

## COUNTY OF UNION

DEPARTMENT OF ENGINEERING, PUBLIC WORKS & FACILITIES MANAGEMENT Joseph J. Policay, Jr., CPWM, Acting Director

BOARD OF COUNTY COMMISSIONERS

MEMORANDUM

SERGIO GRANADOS

Chairman

KIMBERLY PALMIERI-MOUDED

Vice-Chairwoman JAMES E. BAKER, JR.

JOSEPH C. BODEK

TO:

All Potential Bidders

FROM:

Ricardo S. Matias, PE, CME, CFM

County Engineer

Director / Division of Engineering

DR. ANGELA R. GARRETSON BETTE JANE KOWALSKI

DATE:

September 26, 2023

LOURDES M. LEON

REBECCA WILLIAMS

ALEXANDER MIRABELLA

RE:

ADDENDUM NUMBER 1

Union County Parks, Various Restroom Facility

Upgrade, County of Union, New Jersey

BA# 12-2023,

**Union County Engineering Project # 2022-005** 

EDWARD T. OATMAN County Manager AMY CRISP WAGNER

Deputy County Manager

BRUCE H. BERGEN, ESQ. County Counsel

JAMES E. PELLETTIERE Clerk of the Board

Attached is Addendum Number 1 dated September 25, 2023 for the above referenced project.

Please be sure to complete and submit the standard "Acknowledgement of Addendum "form included in the original bid specifications and submit it with the bid.

RICARDO S. MATIAS PE, CME, CFM County Engineer Director, Division of Engineering



September 25, 2023

#### **ADDENDUM #1**

to the PLANS and SPECIFICATIONS for the proposed:

# Interior Restroom Facilities Renovations at: Various Union County Parks

for the

#### The County of Union

Union County, New Jersey COMM. NO. 22-8845

#### This addendum is issued to all known bidders and consists of 1 Page:

This addendum is issued for the purpose of amending certain requirements of the Contract Documents, and as noted hereinafter, and is hereby made an integral part of the Contract Documents for the above referenced project. Statements made herein shall amend, supersede and take precedence over any made in previously issued documents including previously issued addenda, if any. Unless specifically noted or specified hereinafter all work shall conform to the applicable provisions of the Contract Documents.

#### ITEM #1: NO CHANGE IN BID TIME OR DATE

- A. Bids will be received up until 10:30 A.M. prevailing time, on, October 5, 2023 and then opened in the public at the 3<sup>rd</sup> Floor Conference Room at the U.C. Administration Building, 10 Elizabethtown Plaza, Elizabeth, New Jersey.
- B. The seven (7) day mandatory black-out period commences with the issuance of this Addendum; therefore, no further questions will be entertained in that no answers are permitted to be given. Bidders are advised to prepare their bids in accordance with the Plans, Specifications, and Addenda to date.

#### ITEM #2: QUESTION & ANSWER

- 1. <u>RFI #1:</u> Per your Notice to Bidders Page NB-1, DPMC Classification is listed as C009, will you accept bids from General Contractors with C008 Classification?
  - a. Response: Per NJDPMC form DPMC-27, a contractor who is classified in the C008 trade shall be deemed classified for trade C009.
- 2. <u>RFI #2:</u> The specifications say that DPMC prequalification is required for the prime contractor and plumbing, electrical and HVAC sub's. Based on my understanding this is not a state of NJ project, it is a county project, so therefore DPMC prequalification should not be applicable. Why is DPMC prequalification required? If a prime contractor lists a plumbing, electrical or HVAC sub who is not DPMC prequalified will that bid be rejected as non-responsive?
  - a. <u>Response</u>: Although this is not a State of NJ project, the County of Union adopted the State's DPMC Classification policy on September 5th, 2002 per Ordinance No. 557-2002 and as such, DPMC pre-qualifications for classifications listed on the bid advertisement will be required. The bid will be rejected if you or your subcontractors listed do not carry required DPMC classification for the trades indicated on the bid advertisement.

**END OF ADDENDUM #1** 

Respectfully submitted,

SSP Architects

Adam Finkle, AIA
Project Manager

c: SSP: T. Stouchko, D. Spanton

U.C.: M. Ferraro, M. Brennan





#### SPECIFICATIONS FOR

Union County Parks, Various Restroom Facility
Upgrade, County of Union, New Jersey
BA#12-2023; UNION COUNTY ENGINEERING PROJECT #2022-005
AUGUST

#### UNION COUNTY BOARD OF COUNTY COMMISSIONERS

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Edward T. Oatman

# DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES MANAGEMENT

Joseph A. Graziano, Sr., CPWM
Director, Department of Engineering, Public Works and
Facilities Management

# COUNTY ENGINEER DIVISION OF ENGINEERING

Ricardo Matias, PE, CME, CFM

Prepared by: SSP Architects

Revised: 2023.01.04

## COUNTY OF UNION NOTICE TO BIDDERS

Sealed bids will be received by the assistant director of the Division of Purchasing, or her designee, at the County of Union, New Jersey on **October 5, 2023** 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:

# Union County Parks, Various Restroom Facility Upgrade, County of Union, New Jersey BA#12-2023: UNION COUNTY ENGINEERING PROJECT #2022-005

Bid Packages may be obtained at no charge by registering and downloading at <a href="http://ucnj.org/bid-specs">http://ucnj.org/bid-specs</a>. 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.

Bidders on this project are required to be pre-classified by the State of NJ, Division of Property Management and Construction (DPMC) under classifications #C009 (General Construction/Alterations & Additions), #C030 (Plumbing), #C032 (HVACR) and #C047 (Electrical) 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.

A pre-bid meeting will be held on September 13, 2023 at 9:30 am. Those attending shall meet at the restroom facilities at Mattano Park, 430 5th Avenue in Elizabeth, then Rizzuto Park, 599 Morris Avenue in Union at 10:30am, followed by Madison Ave Park, 1300 Madison Avenue in Rahway at 11:45 am; no late arrivals will be permitted.

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.

MICHELE HAGOPIAN, ASSISTANT DIRECTOR OF PURCHASING

# UNION COUNTY BOARD OF COUNTY COMMISSIONERS WE'RE CONNECTED TO YOU!

NB-1

## Union County Parks, Various Restroom Facility Upgrade, County of Union, New Jersey, BA#12-2023; Union County Engineering Project #2022-005

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**Bidding Documents** 

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Bidder Signature Page

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Subcontractor Identification Certification

Acknowledgement of Addendum

Contractor Business Registration Certificate

Affirmative Action Requirement

**Experience Statement** 

Certificate of Bidder Showing Ability to Perform Contract

Non-Collusion Affidavit

Contractor Registration Advisement

Americans with Disabilities Act

Statement of Bidder's Qualifications

Contractor Performance Record-Certification

Affidavit Regarding List of Disbarred, Suspended or Disqualified Bidders

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(Sample form until contract is awarded)

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(Sample form until contract is awarded)

#### GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION AIA DOCUMENT A-201/2017

(Sample form until contract is awarded)

TOC-2 Revised: 2022.01.03

#### **NEW JERSEY PREVAILING WAGE DETERMINATION DOCUMENTS**

#### PROJECT TECHNICAL SPECIFICATIONS

Prepared By:

SSP Architects

50 Division St. Ste. 503 Somerville, NJ 08876

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TOC-3 Revised: 2022.01.03

# UNION COUNTY BOARD OF COUNTY COMMISSIONERS 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 County Commissioners UC Administration Building, 6<sup>th</sup> Floor 10 Elizabethtown Plaza Elizabeth, New Jersey 07207

#### **ADDRESS INQUIRIES TO:**

Union County Division of Purchasing UC Administration Building, 3<sup>rd</sup> Floor 10 Elizabethtown Plaza Elizabeth, NJ 07207

Attn: Michelle Hagopian, Assistant Director, Division of Purchasing

Telephone: 908-527-4130 Facsimile: 908-558-2548

ucbids@ucnj.org

#### 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: Michelle Hagopian, Assistant Director, Division of Purchasing

Telephone: 908-527-4130 Facsimile: 908-558-2548

ucbids@ucnj.org

TITLE OF PROJECT: Union County Parks, Various Restroom Facility Upgrade, County of Union, New Jersey, BA#12-2023; Union County Engineering Project #2022-005

BIDDER: Bidder shall be a single overall contract bidder

**ARCHITECT: SSP Architects** 

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

#### **COUNTY ENGINEER:**

Ricardo S. Matias, PE, CME, CFM Union County Division of Engineering

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Revised: 2023.01.12

#### **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.

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 Contactor's risk. Such payment will only be in the amount agreed to by the parties, in writing in the Change Order(s). See Section 37, 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 minor informalities or non-material exceptions in the bids.

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 Michele Hagopian, Assistant 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, Michele Hagopian, Assistant 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 15 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 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 will return all certified checks or cashier's checks after the proposals have been opened, tabulated and reviewed except those of the three (3) bidders lowest responsible bidders. 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 an 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. LABOR AND MATERIALS

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Revised: 2023.01.12

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.

#### 10. 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 <u>prior</u> 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. The County of Union, its Board of County Commissioners, officers, employees, agents and servants shall be included as an additional insured. Coverage is provided on a primary and non-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.

G-7 Revised: 2023.01.12 Where applicable, a waiver of subrogation in favor of the County of Union, its Board of County Commissioners, 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.

#### 11. 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, defend, 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."

#### 12. ROYALTIES AND PATENTS

G-8 Revised: 2023.01.12 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.

#### 13. 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".

#### 14. 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.

#### 15. 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.

#### 16. 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.

#### 17. OWNERSHIP DISCLOSURES REQUIRED

Pursuant to P.L. 2016, c. 43, codified as N.J.S.A. 52:25-24.2.no corporation, partnership, or limited liability company shall be awarded any contract nor shall any agreement be entered into for the performance of any work or the furnishing of any materials or supplies the County unless prior to the receipt of the bid or accompanying the bid, of said corporation, said partnership, or said limited liability company there is submitted a statement setting forth the names and addresses of all stockholders in the corporation who own ten percent (10%) or more of its stock, of any class, or of all individual partners in the partnership who own a ten percent (10%) or greater interest therein, or of all members in the limited liability company who own a ten percent (10%) or greater interest therein, as the case may be. If one or more such stockholder or partner or member is itself a corporation or partnership or limited liability company, the stockholders holding ten percent (10%) or more of that corporation's stock, or the individual partners owning ten percent (10%) or greater interest in that partnership, or the members owning ten percent (10%) or greater interest in that limited liability company, as the case may be, shall also be listed. The disclosure shall be continued until names and addresses of every non corporate stockholder, and individual partner, and member, exceeding the ten percent (10%) ownership criteria has been listed.

To comply with this section, a bidder with any direct or indirect parent entity which is publicly traded may submit the name and address of each publicly traded entity and the name and address of each person that holds a ten percent (10%) or greater beneficial interest in the publicly traded entity as of the last annual filing with the federal Securities and Exchange Commission ("SEC") or the foreign equivalent, and, if there is any person that holds a ten percent (10%) or greater beneficial interest, also shall submit links to the websites containing the last annual filings with the federal SEC or the foreign equivalent and the relevant page numbers of the filings that contain the information on each person that holds a ten percent (10%) or greater beneficial interest.

(See forms attached)

#### 18. 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.

#### 19. EQUAL EMPLOYMENT OPPORTUNITY COMPLIANCES

G-12 Revised: 2023.01.12 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.

#### 20. 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 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).

In addition to compliance with the New Jersey Prevailing Wage Act, the County requires compliance with procedures established by Resolution No. 2014-0408 adopted by the Union County Board of County Commissioners on May 8, 2014. The resolution is furnished in Section 56 of these General Specifications.

#### 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 statues 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)

#### 21. 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:

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- 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:
  - 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;
  - 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.

#### 22. 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.

#### 23. 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.

# 24. 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.

#### 25. 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.

#### 26. 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.

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#### 27. 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.

#### 28. 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.

#### 29. 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.

#### 30. 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.

#### 31. 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 shall be observed.

#### 32. 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.

#### 33. MATTERS NOT MENTIONED IN CONTRACT DOCUMENTS

G-18 Revised: 2023.01.12 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.

#### 34. PERMITS

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

#### 35. 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.

#### 36. CHANGE ORDERS

The applicability of change orders and change order procedures shall comply with *N.J.S.A.* 40A:11-16.7 and *N.J.A.C.* 5:30-11.1 *et seq.*, "Change Orders and Open End Contracts".

#### **37. 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 36. 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.

#### 38. FORM OF CONTRACT

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.

#### 39. PROGRESS PAYMENTS

G-19 Revised: 2023.01.12 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 6 of these general specifications); b) Certification of Compliance, New Jersey Prevailing Wage Act (see Sections 21 and 51); and c) General Release (see Section 36) 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.

#### 40. 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

G-20 Revised: 2023.01.12 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.

#### 41. 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.

#### 42. 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.

#### 43. AFFIRMATIVE ACTION REQUIREMENTS

(REVISED 01/2022)

#### **EXHIBIT B**

#### MANDATORY EQUAL EMPLOYMENT OPPORTUNITY LANGUAGE

N.J.S.A. 10:5-31 et seq. (P.L.1975, c.127)

N.J.A.C. 17:27-1.1 et seq.

#### **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,

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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, upgrading, 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 <u>N.J.S.A.</u> 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 Dept. of LWD, Construction EEO Monitoring Program, 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 Dept. of LWD, Construction EEO Monitoring Program is satisfied that the contractor or subcontractor is employing workers provided by a union which provides evidence, in accordance with standards prescribed by the Dept. of LWD, Construction EEO Monitoring Program, 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:
  - (l) To notify the public agency compliance officer, the Dept. of LWD, Construction EEO Monitoring Program, 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 nondiscrimination 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 contactor 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 Dept. of LWD, Construction EEO Monitoring Program. 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 Dept. of LWD, Construction EEO Monitoring Program, 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 Dept. of LWD, Construction EEO Monitoring Program.

