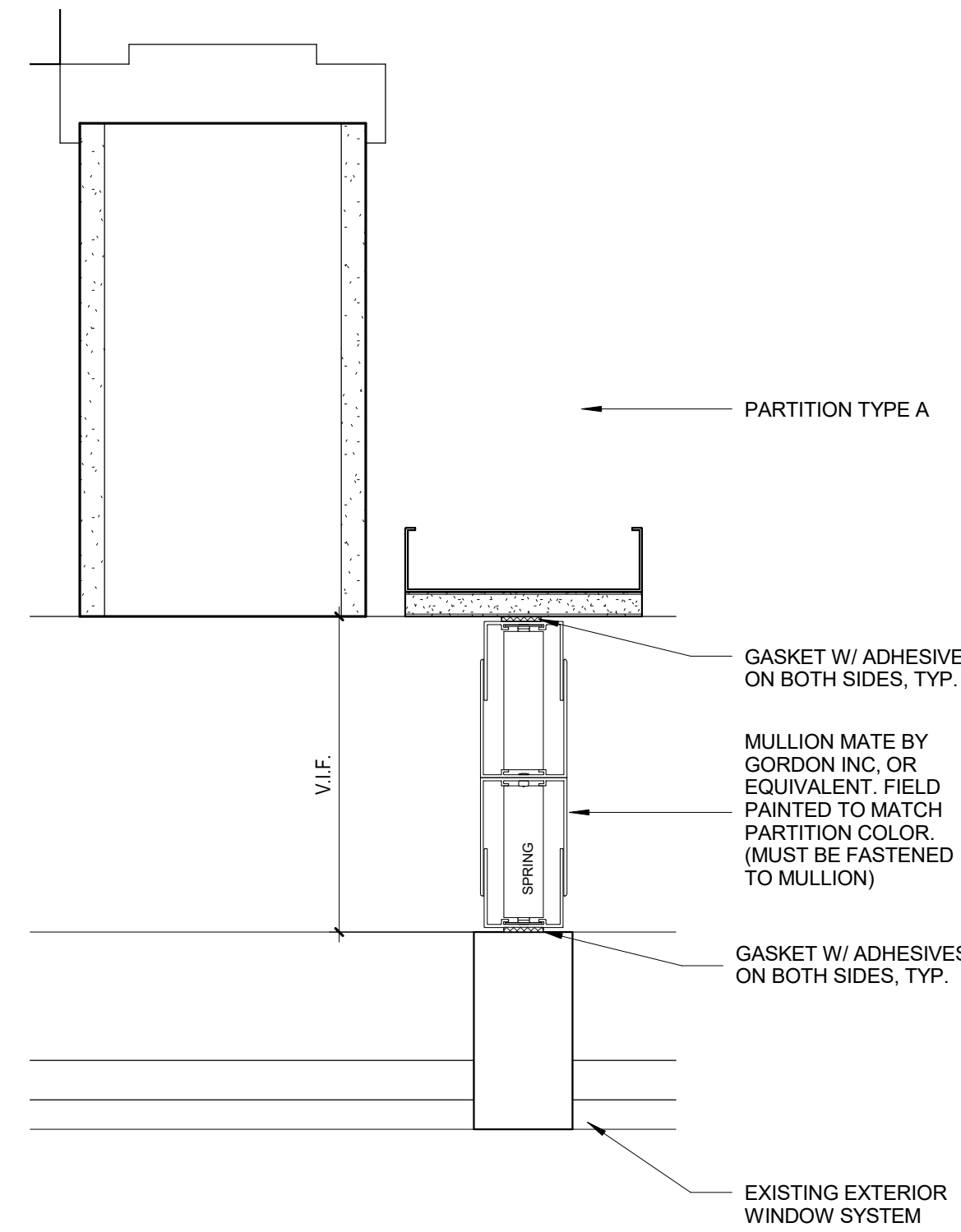
7 SHELF AND ROD DETAIL (BY OWNER)  
SCALE: 1" = 1'-0"



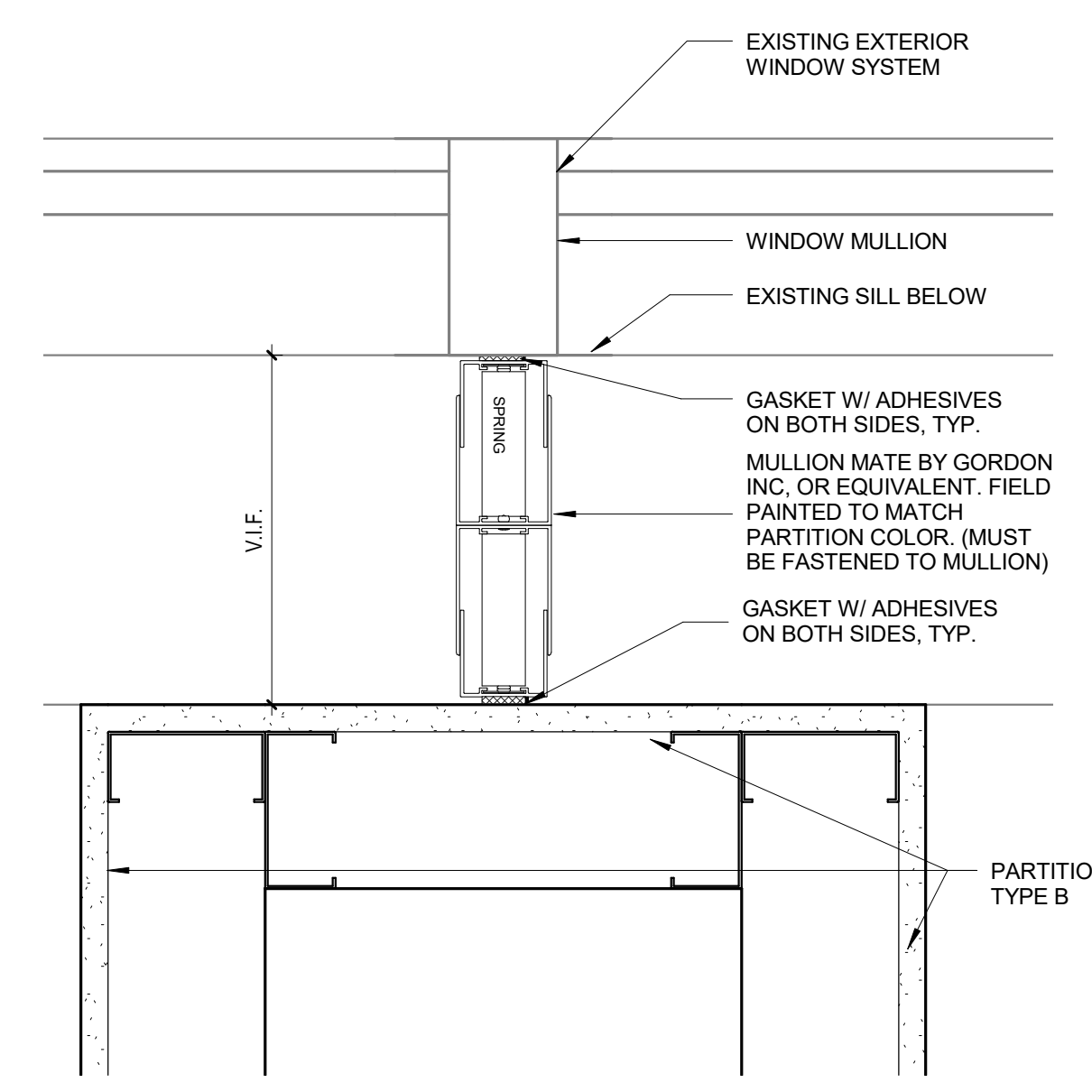
8 COLUMN DETAIL AT "CORRIDOR", TYP. (BY OWNER)  
SCALE: 1" = 1'-0"



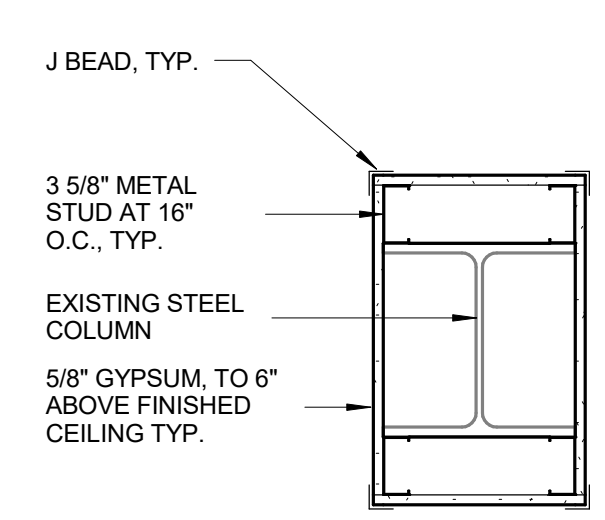
9 ENLARGED PLAN, TRANSACTION DESK (BY OWNER)  
SCALE: 1/2" = 1'-0"



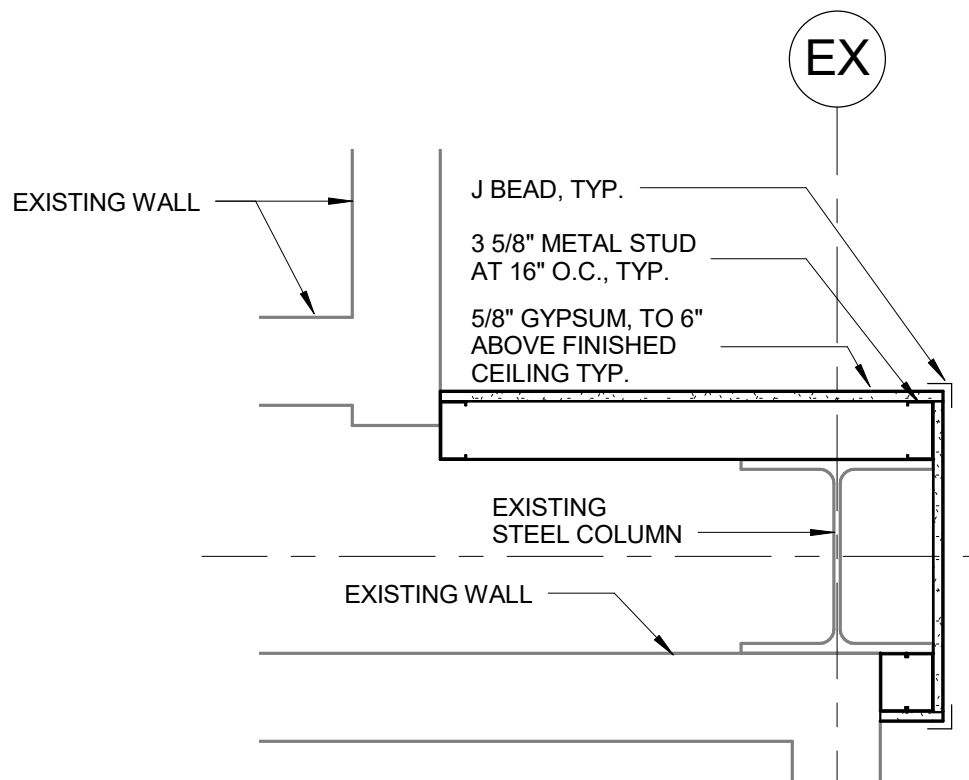
10 PLAN DETAIL (BY OWNER)  
SCALE: 3" = 1'-0"



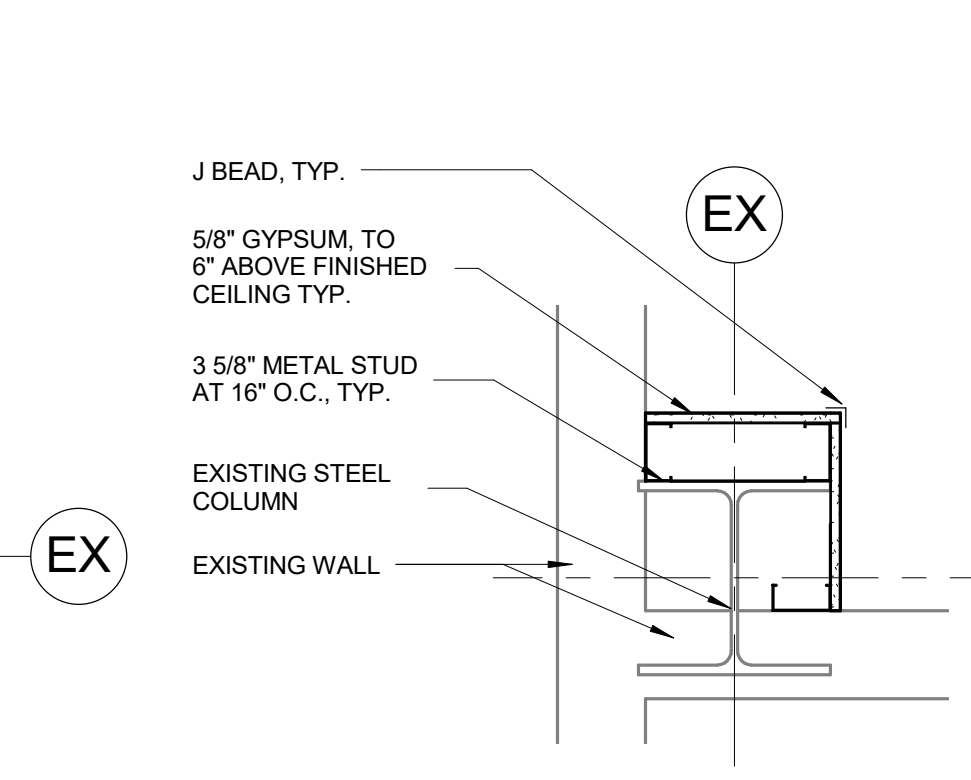
11 PLAN DETAIL (BY OWNER)  
SCALE: 3" = 1'-0"



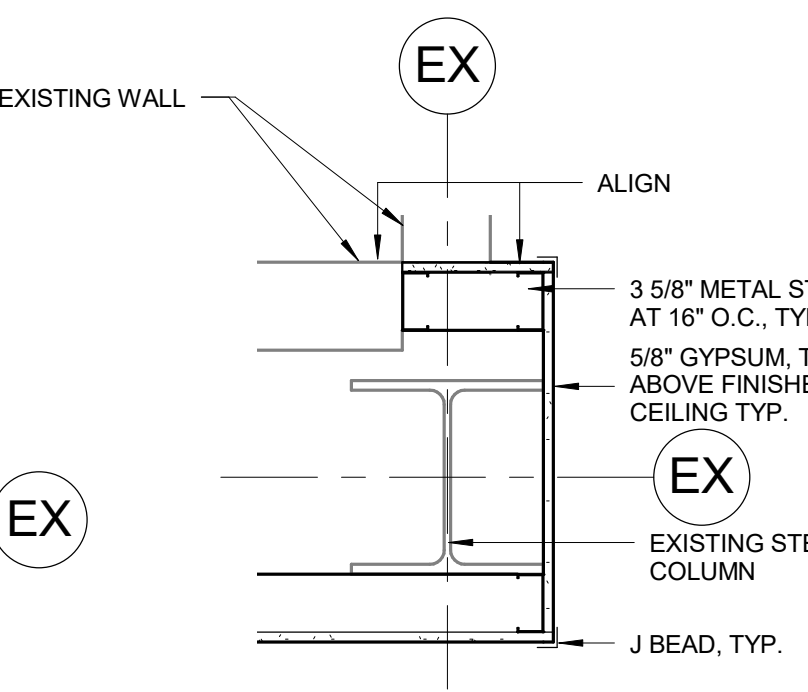
12 COLUMN DETAIL, TYP. (BY OWNER)  
SCALE: 1" = 1'-0"



13 PLAN DETAIL (BY OWNER)  
SCALE: 1" = 1'-0"



14 PLAN DETAIL (BY OWNER)  
SCALE: 1" = 1'-0"



15 PLAN DETAIL (BY OWNER)  
SCALE: 1" = 1'-0"

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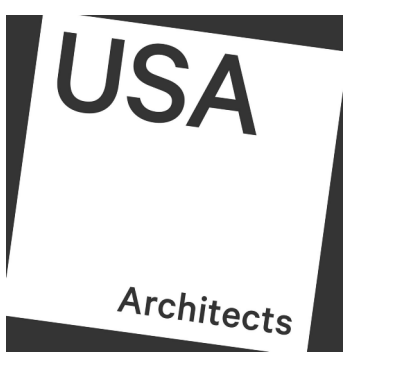
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2 BROAD STREET, ELIZABETH, NJ 07201

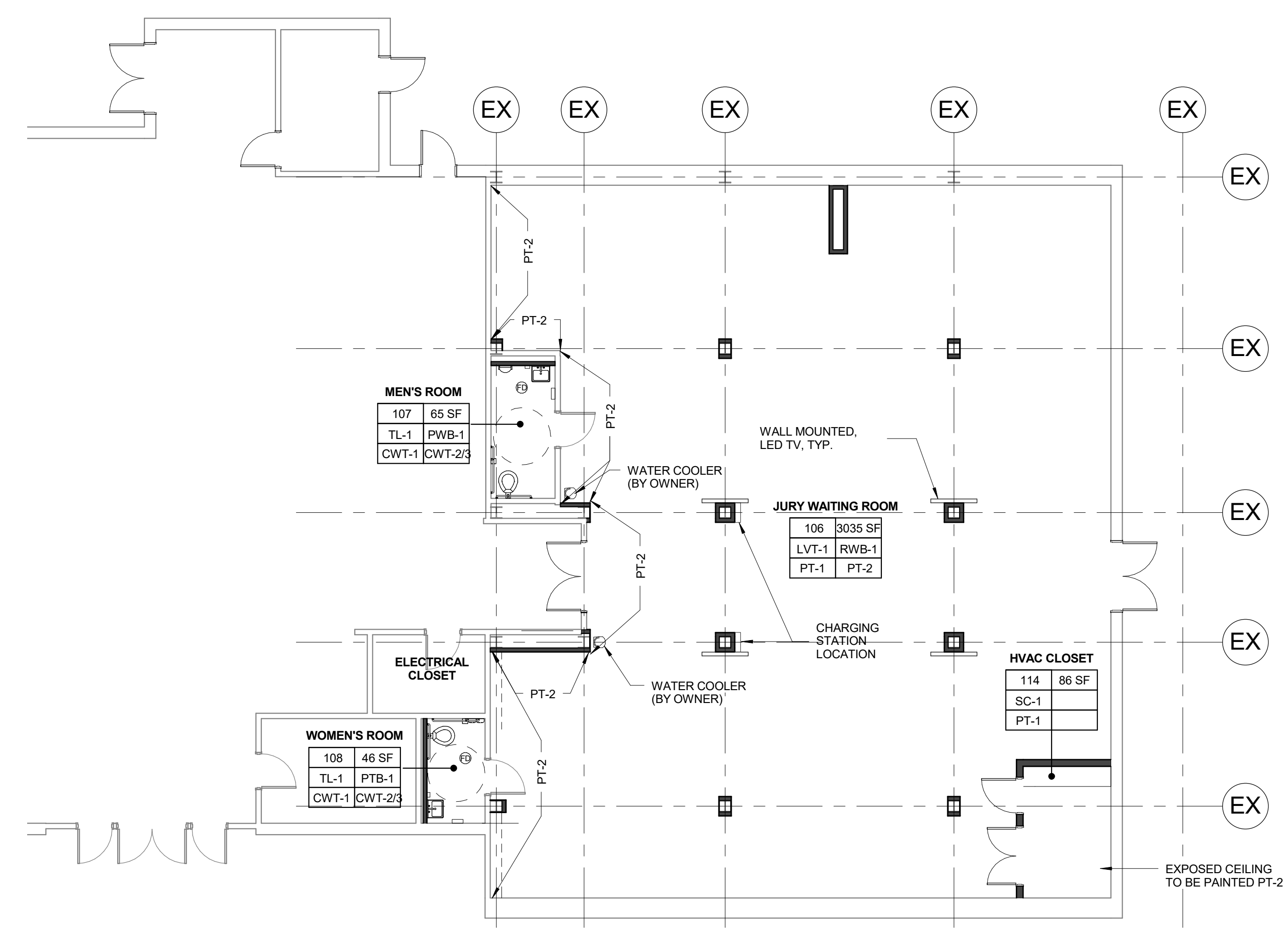
11.01.17 BID SET	
No.	Date
Issue or Revision	
Drawing Title	
DEMOLITION PLAN + PROPOSED FIRST FLOOR PLAN	
Scale	USA Project No.
As indicated	2017-011
Drawing Date	Drawing No.
11.01.17	A-100
Drawn By	Checked By
NP	APA