- (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 Dept. of LWD, Construction EEO Monitoring Program and submitted promptly to the Dept. of LWD, Construction EEO Monitoring Program 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 Dept. of LWD, Construction EEO Monitoring Program an initial project workforce report (Form AA-201) electronically provided to the public agency by the Dept. of LWD, Construction EEO Monitoring Program, 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 Dept. of LWD, Construction EEO Monitoring Program, 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 Dept. of LWD, Construction EEO Monitoring Program as may be

requested by the Dept. of LWD, Construction EEO Monitoring Program 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 Dept. of LWD, Construction EEO Monitoring Program for conducting a compliance investigation pursuant to N.J.A.C. 17:27-1.1 et seq.

#### 44. INVESTMENT ACTIVITIES IN IRAN

Pursuant to 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.

# 45. 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.

#### 46. 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

G-26 Revised: 2023.01.12 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.

#### 47. 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.

#### 48. 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.

#### 49. 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.

#### **50. CONTRACTOR BUSINESS REGISTRATION CERTIFICATE**

Pursuant to N.J.S.A. 52:32-44, the County of Union is prohibited from entering into a contract with an entity unless the bidder/proposer/contractor, and each subcontractor that is required by law to be named in a bid/proposal/contract has a valid Business Registration Certificate on file with the Division of Revenue and Enterprise Services within the Department of the Treasury.

Prior to contract award or authorization, the contractor shall provide the County of Union with its proof of business registration and that of any named subcontractor(s).

Subcontractors named in a bid or other proposal shall provide proof of business registration to the bidder, who in turn, shall provide it to the County of Union prior to the time a contract, purchase order, or other contracting document is awarded or

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authorized.

Proof of registration 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.

During the course of contract performance:

- the contractor shall not enter into a contract with a subcontractor unless the subcontractor first provides the contractor with a valid proof of business registration.
- the contractor shall maintain and submit to the County of Union a list of subcontractors and their addresses that may be updated from time to time.
- 3) the contractor and any subcontractor providing goods or performing services under the contract, and each of their affiliates, shall collect and remit to the Director of the Division of Taxation in the Department of the Treasury, 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 the State. Any questions in this regard can be directed to the Division of Taxation at (609)292-6400. Form NJ-REG can be filed online at

http://www.state.nj.us/treasury/revenue/busregcert.shtml.

Before final payment is made under the contract, the contractor shall submit to the County of Union a complete and accurate list of all subcontractors used and their addresses.

Pursuant to N.J.S.A. 54:49-4.1, a business organization that fails to provide a copy of a business registration as required, or that provides false business registration information, shall be liable for a penalty of \$25 for each day of violation, not to exceed \$50,000, for each proof of business registration not properly provided under a contract with a contracting agency.

#### 51. 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.

#### 52. AMERICAN GOODS AND PRODUCTS WHERE POSSIBLE

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

### 53. 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.

### 54. 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.

### 55. 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,

G-30 Revised: 2023.01.12 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).

### 56. RESOLUTION NO. 2014-408

WHEREAS, the County of Union recognizes there is a need to ensure that all work on significant public construction and maintenance contracts is performed by responsible, qualified firms that maintain the capacity, expertise, personnel, and other qualifications and resources necessary to successfully perform public contracts in a timely, reliable, and cost-effective manner; and

WHEREAS, in order to effectuate the purpose of selecting responsible contractors for significant public contracts and to protect Union County's capital investments in such contracts prospective contractors and subcontractors should be required to meet pre-established, clearly-defined, minimum standards relating to contractor responsibility, including retirements and criteria concerning qualifications, competency) expertise, adequacy of resources, including equipment, financial and personnel, and satisfactory records regarding past project performance, safety, legal compliance and business integrity; and

**WHEREAS**, the County has a compelling interest in assuring that its Public Works Projects meet the highest standard of safety and quality; and

WHEREAS, due to the critical impact that skilled construction craft labor has on public works projects, and due to the limited availability of skilled construction craft labor and imminent craft labor skill shortages, it is necessary to require contractors and subcontractors to participate in established, formal apprenticeship training programs for the purpose of both promoting successful project delivery and ensuring future workforce development; and

WHEREAS, an apprenticeship program is a structured system of training designed to prepare individuals for occupations and lifelong careers in skilled trades and crafts by providing a wage-paying job that incorporates extensive workplace and classroom training under the supervision of experienced workers, in preparation for highly skilled occupations; and

WHEREAS, apprenticeship programs are a critical component in public safety, by ensuring that workers on public projects are properly trained, able,

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competent and capable craftsmen, and provide assurance of compliance with the County's bid specifications and achieve high quality standards; and

WHEREAS, for an apprenticeship program to be fully effective, the public and private sectors must recognize its value and commit to supporting its mission; and

WHEREAS, Union County has long recognized the value of apprenticeship programs through its support of the Union County Vocational-Technical Schools, which offer training programs to help ensure that Union County will continue to produce a skilled and educated work force in the trade specialties, and thus, strengthen Union County's economy by fostering the development of highly paid trade and craft careers; and

WHEREAS, the use of apprenticeship programs or apprenticeship trained employees on Union County Public Works Projects will serve the dual goal of providing the County with assurance that its public works projects are completed with a well-trained workforce, in a highly skilled and timely fashion, while creating opportunities for careers in the skilled trades and craft industry for County residents; and

**WHEREAS,** the County of Union also recognizes that it is beneficial to their employees to utilize fair business, employment, and training practices that have a positive impact on local communities affected by such contracts:

**NOW, THEREFORE, BE IT RESOLVED by** the Board of Chosen Freeholders of the County of Union as follows:

- 1. The County of Union shall require compliance with the provisions of this Resolution by business entities seeking to provide services to the County of Union as specified herein. The requirements of this Resolution are intended to supplement, not replace, existing contractor qualifications and performance standards or criteria currently required by law, public policy or contracting documents, including but not limited to Union County's DPMC classification and Project Labor Agreement policies
- 2. All contractors and subcontractors that perform significant work on any public facility or public works project, including construction, alteration, renovation, repair, service, or maintenance work, shall meet

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the requirements of this Resolution. For purposes of this Resolution, the term "significant work" shall be defined as any work or activity covered under the New Jersey Prevailing Wage Act, N.J.S.A. 34:11-56.25 et seq.

- 3. All firms engaged in contracts covered by this Resolution shall be qualified responsible contractors or subcontractors that have sufficient capabilities in all respects to successfully perform contracts on which they are engaged, including the necessary experience, equipment, technical skills and qualifications and organizational, financial and personnel resources. Firms bidding on public contracts shall also be required to have a satisfactory past performance record and a satisfactory record of legal compliance, integrity and business ethics. Compliance with these standards shall be established by compliance with the requirements set forth in paragraph 8 of this Resolution.
- 4. As a condition of performing work on public works contracts over the public works threshold, the general contractor shall provide certification that he and each subcontractor working on the project shall have at least one (I) employee who has successfully completed the OSHA 10-hour construction safety and health course. As a condition of performing work on public works contracts of \$500,000.00 or more total cost of project, the general contractor shall provide certification that each subcontractor working on the project shall have at least one (1) employee who has successfully completed the OSHA 30-hour construction safety and health course.
- 5. All contractors and subcontractors that perform significant work on any public facility or public works project shall be required to affirmatively provide evidence of and confirm compliance with proof of participation in an Apprenticeship Program currently registered and approved by the United States Department of Labor ("USDOL"), the New Jersey Department of Labor ("NJDOL") or any state having equal to or higher requirements as either the USDOL or NJDOL apprenticeship programs. Additionally, Apprenticeship Programs shall meet the criteria set forth in Section 8(i) of this Resolution.
- 6. As a condition of performing work on public works contracts subject to this Resolution, a general contractor seeking award of a contract shall submit a Contractor Responsibility Certification at the time it submits its bid for contract.
- 7. The Contractor Responsibility Certification shall be completed on a form provided by the Union County Purchasing Department and shall

reference the project for which a bid is being submitted by name and contract or project number.

- 8. In the Contractor Responsibility Certification, general contractors and subcontractors shall certify the following facts regarding their past performance and work history and its current qualifications and performance capabilities:
  - a. The firm has all valid, effective licenses, registrations or certificates required by federal, state, county, or local law, including, but not limited to, licenses, registrations, certificates required to: (1) do business in the designated locale; and (2) perform the contract work it seeks to perform. These shall include, but not be limited to, licenses, registrations or certificates for any type of trade work or specialty work, which the firm proposes to self-perform.
  - b. The firm meets the bonding requirements for the contract, as required by applicable law or contract specifications and any insurance requirements, as required by applicable law or contract specifications, including general liability insurance, workers compensation insurance and unemployment requirements.
  - c. The firm has not been debarred by any federal, state or local government agency or authority in the past three (3) years.
  - d. The firm has not defaulted on any project in the past three (3) years.
  - e. The firm has not had any type of business, contracting or trade license, registration, or other certification suspended or revoked in the past three (3) years.
  - f. The firm has not been cited and found guilty for a willful violation of federal or state safety laws in the past three (3) years.
  - g. The firm and/or its owners have not been convicted of any crime relating to the contracting business by a final decision of a court or government agency in the past three (3) years.
  - h. The firm will pay all craft employees that it employs on the project the current wage rates and benefits as required under applicable Federal or State prevailing wage laws.

- i. The firm participates in an Apprenticeship Program that is currently registered with the USDOL, the NJDOL or any state having equal to or higher requirements as either the USDOL or NJDOL apprenticeship programs, for each craft or trade in which it apprentices. The firm shall provide proof of meeting this qualification standard by submitting appropriate documentation as an attachment to this Certification. The firm shall continue to participate in applicable apprenticeship programs for the full duration of the contract work. The apprenticeship program in which the firm participates shall have graduated at least one (1) enrollee in each of the past three (3) years.
- 9. The County of Union may conduct any additional inquiries to verify that the prospective awardee and its subcontractors have the technical qualifications and performance capabilities necessary to successfully perform the contract and that the firms have a sufficient record of legal compliance and business integrity to justify the award of a public contract. In conducting such inquiries, the County of Union may seek relevant information from the firm, its prior clients or customers, its subcontractors or any other relevant source.
- 10. If any provision of this Resolution shall be held to be invalid or unenforceable by a court of competent jurisdiction, any such holding shall not invalidate any other provisions of this Resolution and all remaining provisions shall remain in full force and effect.

**NOW, THEREFORE, BE IT RESOLVED** by the Board of Chosen Freeholders of the County of Union that it hereby establishes and adopts the Responsible Contractor Policy, and it hereby authorizes the County Manager to sign any and all documents necessary to make said Policy effective immediately.

### **57. FEDERAL TERMS**

TERMS AND CONDITIONS APPLICABLE TO ALL CONTRACTS/PURCHASES FUNDED, IN WHOLE OR IN PART, BY FEDERAL FUNDS.

The provisions set forth below apply to all contracts funded, in whole or in part, by Federal funds as required by 2 CFR 200.317.

1. <u>CONTRACTING WITH SMALL AND MINORITY BUSINESSES, WOMEN'S BUSINESS ENTERPRISES, AND LABOR SURPLUS AREA FIRMS</u>

G-35 Revised: 2023.01.12 Pursuant to 2 CFR 200.321, the State must take all necessary affirmative steps to assure that minority businesses, women's business enterprises, and labor surplus area firms are used when possible. Accordingly, if subawards are to be made the Contractor shall:

- (1) Include qualified small and minority businesses and women's business enterprises on solicitation lists;
- (2) Assure that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;
- (3) Divide total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises;
- (4) Establish delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises; and,
- (5) Use the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce.

### 2. DOMESTIC PREFERENCE FOR PROCUREMENTS

Pursuant to 2 CFR 200.322, where appropriate, the State has a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). If subawards are to be made the Contractor shall include a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). For purposes of this section:

- (1) "Produced in the United States" means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.
- (2) "Manufactured products" means items and construction materials composed in whole or in part of nonferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

### 3. PROCUREMENT OF RECOVERED MATERIALS

Where applicable, in the performance of contract, pursuant to 2 CFR 200.323, the contractor must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR Part 247 that contain the highest percentage of recovered

G-36 Revised: 2023.01.12 materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$ 10,000 or the value of the quantity acquired during the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

To the extent that the scope of work or specifications in the contract requires the contractor to provide recovered materials the scope of work or specifications are modified to require that as follows.

- i. In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired—
  - 1. Competitively within a timeframe providing for compliance with the contract performance schedule;
  - 2. Meeting contract performance requirements; or
  - 3. At a reasonable price.
- ii. Information about this requirement, along with the list of EPA-designated items, is available at EPA's Comprehensive Procurement Guidelines web site, https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program.
- iii. The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act."

### 4. EQUAL EMPLOYMENT OPPORTUNITY

Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of "federally assisted construction contract" in 41 CFR Part 60-1.3 must include the equal opportunity clause provided under 41 CFR 60-1.4(b), in accordance with Executive Order 11246, "Equal Employment Opportunity" (30 FR 12319, 12935, 3 CFR Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and implementing regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor." See, 2 CFR Part 200, Appendix II, para. C.

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

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

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- Employment, upgrading, 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 setting forth the provisions of this nondiscrimination clause.
- (2) The contractor 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 race, color, religion, sex, sexual orientation, gender identity, or national origin.
- (3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.
- (4) The contractor will send to each labor union or representative of workers with which he/she has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- (5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- (6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his/her books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- (7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules,

regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, That if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not

demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

### 5. DAVIS-BACON ACT, 40 U.S.C. 3141-3148, AS AMENDED

When required by Federal program legislation, all prime construction contracts in excess of \$2,000 shall be done in compliance with the Davis-Bacon Act (40 U.S.C. 3141- 3144, and 3146-3148) and the requirements of 29 C.F.R. pt. 5 as may be applicable. The contractor shall comply with 40 U.S.C. 3141-3144, and 3146-3148 and the requirements of 29 C.F.R. pt. 5 as applicable. Contractors are required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. Additionally, contractors are required to pay wages not less than once a week. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency.

### COPELAND ANTI-KICKBACK ACT

Where applicable, the Contractor must comply with Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States").

a. Contractor. The Contractor shall comply with 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. pt. 3 as may be applicable, which are incorporated by reference into the OGS centralized contract.

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- b. Subcontracts. The Contractor or subcontractor shall insert in any subcontracts the clause above and such other clauses as FEMA may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of these contract clauses.
- c. Breach. A breach of the clauses above may be grounds for termination of the OGS centralized contract, and for debarment as a Contractor and subcontractor as provided in 29 C.F.R. § 5.12.

# 7. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT, 40 U.S.C. 3701-3708

Where applicable, all contracts awarded by the non-Federal entity in excess of \$ 100,000 that involve the employment of mechanics or laborers must comply with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5).

- (1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
- (2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of \$27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.
- (3) Withholding for unpaid wages and liquidated damages. The unauthorized user shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work

performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section.

# 8. RIGHTS TO INVENTIONS MADE UNDER A CONTRACT OR AGREEMENT

If the Federal award meets the definition of "funding agreement" under 37 CFR § 401.2 (a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," the recipient or subrecipient must comply with the requirements of 37 CFR Part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency.

9. CLEAN AIR ACT, 42 U.S.C. 7401-7671Q, AND THE FEDERAL WATER POLLUTION CONTROL ACT, 33 U.S.C. 1251-1387, AS AMENDED

Where applicable, Contracts and subgrants of amounts in excess of \$150,000, must comply with the following:

Clean Air Act

- 1. The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.
- 2. The contractor agrees to report each violation to the Division of Purchase and Property and understands and agrees that the Division of Purchase and Property will, in turn, report each violation as required

- to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.
- 3. The contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA.

### Federal Water Pollution Control Act

- 1. The contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.
- 2. The contractor agrees to report each violation to the Division of Purchase and Property and understands and agrees that the Division of Purchase and Property will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.
- 3. The contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA.
- 10. DEBARMENT AND SUSPENSION (EXECUTIVE ORDERS 12549 AND 12689)
- (1) This contract is a covered transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such, the contractor is required to verify that none of the contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.935).
- (2) The contractor must comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.
- (3) This certification is a material representation of fact relied upon by the State or authorized user. If it is later determined that the contractor did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to the State or authorized user, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.
- (4) The bidder or proposer agrees to comply with the requirements of C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

### 11. BYRD ANTI-LOBBYING AMENDMENT, 31 U.S.C. 1352

Contractors that apply or bid for an award exceeding \$100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certification(s) to the awarding agency.

# 12. PROHIBITION ON CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT

- (a) Recipients and subrecipients are prohibited from obligating or expending loan or grant funds to:
  - (1) Procure or obtain;
  - (2) Extend or renew a contract to procure or obtain; or
  - (3) Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115–232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).
    - For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and national security purposes, video surveillance and produced telecommunications equipment Hytera bγ Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).
    - (ii) Telecommunications or video surveillance services provided by such entities or using such equipment.
    - (iii) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation,

reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

# 13. CONTRACTS FOR MORE THAN THE SIMPLIFIED ACQUISITION THRESHOLD

Contracts for more than the simplified acquisition threshold, which is the inflation adjusted amount determined by the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) as authorized by 41 U.S.C. 1908, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate.

### 14. TERMINATION FOR CONVENIENCE PROVISION

All contracts in excess of \$10,000 must address termination for cause and for convenience by the non-Federal entity including the manner by which it will be effected and the basis for settlement.

### 15. BONDING REQUIREMENTS

For construction or facility improvement contracts or subcontracts exceeding the Simplified Acquisition Threshold, the Federal awarding agency or pass-through entity may accept the bonding policy and requirements of the non-Federal entity provided that the Federal awarding agency or pass-through entity has made a determination that the Federal interest is adequately protected. If such a determination has not been made, the minimum requirements must be as follows:

- (a) A bid guarantee from each bidder equivalent to five percent of the bid price. The "bid guarantee" must consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of the bid, execute such contractual documents as may be required within the time specified.
- (b) A performance bond on the part of the contractor for 100 percent of the contract price. A "performance bond" is one executed in connection with a contract to secure fulfillment of all the contractor's requirements under such contract.
- (c) A payment bond on the part of the contractor for 100 percent of the contract price. A "payment bond" is one executed in connection with a contract to assure payment as required by law of all persons supplying labor and material in the execution of the work provided for in the contract.

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## MICHELE HAGOPIAN, ASSISTANT 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 <b>BOTH</b> of the following documents:
<ul> <li>Bidder Signature Page</li> <li>Bidder Disclosure Statement (Fill out 2 pages completely)</li> </ul>
SUBCONTRACTOR IDENTIFICATION. Pursuant to N.J.S.A. 40A:11-16, which includes <b>BOTH</b> of the following documents:
<ul> <li>Subcontractor Identification Statement: List of Subcontractors (only for certain types of work)</li> <li>Subcontractor Identification Certification</li> </ul>
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, <b>Business Registration Certificate ("BRC")</b> should be included with the bids as it must be received by the County prior to the award of the contract. The BRC provided <u>must show</u> that the Bidder was registered at the time of receipt of bids or the bid will be rejected.
A copy of the State of New Jersey Department of the Treasury, Division of Revenue, <b>Business</b> Registration Certificate ("BRC") of all named or listed subcontractors (List of Subcontractors) in a

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 certain types 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
Federal Non-Debarment Certification
BYRD Anti-Lobbying Amendment Certification
Certification Regarding Lobbying
Disclosure of Lobbying Activities (LLL 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 THE DIVISION OF PURCHASING AT <a href="mailto:ucbids@ucnj.org">ucbids@ucnj.org</a>.

### **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)
- SPECIFCATIONS: 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.

### **BID FORM**

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

### Union County Parks, Various Restroom Facility Upgrade, County of Union, New Jersey BA#12-2023; UNION COUNTY ENGINEERING PROJECT #2022-005

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.

BASE BID ITEMS (MADISON AVE & MATTANO PARKS	):
LUMP SUM BID:	
Written	Figures
BID CONTINGENCY: (To be used if and when directed	by the County)
Sixty Five Thousand Dollars Written	<b>\$65,000</b> Figures
TOTAL LUMP SUM PLUS BID CONTINGENCY AMOUN	т:
Written	Figures
NOTE: Bid Contingency may include one-half of one purchase when directed by the County.	percent of contract amount set aside for local training if and
ALTERNATE BID ITEMS:	
ALTERNATE #1 (PHIL RIZZUTO PARK):	
Written	Figures

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

Alternates may be added to the Total Base Bid Amount. The bid will be awarded and / or alternates will be selected as follows:

- 1. Award Base Bid (With Bid Contingency) Only
- 2. Award Base Bid (With Bid Contingency) + Alternate #1

Contractor must propose on the alternates listed above and as further described in Division 01 of these specifications.

CONSENT OF SURETY
TO ACCOMPANY PROPOSAL (BID)

	(hereinafter called Surety), organized and existing under the laws of the	າe State of
	duly authorized and qualified to transact business in the State of New Jersey, in cor	nsideration of
the sum of One Dollar (\$	1.00), lawful money of the United States of America, to it in hand paid, receipt when	eof is hereby
acknowledged, and in co	onsideration, hereby certifies and agrees that if the contract for which the attached	d proposal is
made be awarded to	(hereinafter called Contractor) for the performance of certa	ain work and
labor or the supplying of	f certain materials, or both, as more particularly set forth in said proposal and o	described for
purposes of this instrum	ent as a proposal for to the COUNTY OF UNION and	if Contractor
shall enter into the contr	act, Surety will become bound as surety for its faithful performance, labor and mate	rial payment
and will provide the Con	tractor with a performance, labor and material payment bond in the full amount of	the contract
price.		
NOTE:	NAME OF INSURANCE COMPANY	
Expiration date	NAME OF INSURANCE SOME ANT	
Needed if Annual Surety	ADDRESS:	
	<del></del>	
	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 SIGNATURE PAGE**

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

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

5. You <u>cannot</u> witness your o	own signature.	
		NAME OF BIDDER
ORIGINAL SIGNATURE CORPORATE SECRETARY		ADDRESS OF BIDDER
PRINT NAME AND TITLE CORPORATE SECRETARY		TEL: FAX: E-Mail:
Corporate Seal	BY:	ORIGINAL SIGNATURE
Corporate Sear		

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

PRINT OR TYPE NAME AND TITLE

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 a	nd III, execute certification in Part IV)
For-Profit Corporation (any type)	Limited Liability Company (LLC)
Partnership Limited Partners	hip Limited Liability Partnership (LLP)
Other (be specific):	
Part II	
own 10 percent or more of its sto who own a 10 percent or greater	s and addresses of all stockholders in the corporation who ck, of any class, or of all individual partners in the partnership interest therein, or of all members in the limited liability or greater interest therein, as the case may be. (COMPLETE TION)
individual partner in the partnersh	ation owns 10 percent or more of its stock, of any class, or no nip owns a 10 percent or greater interest therein, or no npany owns a 10 percent or greater interest therein, as the <b>V</b> )
(Please attach additional sheets if more space i	is needed):
lame of Individual or Business Entity	Address

# <u>Part III</u> 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		

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

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

## Part IV Certification

I, being duly sworn upon my oath, hereby represent that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I acknowledge: that I am authorized to execute this certification on behalf of the bidder/proposer; that the *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:	

# 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).

following subcontractors:	and the bid specifications, the undersigned hereby lists the name or names of the
Company Name:	
Address:	
Telephone:	Subcontract Amount: \$
License No.	<del>-</del>
Company Name:	
Address:	
Telephone:	Subcontract Amount: \$
License No.	
Company Name:	
Address:	
	Subcontract Amount: \$
License No.	
IF MORE THAN THREE SUBCONTRA BID PACKAGE.	CTORS, PLEASE COPY THIS SHEET AS NECESSARY AND ATTACH TO THE
(Continued on following page)	

### 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		NAME OF BIDDER
Date		-
		ADDRESS
	Ву:	ORIGINAL SIGNATURE ONLY
		PRINT NAME AND TITLE

## **ACKNOWLEDGMENT OF ADDENDUM**

### **COUNTY OF UNION**

(Name of Construction /Public	Works Project)	(Project o	or Bid Number)		
Pursuant to N.J.S.A. 40A:11-23.7 revisions, or addenda to the bid a acknowledges the submitted bid to County of Union's record of notice bid proposal may be subject for rej	advertisement, specific takes into account the to bidders shall take p	ations or bid provisions o	documents. By indicent fitted the fitted to	cating date of or addendum.	receipt, bidder Note that the
Local Unit Reference Number or Title of Addendum/Revision	How Received (mail up, etc.)	, fax, pick-	Date Received		
	up; e.e.,				
ACKNOWLEDGMENT BY BIDDE	R:				
NAME OF BIDDER:					
ORIGINAL SIGNATURE:					
PRINTED NAME AND TITLE:				_	
DATE:					

### **CONTRACTOR BUSINESS REGISTRATION CERTIFICATE**

Pursuant to N.J.S.A. 52:32-44, the County of Union is prohibited from entering into a contract with an entity unless the bidder/proposer/contractor, and each subcontractor that is required by law to be named in a bid/proposal/contract has a valid Business Registration Certificate on file with the Division of Revenue and Enterprise Services within the Department of the Treasury.

Prior to contract award or authorization, the contractor shall provide the County of Union with its proof of business registration and that of any named subcontractor(s).

Subcontractors named in a bid or other proposal shall provide proof of business registration to the bidder, who in turn, shall provide it to the County of Union prior to the time a contract, purchase order, or other contracting document is awarded or authorized.

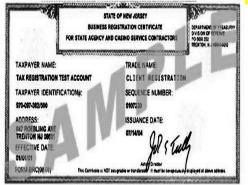
Proof of registration must show that the bidder was in fact registered with the State of New Jersey Department of the Treasury, Division of Revenue and obtained the business registration prior to the receipt of bids. If subcontractors are named on the bid, proof of the business registration for each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

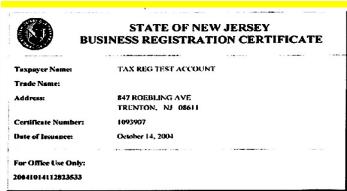
During the course of contract performance:

- (1) the contractor shall not enter into a contract with a subcontractor unless the subcontractor first provides the contractor with a valid proof of business registration.
- (2) the contractor shall maintain and submit to the County of Union a list of subcontractors and their addresses that may be updated from time to time.
- (3) the contractor and any subcontractor providing goods or performing services under the contract, and each of their affiliates, shall collect and remit to the Director of the Division of Taxation in the Department of the Treasury, 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 the State. Any questions in this regard can be directed to the Division of Taxation at (609)292-6400. Form NJ-REG can be filed online at http://www.state.nj.us/treasury/revenue/busregcert.shtml.

Before final payment is made under the contract, the contractor shall submit to the County of Union a complete and accurate list of all subcontractors used and their addresses.

Pursuant to N.J.S.A. 54:49-4.1, a business organization that fails to provide a copy of a business registration as required, or that provides false business registration information, shall be liable for a penalty of \$25 for each day of violation, not to exceed \$50,000, for each proof of business registration not properly provided under a contract with a contracting agency.