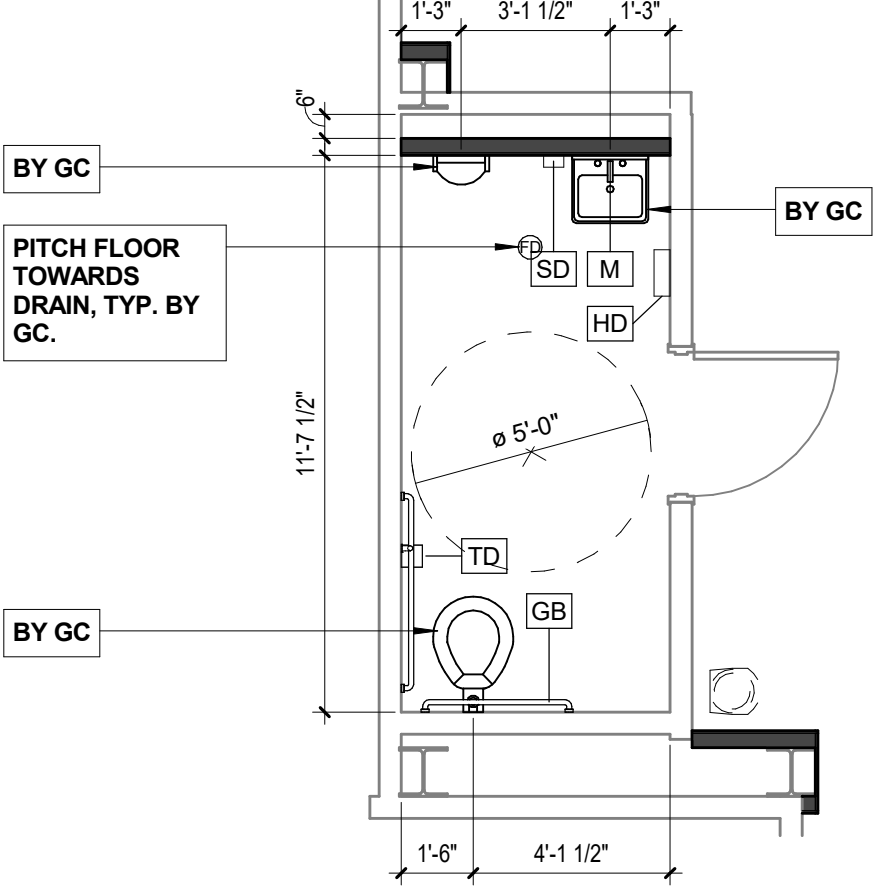
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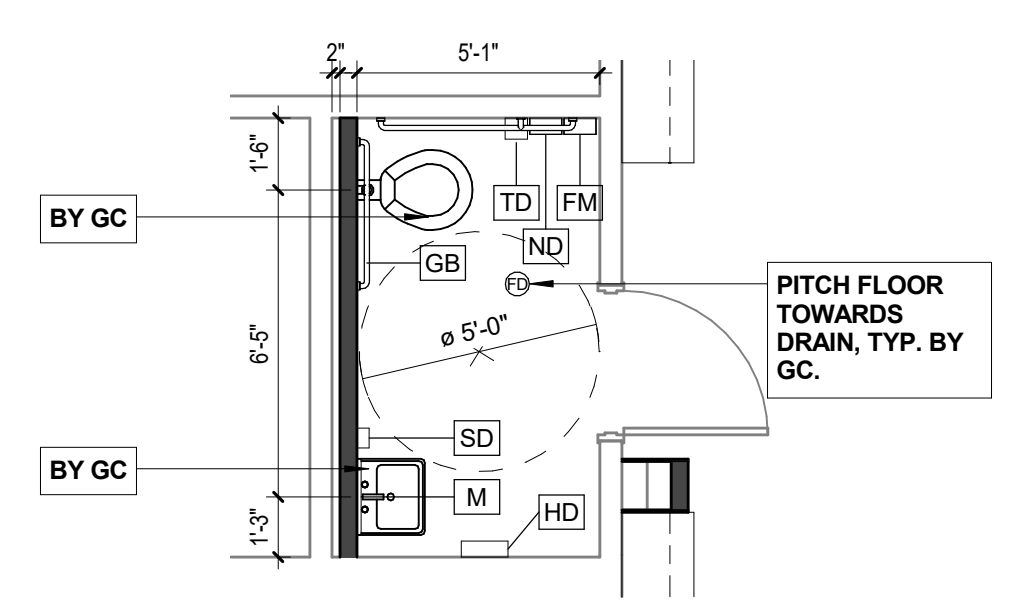
Paul R. Swartz, AIA  
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Peter C. Campano, AIA  
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Daniel J. Fortunato, AIA  
Mitch Miller, AIA, FCSI, CCS  
Susan M. Dehart, AIA



1 PROPOSED FIRST FLOOR FINISH PLAN (BY OWNER)  
SCALE: 1/8" = 1'-0"



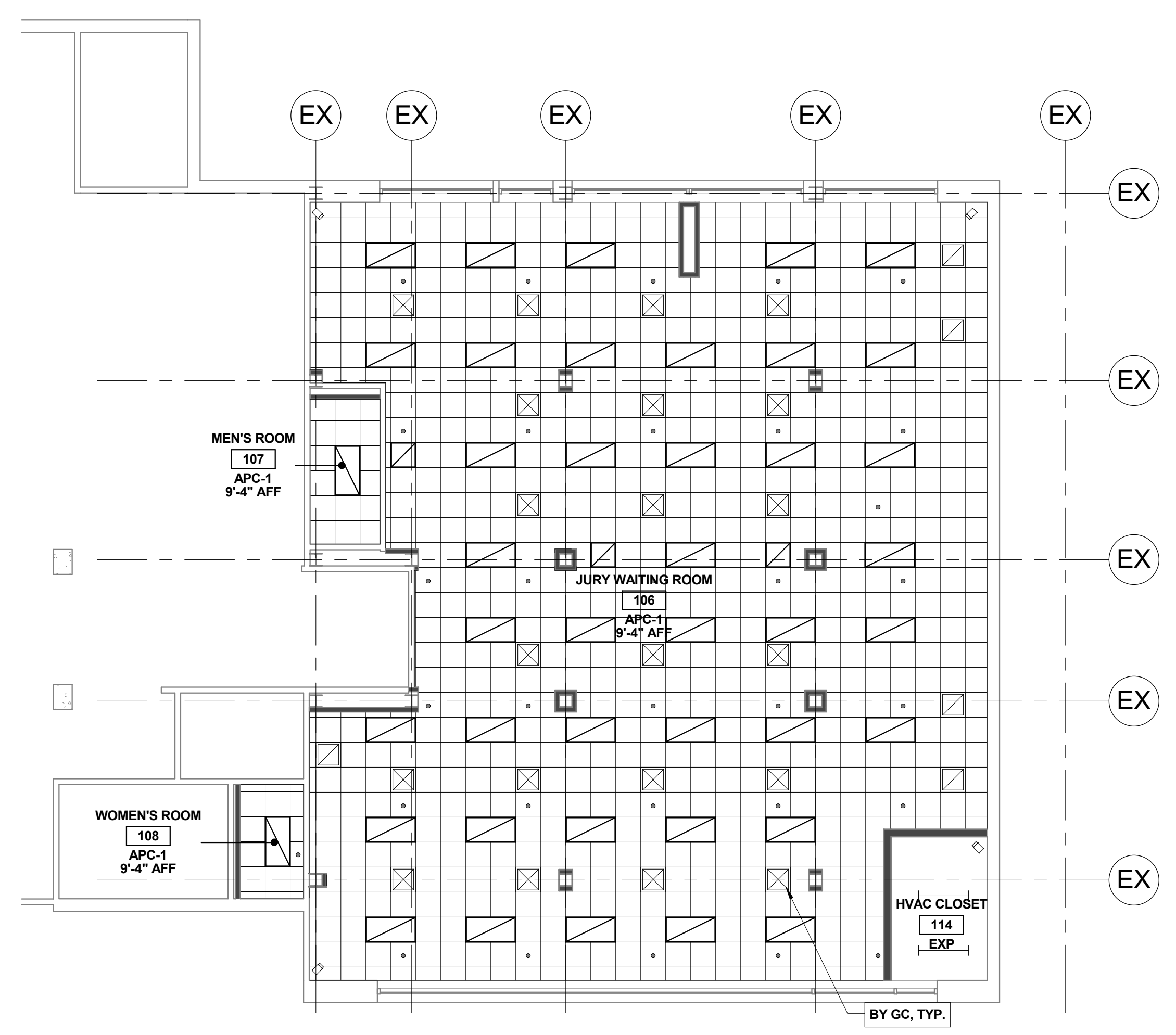
3 ENLARGED MEN'S ROOM PLAN  
(BY OWNER, UNLESS OTHERWISE NOTED)  
SCALE: 1/4" = 1'-0"



4 ENLARGED WOMEN'S ROOM PLAN  
(BY OWNER, UNLESS OTHERWISE NOTED)  
SCALE: 1/4" = 1'-0"

**TOILET ACCESSORY KEY  
(BY OWNER, UNLESS OTHERWISE NOTED)**

- GB 1-1/2" DIA. GRAB BAR (36" LONG (BACK), 42" LONG (SIDE), 18" (VERTICAL))
- HD HAND DRYER - (BY GC)
- M 18" X 30" STEEL FRAMED MIRROR
- ND SANITARY NAPKIN DISPOSAL
- SD SOAP DISPENSER
- TD TOILET PAPER DISPENSER
- FM FEMININE NAPKIN DISPENSER



2 PROPOSED FIRST FLOOR CEILING PLAN (BY OWNER, UNLESS OTHERWISE NOTED)  
SCALE: 1/8" = 1'-0"

**CEILING LEGEND**

- APC-1 2' x 2' APC
- EXP NO CEILING (UNDERSIDE OF DECK EXPOSED)
- 2' x 4' LIGHT FIXTURE
- 2' x 2' LIGHT FIXTURE
- SUPPLY DIFFUSER, BY GC
- EXHAUST DIFFUSER, BY GC
- SPRINKLER HEAD
- 4' LED STRIP LIGHT

(BY GC)

**MISCELLANEOUS STEEL ANGLE MASONRY WALL LINTEL SCHEDULE**

WALL THICKNESS	MASONRY OPENING UP TO 4'-0"	MASONRY OPENING 4'-1" TO 6'-0"	MASONRY OPENING 6'-1" TO 8'-0"
4" WALL	L 3 1/2x3 1/2x5/16	L 4x3 1/2x5/16	L 6x3 1/2x5/16
6" WALL	JL 3 1/2x2 1/2x5/16	JL 3 1/2x2 1/2x5/16	JL 3 1/2x2 1/2x3/8
8" WALL	JL 3 1/2x3 1/2x5/16	JL 4x3 1/2x5/16	JL 6x3 1/2x5/16
10" WALL	L 5x3 1/2x1/4( * ) + L 4x3 1/2x1/4( * )	L 5x3 1/2x1/4( * ) + L 4x3 1/2x1/4( * )	L 5x5x5/16( * ) + L 4x4x5/16( * )
12" WALL	JL L 3 1/2x3 1/2x5/16	JL L 4x3 1/2x5/16	JL L 6x3 1/2x5/16
16" WALL	JL JL 3 1/2x3 1/2x5/16	JL JL 4x3 1/2x5/16	JL JL 6x3 1/2x5/16

**NOTES**

- REFER TO MECHANICAL DRAWINGS FOR LOCATION AND SIZE OF OPENINGS FOR NON-BEARING MASONRY WALLS.
- PROVIDE MINIMUM 6" BEARING ON BRICK, SOLID OR GROUTED SOLID CONCRETE BLOCK, BUT NOT LESS THAN 1" OF BEARING PER FOOT OF SPAN.
- WHERE OPENINGS ARE LOCATED NEXT TO COLUMNS OR BEAMS, ATTACH TO STRUCTURAL STEEL, CONNECTION NOT TO PROTRUDE INTO OPENING.
- ALL EXTERIOR LINTELS SHALL BE HOT DIPPED GALVANIZED PER ASTM 123.
- ALL ANGLES LONG LEG VERTICAL UNLESS NOTED BY ( \* ) WHEN NOTED BY ( \* ) USE LONG LEG HORIZONTAL.
- 6" AT CAVITY WALLS, INCREASE THE HORIZONTAL LEG OF EXTERIOR ANGLE BY WIDTH OF CAVITY.

5 MISCELLANEOUS STEEL ANGLE MASONRY WALL LINTEL SCHEDULE (BY GC)

**FINISH MATERIAL LEGEND (BY OWNER)**

TAG	FINISH	MANUFACTURER	STYLE	COLOR	SIZE	COMMENTS
<b>FLOOR FINISHES</b>						
LVT-1	LUXURY VINYL TILE	MANNINGTON	NATURES PATH SELECT HERITAGE HICKORY	12142 TOFFEE	5" X 48"	WAITING ROOM FLOOR
TL-1	PORCELAIN TILE	AMERICAN OLEAN	1X1 UNGLAZED COLOR BODY MOSAIC BLENDS	SNOW LEOPARD A68	12" X 24" SHEETS	TOILET ROOM FLOOR
SC-1	SEALED CONCRETE					HVAC CLOSET FLOORS
<b>WALL FINISHES</b>						
CWT-1	CERAMIC WALL TILE	AMERICAN OLEAN	BRIGHT AND MATTE GROUP 1	ICE WHITE 0025	6" X 6"	75% OF WALLS
CWT-2	CERAMIC WALL TILE	AMERICAN OLEAN	BRIGHT AND MATTE GROUP 1	LIGHT SMOKE 0042	6" X 6"	25% MIX OF WALLS
CWT-3	CERAMIC WALL TILE	AMERICAN OLEAN	BRIGHT AND MATTE GROUP 1	SUMMER RAIN 0081	6" X 6"	25% MIX OF WALLS
PT-1	PAINT	BENJAMIN MOORE		SILVER HALF DOLLAR 2121-40		MAIN
PT-2	PAINT	BENJAMIN MOORE		WEST COAST 1671		ACCENT
<b>BASE FINISHES</b>						
PTB-1	CERAMIC TILE BASE	AMERICAN OLEAN	COVE BASE A-4601	ICE WHITE 0025	6" X 6"	TOILET ROOMS
RWB-1	RUBBER WALL BASE	ROPPE	COVE	624 CHAMELEON	4"	WALLS, COLUMNS
<b>CEILING FINISHES</b>						
APC-1	ACOUSTIC PANEL CEILING	USG	ASPEN	BASIC	24" X 24"	15/16"
<b>MISCELLANEOUS FINISHES</b>						
PL-1	PLASTIC LAMINATE	WILSONART		MANGALORE MANGO 7984-38		AT SHELF AND ROD.
PL-2	PLASTIC LAMINATE	WILSONART		MANGALORE MANGO 7984	48" X 96"	ON ALL PERIMETER WALLS, UP TO 48" AFF. PRODUCT TYPE 117 - 0.118"-3.0MM.

**FURNITURE AND CASEWORK LEGEND (BY OWNER)**

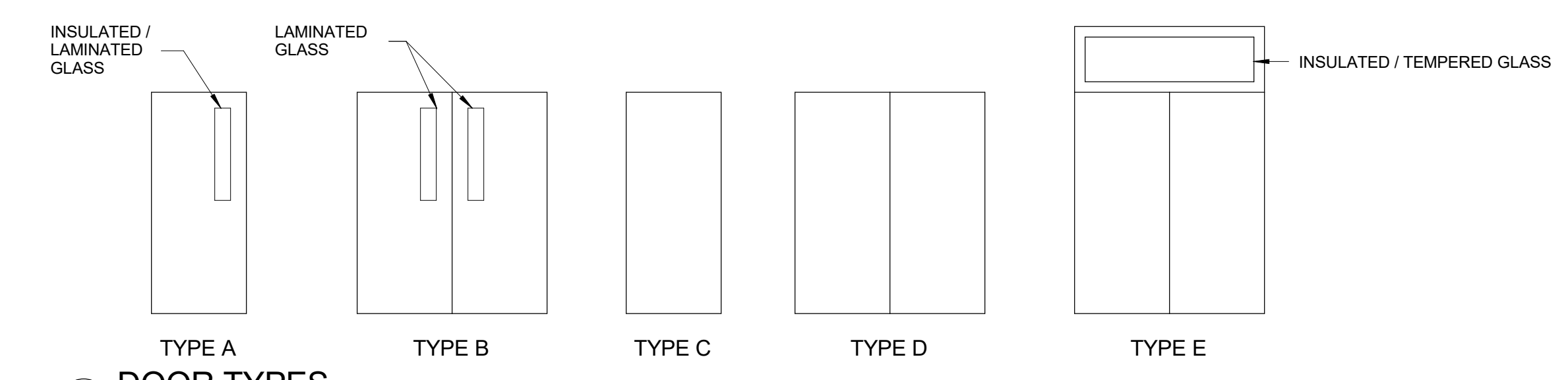
FURNITURE TYPE	BASIS OF DESIGN	MANUFACTURER	AMOUNT	COMMENTS
CHAIRS	VARIABLE LINE	TEKNION	260	STACKING CHAIR, PROVIDED BY OWNER.
WORKSTATION	THEISIS	TEKNION	TO INCLUDE 4 STATIONS	PROVIDED BY OWNER.
WORKSTATION TASK CHAIRS	VARIABLE	TEKNION	4	WORK CHAIR, PROVIDED BY OWNER.
RECEPTION DESK	EXPANSION	TEKNION	1	TO INCLUDE ADA COUNTER AND TRANSACTION COUNTER, PROVIDED BY OWNER.
TASK CHAIRS (AT RECEPTION)	AROUND	TEKNION	2	FOR EMPLOYEES, PROVIDED BY OWNER.