### **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 <u>does not submit the initial project manning report</u> (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 <u>WILL</u> 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

## **EXPERIENCE STATEMENT**

I further certify that m	y company has performed the y company has never defaulte provide details on an attached	following private or public work, d under any contract. Should you sheet.	which is relevant to this bid. u not sign this form due to
Witness	-	NAME OF BIDDER	
Date	-		
		ADDRESS	
	Ву:	ORIGINAL SIGNATURE ONLY	
		PRINT NAME AND TITLE	

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

## CERTIFICATE OF BIDDER SHOWING ABILITY TO PERFORM CONTRACT

STATE OF NEW JERSEY /	0 17 17 011	)
COUNTY OF	Specify, if Other )	) SS:
I, State of	, of full age, being duly s	, of the (City, Town, Borough, etc.) ofsworn 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 F	Project ("Contractor'), and the	nat I executed said proposal with full authority to do so; and
that said Contractor, pursuant to N	J.S.A. 40A:11-20, certifies th	that it owns, leases or controls all the necessary equipment
required by the Plans, Specification	s and Advertisements under	er this Bids are asked for.
If the Bidder is not the actual owner	or lessee of any such equip	pment, then the Bidder shall attach to this Certificate
information identifying the source from	om which the equipment will	Ill be obtained, and such information shall be accompanied
by a certificate from the owner or pe	erson in control of the equipr	oment definitively granting to the Bidder the control of the
equipment required during such tim	e as may be necessary for t	the completion of that portion of the contract.
(Also type or print name of affiant un	nder signature)	_
Dv.		

### **NON-COLLUSION AFFIDAVIT**

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

STATE OF		
) <b>SS</b> :		
COUNTY OF		
I, of the City of, of full age, being duly sworn a	, in the County of according to law, on my oath depose and	, and the State of d say that: I am
of the firm of named project, and that I executed the said proposal	, the bidder making	the proposal for the above
named project, and that I executed the said proposal with full authority to do so; that said bidder has not, di collusion, or otherwise taken any action in restraint of project; and that all statements contained in said proposal and in the statements contained in the affida	rectly or indirectly, entered into any agree free, competitive bidding in connection posal and in this Affidavit are true and co SEY relies upon the truth of the statemer	eement, participation in any with the above named rrect, and made with full hts contained in said
I further warrant that no person or selling agency has an agreement or understanding for a commission, pe or bonafide established commercial or selling agencie	been employed or retained to solicit or s rcentage, brokerage or contingent fee, e	secure such contract upon except bona fide employees
	NAME OF BIDDER	
	ORIGINAL SIGNATURE ON	ILY
	NOTE: The person who signed th for the bidder should sign this for	
Subscribed and sworn before me thisday of		
Notary Public of the State of My commission expires:		
wy commission expires.		

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

### **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

### **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 US.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 thereunto, 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

## STATEMENT OF BIDDER'S QUALIFICATIONS

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

(Name of Bidder)	
(Permanent Main Office Address)	
(When Organized)	
(If a Corporation, where incorporated)	
Number of years your organization has been engaged in construction or contracting business under prese trade name?	nt fir
How many years of experience in construction work has your organization had (a) as a general contractor (b) As a subcontractor?	? An
Contracts on hand: (Attach a list or table showing gross amounts of each Contract and the appropriate date completion)	tes o
General character of work performed by you	
Have you ever failed to complete any work awarded to you?	

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

st your major equipment a	available for this Co	ontract.		
xperience in the construct	ion work similar in	importance to this Proje	ct.	
ave you had any material i) years?				sification with
ackground and experience				fficers.
Individual's Name	Present Position	Yrs. of Construction	Magnitude &	In What
	or Office	Experience	Type of Work	Capacity

18.				or corporation to furnish any ir Imprising this Statement of Bidd	
19.	Bidder's telephone number, fa	x number and o	e-mail address (if app	olicable).	
	Phone				
	Fax				
	E-mail	<u> </u>			
	Mobile	<u> </u>			
Dated	l at	this	day of	, 20	
BIDD	ER (Signature)	_			
BIDDI	ER (Print Name)				
	cribed and sworn to before me day of	, 20			
Speci	) Notary Public of New Jersey/ fy Other State ommission Expires	, 20_			
NOTE	E: FAILURE TO COMPL IN A REJECTION OF		BMIT THIS DOCUME	NT WITH YOUR PROPOSAL	MAY RESULT

### **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

<sup>\*</sup> 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.

# CONTRACTOR PERFORMANCE RECORD 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, 20	
(Seal) Notary Public of New Jersey/ Specify Other State	<u> </u>
My Commission Expires , 20	

# 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
I, State of	, of full age, being duly	sworn according to law on my o	ath depose and say that:
lam	of the firm o	f	. the Bidder making
I am the Proposal for the above named	Project. I have executed the	ne said Proposal with full authorit	ty to do so. Said Bidder is
not at the time of the making this b			
Debarred, Suspended or Disqualif	ied Bidders as a result of ac	ction taken by any State or Feder	ral Agency.
		Name of Contractor	
		Name of Contractor	
	Ву:	e of Authorized Representative)	
	(Signatur	e of Authorized Representative)	
Subscribed and sworn to before m	Δ		
this day of	20		
<u></u> , o. <u></u>			
(Seal) Notary Public of New Jersey	y/		
Specify Other State My Commission Expires	. 20		

# PRIOR NEGATIVE EXPERIENCE QUESTIONNAIRE (N.J.S.A. 40A:11-4)

1.	other contractually sti	ipulated alternate disp to complete a contract	een found, through either court adjudication, arbitration oute resolution mechanism, to have: failed to provide out in a timely manner; or otherwise performed unsatisfac	perform goods
	yes	no	If yes, please provide full, detailed explanation.	- - -
2.			efaulted on a contract, thereby requiring a public entity e goods or perform the services or to correct or comple	
	yes	no	If yes, please provide full, detailed explanation.	- - -
3.			efaulted on a contract, thereby requiring a public entity der of the costs of completion?	to look to your
	yes	no	If yes, please provide full, detailed explanation.	- -
4.	department of the exe	ecutive branch of the	en debarred or suspended from contracting with any o State of New Jersey at the time of the contract award, or goods or services with a public entity?	
	yes	no	If yes, please provide full, detailed explanation.	- - -

# PRIOR NEGATIVE EXPERIENCE CERTIFICATION

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

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

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

TO:	County of Union	CONTRACT:
	Division of Engineering	
	2325 South Avenue	
	Scotch Plains, New Jersey 07076	
PROJ	ECT:	
	cordance with the requirements of the lactor on the public work being performe	New Jersey Prevailing Wage Act, N.J.S.A. 34:11-56 et al *, the undersigned ed for:
		COUNTY OF UNION
		th the contract requirements regarding the payment of the minimum prevailing Prevailing Wage Act" N.J.S.A. 34:11-56 et al.
	CONTRACTOR:	
	ADDRESS:	
	BY:	<del></del>
	<b>5</b> 1.	ORIGINAL SIGNATURE ONLY
	E OF NEW JERSEY	
	by me duly sworn according to law, on	
and sa	ays thatisisisindex	d contractor, and that
	the above named cts set forth in the above statement are	
uic ia	old Set for it it it the above statement are	aud.
Cubaa	cribed and sworn before me	
	day of, 20	
Notan	/ Dublic:	
inotary Mv Cc	y Public: ommission Expires:	<del>_</del>
, 00		<del>_</del>

\* 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.

### **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
4	·			·

TOTAL AMOUNT OF UNCOMPLETED CONTRACTS \$		
Sworn and Subscribed to Before me	BIDDER:	
Thisday of20	(Signature)	
Notary Public	(Print Name)	
	\ /	

# **CERTIFICATE OF INSURANCE STATEMENT**

•	nty of Union insurance requirements as state and agrees to provide all insurance required	
	BIDDER (Signature)	
	BIDDER (Print 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)	

# **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 **One Hundred Twenty (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 specific	edSIGNATURE
SITE VISIT – GENERAL CONTRACTOR	
I,of	
NAME (Print or type)	COMPANY
Visited the site of the work on	SIGNATURE

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

Solicitation Number:	Vendor/Bidder:	
	<u>PART 1</u> CERTIFICATION  DDER MUST COMPLETE PART 1 BY CHECKING ONE OF THE BOXES  K ONE OF THE BOXES WILL RENDER THE PROPOSAL NON-RESPONSIVE	
complete the certification below to attest is identified on the State of New Jersey, The Chapter 25 list is found on the Dep this list prior to completing the below responsive. If the Director of the Divisio	erson or entity that submits a bid or proposal or otherwise proposes to enter into or renew a contract under penalty of perjury, that neither the person nor entity, nor any of its parents, subsidiaries, or affil pepartment of the Treasury's Chapter 25 list as a person or entity engaged in investment activities in rement's website at <a href="http://www.state.nj.us/treasury/pdf/Chapter25List.pdf">http://www.state.nj.us/treasury/pdf/Chapter25List.pdf</a> . Vendors/Bidders must resertification. Failure to complete the certification will render a Vendor's/Bidder's proposal of Purchase and Property finds a person or entity to be in violation of the law, s/he shall take action as or contract, including but not limited to, imposing sanctions, seeking compliance, recovering dam debarment or suspension of the party.  CHECK THE APPROPRIATE BOX	iates, Iran. eview non- s may
or affiliates is listed on the N.J.	ublic Law 2012, c.25, that neither the Vendor/Bidder listed above nor any of its parents, subsidiaries, Department of Treasury's list of entities determined to be engaged in prohibited activities in Iran napter 25 List"). Disregard Part 2 and complete and sign the Certification below.	
B. I am unable to certify listed on the Department's Cha and sign and complete the Cert	as above because the Vendor/Bidder and/or one or more of its parents, subsidiaries, or affiliates is ter 25 list. I will provide a detailed, accurate and precise description of the activities in Part 2 below ication below. Failure to provide such information will result in the proposal being rendered as benalties, fines and/or sanctions will be assessed as provided by law.	
If you checked Box "B" above, provi	PART 2 ITIONAL INFORMATION RELATED TO INVESTMENT ACTIVITIES IN IRAN le a detailed, accurate and precise description of the activities of the Vendor/Bidder, or one of ged in investment activities in Iran by completing the information below.	of its
ENTITY NAME: RELATIONSHIP TO VENDOR/BII DESCRIPTION OF ACTIVITIES: DURATION OF ENGAGEMENT: ANTICIPATED CESSATION DATE VENDOR/BIDDER CONTACT NA VENDOR/BIDDER CONTACT PHO Attach Additional Sheets If Necessary	: 1E:	- - - -
attachments hereto, to the best of my k information contained herein, and that the of any contract(s) with the County of Unaware that it is a criminal offense to n	CERTIFICATION  orized to execute this certification on behalf of the Vendor/Bidder, that the foregoing information and owledge are true and complete. I acknowledge that the County of Union, New Jersey is relying or Vendor/Bidder is under a continuing obligation from the date of this certification through the completon to notify the County of Union in writing of any changes to the information contained herein; that the a false statement or misrepresentation in this certification. If I do so, I will be subject to critication and unenforceable.	n the letion I am minal
Signature	Date	
Print Name and Title		

# CERTIFICATION OF NON-DEBARMENT FOR FEDERAL GOVERNMENT CONTRACTS

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

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

PART I: VENDOR INFORMATION					
Individual or Organization Name	e				
Physical Address o Individual or Organization	of				
Unique Entity ID  (if applicable)					
CAGE/NCAGE Code	е				
(if applicable)					
C	Check	k the box that represent	s the type of busi	ness orga	anization:
			•	·	tion (skip Parts III and IV)
<b>□</b> For-F	Profit	t Corporation (any type)	□Limited Liabilit	y Compa	ny (LLC) <b>□</b> Partnership
□ Limited Partnership □ Limited Liability Partnership (LLP)					
□Other (be specific):					
PART	II – C	CERTIFICATION OF NON-	DEBARMENT: Ind	lividual o	r Organization
government from co execute this certifica on the information of certification through writing of any change to make a false state prosecution under the County of Union, per certification void and	entrace etion of contain the of es to ement ne lav rmitti	cting with a federal agen on behalf of the above-r ined herein and that I an date of contract award b the information contain t or misrepresentation in w and that it will constitu- ing the County of Union	cy. I further acknown amed organization under a continuity the County of U ed herein; that I and this certification at this certification at the amaterial breat	owledge: on; that the ing obligation to note am aware and if I could ach of my antract(s) i	ne County of Union is relying ation from the date of this otify the County of Union in that it is a criminal offense do so, I am subject to criminal agreement(s) with the
Full Name (Print):				Title:	

Signature:	Date:	
------------	-------	--

# PART III – CERTIFICATION OF NON-DEBARMENT: Individual or Entity Owning Greater than 50 Percent of Organization Section A (Check the Box that applies) Below is the name and address of the stockholder in the corporation who owns more than 50 percent of its voting stock, or of the partner in the partnership who owns more than 50 percent interest therein, or of the member of the limited liability company owning more than 50 percent interest therein, as the case may be. Name of Individual or Organization **Physical Address** OR No one stockholder in the corporation owns more than 50 percent of its voting stock, or no partner in the partnership owns more than 50 percent interest therein, or no member in the limited liability company owns more than 50 percent interest therein, as the case may be. Section B (Skip if no Business entity is listed in Section A above) Below is the name and address of the stockholder in the corporation who owns more than 50 percent of the voting stock of the organization's parent entity, or of the partner in the partnership who owns more than 50 percent interest in the organization's parent entity, or of the member of the limited liability company owning more than 50 percent interest in organization's parent entity, as the case may be. Stockholder/Partner/Member **Owning Greater Than 50 Percent of Parent Entity Physical Address** OR No one stockholder in the parent entity corporation owns more than 50 percent of its voting stock, no partner in the parent entity partnership owns more than 50 percent interest therein, or no member in the parent entity limited liability company owns more than 50 percent interest therein, as the case may be.