**DOOR SCHEDULE BY OWNER**

ROOM NAME	DOOR NUMBER	DOOR ELEVATION	DOOR WIDTH	DOOR HEIGHT	DOOR TYPE	FRAME TYPE	FRAME HEIGHT	HARDWARE SET	FIRE RATING	ROOM SIGN INFORMATION	COMMENTS
STAIRS "A"	101	C	VIF	VIF	HM	EXT (HM)	VIF	1			
LOBBY	102	EXT	EXT	EXT	EXT	EXT	EXT	2			
LOBBY	103	C	VIF	VIF	SWC	EXT (HM)	EXT	3			
VESTIBULE	104	A	VIF	VIF	HM	EXT (HM)	EXT	4			
STAIRS "B"	105	C	VIF	VIF	HM	EXT	VIF	1			
JURY WAITING ROOM	106	B	(2) 3'-0"	7'-0"	SWC	HM	VIF	5	90 MIN.	JURY WAITING ROOM - POSTED OCCUPANT LOAD (426 PERSONS)	
MEN'S ROOM	107	C	VIF	VIF	SWC	HM	VIF	6		MEN'S TOILET - ADA SIGNAGE	UNDERCUT 1"
WOMEN'S ROOM	108	C	VIF	VIF	SWC	HM	VIF	6		WOMEN'S TOILET - ADA SIGNAGE	UNDERCUT 1"
HVAC CLOSET	109	D	(2) 2'-6"	7'-0"	WD	HM	7'-2"	7		MECHANICAL ROOM	
HVAC CLOSET	110	C	VIF	7'-0"	WD	HM	7'-2"	7		MECH. ROOM - SERVICE DOOR	

**DOOR SCHEDULE BY GC**

ROOM NAME	DOOR NUMBER	DOOR ELEVATION	DOOR WIDTH	DOOR HEIGHT	DOOR TYPE	FRAME TYPE	FRAME HEIGHT	HARDWARE SET	FIRE RATING	ROOM SIGN INFORMATION	COMMENTS
JURY WAITING ROOM	111	E	VIF	VIF	HM	EXT (HM)	VIF	8			BY GC



6 DOOR TYPES

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**IMPROVEMENTS**  
TO THE  
**JURY WAITING ROOM**  
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**CITY OF ELIZABETH**  
FOR THE  
**COUNTY OF UNION, NEW JERSEY**  
2 BROAD STREET, ELIZABETH, NJ 07201

No.	Date	Issue or Revision
1	11.01.17	BID SET

Drawing Title  
**FINISH PLAN,  
ENLARGED PLANS,  
RCP, DOOR  
SCHEDULE**

Scale	As indicated	USA Project No.	2017-011
Drawing Date	11.01.17	Drawing No.	A-101
Drawn By	NP	Checked By	APA

# PLUMBING GENERAL NOTES (BY GC)

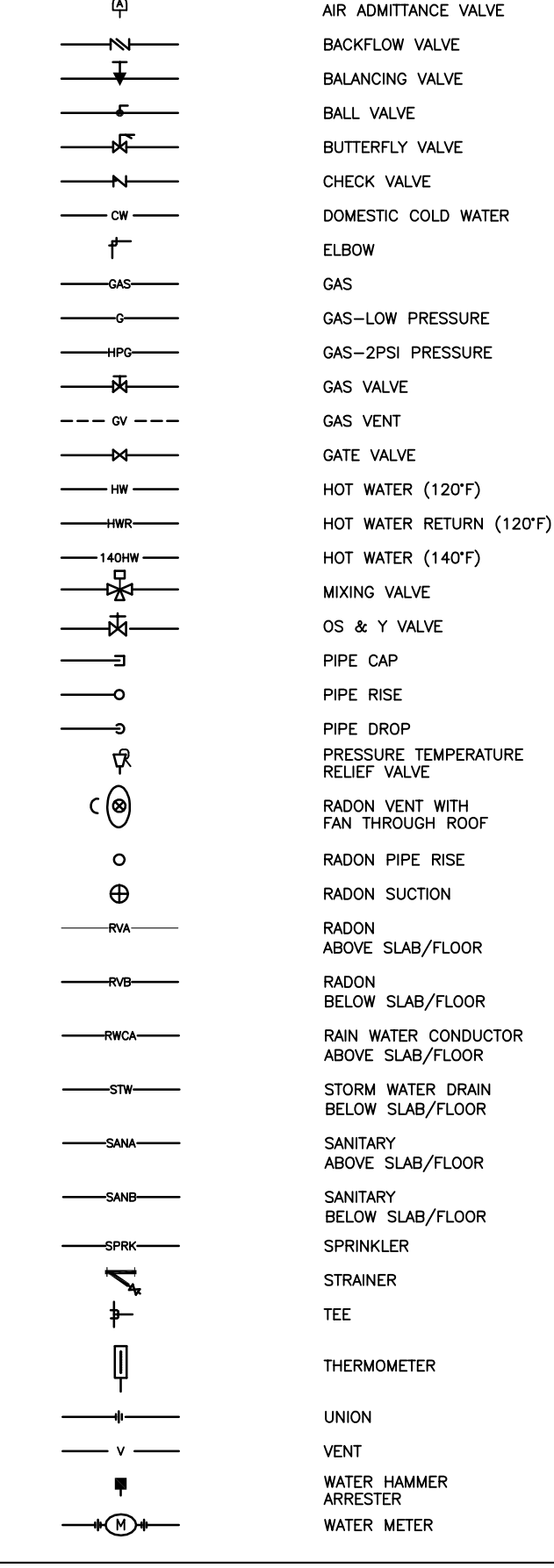
- GENERAL REQUIREMENTS**
- APPLICABLE PLUMBING AND FUEL GAS CODE: NATIONAL STANDARD PLUMBING CODE 2015.
  - BEFORE SUBMITTING A BID, CAREFULLY EXAMINE THE DRAWINGS, VISIT SITE OF PROPOSED WORK AND BECOME FULLY INFORMED OF ALL EXISTING CONDITIONS AND LIMITATIONS TO BE MET. FAILURE TO VISIT AND INSPECT THE EXISTING CONDITIONS SHALL NOT BE VALID REASON FOR AUTHORIZATION OF A CHANGE ORDER.
  - THE DRAWINGS ARE DIAGNOSTIC AND INDICATIVE OF THE WORK AND SHALL BE FOLLOWED AS CLOSELY AS PRACTICAL. THE DRAWINGS ARE NOT INTENDED TO SHOW OR DESCRIBE EVERY SMALL CONSTRUCTION DETAIL. IT IS INTENDED THAT THE CONTRACTOR COMPLETE THE WORK IN SUCH A MANNER THAT THE VARIOUS SYSTEMS WILL FUNCTION, OPERATE, AND PERFORM TO THE TRUE INTENT AND MEANING OF THE DRAWINGS AND COMPLY WITH ALL APPLICABLE BUILDING CODES AND INDUSTRY STANDARDS.
  - ALL WORK SHALL CONFORM TO ALL PERTINENT LAWS, ORDINANCES, CODES, AND REGULATIONS. EQUIPMENT SHALL BE INSTALLED IN THE STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
  - UNLESS OTHERWISE INDICATED, ALL CUTTING AND PATCHING REQUIRED FOR THE INSTALLATION OR REMOVAL OF THE PLUMBING WORK IS BY THIS CONTRACTOR. ALL PATCHING SHALL BE RESTORED TO ORIGINAL CONDITIONS. DO NOT CUT STRUCTURAL MEMBERS.
  - UNCONDITIONALLY GUARANTEE IN WRITING ALL MATERIALS, EQUIPMENT, AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE BY OWNER.
  - MAINTAIN A CLEAN AND SAFE WORK AREA AT ALL TIMES. ALL SAFETY PROCEDURES AND ENFORCEMENT IS THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL MEET ALL OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION STANDARDS.

- INSTALLATION REQUIREMENTS**
- INSTALL PIPE SLEEVES IN WALLS AND FLOORS WHERE PIPES PENETRATE. PROVIDE ALL NECESSARY HANGERS, SUPPORTS, AND ANCHORS FOR ALL PIPING AND EQUIPMENT.
  - DO NOT LOCATE ANY ITEMS REQUIRING ACCESS IN AN INACCESSIBLE LOCATION UNLESS AN APPROVED ACCESS DOOR IS PROVIDED.
  - ALL PIPING SHALL BE CONCEALED IN WALLS, CEILING SPACE, OR SOFFITS. COORDINATE WORK WITH ALL TRADES. DO NOT RUN WATER PIPES IN UNHEATED SPACES.
  - INTERIOR COLD AND HOT WATER DISTRIBUTION PIPING WITHIN THE BUILDING SHALL BE TYPE "L" COPPER, ASTM SPEC. B-88-81 WITH A 150 PSI WORKING PRESSURE. FITTINGS SHALL BE WITHOUT COPPER OR BRASS COMPRESSING TO PIPE TO WHICH THEY ARE ATTACHED. JOINTS SHALL BE SOLDERED USING LEAD-FREE SOLDER OR COPPER ALLOY PRESS FITTINGS CONFORMING TO THE MATERIAL AND SIZING REQUIREMENTS OF ASME B16.18 OR ASME B16.22 AND COPPER PRESS FITTINGS WITH UPON O-RINGS. AFTER ALL PIPING HAS BEEN INSTALLED, BUT BEFORE ANY EQUIPMENT OR FIXTURES ARE INSTALLED, THE SYSTEM SHALL BE FILLED WITH WATER UNDER PRESSURE OF 150 POUNDS PER SQUARE INCH. THE PRESSURE SHALL BE MAINTAINED FOR A PERIOD OF 60 MINUTES. AFTER SUCCESSFUL TESTING, FLUSH ALL PIPING TO REMOVE DIRT AND FOREIGN MATTER, THEN STERILIZE THE WATER SYSTEM WITH A CHLORINE OR HYDROLYTIC FLUSH WATER PIPES WITH FRESH WATER TO REMOVE CHLORINE RESIDUE. STERILIZATION SHALL BE PERFORMED IN ACCORDANCE WITH AWWA SPECIFICATIONS C601-531.
  - PROVIDE ALL LABOR, MATERIALS, TRUCKING, AND DISPOSAL OF ALL EQUIPMENT AND MATERIALS MADE OBSOLETE BY THE RENOVATIONS. ALL EQUIPMENT AND MATERIALS REMOVED BY THIS CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND/OR SHALL BE TAKEN TO AN APPROVED LANDFILL.
  - ALL SANITARY AND VENT PIPING ABOVE AND BELOW THE GROUND SHALL BE SCH. 40 DWV PVC PLASTIC PIPE WITH SOLVENT WELD JOINTS AND FITTINGS (PVC CELLULAR FOAM CORE PIPE SHALL NOT BE PERMITTED) OR SERVICE WEIGHT CAST IRON OR NO-HUB CAST IRON. MAKE ALL JOINTS WATER-TIGHT AND GASTIGHT. WHEN ROUGHING WORK IS COMPLETED AND BEFORE CONNECTION OF FIXTURES OR DRAINS, THE SYSTEM SHALL BE SUBJECTED TO A WATER TEST BY FLOODING UP ALL OPENINGS AND FILLING ALL. ANY DEFECTS SHALL BE CORRECTED.
  - ALL SANITARY AND VENT PIPING IN RETURN AIR PLENUM CEILING, AND THROUGH FIVE RATED ASSEMBLIES SHALL BE SERVICE WEIGHT CAST IRON OR NO-HUB CAST IRON. ALL RAIN WATER PIPING BEING HEAT TRACED SHALL BE SERVICE WEIGHT CAST IRON OR NO-HUB CAST IRON.
  - IDENTIFY ALL DOMESTIC COLD WATER, AND DOMESTIC HOT WATER PIPING WITH COLORED, WATERPROOF, ALL TEMPERATURE, SELF-ADHERING LABELS AND DIRECTIONAL ARROWS AS MANUFACTURED BY STON.
  - PROVIDE SHOCK ABSORBING DEVICES WHICH WILL PROTECT WATER SUPPLY PIPING FROM WATER HAMMER. SEALED AIR CHAMBER METAL BELLOWS TYPE SHALL BE JAY R. SMITH COMPANY "HYDROTRON". LOCATE AT THE ENDS OF ALL BRANCH PIPING RUNS.
  - INSULATE ALL DOMESTIC HOT, HOT RECIRCULATION, AND COLD WATER PIPING AND ALL FITTINGS AND VALVES. CONTRACTOR TO PATCH, REPAIR AND REPLACE ALL DAMAGED OR MISSING EXISTING PIPE INSULATION THAT HAS DAMAGED OR REMOVED DURING NEW PIPING INSTALLATION. PIPE INSULATION SHALL BE RIGID FIBERGLASS WITH WHITE KRAFT BENEATH TO ALUMINUM FOIL, K = 0.23 @ 75 F., REINFORCED WITH FIBERGLASS YARN, SUITABLE FOR PAINTING, MANVILLE MICRO-LOK 600 WITH AP-T JACKET OR APPROVED EQUAL. FITTINGS AND VALVES SHALL BE INSULATED WITH MOLEDED ONE-PIECE F.V.C. COVERS WITH FIBERGLASS INSULATION, MANVILLE "ZESTON 25/50" OR EQUAL.
  - SUBMIT COPIES OF DETAILED SHOP DRAWING DATA FOR EACH PIECE OF EQUIPMENT OR MATERIAL PROPOSED TO BE USED FOR REVIEW BY THE ENGINEER.
  - AT THE COMPLETION OF WORK, CONTRACTOR SHALL PROVIDE THE OWNER WITH AN INSTRUCTION TO EMPLOYEES FOR EACH SYSTEM INSTALLED AND THE OPERATION OF ALL EQUIPMENT.
  - UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL SUBMIT TO THE ARCHITECT/ENGINEER AS-BUILT DRAWINGS AND COPIES OF OPERATION AND MAINTENANCE MANUALS INCLUDING ALL NAME PLATE DATA, WIRING DIAGRAMS, MAINTENANCE INSTRUCTIONS, AND PARTS LIST.
  - REMOVE, STORE, AND REINSTALL CEILING TILES AS REQUIRED TO ACCESS EXISTING PIPING AND TO INSTALL NEW WORK. TILES DAMAGED BY THIS CONTRACTOR SHALL BE REPLACED BY THIS CONTRACTOR.
  - DO NOT INSTALL PIPING OR ANY OTHER PLUMBING EQUIPMENT OVER ELECTRICAL PANELS.

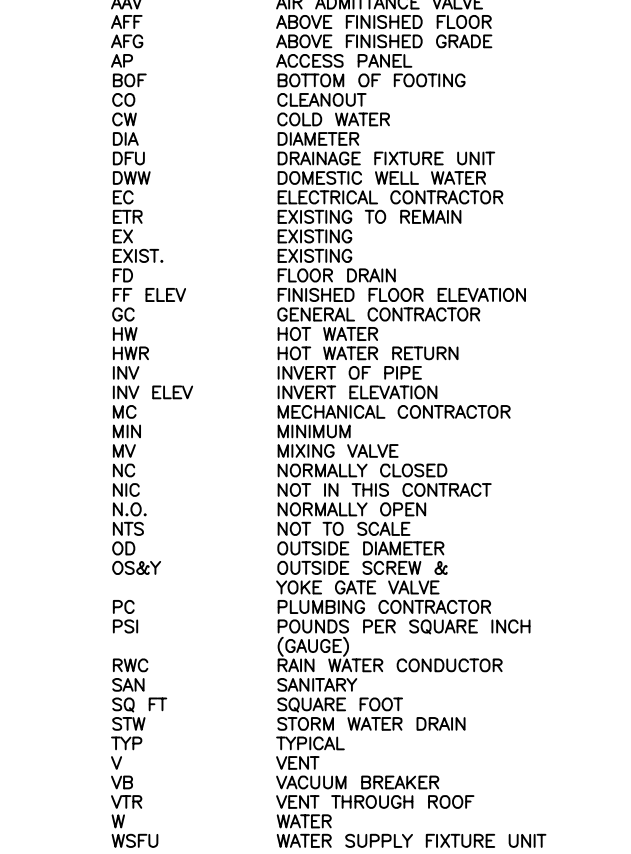
# GENERAL DEMOLITION NOTES (BY OWNER)

- APPLICABLE PLUMBING AND FUEL GAS CODE: NATIONAL STANDARD PLUMBING CODE 2015.
- THE DRAWINGS ARE DRAWN TO GENERALLY INDICATE THE DEMOLITION REQUIRED TO ACCOMMODATE THE NEW CONSTRUCTION BUT ARE NOT ALL INCLUSIVE. THE FULL EXTENT OF DEMOLITION WORK MUST BE DETERMINED IN THE FIELD BASED ON THE ACTUAL CONDITIONS ENCOUNTERED AND AS REQUIRED FOR THE SATISFACTORY PROTECTION AND PROPER EXECUTION OF THE WORK. THE DRAWINGS SHOW THE GENERAL SCOPE OF THE DEMOLITION. IT SHALL BE UNDERSTOOD THAT NOT EVERY PIPE AND CONDITION CAN BE SHOWN ON THE DRAWINGS BUT THE INTENT IS TO REMOVE ALL PIPING AND EQUIPMENT MADE OBSOLETE BY THE RENOVATIONS. LOCATIONS OF PIPING SHOWN IS BASED ON THE ORIGINAL BUILDING DRAWINGS AND LIMITED SURVEY. DEVIATIONS BETWEEN DRAWINGS AND ACTUAL INSTALLATION MAY BE ENCOUNTERED AND SHALL BE TAKEN INTO CONSIDERATION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE DEMOLITION AND REMOVAL OF SYSTEMS AND EQUIPMENT MADE OBSOLETE BY THE RENOVATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR THE RESPECTIVE CUTTING, REMOVAL, PATCHING, AND REPAIR OF EXISTING FLOORS, WALLS, CEILING, ROOF CONSTRUCTION, AND SITE WORK AS A RESULT OF THE DEMOLITION.
- PROVIDE AND INSTALL STEEL LINTELS FOR OPENINGS IN EXISTING WALL CONSTRUCTION. CUTTING AND PATCHING OF EXISTING WALL CONSTRUCTION TO BE PERFORMED BY CONTRACTOR UNLESS NOTED OTHERWISE.
- REFER TO ARCHITECTURAL ("A"), MECHANICAL ("M"), FIRE PROTECTION CONTRACTOR ("FP"), AND ELECTRICAL ("E") DRAWINGS FOR ADDITIONAL INFORMATION PERTINENT TO THE OVERALL DEMOLITION AND REMOVAL WORK.
- MATERIALS RESULTING FROM DEMOLITION AND REMOVAL OPERATIONS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE COMPLETELY REMOVED FROM THE SITE UNLESS NOTED OTHERWISE ON THE DRAWINGS OR REQUESTED BY THE OWNER.
- DEBRIS AND OTHER MATERIALS RESULTING FROM DEMOLITION OPERATIONS SHALL NOT BE STORED ON SITE, UNLESS NOTED OTHERWISE. ALL DEMOLITION MATERIAL SHALL BE PROMPTLY REMOVED FROM THE SITE.
- WHEN AN EXISTING ITEM IS REMOVED (I.E. PLUMBING FIXTURE, PIPE, EQUIPMENT, ETC.) THE CONTRACTOR SHALL ALSO REMOVE THE ACCOMPANYING SUPPORTS, AND ALL ANCHORS. ALL SEALANT RESIDUE SHALL BE COMPLETELY REMOVED AND THE WALLS CLEANED AND REPAIRED TO MATCH ADJACENT WALL SURFACES. PATCH ALL OPENINGS TO MATCH EXISTING.
- CONTRACTORS SHALL PROTECT ALL FLOORS, WALLS, CEILING, AND FURNISHINGS THROUGHOUT THE DEMOLITION AREA. ANY DAMAGE TO THE AREA AS A RESULT OF DEMOLITION SHALL BE FIXED TO MATCH EXISTING CONDITIONS AT NO EXTRA COST TO THE OWNER.
- WHERE EQUIPMENT OR PIPING IS REMOVED, AND HOLES OR MARKED SURFACES ARE LEFT IN THE WALLS OR CEILING THEY SHALL BE PATCHED TO MATCH THE EXISTING SURFACE.

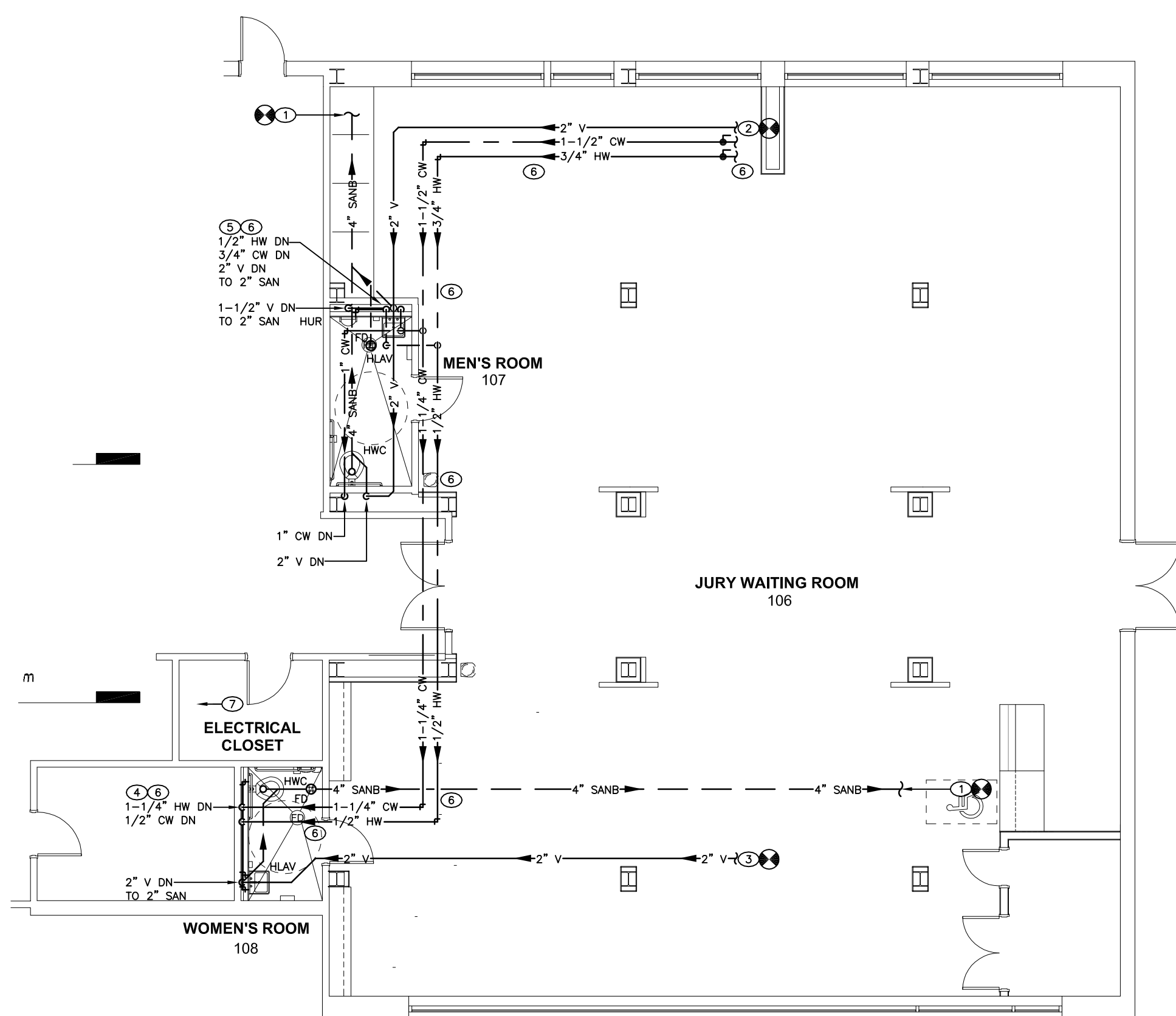
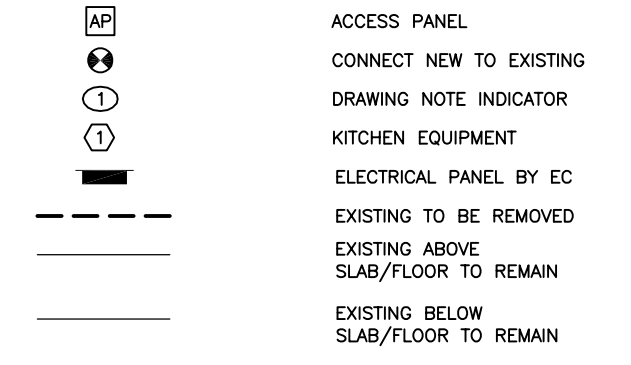
# PIPING LEGEND



# ABBREVIATIONS



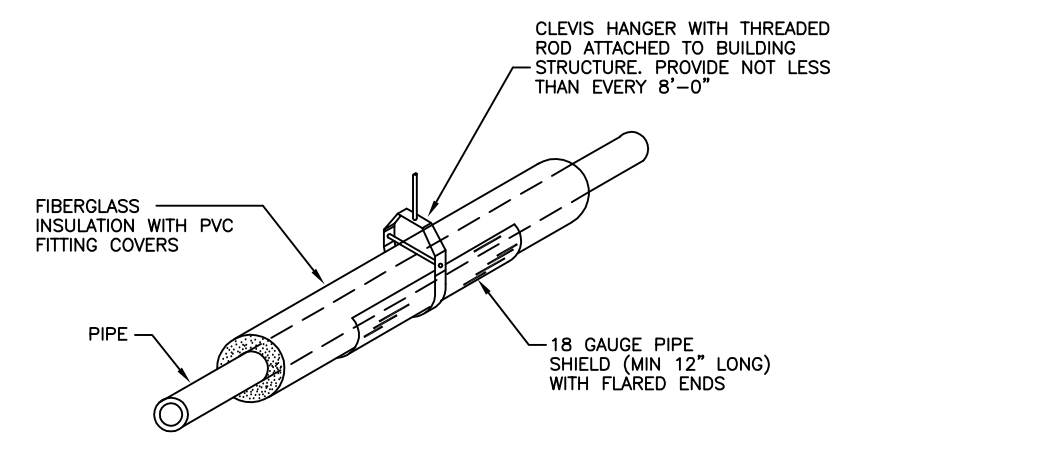
# MISCELLANEOUS



1 PARTIAL FIRST FLOOR PLAN - PLUMBING (BY GC)



- DRAWING NOTES BY SYMBOL - NEW WORK**
- CONNECT NEW 4" SANITARY TO EXISTING OF SAME SIZE OR LARGER AND EXTEND THROUGH BASEMENT CEILING SPACE AS INDICATED TO NEW FIXTURE LOCATION.
  - CONNECT NEW 2" V. 1-1/2" CW AND 3/4" HW TO EXISTING IN FIRST FLOOR CEILING SPACE AND EXTEND AS INDICATED TO NEW FIXTURE LOCATION. PROVIDE FULL PORT BALL VALVES ON NEW DOMESTIC WATER PIPE AT CONNECTION TO EXISTING.
  - CONNECT NEW 2" V. TO EXISTING IN FIRST FLOOR CEILING SPACE AND EXTEND AS INDICATED TO NEW FIXTURE LOCATION.
  - NEW 1-1/2" CW AND 1/2" HW DOWN IN WALL TO SUPPLY 1/2" CW AND HW TO LAVATORY AND 1" CW TO WATER CLOSET.
  - NEW 3/4" CW AND 1/2" HW DOWN IN WALL TO SUPPLY 1/2" CW AND HW TO LAVATORY AND 3/4" CW TO URINAL.
  - PROVIDE TEMPERATURE MAINTENANCE ON DOMESTIC HOT WATER PIPING FROM CONNECTION TO EXISTING TO EACH 1/2" DROP IN WALLS. BATHROOM HW-42 SELF REGULATING TEMPERATURE MAINTENANCE CABLE APPROX. 12' L.F. 2004. 125°F TO HOT TAP HANG. MINIMUM SHEATH LENGTH 20' ON 5/8" BRASS. 125°F TO HOT TAP HANG. MINIMUM SHEATH LENGTH 20' ON 5/8" BRASS. PROVIDE (1) BAVULC-T TEE CONNECTOR, (1) EC ELECTRONIC CONTROLLER, (2) 18 GAUGE BRASS WIRE AND POWER CABLE TO JUNCTION BOX. COORDINATE EXACT JUNCTION BOX LOCATION WITH EC. HANG ELECTRICAL CONTROLLER BY EC. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
  - COORDINATE LOCATION OF EC ELECTRONIC CONTROLLER ON WALL WITH EC.



2 TYPICAL PIPING HANGER DETAIL (BY GC)  
NO SCALE

# PLUMBING FIXTURE SCHEDULE (BY GC)

FIXTURE	MANUFACTURER	TYPE	MODEL	TRIM NO.	SUPPORT NO.	TRAP	MINIMUM TRAP SIZE	WHEELS	WHEELS	WHEELS	FLOW RATE	MOUNTING HEIGHT	ELECTRICAL REQUIREMENTS	REMARKS	FIXTURE SPECIFIC NOTES			
HWC	AMERICAN STANDARD	MADERA	3043.001	SLOAN SOLS 8111-1.6	FLOOR		4"	2"	1"	5.0	5.0	4.0	1.6 GPF	RM AT 17" AFF	EXPOSED TOP SPUD. SOLAR/BATTERY POWERED SENSOR ACTIVATED FLUSHMETER VALVE TOILET WITH AMERICAN STANDARD SEAT MODEL 5050.100 EXTRA HEAVY DUTY DRAIN FRONT LESS COVER. CALL TO WALL.	SEE NOTE A		
HUR	AMERICAN STANDARD	WASHROOM FLOORSE	6590.001EC	SLOAN SOLS 8118-1.0	JR SMITH 0637		2"	1 1/2"	3/4"	4.0	4.0	4.0	0.125 GPF	RM AT 17" AFF	EXPOSED TOP SPUD. SOLAR/BATTERY POWERED SENSOR ACTIVATED FLUSHMETER HIGH EFFICIENCY URINAL. CALL TO WALL.			
HLV	AMERICAN STANDARD	LUCERNE	0356.421	SLOAN SOLS 847-275-BOT	JR SMITH 0702		1 1/4"	1 1/2"	1 1/4"	1 1/2"	1.0	0.8	0.8	1.0	0.5 GPM	RM AT 34" AFF	SINGLE CENTER HOLE WALL HUNG LAVATORY WITH SOLAR/BATTERY POWERED SENSOR ACTIVATED FAUCET AND SLOAN MAX-135-A ASSE. 1070. THERMOSTATIC MIXING VALVE. SET OUTLET TEMPERATURE SET AT 105° F.	SEE NOTE B
WHA-	JR SMITH	WATER HAMMER ARRESTER	5000 SERIES												REF-CHECKS: HFC-CHECKS: HFC-CHECKS: PGI-D=5030, PGI-E=5040, PGI-F=5050			
FD	JR SMITH	FLOOR DRAIN	2009-B-NB				2"	2"	1-1/2"						CAST IRON BODY, ROUND NICKEL BRONZE ADJUSTABLE STRAINER WITH 4" DEEP TRAP SEAL.	SEE NOTE C		

- GENERAL NOTES:**
- ALL CHINA FIXTURES TO BE SUPPLIED WHITE.
  - ALL EXPOSED PIPING TO BE CHROME PLATED.
  - PROVIDE STOP VALVES AT EACH FIXTURE.
  - ADJUST ALL SELF-CLOSING FAUCETS FOR 10 SECOND RUN TIME.
  - FURNISH ALL LAVATORIES WITH CHROME PLATED METAL GROUND STRAINER AND TAILPIECE.
  - EXPOSED P-TRAPS FOR LAVS TO BE 1 1/4" X 1 1/2" 17 GAUGE CHROME PLATED WITH CLEANOUTS.
  - ALTERNATE MANUFACTURERS: KOHLER, SLOAN, CORNELL, WOOD, AND ZURN.
- FIXTURE SPECIFIC NOTES:**
- PROVIDE WHITE LUGS HANDLE ON ACCESS SIDE OF FIXTURE.
  - PROVIDE "TRUSSBO" PREFORMED LAV-SHIELD LAVATORY PROTECTIVE ENCLOSURE. WHITE IN COLOR UNDER ALL LAVATORIES.
  - PROVIDE WITH PROXY SYSTEM TRAP GUARD INSET FITTING WHERE INDICATED ON DRAWINGS. COORDINATE EXACT SIZE WITH MANUFACTURER REPRESENTATIVE.

# HANGER AND SUPPORT SPACING (BY GC)

MATERIAL	PIPE SIZE	HORIZONTAL SPACING IN FEET	VERTICAL SPACING IN FEET	REMARKS
TYPE "L" COPPER PIPE OR TUBING	1 1/4" AND SMALLER	6'	10'	MANDATORY GUIDE
TYPE "L" COPPER PIPE OR TUBING	1 1/2" AND LARGER	10'	10'	MANDATORY GUIDE
PVC SCHEDULE 40 PIPE	ALL	4'	10'	MANDATORY GUIDE
CAST-IRON PIPE	ALL	5'	15'	MAXIMUM HORIZONTAL SPACING OF CAST-IRON HANGERS SHALL BE INCREASED TO 12' INSIDE 10-FOOT LENGTHS OF PIPE ARE INSTALLED.
STEEL PIPE	1/2"	6'	EVERY FLOOR LEVEL	
STEEL PIPE	3/4" AND 1"	8'	EVERY FLOOR LEVEL	
STEEL PIPE	1-1/4" AND LARGER	10'	EVERY FLOOR LEVEL	

# TABLE 12.8.1 MAXIMUM LENGTH OF TRAP ARM

SIZE OF TRAP ARM (INCHES)	LENGTH - TRAP ARM TO VENT	SLOPE - INCHES PER FOOT
1-1/4	3'-4"	1/4
1-1/2	5'	1/4
2	8'	1/4
3	10'	1/8
4	12'	1/8

# FIRESTOPPING NOTES (BY GC)

UL SYSTEM NUMBER	RATING	3M PRODUCT	BUILDING COMPONENTS	BUILDING MATERIAL	THROUGH PENETRATION
C-AJ-1009	2	2000 2000-2003	WALL FLOOR	CONCRETE	SLEEVED 4" STEEL PIPE OR 6" DMT
C-AJ-1013	1	2000 2000-2003	WALL FLOOR	CONCRETE	UNSLEEVED 4" STEEL PIPE OR 6" DMT
C-AJ-1017	3	FD-150	WALL FLOOR	CONCRETE	10" STEEL OR 6" DMT
C-AJ-7003	3	CP25WB	WALL FLOOR	CONCRETE	STEEL DUCT
C-AJ-2002	2	FS-195+	WALL FLOOR	CONCRETE	4" PVC PIPE
W-L-1080	2	WFS-2 HXITY	WALL	GYPSPUM	4" STEEL, EMT, CAST IRON, 2" COPPER
W-L-1146	1, 2	CP25WB +	WALL	GYPSPUM	12" STEEL, 4" EMT, CAST IRON, 6" CONDUIT, COPPER PIPE
W-L-7008	1, 2	CP25WB	WALL	GYPSPUM	36" X 30" 24 GAUGE STEEL DUCT
F-C-5002	1	FS-195+ CP25WB +	FLOOR CEILING	WOOD GYPSPUM	INSULATED 4" STEEL, 3" COPPER

- THE ABOVE LIST OF PENETRATION FIRESTOP METHODS ARE NOT INTENDED TO BE INCLUSIVE OF EVERY TYPE IN THIS BUILDING, BUT ARE PROVIDED AS A BASIS OF DESIGN FOR THE TYPICAL TYPE FOUND IN A BUILDING. THE CONTRACTOR IS TO SUBMIT SHOP DRAWINGS FOR EACH TYPE OF FIRESTOP PENETRATION FOR ALL DUCTS, PIPES, CONDUITS, AIRWAYS, ETC. THAT WILL MEET THE UL RATING OF THE ASSEMBLY BEING PENETRATED.
- THE CONTRACTOR SHALL FOLLOW THE SPECIFIC INSTALLATION DETAILS AND GUIDELINES LISTED BY THE MANUFACTURER OF THE PRODUCT BEING USED.
- APPROVED MATERIAL MAY BE PROVIDED BY 3M PROTECTION PRODUCTS OR HILT.