	Section C – Part III Certification	on			
I hereby certify that no	individual or organization that is debarred by	the feder	al government from		
contracting with a fed	eral agency owns greater than 50 percent of th	e <b>Organi</b> z	zation listed above in Part I or,		
if applicable, owns gre	ater than 50 percent of a parent entity of <nar< td=""><td>ne of org</td><td>anization&gt;</td></nar<>	ne of org	anization>		
	I further acknowledge:	that I am	authorized to execute this		
certification on behalf	of the above-named organization; that the Co	unty of U	nion is relying on the		
information contained	herein and that I am under a continuing obliga	ation fron	n the date of this certification		
through the date of co	ntract award by the County of Union to notify	the Coun	ty of Union in writing of any		
changes to the inform	ation contained herein; that I am aware that it	is a crimi	nal offense to make a false		
statement or misrepre	sentation in this certification, and if I do so, I a	m subject	to criminal prosecution under		
the law and that it will	the law and that 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.					
Full Name (Print):		Title:			
Signature:		Date:			

Part IV – CERTIFICATION OF NON-DEBARMENT: Contractor – Controlled Entities				
	S	Section A		
	listed in Part I owns more to in which the Organization I therein, or of the limited lia	ress of the corporation(s) in which the <b>Organization</b> than 50 percent of voting stock, or of the partnership(s) <b>listed in Part I</b> owns more than 50 percent interest ability company or companies in which the <b>Organization</b> more than 50 percent interest therein, as the case may		
Name of	Business Entity	Physical Address		
**Add additional sheets if necessary**				
		OR		
	_	<b>ove in Part I</b> does not own greater than 50 percent of the tion and does not own greater than 50 percent interest mited liability company.		

Section B (skip if no business entities are listed in Section A of Part IV)				
	Below are the names and addresses of any entities in which an entity listed in Part III A owns greater than 50 percent of the voting stock (corporation) or owns greater than 50 percent interest (partnership or limited liability company).			
Name of Business Entity Controlled by Entity Listed in Section A of Part IV			Phy	ysical Address
**Add additional She	eets if necessary**			
		OR		
	No entity listed in Part III A owns greater than 50 percent of the voting stock in any corporation or owns greater than 50 percent interest in any partnership or limited liability company.			
Section C – Part IV Certification				
entity that that is debta applicable, does not do any entity debarred by acknowledge: that I at that the County of Urrobligation from the donotify the County of Uthat it is a criminal of I am subject to criminal agreement(s) with the	parred by the federal government from greater than 50 percent on the federal government from authorized to execute this nion is relying on the informatiate of this certification throughing of any change fense to make a false statemental prosecution under the law	nent from control any entity that it is contracting to certification on the cion contained high the date of ces to the informent or misrepressand that it will	acting wi at in turn: with a fec behalf or nerein and ontract a lation cor sentation constitut	s owns greater than 50 percent of leral agency. I further if the above-named organization; d that I am under a continuing ward by the County of Union to stained herein; that I am aware in this certification, and if I do so,
Full Name (Print):			Title:	
Signature:			Date:	

# BYRD ANTI-LOBBYING AMENDMENT CERTIFICATION

(To be submitted with each bid, proposal or offer exceeding \$100,000)

The undersigned, [Company]knowledge, that:	certifies, to the best of his or her
person for influencing or attempting to influence as an officer or employee of Congress, or an employee of any Federal contract, the making of any Federal	aid or will be paid, by or on behalf of the undersigned, to any an officer or employee of an agency, a Member of Congress, see of a Member of Congress in connection with the awarding all grant, the making of any Federal loan, the entering into of continuation, renewal, amendment, or modification of any nent.
influencing or attempting to influence an officer or or employee of Congress, or an employee of a M	ted funds have been paid or will be paid to any person for r employee of any agency, a Member of Congress, an officer ember of Congress in connection with this Federal contract, rsigned shall complete and submit Standard Form - LLL, nce with its instructions.
	of this certification be included in the award documents for subgrants, and contracts under grants, loans, and cooperative and disclose accordingly.
made or entered into. Submission of this certificant transaction imposed by 31, U.S.C. § 1352 (as ame	ct upon which reliance was placed when this transaction was fication is a prerequisite for making or entering into this ended by the Lobbying Disclosure Act of 1995). Any person e subject to a civil penalty of not less than \$10,000 and not
The Contractor, [Company] each statement of its certification and disclosure, it the provisions of 31 U.S.C. § 3801 et seq., apply to	, certifies or affirms the truthfulness and accuracy of fany. In addition, the Contractor understands and agrees that this certification and disclosure, if any.
Signature of Contractor's Authorized Representative	ve
Name and Title of Contractor's Authorized Representation	entative
Date	

#### CERTIFICATION REGARDING LOBBYING

The undersigned certifies, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in the award documents of all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, United States Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

(signature)	(date)	
TITLE:		
CERTIFIED BY: (type or print)		
City, State, Zip:		-
Street address:		-
Organization:		_

# DISCLOSURE OF LOBBYING ACTIVITIES (LLL Form)

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352 0348-0046

N	I/A – My agency does	not engage in any lob	bying activities
a. contract b. grant c. cooperative agreement d. loan e. loan guarantee f. loan insurance	a. bid/offer/application b. Initial award c. Post-award		a. initial filing b. material change  For Material Change Only: year quarter date of last report
4. Name and Address of Reporting Entity:  Prime Subawardee Tier ,if known:		5. If Reporting Entity in NO.4 is a Subawardee, enter Name and Address of Prim:	
Congressional District, if known:  6. Federal Department/Agency:		Congressional District, if known:  7. Federal Program Name/Description:	
		CDFA NUMBER, if applicable	
8. Federal Action Number, if known:		9. Award Amount, \$	if known:
10. a. Name and address of Lobbying Reg (if individual, last name, first name			forming Services (including address if 0a) (las name, first name, MI):
11. Information request through this form is authorized by title 31 U.S.C. Section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.		Title: Telephone NO.:	Signature:
Federal Use Only:			Authorized for Local Reproduction Standard Form LLL (Rev. 7-97)

#### INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer of employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress with a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

- 1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a Federal action.
- 2. Identify the status of the covered Federal action.
- 3. Identify the appropriate classification of this report. If this is a follow-up report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
- 4. Enter the full name, address, city, state and zip code of the reporting entity include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is or expects to be a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1<sup>st</sup> tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
- 5. If the organization filing the report in item 4 checks "Subawardee," then enter the full name, address, city, state and zip code of the prime Federal recipient. Include Congressional District, if known.
- 6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
- 7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans and loan commitments.
- 8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number, Invitation for Bid (IFB) number, grant announcement number, the contract, grant, or loan award number, the application/proposal control number assigned by the Federal agency.) Include prefixes, e.g. "RFP-DE-90-001."
- 9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
- 10. A) Enter the full name, address, city, state and zip code of the lobbying registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in item 4 to influence the covered Federal action.
  - B) Enter the full names of the individual(s) performing services, and include full address if different from 10(a). Enter last name, first name and middle initial (MI).
- 11. The certifying official shall sign and date the form; print his/her name, title, and telephone number.

#### **GENERAL SPECIFICATIONS**

#### **FEDERAL TERMS**

TERMS AND CONDITIONS APPLICABLE TO ALL CONTRACTS/PURCHASES FUNDED, IN WHOLE OR IN PART, BY FEDERAL FUNDS.

The provisions set forth below apply to all contracts funded, in whole or in part, by Federal funds as required by 2 CFR 200.317.

# 1. <u>CONTRACTING WITH SMALL AND MINORITY BUSINESSES, WOMEN'S BUSINESS</u> ENTERPRISES, AND LABOR SURPLUS AREA FIRMS

Pursuant to 2 CFR 200.321, the State must take all necessary affirmative steps to assure that minority businesses, women's business enterprises, and labor surplus area firms are used when possible. Accordingly, if subawards are to be made the Contractor shall:

- (1) Include qualified small and minority businesses and women's business enterprises on solicitation lists;
- (2) Assure that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;
- (3) Divide total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises;
- (4) Establish delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises; and,
- (5) Use the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce.

#### 2. DOMESTIC PREFERENCE FOR PROCUREMENTS

Pursuant to 2 CFR 200.322, where appropriate, the State has a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). If subawards are to be made the Contractor shall include a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). For purposes of this section:

- (1) "Produced in the United States" means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.
- (2) "Manufactured products" means items and construction materials composed in whole or in part of nonferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

#### 3. PROCUREMENT OF RECOVERED MATERIALS

Where applicable, in the performance of contract, pursuant to 2 CFR 200.323, the contractor must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR Part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$ 10,000 or the value of the quantity acquired during the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

To the extent that the scope of work or specifications in the contract requires the contractor to provide recovered materials the scope of work or specifications are modified to require that as follows.

- i. In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired—
  - 1. Competitively within a timeframe providing for compliance with the contract performance schedule:

- 2. Meeting contract performance requirements; or
- 3. At a reasonable price.
- ii. Information about this requirement, along with the list of EPA- designated items, is available at EPA's Comprehensive Procurement Guidelines web site, https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program.
- iii. The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act."

#### 4. EQUAL EMPLOYMENT OPPORTUNITY

Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of "federally assisted construction contract" in 41 CFR Part 60-1.3 must include the equal opportunity clause provided under 41 CFR 60-1.4(b), in accordance with Executive Order 11246, "Equal Employment Opportunity" (30 FR 12319, 12935, 3 CFR Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and implementing regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor." See, 2 CFR Part 200, Appendix II, para. C. During the performance of this contract, the contractor agrees as follows:

- (1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:
  Employment, upgrading, 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 setting forth the provisions of this nondiscrimination clause.
- (2) The contractor 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 race, color, religion, sex, sexual orientation, gender identity, or national origin.
- (3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.
- (4) The contractor will send to each labor union or representative of workers with which he/she has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- (5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- (6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his/her books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- (7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
- (8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by

rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States. The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, That if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

#### 5. DAVIS-BACON ACT, 40 U.S.C. 3141-3148, AS AMENDED

When required by Federal program legislation, all prime construction contracts in excess of \$2,000 shall be done in compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) and the requirements of 29 C.F.R. pt. 5 as may be applicable. The contractor shall comply with 40 U.S.C. 3141-3144, and 3146-3148 and the requirements of 29 C.F.R. pt. 5 as applicable. Contractors are required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. Additionally, contractors are required to pay wages not less than once a week. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency.

#### COPELAND ANTI-KICKBACK ACT

Where applicable, the Contractor must comply with Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States").

- a. Contractor. The Contractor shall comply with 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. pt. 3 as may be applicable, which are incorporated by reference into the OGS centralized contract.
- b. Subcontracts. The Contractor or subcontractor shall insert in any subcontracts the clause above and such other clauses as FEMA may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of these contract clauses.

c. Breach. A breach of the clauses above may be grounds for termination of the OGS centralized contract, and for debarment as a Contractor and subcontractor as provided in 29 C.F.R. § 5.12.

#### 7. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT, 40 U.S.C. 3701-3708

Where applicable, all contracts awarded by the non-Federal entity in excess of \$ 100,000 that involve the employment of mechanics or laborers must comply with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5).

- (1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
- (2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of \$27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.
- (3) Withholding for unpaid wages and liquidated damages. The unauthorized user shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.
- (4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section.

### 8. RIGHTS TO INVENTIONS MADE UNDER A CONTRACT OR AGREEMENT

If the Federal award meets the definition of "funding agreement" under 37 CFR § 401.2 (a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," the recipient or subrecipient must comply with the requirements of 37 CFR Part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency.

9. CLEAN AIR ACT, 42 U.S.C. 7401-7671Q, AND THE FEDERAL WATER POLLUTION CONTROL ACT, 33 U.S.C. 1251-1387, AS AMENDED

Where applicable, Contracts and subgrants of amounts in excess of \$150,000, must comply with the following:

Clean Air Act

- 1. The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seg.
- The contractor agrees to report each violation to the Division of Purchase and Property and understands and agrees that the Division of Purchase and Property will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.

3. The contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA.

#### Federal Water Pollution Control Act

- 1. The contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.
- 2. The contractor agrees to report each violation to the Division of Purchase and Property and understands and agrees that the Division of Purchase and Property will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.
- 3. The contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA.

#### 10. DEBARMENT AND SUSPENSION (EXECUTIVE ORDERS 12549 AND 12689)

- (1) This contract is a covered transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such, the contractor is required to verify that none of the contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).
- (2) The contractor must comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into
- (3) This certification is a material representation of fact relied upon by the State or authorized user. If it is later determined that the contractor did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to the State or authorized user, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.
- (4) The bidder or proposer agrees to comply with the requirements of 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

#### 11. BYRD ANTI-LOBBYING AMENDMENT, 31 U.S.C. 1352

Contractors that apply or bid for an award exceeding \$100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certification(s) to the awarding agency.

# 12. PROHIBITION ON CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT

- (a) Recipients and subrecipients are prohibited from obligating or expending loan or grant funds to:
  - (1) Procure or obtain;
  - (2) Extend or renew a contract to procure or obtain; or
  - (3) Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115–232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).
    - (i) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou

Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).

- (ii) Telecommunications or video surveillance services provided by such entities or using such equipment.
- (iii) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

#### 13. CONTRACTS FOR MORE THAN THE SIMPLIFIED ACQUISITION THRESHOLD

Contracts for more than the simplified acquisition threshold, which is the inflation adjusted amount determined by the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) as authorized by 41 U.S.C. 1908, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate.

#### 14. TERMINATION FOR CONVENIENCE PROVISION

All contracts in excess of \$10,000 must address termination for cause and for convenience by the non-Federal entity including the manner by which it will be effected and the basis for settlement.