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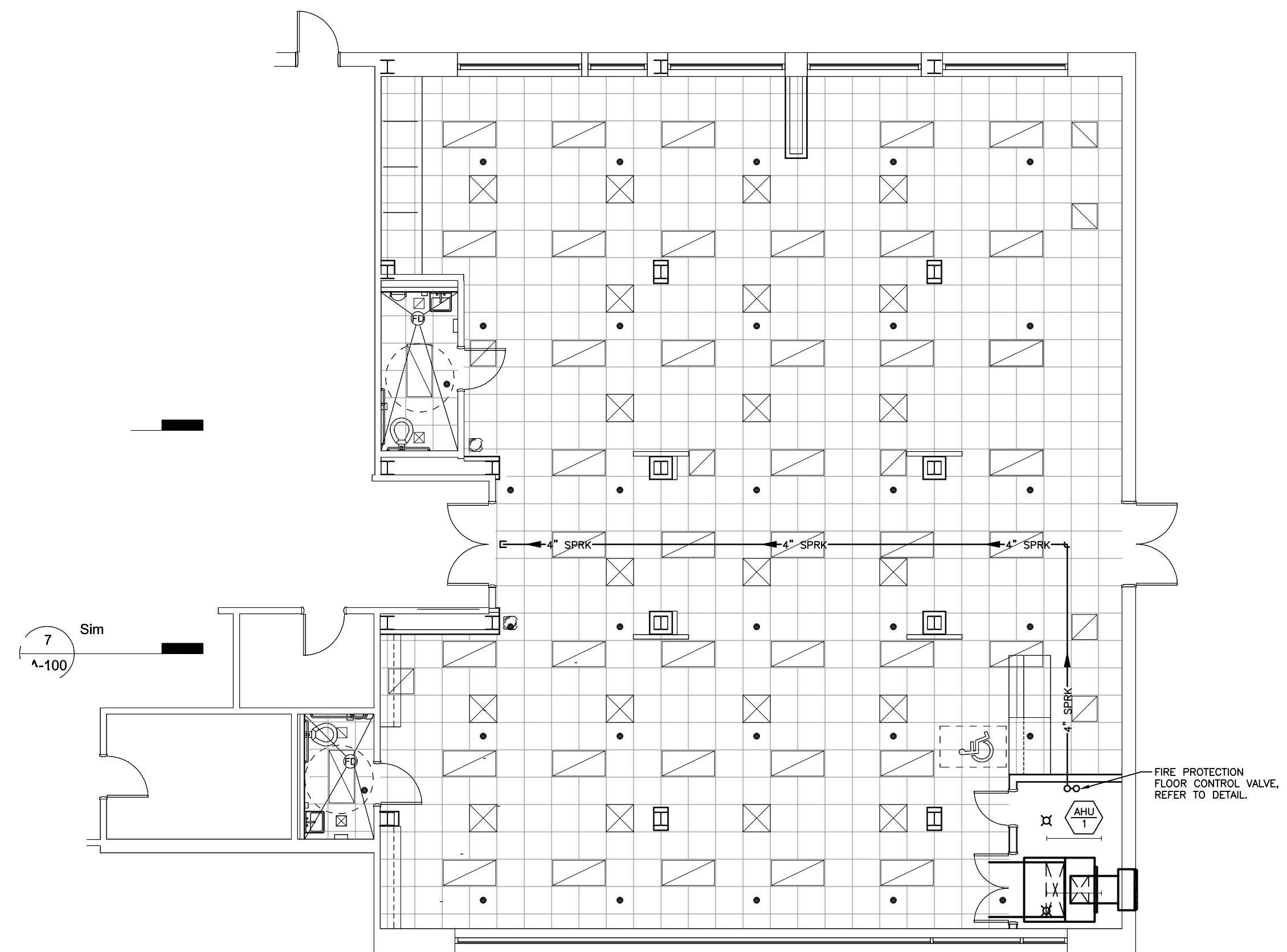
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**GENERAL NOTES, SYMBOL LISTS & FLOOR PLANS - PLUMBING**

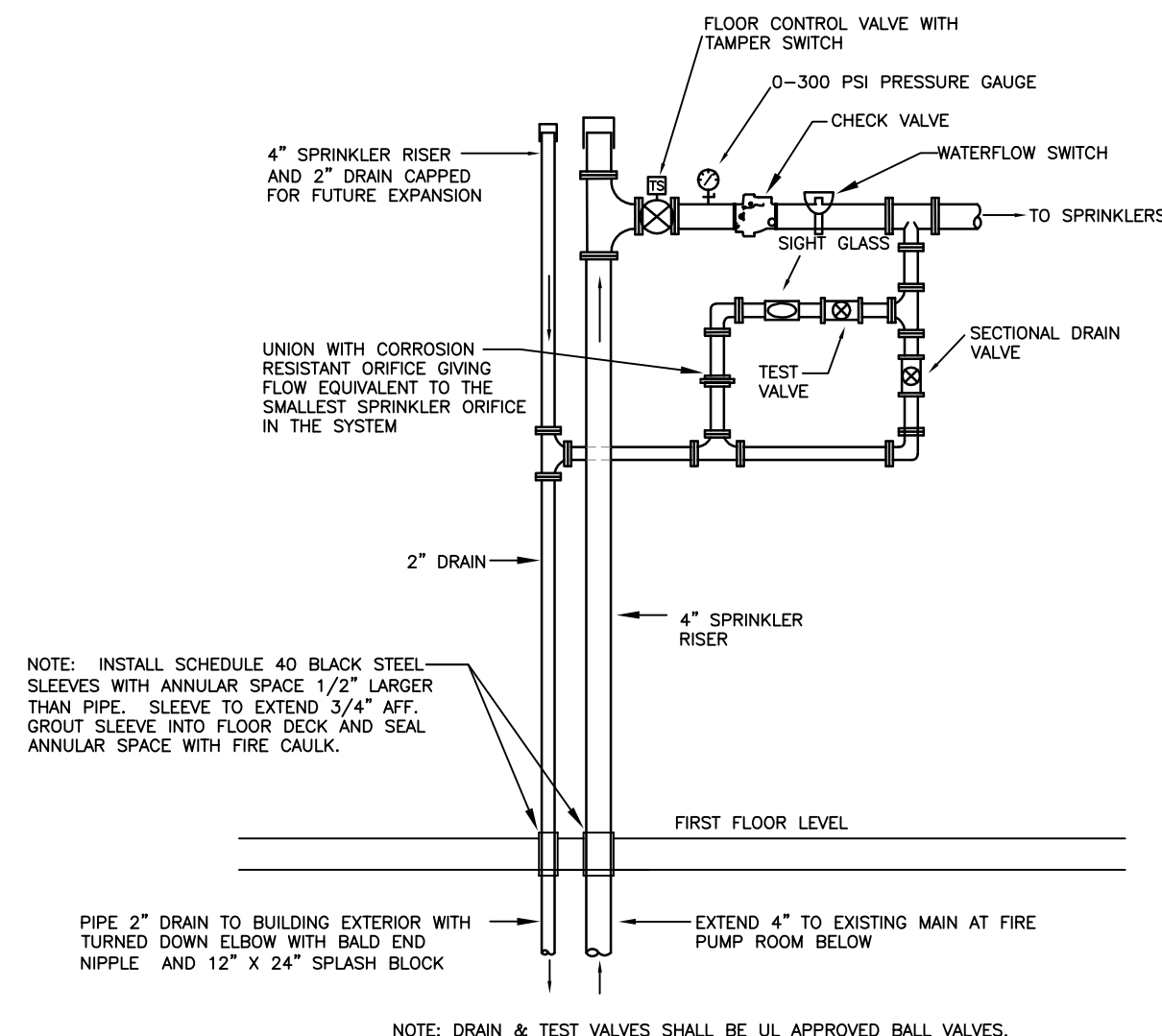
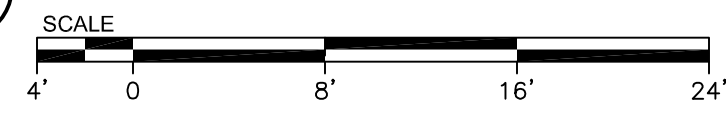
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1 PARTIAL FIRST FLOOR PLAN - FIRE PROTECTION (BY GC)



2 TYPICAL NEW FLOOR CONTROL VALVE DETAIL (BY GC)

NO SCALE

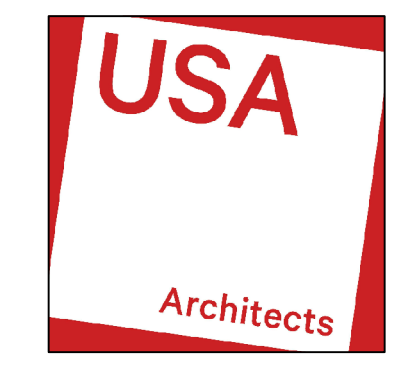
FIRE PROTECTION GENERAL NOTES (BY GC)

- A. APPLICABLE FIRE PROTECTION CODE: NFPA-13 2013.
- B. THE EXISTING BASEMENT IS CURRENTLY SERVED BY A WET SPRINKLER SYSTEM WITH FIRE PUMP.
- C. THE WET SPRINKLER SYSTEM SHALL BE HYDRAULICALLY CALCULATED TO PROVIDE THE PRESCRIBED DENSITY UNIFORMLY OVER THE MOST REMOTE AREA. COPIES OF THE CALCULATIONS SHALL BE SUBMITTED WITH THE SHOP DRAWINGS. REFER TO SPECIFICATIONS FOR ADDITIONAL SPRINKLER SYSTEM REQUIREMENTS.
- D. TOTAL SYSTEM DESIGN AND INSTALLATION IS THE RESPONSIBILITY OF THIS CONTRACTOR. ALL WORK SHALL BE IN COMPLIANCE WITH THESE SPECIFICATIONS, THE DRAWINGS, AND NFPA 13. WHERE THERE ARE CONFLICTS BETWEEN THE SPECIFICATIONS AND NFPA 13, NFPA 13 SHALL GOVERN. THE DRAWINGS AND SPECIFICATIONS ARE DIAGNOSTIC AND SHOW THE INTENT OF THE DESIGN. ACTUAL CONFIGURATION, LAYOUT, QUANTITIES, ETC IS THE RESPONSIBILITY OF THIS CONTRACTOR.
- E. THE WATER SOURCE FOR THE SPRINKLER SYSTEM IS CITY WATER. CURRENT FLOW TEST INFORMATION IS AVAILABLE AND WILL BE PROVIDED TO THE CONTRACTOR.
- F. SPRINKLER HEADS SHALL BE CENTERED IN CEILING TILES AND LOCATED SYMMETRICALLY WITH LIGHTING FIXTURES AND DIFFUSERS AS SHOWN.
- G. THE SPRINKLER HEAD SPACING AND LOCATIONS IN THE ENTIRE SPRINKLER SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH NFPA-13.
- H. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING SIGNED AND SEALED DRAWINGS, SUBMITTALS AND HYDRAULIC CALCULATIONS TO AUTHORITY HAVING JURISDICTION (AHJ) PRIOR TO START OF ANY WORK. CONTRACTOR SHALL REVISE AND RESUBMIT AS MAY BE REQUIRED.
- I. THE ENTIRE AREA OF ALTERATION SHALL BE SPRINKLERED. THIS SHALL INCLUDE THE CONCEALED COMBUSTIBLE SPACES.
- J. THE WET SPRINKLER DISTRIBUTION SYSTEM SHALL BE BLACK SCHEDULE 10 PIPE WITH ROLL GROOVED FITTINGS AND SCHEDULE 40 THREADED PIPE WITH MALLEABLE-IRON THREADED FITTINGS.
- K. PROVIDE INSPECTOR TEST STATION AT THE MOST REMOTE POINT OF EACH SPRINKLER SYSTEM. PIPING AND VALVE SHALL BE CONCEALED ABOVE AN ACCESSIBLE CEILING AND DRAIN PIPING CONCEALED IN THE WALLS. EXTEND DRAIN PIPING TO BUILDING EXTERIOR. DO NOT DISCHARGE ON TO CONCRETE WALKWAYS OR PATIOS. WHERE PLASTER CEILINGS OCCUR PROVIDE NON-RUSTING ACCESS PANELS FOR VALVES. LOCATIONS TO BE APPROVED BY THE ARCHITECT.
- M. THE SPRINKLER CONTRACTOR SHALL REVIEW ALL PROJECT DRAWINGS AND COORDINATE THE INSTALLATION OF THE PIPING WITH ALL OTHER TRADES FOR THE PROJECT. REFER TO THE ARCHITECTURAL PLANS FOR CEILING FINISH TYPES AND LOCATION OF STRUCTURAL STEEL. THE HEAD LAYOUT TO SHOW INTENT. ADDITIONAL HEADS MAY BE NEEDED BECAUSE OF BULKHEADS. REFER TO MECHANICAL DRAWINGS FOR DUCTS THAT MAY REQUIRE HEADS UNDERNEATH.
- N. DO NOT INSTALL PIPING OR ANY OTHER SPRINKLER EQUIPMENT OVER ELECTRICAL PANELS.
- O. CURRENT SERVICE PROVIDER: DAVID FIRE SYSTEMS; 367 WEST PLEASANT VIEW AVE, HACKENSACK, NJ, (201) 342-7800. ALL WORK SHALL BE FULLY COORDINATED WITH THE EXISTING SERVICE PROVIDED AS PART OF THIS CONTRACT.

SPRINKLER HEAD SCHEDULE (BY GC)

SYMBOL	MANUFACTURER	MODEL	TEMPERATURE SETTING	FINISH	DRIFICE	K	REMARKS
*	* VIKING	VK302	155°F	WHITE	1/2"	5.6	QUICK RESPONSE PENDANT SPRINKLER WITH 1-1/2" RECESSED ESCUTCHION
II	* VIKING	VK300	155°F	BRASS	1/2"	5.6	QUICK RESPONSE UPRIGHT SPRINKLER

\* OR EQUIVALENT BY RELIABLE, STAR, AND GRINNELL ARE ALSO ACCEPTABLE.  
NOTE: ALL EXPOSED SPRINKLER PIPING TO BE PAINTED BY THE GC. COLOR AS SELECTED BY THE ARCHITECT.



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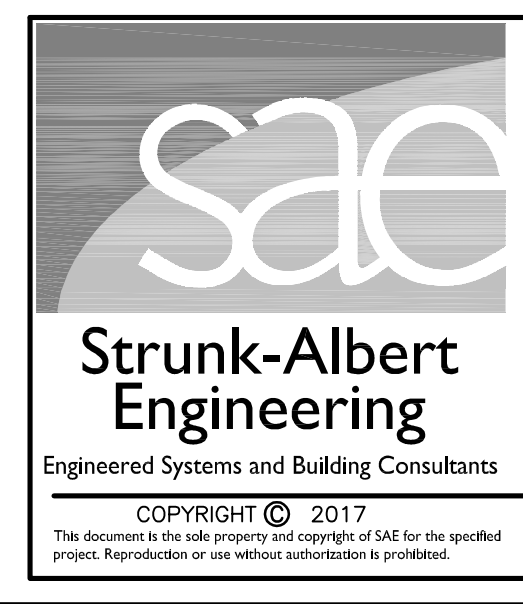
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Drawn By  
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Checked By  
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SAE Project No: UCJ - 03017

ABBREVIATIONS

Table listing abbreviations for various mechanical components and systems, such as AA for Air to Air Heat Exchanger, AC for Air Conditioning, and so on.

MISCELLANEOUS

Table listing miscellaneous symbols and their meanings, including existing work, work to be removed, and section indicators.

PIPING LEGEND

Table listing piping symbols and their descriptions, such as CC for Cooling Condensate, DWR for Cold Water Return, and others.

DUCTWORK LEGEND

Table listing ductwork symbols and their descriptions, including duct size notations, damper symbols, and transition symbols.

HYDRONIC VALVE SCHEDULE (BY GC)

Table detailing the specifications for various hydronic valves, including valve type, pipe size, and acceptable products.

MECHANICAL INSULATION SCHEDULE (BY GC)

Table detailing the specifications for mechanical insulation, including service, materials, R-value, and acceptable products.

PIPE SPECIFICATIONS (BY GC)

Table detailing the specifications for various pipe types, including material type, pipe size, and fitting specifications.

PIPE SUPPORT SPACING (BY GC)

Table detailing the maximum horizontal and vertical spacing for copper and steel pipes.

FIRESTOPPING NOTES (BY GC)

Table detailing firestopping notes, including UL system number, rating, product, building components, building material, and penetration details.

GENERAL DEMOLITION NOTES (BY GC)

- List of general demolition notes (A through H) detailing requirements for demolition work, including safety and material handling.

MECHANICAL GENERAL NOTES (BY GC)

- List of mechanical general notes (A through J) detailing requirements for installation, operation, and maintenance of mechanical systems.



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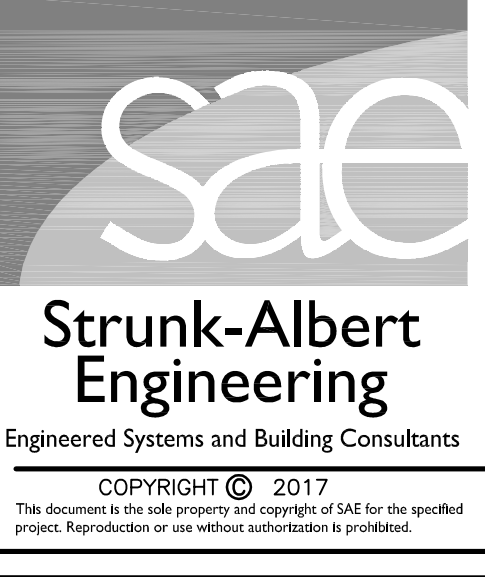
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IMPROVEMENTS TO THE JURY WAITING ROOM IN THE CITY OF ELIZABETH FOR THE COUNTY OF UNION, NEW JERSEY

Table with columns for No., Date, Issue or Revision, and Drawing Title.

Drawing Title: GENERAL NOTES & SYMBOL LIST

Table with columns for Scale, Date, Drawing No., and other project details.



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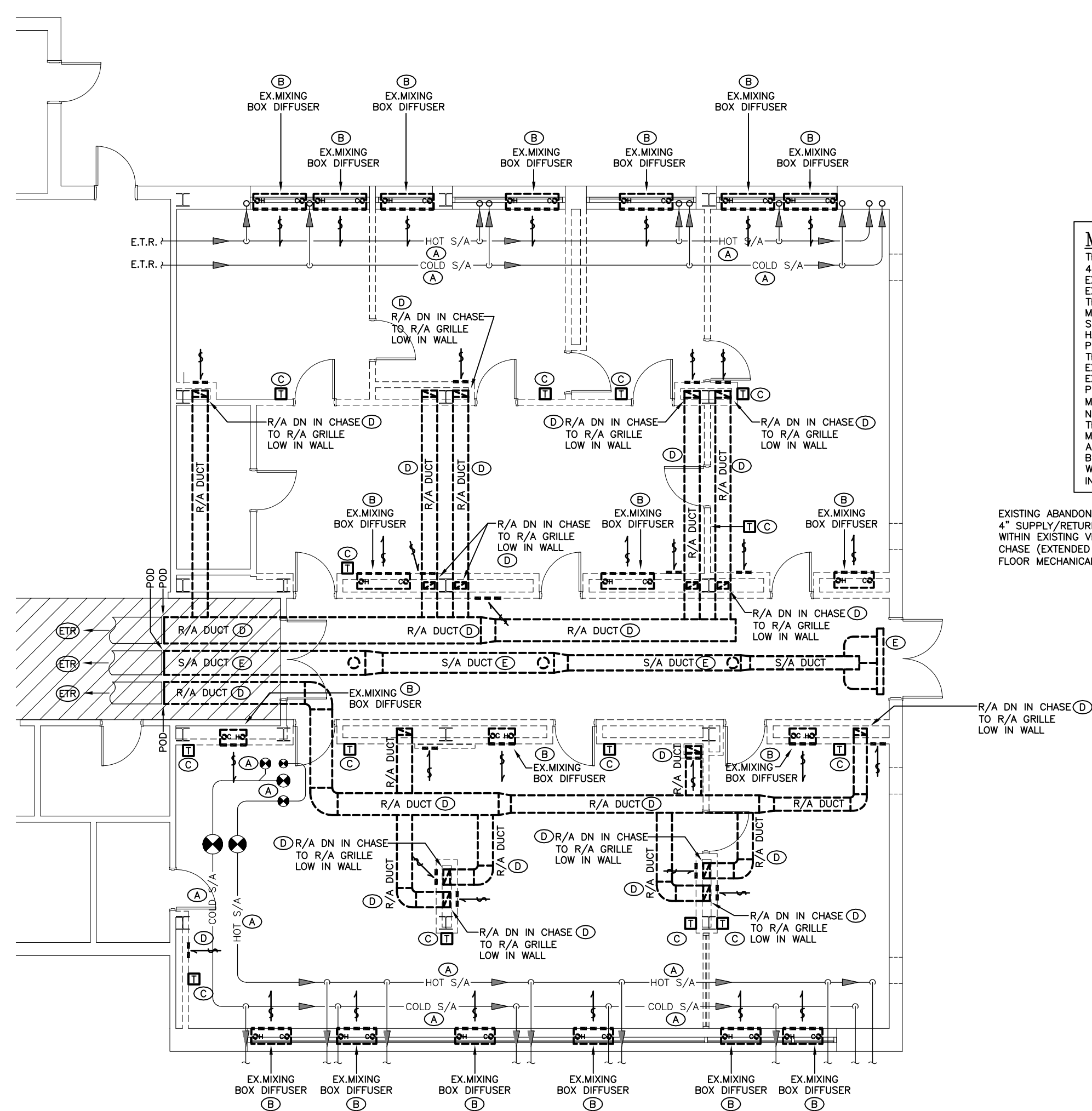
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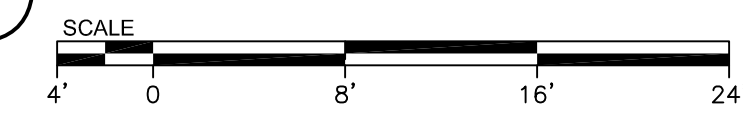
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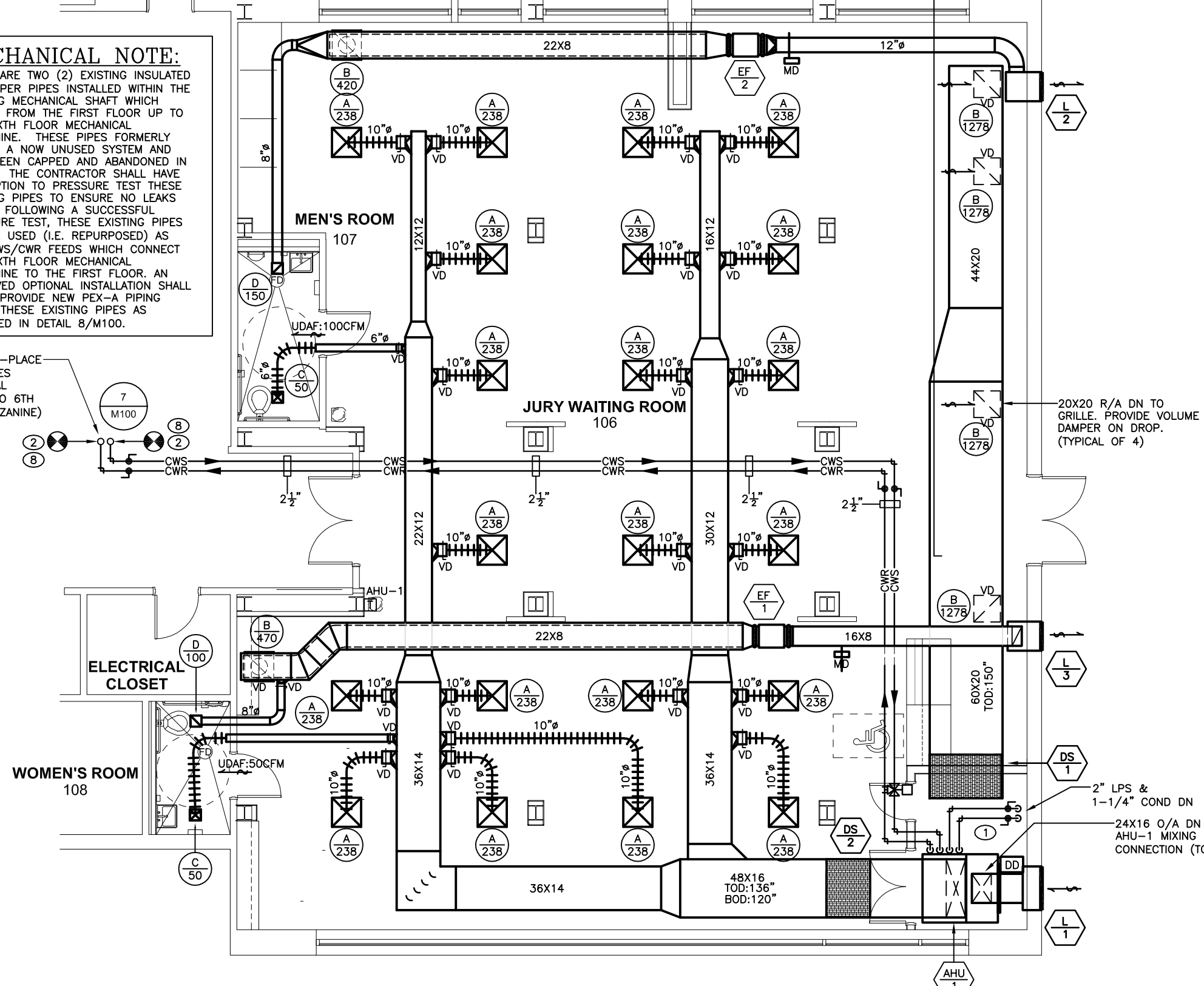
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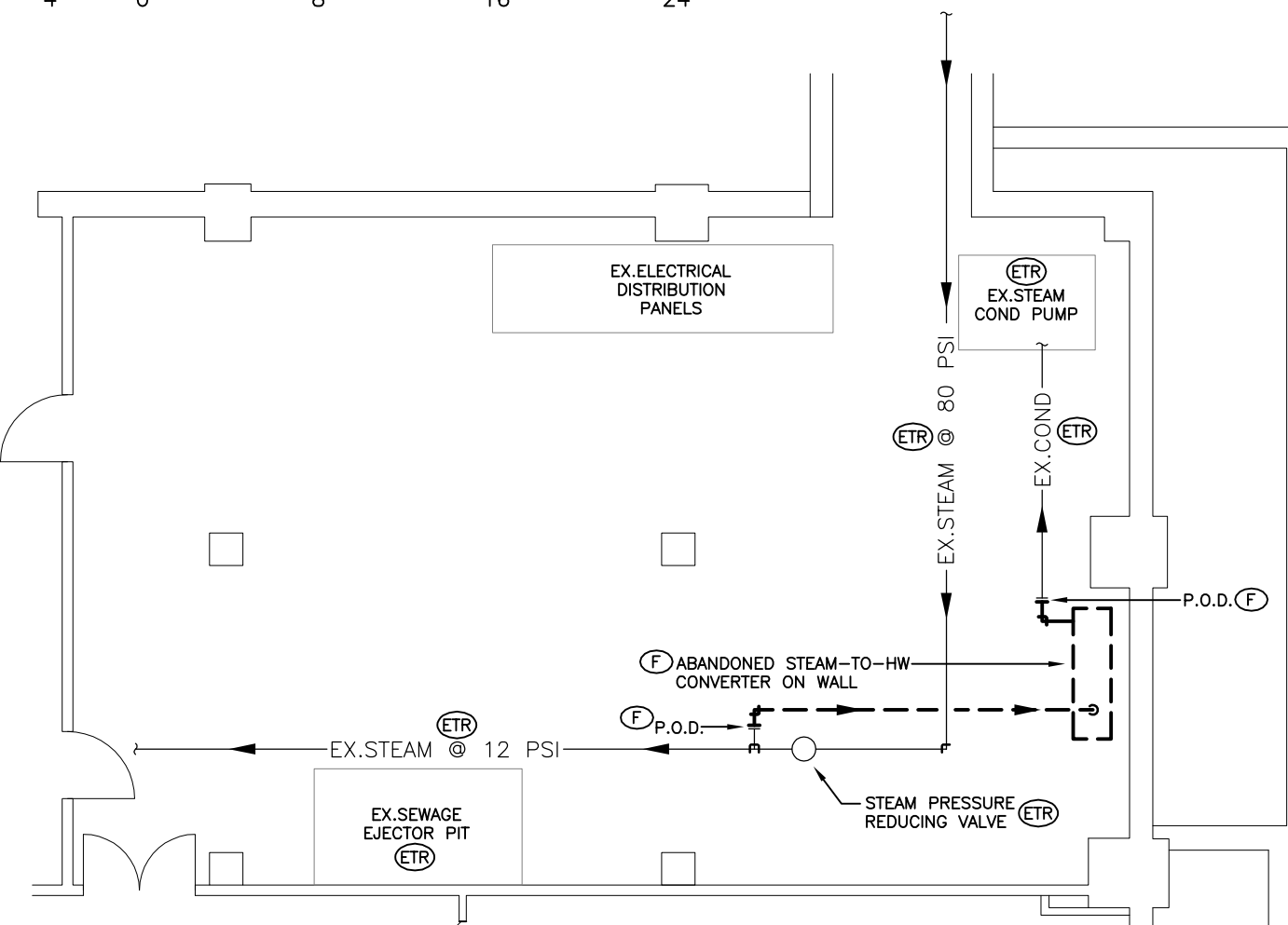
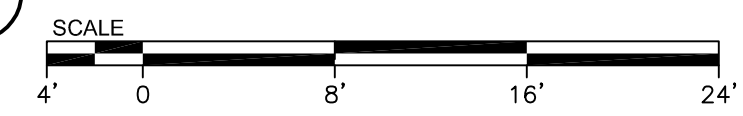
1 PARTIAL FIRST FLOOR DEMOLITION PLAN - MECHANICAL (BY GC)



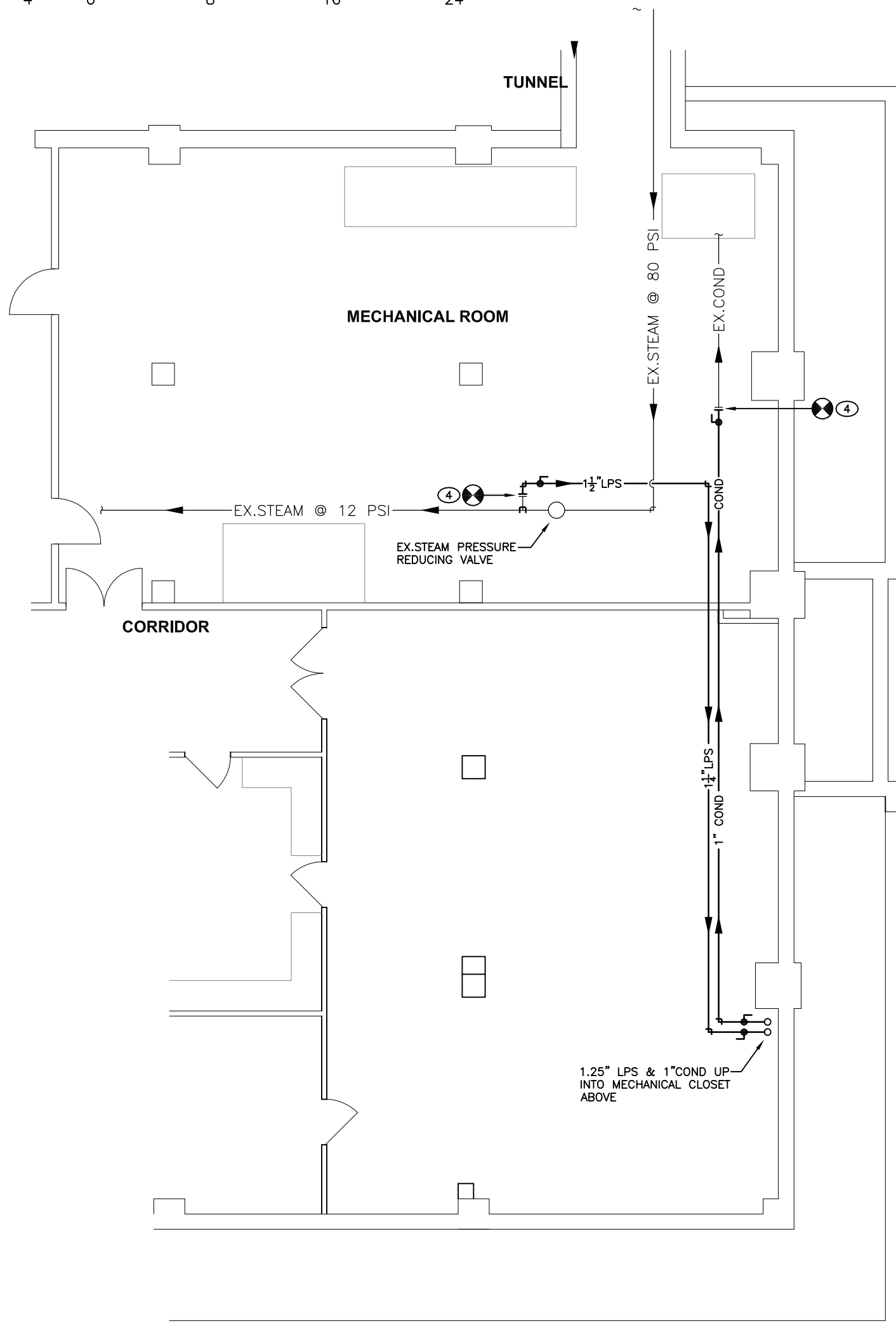
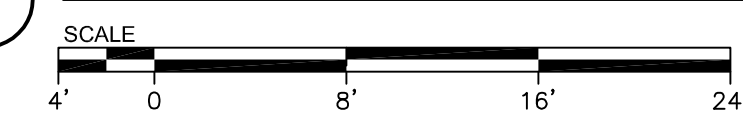
**MECHANICAL NOTE:**  
THERE ARE TWO (2) EXISTING INSULATED 4" COPPER PIPES RETAINED WITHIN THE EXISTING MECHANICAL SHAFT WHICH EXTEND FROM THE FIRST FLOOR UP TO THE SIXTH FLOOR MECHANICAL MEZZANINE. THESE PIPES FORMERLY SERVED A NOW UNUSED SYSTEM AND HAVE BEEN CAPPED AND ABANDONED IN PLACE. THE CONTRACTOR SHALL HAVE THE OPTION TO PRESERVE OR REMOVE THESE EXISTING PIPES TO ENGINEER'S LEADERSHIP. FOLLOWING A SUCCESSFUL PRESERVE TEST, THESE EXISTING PIPES MAY BE USED (I.E. REPURPOSED) AS NEW CWS/CWR FEEDS WHICH CONNECT MEZZANINE TO THE FIRST FLOOR. AN APPROVED OPTIONAL INSTALLATION SHALL BE TO PROVIDE NEW PEX-A PIPING WITHIN THESE EXISTING PIPES AS INDICATED IN DETAIL 3/A/1000.



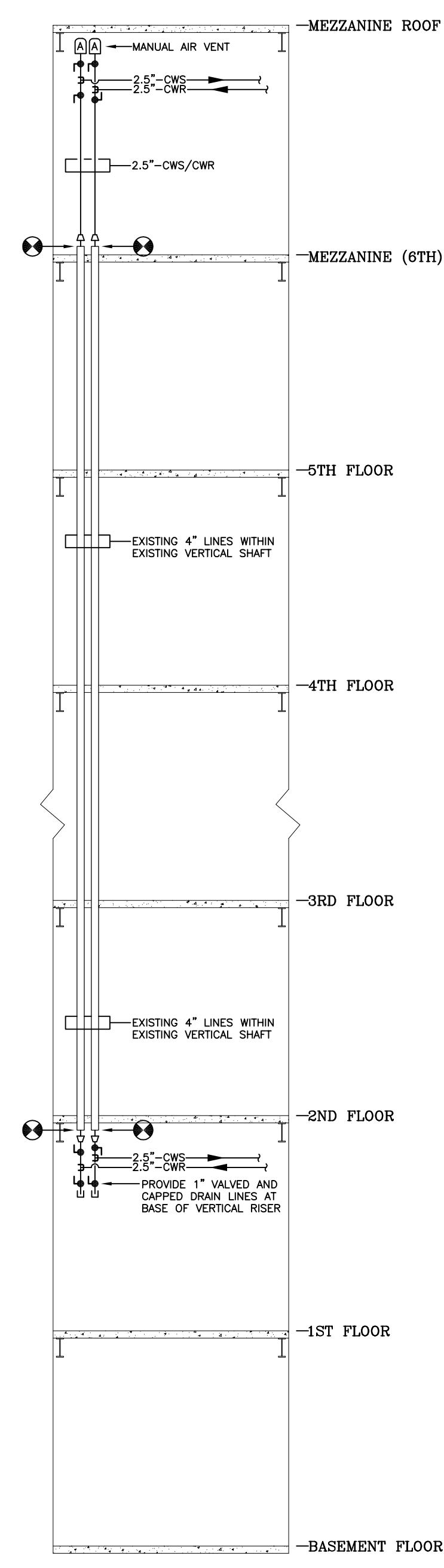
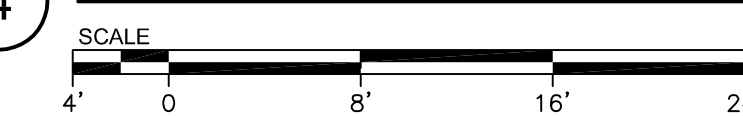
3 PARTIAL FIRST FLOOR PLAN - MECHANICAL (BY GC)



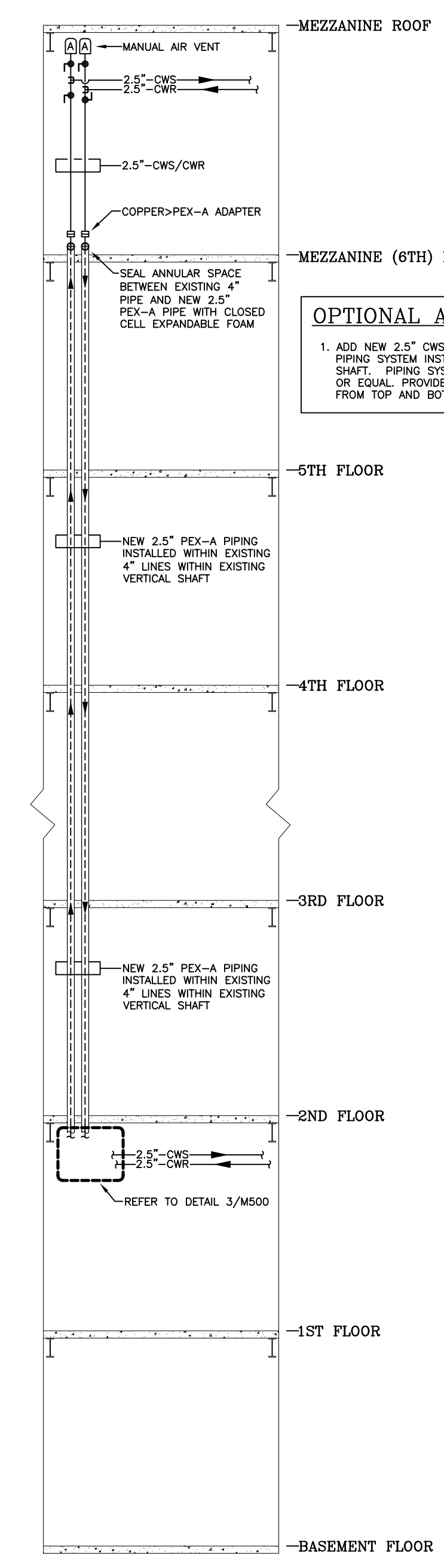
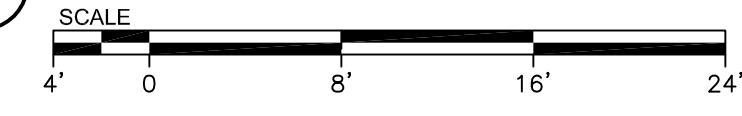
2 PARTIAL BASEMENT FLOOR DEMOLITION PLAN - MECHANICAL (BY GC)



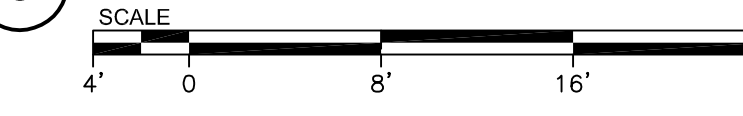
4 PARTIAL BASEMENT FLOOR PLAN - MECHANICAL (BY GC)



7 VERTICAL RISER DIAGRAM (BY GC)



8 OPTIONAL INSTALLATION VERTICAL RISER DIAGRAM (BY GC)



**OPTIONAL APPROACH NOTES:**  
1. ADD NEW 2.5" CWS/CWR PIPING WITHIN EXISTING 4" PIPING SYSTEM INSTALLED WITHIN EXISTING VERTICAL SHAFT. PIPING SYSTEM SHALL BE PEX-A BY UPWARD OR EQUAL PROVIDE SUPPORTS FOR NEW PEX-A PIPING FROM TOP AND BOTTOM, AS REQUIRED.