#### 15. BONDING REQUIREMENTS

For construction or facility improvement contracts or subcontracts exceeding the Simplified Acquisition Threshold, the Federal awarding agency or pass-through entity may accept the bonding policy and requirements of the non-Federal entity provided that the Federal awarding agency or pass-through entity has made a determination that the Federal interest is adequately protected. If such a determination has not been made, the minimum requirements must be as follows:

- (a) A bid guarantee from each bidder equivalent to five percent of the bid price. The "bid guarantee" must consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of the bid, execute such contractual documents as may be required within the time specified.
- (b) A performance bond on the part of the contractor for 100 percent of the contract price. A "performance bond" is one executed in connection with a contract to secure fulfillment of all the contractor's requirements under such contract.
- (c) A payment bond on the part of the contractor for 100 percent of the contract price. A "payment bond" is one executed in connection with a contract to assure payment as required by law of all persons supplying labor and material in the execution of the work provided for in the contract.

# BYRD ANTI-LOBBYING AMENDMENT CERTIFICATION

(To be submitted with each bid, proposal or offer exceeding \$100,000)

The undersigned, [Company]	certifies, to the best of his or her knowledge,
that:	
1. No Federal appropriated funds have been paid or will be pa person for influencing or attempting to influence an officer or empl officer or employee of Congress, or an employee of a Member of any Federal contract, the making of any Federal grant, the making cooperative agreement, and the extension, continuation, renewal, contract, grant, loan, or cooperative agreement.	oyee of an agency, a Member of Congress, an Congress in connection with the awarding of of any Federal loan, the entering into of any
2. If any funds other than Federal appropriated funds have influencing or attempting to influence an officer or employee of an or employee of Congress, or an employee of a Member of Congresant, loan, or cooperative agreement, the undersigned shall co "Disclosure Form to Report Lobbying," in accordance with its instant	ny agency, a Member of Congress, an officer ress in connection with this Federal contract, complete and submit Standard Form - LLL,
3. The undersigned shall require that the language of this certificati subawards at all tiers (including subcontracts, subgrants, and co agreements) and that all subrecipients shall certify and disclose acc	ntracts under grants, loans, and cooperative
This certification is a material representation of fact upon which remade or entered into. Submission of this certification is a prerequisimposed by 31, U.S.C. § 1352 (as amended by the Lobbying Disc file the required certification shall be subject to a civil penalty of not for each such failure.	ite for making or entering into this transaction losure Act of 1995). Any person who fails to
The Contractor, [Company], certifies of statement of its certification and disclosure, if any. In addition, the provisions of 31 U.S.C. § 3801 et seq., apply to this certification are	
Signature of Contractor's Authorized Representative	_
Name and Title of Contractor's Authorized Representative	_
Date	

#### CERTIFICATION REGARDING LOBBYING

The undersigned certifies, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in the award documents of all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, United States Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

(signature)	(date)	
TITLE:		
CERTIFIED BY: (type or print)		
City, State, Zip:		-
Street address:		-
Organization:		_

DISCLOSURE OF LOBBYING ACTIVITIES (LLL Form)
Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352 0348-0046

N/A – My agency does not engage in any lobbying activities				
a. contract b. grant c. cooperative agreement d. loan e. loan guarantee f. loan insurance	2. Status of Federal Action:  a. bid/offer/application b. Initial award c. Post-award		a. initial filing b. material change  For Material Change Only: year quarter date of last report	
4. Name and Address of Reporting Entity Prime Subawa Tier	ardee	and Address of Pri		
Congressional District, if known:  6. Federal Department/Agency:		7. Federal Program Name/Description:		
		CDFA NUMBER, if applicable		
8. Federal Action Number, if known:		9. Award Amount, \$	if known:	
10. a. Name and address of Lobbying Reg			orming Services (including address if Oa) (las name, first name, MI):	
11. Information request through this form 31 U.S.C. Section 1352. This disclosure of a material representation of fact upon which by the tier above when this transaction was This disclosure is required pursuant to 3 information will be available for public insumposed who fails to file the required disclosure shall penalty of not less than \$10,000 and not me each such failure.	lobbying activities is h reliance was placed made or entered into. 1 U.S.C. 1352. This spection. Any person Il be subject to a civil	Title: Telephone NO.:	Signature:	
Federal Use Only:			Authorized for Local Reproduction Standard Form LLL (Rev. 7-97)	

#### INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer of employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress with a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

- 1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a Federal action.
- 2. Identify the status of the covered Federal action.
- 3. Identify the appropriate classification of this report. If this is a follow-up report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
- 4. Enter the full name, address, city, state and zip code of the reporting entity include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is or expects to be a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1<sup>st</sup> tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
- 5. If the organization filing the report in item 4 checks "Subawardee," then enter the full name, address, city, state and zip code of the prime Federal recipient. Include Congressional District, if known.
- 6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
- 7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans and loan commitments.
- 8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number, Invitation for Bid (IFB) number, grant announcement number, the contract, grant, or loan award number, the application/proposal control number assigned by the Federal agency.) Include prefixes, e.g. "RFP-DE-90-001."
- 9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
- 10. A) Enter the full name, address, city, state and zip code of the lobbying registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in item 4 to influence the covered Federal action.
  - B) Enter the full names of the individual(s) performing services, and include full address if different from 10(a). Enter last name, first name and middle initial (MI).
- 11. The certifying official shall sign and date the form; print his/her name, title, and telephone number.

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB Control Number. The valid OMB control number for this information collection is OMB No. 0348-0046. Public reporting burden for this collection of information is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-10046), 'Washington, DC 20503.

# ${ lap{AIA}^{\circ}}$ Document A101 $^{\circ}$ – 2017

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

AGREEMENT made as of the		in the year		
(in words, indicate day, month and ye	ar.)			
BETWEEN the Owner:				This document has important legal consequences. Consultation with
(Name, legal status, address and othe	r information)			an attorney is encouraged with
				respect to its completion or modification.
				The parties should complete A101*—2017, Exhibit A,
				Insurance and Bonds,
and the Contractor:	iC			contemporaneously with this Agreement.
(Name, legal status, address and othe	r injormation)		·	_
				AIA Document A201®–2017, General Conditions of the
				Contract for Construction, is
				adopted in this document by reference. Do not use with other
end ett to most a	•			general conditions unless this
for the following Project: (Name, location and detailed descript	tion)			document is modified.
	, dans			
		N. S. S.		
The Analyteets				
The Architect: (Name, legal status, address and other	r information)			
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	\$ E \			
	<u> </u>			
	227			

The Owner and Contractor agree as follows.

#### **TABLE OF ARTICLES**

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

#### EXHIBIT A INSURANCE AND BONDS

#### ARTICLE 1 THE CONTRACT DOCUMENTS

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

#### ARTICLE 2 THE WORK OF THIS CONTRACT

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

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

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

(Check one of the following boxes.)

	The date	of this	Agreement	t.
	A date so	et forth	in a notice	to proceed issued by the Owner.
	Establisl	ned as f	ollows:	
, el				o determine the date of commencement of the Work.)

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

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

#### § 3.3 Substantial Completion

§ 3.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion of the entire Work:

(Check one of the following boxes and complete the necessary information.)

L	Not later than	(		) calendar days from the date of commencement of the W	vork.
---	----------------	---	--	--	-------

☐ By the following date:	
	rovided in the Contract Documents, if portions of the Work are entire Work, the Contractor shall achieve Substantial Completion
Portion of Work St	ubstantial Completion Date
§ 3.3.3 If the Contractor fails to achieve Substantial Conany, shall be assessed as set forth in Section 4.5.	apletion as provided in this Section 3.3, liquidated damages, if
	sum in current funds for the Contractor's performance of the ct to additions and deductions as provided in the Contract
§ 4.2 Alternates § 4.2.1 Alternates, if any, included in the Contract Sum:	
ltem Pr	rice
§ 4.2.2 Subject to the conditions noted below, the follow execution of this Agreement. Upon acceptance, the Ow (Insert below each alternate and the conditions that mu	ner shall issue a Modification to this Agreement.
ltem	Price Conditions for Acceptance
§ 4.3 Allowances, if any, included in the Contract Sum: (Identify each allowance.)	
	rice
§ 4.4 Unit prices, if any: (Identify the item and state the unit price and quantity l	imitations, if any, to which the unit price will be applicable.)
ltem	Units and Limitations Price per Unit (\$0.00)
§ 4.5 Liquidated damages, if any! (Insert terms and conditions for liquidated damages, if	any.)
§ 4.6 Other: (Insert provisions for bonus or other incentives, if any,	that might result in a change to the Contract Sum.)

#### ARTICLE 5 PAYMENTS

#### § 5.1 Progress Payments

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

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

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

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

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

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

§ 5.1.6 In accordance with AIA Document A201<sup>TM</sup>—2017, General Conditions of the Contract for Construction, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.6.1 The amount of each progress payment shall first include:

- .1 That portion of the Contract Sum properly allocable to completed Work;
- .2 That portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction, or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing; and
- .3 That portion of Construction Change Directives that the Architect determines, in the Architect's professional judgment, to be reasonably justified.

§ 5.1.6.2 The amount of each progress payment shall then be reduced by:

- .1 The aggregate of any amounts previously paid by the Owner;
- The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A201–2017;
- .3 Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;
- 4 For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A201–2017; and
- .5 Retainage withheld pursuant to Section 5.1.7.

§ 5.1.7 Retainage

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

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

§ 5.1.7.1.1 The following items are not subject to retainage:

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

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

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

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

(Insert any other conditions for release of retainage upon Substantial Completion.)

- § 5.1.8 If final completion of the Work is materially delayed through no fault of the Contractor, the Owner shall pay the Contractor any additional amounts in accordance with Article 9 of AIA Document A201–2017.
- § 5.1.9 Except with the Owner's prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

#### § 5.2 Final Payment

- § 5.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when
  - .1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Article 12 of AIA Document A201-2017, and to satisfy other requirements, if any, which extend beyond final payment; and
  - .2 a final Certificate for Payment has been issued by the Architect.
- § 5.2.2 The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the Architect's final Certificate for Payment, or as follows:

#### § 5.3 Interest

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

#### ARTICLE 6 DISPUTE RESOLUTION

#### § 6.1 Initial Decision Maker

The Architect will serve as the Initial Decision Maker pursuant to Article 15 of AIA Document A201–2017, unless the parties appoint below another individual, not a party to this Agreement, to serve as the Initial Decision Maker. (If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)

§ 6.2 Binding Dispute Resolution  For any Claim subject to, but not resolved by, mediation pursuant to Article 15 of AIA Document A201–2017, the method of binding dispute resolution shall be as follows:  (Check the appropriate box.)
☐ Arbitration pursuant to Section 15.4 of AIA Document A201–2017
Litigation in a court of competent jurisdiction
Other (Specify)
If the Owner and Contractor do not select a method of binding dispute resolution, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, Claims will be resolved by litigation in a court of competent jurisdiction.
ARTICLE 7 TERMINATION OR SUSPENSION § 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201–2017.
§ 7.1.1 If the Contract is terminated for the Owner's convenience in accordance with Article 14 of AIA Document A201–2017, then the Owner shall pay the Contractor a termination fee as follows:  (Insert the amount of, or method for determining, the fee, if any, payable to the Contractor following a termination for the Owner's convenience.)
§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201–2017.
ARTICLE 8 MISCELLANEOUS PROVISIONS § 8.1 Where reference is made in this Agreement to a provision of AIA Document A201–2017 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract
Documents.
§ 8.2 The Owner's representative: (Name, address, email address, and other information)  § 8.3 The Contractor's representative:
(Name, address, email address, and other information)

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

# § 8.5 Insurance and Bonds

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

§ 8.5.2 The Contractor shall provide bonds as set forth in AIA Document A101<sup>TM</sup>\_2017 Exhibit A, and elsewhere in the Contract Documents.

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

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

# § 8.7 Other provisions:

#### ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 This Agreement is comprised of the following documents:

- 1 AIA Document A101<sup>TM</sup>—2017, Standard Form of Agreement Between Owner and Contractor
- .2 AIA Document A101<sup>TM</sup>-2017, Exhibit A, Insurance and Bonds
- 3 AIA Document A201<sup>TM</sup>–2017, General Conditions of the Contract for Construction
- AIA Document E203<sup>TM</sup>—2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:

(Insert the date of the E203-2013 incorporated into this Agreement.)

.5	Drawings				
	Number	Ti	tle .	Date	
.6	Specifications				
	Section	Ti	tle	Date	Pages
.7	Addenda, if any				
48.8	Number	D:	ate	Pages	

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

.8 Other Exhibits:

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

AIA Document E204<sup>TM</sup>\_2017, Sustainable Projects Exhibit, dated as indicated below: (Insert the date of the E204-2017 incorporated into this Agreement.)

	☐ The Sustainability Pla	n:		
	Title	Date	Pages	
	☐ Supplementary and of	her Conditions of the Contrac		
	Document	Title	Date	Pages
	Document A201™-2017 sample forms, the Control requirements, and other proposals, are not part of documents should be listed ent entered into as of the december 1.50 miles and 1.50 miles are not part of the december 1.50 miles are not part of the	documents that are intended a provides that the advertisement of the solution of the contract Documents and the contract Documents and the contract Documents and the contract Documents and the condy if intended to be a say and year first written above	ent or invitation to bid, Ins ins of Addenda relating to Owner in anticipation of r less enumerated in this Ag part of the Contract Docu	tructions to Bidders, bidding or proposal eceiving bids or reement. Any such
OWNER (Sig			ACTOR (Signature)	
(Printed na	me and title)	(Printed	d name and title)	

# ${ estar}{ m AIA}^{ m s}$ Document A101 $^{ m e}$ – 2017 Exhibit A

# Insurance and Bonds

This Insurance and Bonds Exhibit is part of the Agreement, between the Owner and the					
Contractor, dated the	day of	in the year			
(In words, indicate day, month and year.)					

for the following **PROJECT**:

(Name and location or address)

THE OWNER:

(Name, legal status and address)

THE CONTRACTOR:

(Name, legal status and address)

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

This document is intended to be used in conjunction with AIA Document A201\*–2017, General Conditions of the Contract for Construction. Article 11 of A201\*–2017 contains additional insurance provisions.