**DRAWING NOTES BY SYMBOL - DEMOLITION**

- (1) EXISTING ITEM TO REMAIN.
- (2) EX. HIGH VELOCITY 'HOT' & 'COLD' DUCTWORK. EXISTING SUPPLY DUCTWORK IN CEILING SPACE TO REMAIN.
- (3) EX. MINE BOX DIFFUSER. DISCONNECT AND REMOVE WALL-RECESSED UNIT AND ALL RELATED WIRING, CONTROLS AND FEEDER 'HOT' AND 'COLD' DUCTWORK. CAP EXISTING HIGH VELOCITY DUCTWORK WITHIN BASEMENT BELOW. BACK AT MAIN DUCT AND SEAL AIR TIGHT.
- (4) EX. THERMOSTAT. DISCONNECT AND REMOVE EXISTING PNEUMATIC WALL THERMOSTAT AND ASSOCIATED PNEUMATIC TUBING BACK TO MAIN AND CAP. EXISTING AIR PIPING MAINS SERVING OTHER PORTIONS OF THE BUILDING TO REMAIN IN OPERATION.
- (5) EX. R/A DUCT. DISCONNECT AND REMOVE EXISTING RETURN AIR DUCTWORK, GRILLERS AND ALL ASSOCIATED HANGERS/SUPPORTS, WHERE INDICATED. SEAL EXISTING DUCTWORK INDICATED TO REMAIN AT DISCONNECTOR POINT AIR TIGHT.
- (6) EX. S/A DUCT. DISCONNECT AND REMOVE EXISTING SUPPLY AIR DUCTWORK, DIFFUSERS AND ALL ASSOCIATED HANGERS/SUPPORTS, WHERE INDICATED. SEAL EXISTING DUCTWORK INDICATED TO REMAIN AT DISCONNECTOR POINT AIR TIGHT.
- (7) EX. STEAM-HW CONVERTER. DISCONNECT AND REMOVE EXISTING LOW-PRESSURE STEAM SUPPLY LINE AS INDICATED. EXISTING WALL-MOUNTED STEAM-HW SHELL & TUBE CONVERTER AND EXISTING CONDENSATE RETURN AS INDICATED IN PREPARATION FOR NEW WORK. DISCONNECT AND REMOVE ALL ASSOCIATED HANGERS, SUPPORTS AND ACCESSORIES.

**DRAWING NOTES BY SYMBOL - NEW**

- (1) ALL PENETRATIONS (DUCTWORK, PIPING, WIRING, ETC) THROUGH NEW MECHANICAL CLOSETS SHALL BE SEALED AIR TIGHT WITH ADDITIONAL CALCULATING SHEET (SP-506 OR EQUAL).
- (2) OPEN EXISTING VERTICAL SHAFT ENCLOSURE AND CONNECT NEW 2-1/2" CWS/CWR TO EXISTING ABANDONED-IN-PLACE EXISTING 4" PIPES. ONCE CONNECTION IS COMPLETE, PATCH AND REPAIR SHAFT WALL TO MATCH EXISTING ADJACENT STRUCTURES/SURFACES AND SEAL.
- (3) NOT USED.
- (4) CONNECT NEW STEAM/COND TO EXISTING LINES REMAINING FROM DEMOLITION.
- (5) CONNECT NEW 2.5" CWS/CWR PIPES TO EXISTING ABANDONED-IN-PLACE PIPES WHICH HAVE BEEN CUT AND CAPPED AT FLOOR OF MECHANICAL MEZZANINE.
- (6) CONNECT NEW 2.5" CWS/CWR PIPES TO EXISTING CHILLED WATER MAINS WITHIN MECHANICAL MEZZANINE.
- (7) OPTIONAL INSTALLATION APPROACH (SUPERSEDES DRAWINGS NOTES BY SYMBOL #8). CONNECT NEW 2.5" CWS/CWR PIPING TO NEW 2.5" PEX-A CWS/CWR PIPES WHICH ARE TO BE INSTALLED WITHIN EXISTING 4" PIPES. PROVIDE REQUIRED COPPER-TO-PEX-A ADAPTERS REQUIRED FOR INSTALLATION.
- (8) OPTIONAL INSTALLATION APPROACH (SUPERSEDES DRAWINGS NOTES BY SYMBOL #7). OPEN EXISTING VERTICAL SHAFT ENCLOSURE AND CONNECT NEW 2-1/2" CWS/CWR TO NEW 2.5" PEX-A CWS/CWR PIPES WHICH ARE TO BE INSTALLED WITHIN EXISTING 4" PIPES. ONCE CONNECTION IS COMPLETE, PATCH AND REPAIR SHAFT WALL TO MATCH EXISTING ADJACENT STRUCTURES/SURFACES AND SEAL. REFER TO DETAIL 3/A/1000 FOR ADDITIONAL INFORMATION.

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11.01.17 BID SET  
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**PARTIAL FLOOR PLANS - MECHANICAL**

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## AIR HANDLING UNIT SCHEDULE (BY GC)

NUMBER	MANUFACTURER	MODEL	SUPPLY STAGE-1 (CFM)	SUPPLY STAGE-2 (CFM)	FAN CONTROL	VENT (CFM)	E.S.P. (IN WC)	FAN MOTOR HP	CHILLED WATER COIL DATA						STEAM HEATING COIL DATA			ELECTRICAL DATA				
									EAT DR/WH (°F)	LAT DR/WH (°F)	TOTAL CAPACITY (BTUH)	SENSIBLE CAPACITY (BTUH)	ENT/LWT (°F)	FLOW RATE (GPM)	WPD (°F)	EAT (°F)	LAT (°F)	TOTAL CAPACITY (BTUH)	PSI	V/PH/HZ	MCA	MOCP
AHU-1	AARON	V3DLB326FC210	5,110	3,070	2-STAGE	1140	1.25"	204.0	79.5/65.23	55.7/24.4	161	128	42/24	30	2.7	56.6	92.6	203.4	12	460/2/60	11	15

FEATURES:

- VERTICAL CONFIGURATION
- REFER TO SECTION 3.9/1-100 FOR COORDINATION OF UNIT CONFIGURATION & PIPE CONNECTION REQUIREMENTS.
- SUPPLY BLOWER: 1 BLOWER + HIGH EFFICIENCY EC MOTOR; BACKWARD CURVED PLENUM FAN.
- MIXING BOX WITH MODULATING MOTORIZED G/A & R/A DAMPERS + 4" MERV-11 FILTERS.
- STAINLESS STEEL DRAIN PAN.
- STEAM COIL IN REHEAT POSITION, DOWN STREAM FROM THE CHILLED WATER COIL.
- CHILLED WATER COIL.
- PHASE MONITOR ACCESSORY.
- COMBINATION STARTER/DISCONNECT.

SUBJECT TO COMPLIANCE WITH THESE SPECIFICATIONS; OTHER MANUFACTURERS THAT MAY PROVIDE EQUIPMENT INCLUDE CARRIER, TRANE OR DAKIN.

## DUCT SILENCER SCHEDULE (BY GC)

NUMBER	MANUFACTURER	MODEL	DUCT SIZE	CONFG	UNIT LENGTH	PRESSURE DROP (IN WC)	SERVES	CFM	INSERTION LOSS							
									63 HZ	125 HZ	250 HZ	500 HZ	1K HZ	2K HZ	4K HZ	8K HZ
DS-1	PRICE	RL36/20	60"x20"	RETURN	36"	0.10	AHU-1	5,110	7	12	20	32	33	27	21	16
DS-2	PRICE	RL36/28	48"x16"	SUPPLY	36"	0.10	AHU-1	5,110	8	9	10	12	10	10	10	9

FEATURES:

- INSTALL AS PER MANUFACTURER'S INSTRUCTIONS.
- DUCT SILENCER TO MATCH DUCT SIZE, TRANSITION TO DUCT SILENCER AS REQUIRED.

SUBJECT TO COMPLIANCE WITH THESE SPECIFICATIONS; OTHER MANUFACTURERS THAT MAY PROVIDE EQUIPMENT INCLUDE VIBRO ACOUSTICS OR IAC.

## EXHAUST FAN SCHEDULE (BY GC)

NUMBER	MANUFACTURER	TYPE	MODEL	CFM	MOTOR TYPE	S.P.	VOLTAGE	ELEC.	MOTORIZED DAMPER	FEATURES
EF-1	GREENHECK	INLINE	S0-120-VG	570	DIRECT DRIVE VAR-GREEN	0.375"	120V/1/60	1/2 HP	YES	1,2,3,4,5,6,7
EF-2	GREENHECK	INLINE	S0-120-VG	570	DIRECT DRIVE VAR-GREEN	0.375"	120V/1/60	1/2 HP	YES	1,2,3,4,5,6,7

FEATURES:

- MOTOR: VAR-GREEN EC MOTOR WITH MOUNTED POTENTIOMETER DIAL.
- UL/CSA 705 LISTED - POWER VENTILATORS
- SWITCH: NEMA-1, TOGGLE MOUNTED TO FAN.
- DAMPER: GREENHECK VCD-33, 115VAC, END SWITCH.
- INSULATED HOUSING, 1" THICK.
- MOTOR COVER.
- ISOLATION KIT; SPRING.

SUBJECT TO COMPLIANCE WITH THESE SPECIFICATIONS; OTHER MANUFACTURERS THAT MAY PROVIDE EQUIPMENT INCLUDE COOK OR PENN BARRY.

## LOUVER SCHEDULE (BY GC)

NUMBER	MANUFACTURER	MODEL	SIZE (W X H)	FREE AREA (SQ FT)	SFD (IN WG)	TOTAL CFM	AIRFLOW DIRECTION
L-1	GREENHECK	ESD-603	36" x 18"	1.79	<0.07"	1140	INTAKE
L-2	GREENHECK	ESD-603	24" x 18"	1.12	<0.04"	570	EXHAUST
L-3	GREENHECK	ESD-603	24" x 18"	1.12	<0.04"	570	EXHAUST

FEATURES:

- HEAVY GAUGE EXTRUDED ALUMINUM: 6" X 0.081" + WELDED CONSTRUCTION.
- DRAINABLE BLADE DESIGN W/ STATIONARY BLADES
- KYNAR PAINT FINISH: COLOR SELECTED BY ARCHITECT.
- BIRD SCREEN & FILTER RACK + MESH FILTER + CROSS PATTERN SECURITY BARS.

SUBJECT TO COMPLIANCE WITH THESE SPECIFICATIONS; OTHER MANUFACTURERS THAT MAY PROVIDE EQUIPMENT INCLUDE LLOYD OR ARROW.

## GRILLE AND DIFFUSER SCHEDULE (BY GC)

SYMBOL	MANUFACTURER	MODEL	SIZE	FRAME STYLE	PATTERN	MATERIAL	FINISH	VOLUME DAMPER
A	PRICE	SFD-H	10"x24"x24"	LAY-IN	4-WAY HIGH INDUCTION	STEEL	WHITE	NO
B	PRICE	535 1/2" SPACE @ 45-DEG DEFLECT	22"x22"	LAY-IN	R/A	STEEL	WHITE	NO
C	PRICE	520 3/4" SPACE	8X8	LAY-IN	2-WAY BLOW	STEEL	WHITE	NO
D	PRICE	530 3/4" SPACE	8X8	LAY-IN	E/A	STEEL	WHITE	NO

FEATURES:

- CONTRACTOR TO COORDINATE ALL FRAME STYLES WITH CEILING CONSTRUCTION.
- CONTRACTOR TO SPRAY PAINT ALL RETURN AIR FLENUMS FLAT BLACK.

SUBJECT TO COMPLIANCE WITH THESE SPECIFICATIONS; OTHER MANUFACTURERS THAT MAY PROVIDE EQUIPMENT INCLUDE TITUS, NALOR OR KRUEGER.

## PUMP SCHEDULE (BY GC)

NUMBER	SERVICE	MANUFACTURER	MODEL	GPM	FT HD	HP	VOLTAGE
P-1	CHILLED WATER (BOOSTER)	TACO	1919	30	40	1-1/2	120/1φ

FEATURES:

- CAST IRON CASING + STAINLESS STEEL SEAL FACE PLATE + ALUMINUM MOTOR HOUSING.
- STAINLESS STEEL SHAFT
- CARBON/SILICON-CARBIDE MECHANICAL SEAL
- PERMANENTLY LUBRICATED BALL BEARING MOTOR BEARINGS.
- EPDM GASKETS

SUBJECT TO COMPLIANCE WITH THESE SPECIFICATIONS; OTHER MANUFACTURERS THAT MAY PROVIDE EQUIPMENT INCLUDE BAGO OR PACO.

## AUTOMATIC TEMPERATURE CONTROLS (BY GC)

### GENERAL REQUIREMENTS

- THE EXISTING BUILDING AUTOMATIC CONTROL SYSTEM CURRENTLY IN USE AT THE FACILITY IS AUTOMATED LOGIC. ALL NEW UNIT CONTROLLERS SHALL BE AN EXTENSION OF THE EXISTING BUILDING AUTOMATIC CONTROL SYSTEM TO ALLOW FOR A SEAMLESS INTEGRATION INTO THAT EXISTING SYSTEM. ALL CONTROLS WITHIN THE NEW AIR HANDLING EQUIPMENT SHALL BE COORDINATED WITH THE FACILITY'S CURRENT BUILDING AUTOMATIC CONTROL. AUTOMATED LOGIC-NEW YORK // NEW JERSEY, 100 DELAWARE AVE, SUITE 400, CLIFTON NJ 07014; 1-973-968-4700; WWW.AUTOMATEDLOGIC.COM
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A COMPLETE AND OPERATIONAL CONTROL SYSTEM FOR THE NEW AIR HANDLING EQUIPMENT AND SHALL COORDINATE ALL CONNECTION REQUIREMENTS TO ALL EQUIPMENT. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY CONTROLLERS, MODULES, RELAYS, CONTROLLERS, WIRING, DEVICES, ETC REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM THAT MEETS THE INTENT OF THESE SPECIFICATIONS AND THE CONTROL SEQUENCES OUTLINED.
- REFER TO HVAC SEQUENCES OF OPERATION FOR ADDITIONAL INFORMATION.
- PROVIDE A COMPLETE SUBMITTAL PACKAGE WHICH INCLUDES PRODUCT DATA FOR ALL HARDWARE, SHOP DRAWINGS WHICH INDICATE SCHEMATIC FLOW DIAGRAMS, WIRING DIAGRAMS, ETC.
- ALL FIELD INSTALLED DAMPER ACTUATORS SHALL BE MANUFACTURED BY BELIMO
- ALL NEW CONTROL VALVES SHALL BE MANUFACTURED BY BELIMO
- ALL NEW CONTROL WIRING SHALL BE PLENUM RATED AND CERTIFIED FOR USE WITH THE AUTOMATED LOGIC CONTROL SYSTEM
- TERMOSTATS SHALL BE SENSORS ONLY. LOCATIONS ON PLANS ARE DIAGRAMATIC AND SHALL BE FIELD-COORDINATED WITH OTHER WALL-MOUNTED DEVICES. HIGHEST OPERABLE COMPONENT SHALL NOT EXCEED 48" ABOVE FINISHED FLOOR. WIRING TO ALL SENSORS SHALL BE PROVIDED WITH ENOUGH WIRES TO ACCOMMODATE UPGRADE TO SENSORS WITH TEMPERATURE CONTROL, LED SCREEN AND OCC/UNOCC OVERRIDE FUNCTION IN THE FUTURE.

### ATC SEQUENCE OF OPERATIONS

- AIR HANDLING UNIT (AHU-1); SINGLE-ZONE VAV
  - CONTROL RESPONSIBILITY
    - THE CONTRACTOR SHALL PROVIDE ALL CONTROLS UNDER THIS SECTION, AND SHALL BE RESPONSIBLE FOR A COMPLETE AND OPERATIONAL CONTROL SYSTEM AND SHALL COORDINATE THE CONNECTION REQUIREMENTS TO ALL EQUIPMENT PROVIDED WITH INTEGRAL CONTROLLERS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING AND MOUNTING OF ALL CONTROLS WHETHER DONE IN THE FIELD OR IN THE FACTORY.
    - THE AIR HANDLING UNIT SHALL HAVE A DEDICATED CONTROL CABINET FOR ATC EQUIPMENT
    - THE CONTRACTOR SHALL PROVIDE DUCT SMOKE DETECTORS WHERE INDICATED. CONTROL WIRING FOR UNIT SHUTDOWN SHALL BE PROVIDED BY THE BAS CONTRACTOR. POWER WIRING FOR THE UNIT CONTROLLERS SHALL BE FROM THE UNIT POWER. A SEPARATE CIRCUIT WILL NOT BE RUN
  - UNIT DESCRIPTION
    - SUPPLY FAN WITH EC MOTOR
    - MODULATING 3-WAY CHILLED WATER CONTROL VALVE.
    - MODULATING 2-WAY STEAM CONTROL VALVE.
    - CONDENSATE DRAIN PAN SAFETY SWITCH.
    - MODULATING OUTDOOR AIR DAMPER.
    - MODULATING RETURN AIR DAMPER.
  - RUN CONDITIONS
    - UNIT SHALL BE AUTOMATICALLY OR MANUALLY ENABLED TO RUN IN OCCUPIED OR UNOCCUPIED MODE.
    - AUTOMATIC OPERATION IN OCCUPIED/UNOCCUPIED MODES SHALL BE AS DEFINED BELOW IN THE FAN CONTROL AND TEMPERATURE CONTROL SECTIONS
    - WHEN THE UNIT IS STOPPED (MANUALLY OR AUTOMATICALLY IN UNOCCUPIED, OR FROM SAFETY FUNCTIONS), THE FANS SHALL BE DE-ENERGIZED, THE OUTSIDE AIR (OA) DAMPERS SHALL CLOSE, AND RETURN AIR (RA) DAMPERS SHALL OPEN, THE COOLING SHALL DISABLE AND THE HEATING VALVE SHALL BE CONTROLLED AS DESCRIBED IN HEATING SECTION
    - OPTIMAL START: AN ADAPTIVE OPTIMAL START ALGORITHM SHALL BE USED TO MINIMIZE THE ENERGY REQUIRED AND WARM-UP OR COOL-DOWN DURING THE UNOCCUPIED PERIOD. NECESSARY TO ACHIEVE ZONE OCCUPIED TEMPERATURE SETPOINTS BY THE START OF SCHEDULED OCCUPIED PERIOD. DURING THIS WARM-UP/COOL-DOWN MODE, THE OUTDOOR AIR DAMPER SHALL BE CLOSED AND THE RETURN AIR DAMPER SHALL BE OPEN FOR FULL RECIRCULATION
    - SAFETY SHUTDOWNS
      - DUCT SMOKE DETECTION: THE UNIT SHALL SHUT DOWN AND GENERATE AN ALARM AT THE BAS UPON RECEIVING A DUCT AIR SMOKE DETECTOR ALARM STATUS

- TEMPERATURE CONTROL
  - TEMPERATURE CONTROL: THE UNIT CONTROLLER SHALL USE ZONE TEMPERATURE TO AUTOMATICALLY SELECT HEATING OR COOLING MODE. THE DISCHARGE AIR TEMPERATURE SHALL FIRST BE RESET DEPENDING ON ZONE HEATING OR COOLING DEMANDS WITH FAN OPERATING AT MINIMUM VENTILATION CFM. THEN SUPPLY AIR FLOW WILL MODULATE THROUGH ITS MINIMUM AND MAXIMUM CFM RANGE TO MAINTAIN THE ZONE TEMPERATURE SETPOINT AS DESCRIBED BELOW
  - HEATING MODE: WHEN ZONE TEMPERATURE DROPS BELOW HEATING SETPOINT COOLING SHALL BE DISABLED AND UNIT CONTROL SHALL BE INDEXED TO HEATING MODE
    - FIRST STAGE - HEATING DAT RESET: UPON ZONE TEMPERATURE BELOW SETPOINT RESET DAT FROM A MINIMUM OF THE SPACE HEATING SETPOINT TO A MAXIMUM OF 5°F (ADJ.) WHILE SUPPLY AIR FLOW STAYS AT MINIMUM VENTILATION CFM
    - SECOND STAGE - INCREASE AIRFLOW: UPON CONTINUED ZONE TEMPERATURE BELOW SETPOINT, INCREASE SUPPLY AIRFLOW SETPOINT FROM MINIMUM CFM TO DESIGN CFM
    - REVERSE SHALL OCCUR AS ZONE TEMPERATURE RISES ABOVE HEATING SETPOINT
  - DEADBAND: WHEN ZONE TEMPERATURE IS WITHIN DEADBAND, UNIT CONTROLS SHALL MAINTAIN MINIMUM CFM. DAT SHALL REMAIN IN CONTROL FROM LAST MODE
  - COOLING MODE: WHEN ZONE TEMPERATURE RISES ABOVE COOLING SETPOINT HEATING SHALL BE DISABLED UNIT CONTROL SHALL BE INDEXED TO COOLING MODE
    - FIRST STAGE - COOLING DAT RESET: UPON ZONE TEMPERATURE ABOVE SETPOINT, RESET DAT FROM MAXIMUM OF THE SPACE COOLING SETPOINT TO MINIMUM OF 5°F (ADJ.) WHILE SUPPLY AIR FLOW STAYS AT MINIMUM CFM
    - SECOND STAGE - INCREASE AIRFLOW: UPON CONTINUED ZONE TEMPERATURE ABOVE SETPOINT, INCREASE SUPPLY AIRFLOW SETPOINT FROM MIN CFM TO DESIGN CFM
    - REVERSE SHALL OCCUR AS ZONE TEMPERATURE DROPS BELOW COOLING SETPOINT
- MONITORING ALARMS
  - FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF
  - FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON
  - FAN MOTOR FAULT.
  - FAN RUNTIME EXCEEDED: STATUS RUNTIME EXCEEDS A USER DEFINABLE LIMIT (ADJ.) FOR VARIOUS MAINTENANCE TASKS SUCH AS FILTER REPLACEMENT, GREASE BELT CHANGE, COIL CLEANING, ETC. REFER TO EQUIPMENT O&M FOR COMPLETE LIST FOR MAINTENANCE TASKS

- TEMPERATURE CONTROL
  - TEMPERATURE CONTROL: THE UNIT CONTROLLER SHALL USE ZONE TEMPERATURE TO AUTOMATICALLY SELECT HEATING OR COOLING MODE. THE DISCHARGE AIR TEMPERATURE SHALL FIRST BE RESET DEPENDING ON ZONE HEATING OR COOLING DEMANDS WITH FAN OPERATING AT MINIMUM VENTILATION CFM. THEN SUPPLY AIR FLOW WILL MODULATE THROUGH ITS MINIMUM AND MAXIMUM CFM RANGE TO MAINTAIN THE ZONE TEMPERATURE SETPOINT AS DESCRIBED BELOW
  - HEATING MODE: WHEN ZONE TEMPERATURE DROPS BELOW HEATING SETPOINT COOLING SHALL BE DISABLED AND UNIT CONTROL SHALL BE INDEXED TO HEATING MODE
    - FIRST STAGE - HEATING DAT RESET: UPON ZONE TEMPERATURE BELOW SETPOINT RESET DAT FROM A MINIMUM OF THE SPACE HEATING SETPOINT TO A MAXIMUM OF 5°F (ADJ.) WHILE SUPPLY AIR FLOW STAYS AT MINIMUM VENTILATION CFM
    - SECOND STAGE - INCREASE AIRFLOW: UPON CONTINUED ZONE TEMPERATURE BELOW SETPOINT, INCREASE SUPPLY AIRFLOW SETPOINT FROM MINIMUM CFM TO DESIGN CFM
    - REVERSE SHALL OCCUR AS ZONE TEMPERATURE RISES ABOVE HEATING SETPOINT
  - DEADBAND: WHEN ZONE TEMPERATURE IS WITHIN DEADBAND, UNIT CONTROLS SHALL MAINTAIN MINIMUM CFM. DAT SHALL REMAIN IN CONTROL FROM LAST MODE
  - COOLING MODE: WHEN ZONE TEMPERATURE RISES ABOVE COOLING SETPOINT HEATING SHALL BE DISABLED UNIT CONTROL SHALL BE INDEXED TO COOLING MODE
    - FIRST STAGE - COOLING DAT RESET: UPON ZONE TEMPERATURE ABOVE SETPOINT, RESET DAT FROM MAXIMUM OF THE SPACE COOLING SETPOINT TO MINIMUM OF 5°F (ADJ.) WHILE SUPPLY AIR FLOW STAYS AT MINIMUM CFM
    - SECOND STAGE - INCREASE AIRFLOW: UPON CONTINUED ZONE TEMPERATURE ABOVE SETPOINT, INCREASE SUPPLY AIRFLOW SETPOINT FROM MIN CFM TO DESIGN CFM
    - REVERSE SHALL OCCUR AS ZONE TEMPERATURE DROPS BELOW COOLING SETPOINT
- MONITORING ALARMS
  - ZONE AIR TEMPERATURE CONDITION 5°F (ADJ.) ABOVE OR BELOW THE EFFECTIVE ZONE AIR TEMPERATURE SETPOINT FOR 30 MINUTES (ADJ.)
  - DISCHARGE AIR TEMPERATURE CONDITION 5°F (ADJ.) ABOVE OR BELOW THE EFFECTIVE DISCHARGE AIR TEMPERATURE SETPOINT FOR 30 MINUTES (ADJ.)

- COOLING CONTROL
  - THE CONTROLLER SHALL MODULATE COOLING CAPACITY TO MAINTAIN THE DISCHARGE COOLING SETPOINT COOLING CONTROL SHALL BE ENABLED WHENEVER
    - DAT EXCEEDS EFFECTIVE DAT COOLING SETPOINT
    - AND THE SUPPLY FAN STATUS IS ON
    - AND THE HEATING IS DISABLED
  - HEATING CONTROL
    - THE CONTROLLER SHALL MODULATE HEATING CAPACITY TO MAINTAIN THE DISCHARGE HEATING TEMPERATURE SETPOINT
    - HEATING SHALL BE ENABLED WHENEVER
      - DAT BELOW EFFECTIVE DAT HEATING SETPOINT
      - AND THE SUPPLY FAN STATUS IS ON
      - AND THE COOLING IS NOT ACTIVE
    - WHEN THE UNIT IS STOPPED (MANUALLY, AUTOMATICALLY IN UNOCCUPIED), AND WHEN THE OUTDOOR AIR TEMPERATURE IS LESS THAN 45°F, THE CONTROLLER SHALL MODULATE THE HEATING COIL VALVE TO MAINTAIN THE MIXED AIR TEMPERATURE AT 70°F (ADJ.) SETPOINT
    - WHEN THE LOW LIMIT FREEZE/STAT COIL IS IN THE ALARM CONDITION THE HEATING VALVE SHALL BE 100% OPEN TO THE HEATING COIL.
  - VENTILATION CONTROL
    - WHEN IN THE OCCUPIED MODE, THE CONTROLLER SHALL MODULATE THE OUTSIDE AIR DAMPER POSITION FROM THE CLOSED POSITION TO DESIGN VENTILATION CFM (THE RETURN AIR DAMPER SHALL CONTROL INVERSELY TO THE OUTDOOR AIR DAMPER POSITION)
    - ON UNITS WITHOUT AIRFLOW MEASURING CAPABILITY, OUTDOOR DAMPER POSITION SETPOINTS SHALL BE ESTABLISHED FOR EACH RESPECTIVE DESIGN CFM FLOW RATE. THE VENTILATION AIR DAMPER SETPOINT SHALL BE DYNAMICALLY RESET BASED ON SUPPLY FAN SPEED SO THAT THE OUTDOOR AIRFLOW RATE DOES NOT OVER OR UNDER VENTILATE. THE TAB CONTRACTOR SHALL ASSIST THE CONTRACTOR WITH ESTABLISHING SETPOINTS TO CALCULATE THE DYNAMIC VENTILATION SETPOINT WHEN SWAN = OMAX // SWAK = OMIN
      - SWAK - THE SUPPLY FAN SPEED AT DESIGN CFM
      - SWAN - THE SUPPLY FAN SPEED AT MINIMUM VENTILATION CFM
      - OMAX - THE OUTDOOR AIR DAMPER POSITION TO MAINTAIN MINIMUM VENTILATION CFM AT MINIMUM SUPPLY FAN SPEED
      - OMIN - THE OUTDOOR AIR DAMPER POSITION TO MAINTAIN MINIMUM VENTILATION CFM AT DESIGN SUPPLY FAN SPEED
    - THE OUTDOOR DAMPER SHALL CLOSE AND THE RETURN AIR DAMPER SHALL OPEN WHEN THE UNIT IS STOPPED (MANUALLY, AUTOMATICALLY IN UNOCCUPIED, OR FROM SAFETY FUNCTIONS)
    - THE CONTROLLER SHALL MODULATE THE OUTDOOR AIR DAMPER CLOSE AND THE RETURN AIR DAMPER OPEN TO LIMIT THE MIXED AIR TEMPERATURE AT THE MIXED AIR LIMIT SETPOINT OF 48°F (ADJ.)
    - WHEN THE OUTSIDE AIR TEMPERATURE IS LESS THAN 45°F (ADJ.), THE OUTSIDE AIR (OA) DAMPER OPENING RATE SHALL BE LIMITED TO 0% PER MINUTE (ADJ.) WHEN DAT IS >45°F, THERE SHALL NOT BE A DELAYED RAMP OPEN PERIOD.
  - MONITORING ALARMS
    - MIXED AIR TEMPERATURE CONDITION 5°F (ADJ.) ABOVE OR BELOW THE EFFECTIVE MIXED AIR TEMPERATURE LOW LIMIT SETPOINT 48°F (ADJ.) FOR 30 MINUTES (ADJ.)
- EXHAUST FAN CONTROL
  - THE ASSOCIATED EXHAUST FAN IS ENABLED WHEN THE EITHER AIR HANDLING UNIT IS IN THE OCCUPIED MODE AND THE OUTSIDE AIR DAMPER IS OPEN TO THE VENTILATION SETPOINT
  - MONITORING ALARMS
    - FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF

### CHILLED WATER BOOSTER PUMP

- SYSTEM DESCRIPTION
  - CHILLED WATER BOOSTER PUMP
  - THE PUMP SHALL BE ENABLED WHENEVER
    - EITHER AIR HANDLING UNIT IS OPERATING IN THE COOLING MODE.
  - WHEN ENABLED, THE CONTROLLER SHALL ENERGIZE PUMP AND OPERATE AT CONTINUOUS SPEED.
  - MONITORING ALARMS
    - PUMP FAILURE: COMMANDED ON, BUT THE STATUS IS OFF
- SYSTEM GRAPHICS
  - THE USER SHALL BE CAPABLE OF VIEWING AND ADJUSTING SETPOINTS AND OPERATIONAL CONDITIONS OF THE FOLLOWING TABLE REPRESENTING THE MINIMUM DATA REQUIRED ON THE GRAPHICAL DISPLAY, OVERRIDE CAPABILITY AND ALARMING
  - THE CONTRACTOR SHALL FURNISH AND INSTALL A COMPLETE BUILDING AUTOMATION SYSTEM (BAS) INCLUDING ALL NECESSARY HARDWARE AND ALL OPERATING AND APPLICATIONS SOFTWARE NECESSARY TO PERFORM THE CONTROL SEQUENCES OF OPERATION IN SUCH A MANNER THAT THE VARIOUS SYSTEMS WILL OPERATE, FUNCTION AND PERFORM TO THE TRUE INTENT AND MEANING OF THE DRAWINGS AND SPECIFICATIONS.

POINTS	DISARM	HARDWARE INPUT	HARDWARE OUTPUT	OVERRIDE CAPABILITY	ALARM	NOTES
SUPPLY AIR FAN START/STOP	X	BI	BO	X	X	
SUPPLY FAN VFD FAULT	X	BI			X	
SUPPLY FAN VFD SPEED	X	AO	X	X		CONTROLLED SPEED
SUPPLY FAN RUN STATUS	X	BI			X	
EXHAUST AIR FAN START/STOP	X	BI	BO	X	X	
EXHAUST AIR FAN RUN STATUS	X	BI			X	
RETURN AIR TEMPERATURE	X	AI			X	
MIXED AIR TEMPERATURE	X	AI			X	
LOW COIL LEAVING TEMPERATURE	X	AI			X	
UNIT DISCHARGE AIR TEMPERATURE	X	AI			X	DOWN-STREAM OF ALL COILS
RUCKL SMOKE DETECTOR	X	BI			X	
CHILLED WATER VALVE	X	AO	X	X		CONTROLLED POSITION
STEAM HEATING VALVE	X	AO	X	X		CONTROLLED POSITION
OUTSIDE AIR DAMPER	X	AO	X	X		CONTROLLED POSITION
RETURN AIR DAMPER	X	AO	X	X		CONTROLLED POSITION
LOCK/UNLOCK SCHEDULE	X	AI			X	
OUTDOOR AIR TEMPERATURE	X	AI			X	THIS CAN BE A GLOBAL POINT
OUTDOOR HUMIDITY	X	AI			X	THIS CAN BE A GLOBAL POINT
SPACE TEMPERATURE SETPOINT BAS	X	AI			X	ALARM AT HIGH/LOW LEVEL
SPACE TEMPERATURE SETPOINT	X					
VENTILATION SETPOINT BAS	X					
RETURN TIME SETPOINT	X				X	ALARM AT HIGH LEVEL
AIR HANDLING UNIT CONTROL MODE(S)	X				X	
HX ENABLE/DISABLE	X				X	
HW PUMP #1-1 START/STOP	X	BI	BO	X		
HW PUMP #1-1 RUN STATUS	X	BI			X	
HW PUMP #1-2 START/STOP	X	BI	BO	X		
HW PUMP #1-2 RUN STATUS	X	BI			X	
HW LEAVING WATER TEMPERATURE	X	AI			X	
DRAIN PAN SAFETY SWITCH	X	BI			X	ALARM AT HIGH LEVEL
L/W PUMP #2-3 START/STOP	X	BI	BO	X		
L/W PUMP #2-3 RUN STATUS	X	BI			X	
ELECTRICAL FREQUENCY LOW LEVEL	X	BI			X	



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### IMPROVEMENTS

TO THE  
**JURY WAITING ROOM**  
IN THE  
**CITY OF ELIZABETH**  
FOR THE  
**COUNTY OF UNION, NEW JERSEY**

2 BROAD STREET, ELIZABETH, NJ 07201

11.01.17 BID SET

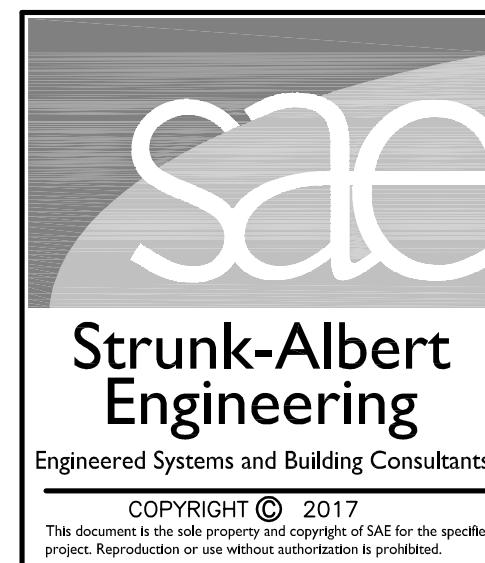
No. Date Issue or Revision

Drawing Title  
**SCHEDULES & AUTOMATIC TEMPERATURE CONTROLS**

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USA Project No.: 2017-011

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Checked By: DBS



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