#### **TABLE OF ARTICLES**

A.1 GENERAL

A.2 OWNER'S INSURANCE

A.3 CONTRACTOR'S INSURANCE AND BONDS

A.4 SPECIAL TERMS AND CONDITIONS

# ARTICLE A.1 GENERAL

The Owner and Contractor shall purchase and maintain insurance, and provide bonds, as set forth in this Exhibit. As used in this Exhibit, the term General Conditions refers to AIA Document A201<sup>TM</sup>—2017, General Conditions of the Contract for Construction.

# ARTICLE A.2 OWNER'S INSURANCE

# § A.2.1 General

Prior to commencement of the Work, the Owner shall secure the insurance, and provide evidence of the coverage, required under this Article A.2 and, upon the Contractor's request, provide a copy of the property insurance policy or policies required by Section A.2.3. The copy of the policy or policies provided shall contain all applicable conditions, definitions, exclusions, and endorsements.

#### § A.2.2 Liability Insurance

The Owner shall be responsible for purchasing and maintaining the Owner's usual general liability insurance.

# § A.2.3 Required Property Insurance

§ A.2.3.1 Unless this obligation is placed on the Contractor pursuant to Section A.3.3.2.1, the Owner shall purchase and maintain, from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located, property insurance written on a builder's risk "all-risks" completed value or equivalent policy form and sufficient to cover the total value of the entire Project on a replacement cost basis. The Owner's

property insurance coverage shall be no less than the amount of the initial Contract Sum, plus the value of subsequent Modifications and labor performed and materials or equipment supplied by others. The property insurance shall be maintained until Substantial Completion and thereafter as provided in Section A.2.3.1.3, unless otherwise provided in the Contract Documents or otherwise agreed in writing by the parties to this Agreement. This insurance shall include the interests of the Owner, Contractor, Subcontractors, and Sub-subcontractors in the Project as insureds. This insurance shall include the interests of mortgagees as loss payees.

§ A.2.3.1.1 Causes of Loss. The insurance required by this Section A.2.3.1 shall provide coverage for direct physical loss or damage, and shall not exclude the risks of fire, explosion, theft, vandalism, malicious mischief, collapse, earthquake, flood, or windstorm. The insurance shall also provide coverage for ensuing loss or resulting damage from error, omission, or deficiency in construction methods, design, specifications, workmanship, or materials. Sub-limits, if any, are as follows:

(Indicate below the cause of loss and any applicable sub-limit.)

Cause of Loss

Sub-Limit

§ A.2.3.1.2 Specific Required Coverages. The insurance required by this Section A.2.3.1 shall provide coverage for loss or damage to falsework and other temporary structures, and to building systems from testing and startup. The insurance shall also cover debris removal, including demolition occasioned by enforcement of any applicable legal requirements, and reasonable compensation for the Architect's and Contractor's services and expenses required as a result of such insured loss, including claim preparation expenses. Sub-limits, if any, are as follows:

(Indicate below type of coverage and any applicable sub-limit for specific required coverages.)

Coverage

Sub-Limit

- § A.2.3.1.3 Unless the parties agree otherwise, upon Substantial Completion, the Owner shall continue the insurance required by Section A.2.3.1 or, if necessary, replace the insurance policy required under Section A.2.3.1 with property insurance written for the total value of the Project that shall remain in effect until expiration of the period for correction of the Work set forth in Section 12.2.2 of the General Conditions.
- § A.2.3.1.4 Deductibles and Self-insured Retentions. If the insurance required by this Section A.2.3 is subject to deductibles or self-insured retentions, the Owner shall be responsible for all loss not covered because of such deductibles or retentions.
- § A.2.3.2 Occupancy or Use Prior to Substantial Completion. The Owner's occupancy or use of any completed or partially completed portion of the Work prior to Substantial Completion shall not commence until the insurance company or companies providing the insurance under Section A.2.3.1 have consented in writing to the continuance of coverage. The Owner and the Contractor shall take no action with respect to partial occupancy or use that would cause cancellation, lapse, or reduction of insurance, unless they agree otherwise in writing.

# § A.2.3.3 Insurance for Existing Structures

If the Work involves remodeling an existing structure or constructing an addition to an existing structure, the Owner shall purchase and maintain, until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, "all-risks" property insurance, on a replacement cost basis, protecting the existing structure against direct physical loss or damage from the causes of loss identified in Section A.2.3.1, notwithstanding the undertaking of the Work. The Owner shall be responsible for all co-insurance penalties.

# § A.2.4 Optional Extended Property Insurance.

The Owner shall purchase and maintain the insurance selected and described below.

(Select the types of insurance the Owner is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance. For each type of insurance selected, indicate applicable limits of coverage or other conditions in the fill point below the selected item.)

L	§ A.2.4.1 Loss of Use, Business Interruption, and Delay in Completion Insurance, to reimburse the Owner for loss of use of the Owner's property, or the inability to conduct normal operations due to a covered cause of loss.
	§ A.2.4.2 Ordinance or Law Insurance, for the reasonable and necessary costs to satisfy the minimum requirements of the enforcement of any law or ordinance regulating the demolition, construction, repair, replacement or use of the Project.
	§ A.2.4.3 Expediting Cost Insurance, for the reasonable and necessary costs for the temporary repair of damage to insured property, and to expedite the permanent repair or replacement of the damaged property.
	§ A.2.4.4 Extra Expense Insurance, to provide reimbursement of the reasonable and necessary excess costs incurred during the period of restoration or repair of the damaged property that are over and above the total costs that would normally have been incurred during the same period of time had no loss or damage occurred.
	§ A.2.4.5 Civil Authority Insurance, for losses or costs arising from an order of a civil authority prohibiting access to the Project, provided such order is the direct result of physical damage covered under the required property insurance.
	§ A.2.4.6 Ingress/Egress Insurance, for loss due to the necessary interruption of the insured's business due to physical prevention of ingress to, or egress from, the Project as a direct result of physical damage.
	§ A.2.4.7 Soft Costs Insurance, to reimburse the Owner for costs due to the delay of completion of the Work, arising out of physical loss or damage covered by the required property insurance: including construction loan fees; leasing and marketing expenses; additional fees, including those of architects, engineers, consultants, attorneys and accountants, needed for the completion of the construction, repairs, or reconstruction; and carrying costs such as property taxes, building permits, additional interest on loans, realty taxes, and insurance premiums over and above normal expenses.
(Select the types	ional Insurance.  purchase and maintain the insurance selected below.  of insurance the Owner is required to purchase and maintain by placing an X in the box(es)  iption(s) of selected insurance.)
	§ A.2.5.1 Cyber Security Insurance for loss to the Owner due to data security and privacy breach, including costs of investigating a potential or actual breach of confidential or private information. (Indicate applicable limits of coverage or other conditions in the fill point below.)

1

§ A.2.5.2 Other Insurance (List below any other insurance coverage to	be provided by the Owner and any applicable limits.)
Coverage	Limits

#### ARTICLE A.3 CONTRACTOR'S INSURANCE AND BONDS

§ A.3.1 General

§ A.3.1.1 Certificates of Insurance. The Contractor shall provide certificates of insurance acceptable to the Owner evidencing compliance with the requirements in this Article A.3 at the following times: (1) prior to commencement of the Work; (2) upon renewal or replacement of each required policy of insurance; and (3) upon the Owner's written request. An additional certificate evidencing continuation of commercial liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment and thereafter upon renewal or replacement of such coverage until the expiration of the periods required by Section A.3.2.1 and Section A.3.3.1. The certificates will show the Owner as an additional insured on the Contractor's Commercial General Liability and excess or umbrella liability policy or policies.

§ A.3.1.2 Deductibles and Self-Insured Retentions. The Contractor shall disclose to the Owner any deductible or selfinsured retentions applicable to any insurance required to be provided by the Contractor.

§ A.3.1.3 Additional Insured Obligations. To the fullest extent permitted by law, the Contractor shall cause the commercial general liability coverage to include (1) the Owner, the Architect, and the Architect's consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions for which loss occurs during completed operations. The additional insured coverage shall be primary and non-contributory to any of the Owner's general liability insurance policies and shall apply to both ongoing and completed operations. To the extent commercially available, the additional insured coverage shall be no less than that provided by Insurance Services Office, Inc. (ISO) forms CG 20 10 07 04, CG 20 37 07 04, and, with respect to the Architect and the Architect's consultants, CG 20 32 07 04.

§ A.3.2 Contractor's Required Insurance Coverage

§ A.3.2.1 The Contractor shall purchase and maintain the following types and limits of insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, unless a different duration is stated below: (If the Contractor is required to maintain insurance for a duration other than the expiration of the period for correction of Work, state the duration.)

	ď	
§ A.3.2	.2 Comr	nercial General Liability
§ A.3.2	. <b>2.1</b> Cor	nmercial General Liability insurance for the Project written on an occurrence form with policy limits of not les
than		(\$) each occurrence,(\$) general aggregate, and(\$) aggregate for products-
comple	eted oper	rations hazard, providing coverage for claims including
	.1	damages because of bodily injury, sickness or disease, including occupational sickness or disease, and
		death of any person;
	.2	personal injury and advertising injury;
	.3	damages because of physical damage to, or destruction of, tangible property, including the loss of use of
		such property;
	,4	bodily injury or property damage arising out of completed operations; and

the Contractor's indemnity obligations under Section 3.18 of the General Conditions.

- § A.3.2.2.2 The Contractor's Commercial General Liability policy under this Section A.3.2.2 shall not contain an exclusion or restriction of coverage for the following:
  - .1 Claims by one insured against another insured, if the exclusion or restriction is based solely on the fact that the claimant is an insured, and there would otherwise be coverage for the claim.
  - .2 Claims for property damage to the Contractor's Work arising out of the products-completed operations hazard where the damaged Work or the Work out of which the damage arises was performed by a Subcontractor.
  - .3 Claims for bodily injury other than to employees of the insured.
  - .4 Claims for indemnity under Section 3.18 of the General Conditions arising out of injury to employees of the insured
  - .5 Claims or loss excluded under a prior work endorsement or other similar exclusionary language.
  - .6 Claims or loss due to physical damage under a prior injury endorsement or similar exclusionary language.
  - .7 Claims related to residential, multi-family, or other habitational projects, if the Work is to be performed on such a project.
  - .8 Claims related to roofing, if the Work involves roofing.
  - .9 Claims related to exterior insulation finish systems (EIFS), synthetic stucco or similar exterior coatings or surfaces, if the Work involves such coatings or surfaces.
  - .10 Claims related to earth subsidence or movement, where the work involves such hazards.
  - .11 Claims related to explosion, collapse, and underground hazards, where the Work involves such hazards.
- § A.3.2.3 Automobile Liability covering vehicles owned, and non-owned vehicles used, by the Contractor, with policy limits of not less than \_\_\_\_\_\_ (\$\_\_\_) per accident, for bodily injury, death of any person, and property damage arising out of the ownership, maintenance and use of those motor vehicles along with any other statutorily required automobile coverage.

  § A.3.2.4 The Contractor may achieve the required limits and coverage for Commercial General Liability and
- Automobile Liability through a combination of primary and excess or umbrella liability insurance, provided such primary and excess or umbrella insurance policies result in the same or greater coverage as the coverages required under Section A.3.2.2 and A.3.2.3, and in no event shall any excess or umbrella liability insurance provide narrower coverage than the primary policy. The excess policy shall not require the exhaustion of the underlying limits only through the actual payment by the underlying insurers.

§ A.3.2.12 Insurance for the use or operation of manned or unmanned aircraft, if the Work requires such activities, with

§ A.3.2.11 Insurance for maritime liability risks associated with the operation of a vessel, if the Work requires such activities, with policy limits of not less than \_\_\_\_\_ (\$\_\_\_) per claim and \_\_\_\_\_ (\$\_\_\_) in the aggregate.

policy limits of not less than (\$ ) per claim and (\$ ) in the aggregate.

§ A.3.3 Contractor's Other Insurance Coverage

§ A.3.3.1 Insurance selected and described in this Section A.3.3 shall be purchased from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, unless a different duration is stated below:

(If the Contractor is required to maintain any of the types of insurance selected below for a duration other than the expiration of the period for correction of Work, state the duration.)

§ A.3.3.2 The Contractor shall purchase and maintain the following types and limits of insurance in accordance with Section A.3.3.1.

(Select the types of insurance the Contractor is required to purchase and maintain by placing an  $\dot{X}$  in the box(es) next to the description(s) of selected insurance. Where policy limits are provided, include the policy limit in the appropriate fill point.)

§ A.3.3.2.1 Property insurance of the same type and scope satisfying the requirements identified in Section A.2.3, which, if selected in this section A.3.3.2.1, relieves the Owner of the responsibility to purchase and maintain such insurance except insurance required by Section A.2.3.1.3 and Section A.2.3.3. The Contractor shall comply with all obligations of the Owner under Section A.2.3 except to the extent provided below. The Contractor shall disclose to the Owner the amount of any deductible, and the Owner shall be responsible for losses within the deductible. Upon request, the Contractor shall provide the Owner with a copy of the property insurance policy or policies required. The Owner shall adjust and settle the loss with the insurer and be the trustee of the proceeds of the property insurance in accordance with Article 11 of the General Conditions unless otherwise set forth below.

(Where the Contractor's obligation to provide property insurance differs from the Owner's obligations as described under Section A.2.3, indicate such differences in the space below. Additionally, if a party other than the Owner will be responsible for adjusting and settling a loss with the insurer and acting as the trustee of the proceeds of property insurance in accordance with Article 11 of the General Conditions, indicate the responsible party below.)

		n policy limits of not less than Work within fifty (50) feet of rail	
§ A.3.3.2.3 Asbestos A per claim and	patement Liability Insurance, w	ith policy limits of not less than liability arising from the encapsu	(\$)
	or physical damage to property "all-risks" completed value for	while it is in storage and in transorm.	it to the
	surance on an "all-risks" comp n the Project, including scaffol	leted value form, covering proper ding and other equipment.	ty owned by the
§ A.3.3.2.6 Other Insur (List below any other		ided by the Contractor and any ap	oplicable limits.)
Coverage	Limits		

§ A.3.4 Performance Bond and Payment Bond

The Contractor shall provide surety bonds, from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located, as follows: (Specify type and penal sum of bonds.)

Type

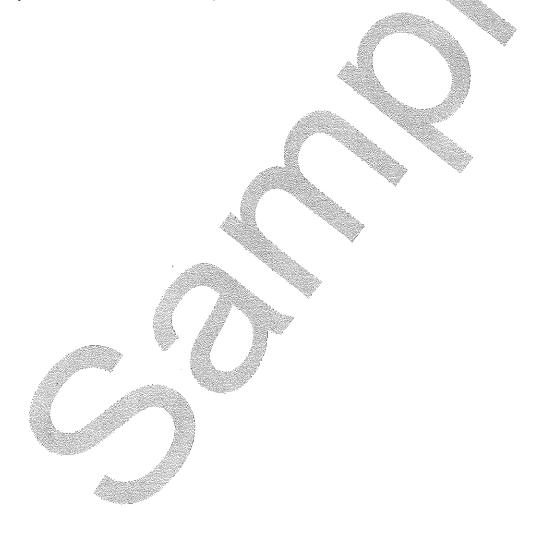
Penal Sum (\$0.00)

Payment Bond Performance Bond

Payment and Performance Bonds shall be AIA Document A312<sup>TM</sup>, Payment Bond and Performance Bond, or contain provisions identical to AIA Document A312<sup>TM</sup>, current as of the date of this Agreement.

# ARTICLE A.4 SPECIAL TERMS AND CONDITIONS

Special terms and conditions that modify this Insurance and Bonds Exhibit, if any, are as follows:



# General Conditions of the Contract for Construction

for the following PROJECT:

(Name and location or address)

# THE OWNER:

(Name, legal status and address)

#### THE ARCHITECT:

(Name, legal status and address)

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- 1 GENERAL PROVISIONS
- 2 OWNER
- 3 CONTRACTOR
- 4 ARCHITECT
- 5 SUBCONTRACTORS
- 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS
- 7 CHANGES IN THE WORK
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- 9 PAYMENTS AND COMPLETION
- 10 PROTECTION OF PERSONS AND PROPERTY
- 11 INSURANCE AND BONDS
- 12 UNCOVERING AND CORRECTION OF WORK
- 13 MISCELLANEOUS PROVISIONS
- 14 TERMINATION OR SUSPENSION OF THE CONTRACT
- 15 CLAIMS AND DISPUTES

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

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

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# **ARTICLE 1 GENERAL PROVISIONS**

# § 1.1 Basic Definitions

# § 1.1.1 The Contract Documents

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

#### § 1.1.2 The Contract

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

# § 1.1.3 The Work

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

# § 1.1.4 The Project

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

# § 1.1.5 The Drawings

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

# § 1.1.6 The Specifications

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

#### § 1.1.7 Instruments of Service

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

# § 1.1.8 Initial Decision Maker

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2. The Initial Decision Maker shall not show partiality to the Owner or Contractor and shall not be liable for results of interpretations or decisions rendered in good faith.

# § 1.2 Correlation and Intent of the Contract Documents

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

§ 1.2.1.1 The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining

provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

- § 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.
- § 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

### § 1.3 Capitalization

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

§ 1.4 Interpretation

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

# § 1.5 Ownership and Use of Drawings, Specifications, and Other Instruments of Service

- § 1.5.1 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and retain all common law, statutory, and other reserved rights in their Instruments of Service, including copyrights. The Contractor, Subcontractors, Subsubcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.
- § 1.5.2 The Contractor, Subcontractors, Sub-subcontractors, and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to any protocols established pursuant to Sections 1.7 and 1.8, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the Owner, Architect, and the Architect's consultants.

# § 1.6 Notice

- § 1.6.1 Except as otherwise provided in Section 1.6.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if a method for electronic transmission is set forth in the Agreement.
- § 1.6.2 Notice of Claims as provided in Section 15.1.3 shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

§ 1.7 Digital Data Use and Transmission

The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203<sup>TM</sup>—2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

§ 1.8 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203<sup>TM</sup>—2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document G202<sup>TM</sup>—2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building

information model, and each of their agents and employees.

# ARTICLE 2 OWNER

# § 2.1 General

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

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

# § 2.2 Evidence of the Owner's Financial Arrangements

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

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

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

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

# § 2.3 Information and Services Required of the Owner

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

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

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

§ 2.3.4 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the

site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

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

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

# § 2.4 Owner's Right to Stop the Work

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

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

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

# ARTICLE 3 CONTRACTOR

## § 3.1 General

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

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

# § 3.2 Review of Contract Documents and Field Conditions by Contractor

- § 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents.
- § 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.3.4, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's

capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

- § 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.
- § 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall submit Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner, subject to Section 15.1.7, as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

# § 3.3 Supervision and Construction Procedures

- § 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences, or procedures, the Contractor shall evaluate the jobsite safety thereof and shall be solely responsible for the jobsite safety of such means, methods, techniques, sequences, or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely notice to the Owner and Architect, and shall propose alternative means, methods, techniques, sequences, or procedures. The Architect shall evaluate the proposed alternative solely for conformance with the design intent for the completed construction. Unless the Architect objects to the Contractor's proposed alternative, the Contractor shall perform the Work using its alternative means, methods, techniques, sequences, or procedures.
- § 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.
- § 3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

# § 3.4 Labor and Materials

- § 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.
- § 3.4.2 Except in the case of minor changes in the Work approved by the Architect in accordance with Section 3.12.8 or ordered by the Architect in accordance with Section 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.
- § 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

# § 3.5 Warranty

§ 3.5.1 The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes

remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

§ 3.5.2 All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.8.4.

# § 3.6 Taxes

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

# § 3.7 Permits, Fees, Notices and Compliance with Laws

- § 3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.
- § 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.
- § 3.7.3 If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

# § 3.7.4 Concealed or Unknown Conditions

If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 14 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend that an equitable adjustment be made in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may submit a Claim as provided in Article 15:

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

# § 3.8 Allowances

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

# § 3.8.2 Unless otherwise provided in the Contract Documents,

- .1 allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- .2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and

- .3 whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.
- § 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

# § 3.9 Superintendent

- § 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.
- § 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the name and qualifications of a proposed superintendent. Within 14 days of receipt of the information, the Architect may notify the Contractor, stating whether the Owner or the Architect (1) has reasonable objection to the proposed superintendent or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.
- § 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

# § 3.10 Contractor's Construction and Submittal Schedules

- § 3.10.1 The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall contain detail appropriate for the Project, including (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of each portion of the Work. The schedule shall provide for the orderly progression of the Work to completion and shall not exceed time limits current under the Contract Documents. The schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project.
- § 3.10.2 The Contractor, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, shall submit a submittal schedule for the Architect's approval. The Architect's approval shall not be unreasonably delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, or fails to provide submittals in accordance with the approved submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.
- § 3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.

# § 3,11 Documents and Samples at the Site

The Contractor shall make available, at the Project site, the Contract Documents, including Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and similar required submittals. These shall be in electronic form or paper copy, available to the Architect and Owner, and delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

# § 3.12 Shop Drawings, Product Data and Samples

- § 3.12.1 Shop Drawings are drawings, diagrams, schedules, and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier, or distributor to illustrate some portion of the Work,
- § 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.
- § 3.12.3 Samples are physical examples that illustrate materials, equipment, or workmanship, and establish standards by which the Work will be judged.

- § 3.12.4 Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to demonstrate how the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.
- § 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve, and submit to the Architect, Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents, in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of Separate Contractors.
- § 3.12.6 By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.
- § 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples, or similar submittals, until the respective submittal has been approved by the Architect.
- § 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from the requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples, or similar submittals, unless the Contractor has specifically notified the Architect of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals, by the Architect's approval thereof.
- § 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples, or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such notice, the Architect's approval of a resubmission shall not apply to such revisions.
- § 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures. The Contractor shall not be required to provide professional services in violation of applicable law.
- § 3.12.10.1 If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall be entitled to rely upon the adequacy and accuracy of the performance and design criteria provided in the Contract Documents. The Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings, and other submittals prepared by such professional. Shop Drawings, and other submittals related to the Work, designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy and accuracy of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor the performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review and approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.
- § 3.12.10.2 If the Contract Documents require the Contractor's design professional to certify that the Work has been performed in accordance with the design criteria, the Contractor shall furnish such certifications to the Architect at the

time and in the form specified by the Architect.

#### § 3.13 Use of Site

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

# § 3.14 Cutting and Patching

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

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

# § 3.15 Cleaning Up

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

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the Owner shall be entitled to reimbursement from the Contractor.

# § 3.16 Access to Work

The Contractor shall provide the Owner and Architect with access to the Work in preparation and progress wherever located.

# § 3.17 Royalties, Patents and Copyrights

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

# § 3.18 Indemnification

§ 3.18.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.

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

#### ARTICLE 4 ARCHITECT

#### § 4.1 General

§ 4.1.1 The Architect is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement.

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

#### § 4.2 Administration of the Contract

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

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents.

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner (1) known deviations from the Contract Documents, (2) known deviations from the most recent construction schedule submitted by the Contractor, and (3) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of, and will not be responsible for acts or omissions of, the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

# § 4.2.4 Communications

The Owner and Contractor shall include the Architect in all communications that relate to or affect the Architect's services or professional responsibilities. The Owner shall promptly notify the Architect of the substance of any direct communications between the Owner and the Contractor otherwise relating to the Project. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and suppliers shall be through the Contractor. Communications by and with Separate Contractors shall be through the Owner. The Contract Documents may specify other communication protocols.

- § 4.2.5 Based on the Architect's evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.
- § 4.2.6 The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.4.2 and 13.4.3, whether or not the Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, suppliers, their agents or employees, or other persons or entities performing portions of the Work.
- § 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under

- Sections 3.3, 3.5, and 3.12. The Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.
- § 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may order minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.
- § 4.2.9 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.
- § 4.2.10 If the Owner and Architect agree, the Architect will provide one or more Project representatives to assist in carrying out the Architect's responsibilities at the site. The Owner shall notify the Contractor of any change in the duties, responsibilities and limitations of authority of the Project representatives.
- § 4.2.11 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.
- § 4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either, and will not be liable for results of interpretations or decisions rendered in good faith.
- § 4.2.13 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.
- § 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

#### ARTICLE 5 SUBCONTRACTORS

# § 5.1 Definitions

- § 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a Separate Contractor or the subcontractors of a Separate Contractor.
- § 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

# § 5.2 Award of Subcontracts and Other Contracts for Portions of the Work

- § 5.2.1 Unless otherwise stated in the Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the persons or entities proposed for each principal portion of the Work, including those who are to furnish materials or equipment fabricated to a special design. Within 14 days of receipt of the information, the Architect may notify the Contractor whether the Owner or the Architect (1) has reasonable objection to any such proposed person or entity or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.
- § 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.
- § 5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the

Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person, or entity for one previously selected if the Owner or Architect makes reasonable objection to such substitution.

# § 5.3 Subcontractual Relations

By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work that the Contractor, by these Contract Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

# § 5.4 Contingent Assignment of Subcontracts

- § 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that
  - assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor; and
  - .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

- § 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.
- § 5.4.3 Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

# ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

# § 6.1 Owner's Right to Perform Construction and to Award Separate Contracts

- § 6.1.1 The term "Separate Contractor(s)" shall mean other contractors retained by the Owner under separate agreements. The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.
- § 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.
- § 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each Separate

Contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with any Separate Contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to its construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, Separate Contractors, and the Owner until subsequently revised.

§ 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces or with Separate Contractors, the Owner or its Separate Contractors shall have the same obligations and rights that the Contractor has under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6, and Articles 10, 11, and 12.

### § 6.2 Mutual Responsibility

- § 6.2.1 The Contractor shall afford the Owner and Separate Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.
- § 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a Separate Contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly notify the Architect of apparent discrepancies or defects in the construction or operations by the Owner or Separate Contractor that would render it unsuitable for proper execution and results of the Contractor's Work. Failure of the Contractor to notify the Architect of apparent discrepancies or defects prior to proceeding with the Work shall constitute an acknowledgment that the Owner's or Separate Contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work. The Contractor shall not be responsible for discrepancies or defects in the construction or operations by the Owner or Separate Contractor that are not apparent.
- § 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a Separate Contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a Separate Contractor's delays, improperly timed activities, damage to the Work or defective construction.
- § 6.2.4 The Contractor shall promptly remedy damage that the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or Separate Contractor as provided in Section 10.2.5.
- § 6.2.5 The Owner and each Separate Contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

#### § 6.3 Owner's Right to Clean Up

If a dispute arises among the Contractor, Separate Contractors, and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Architect will allocate the cost among those responsible.

# ARTICLE 7 CHANGES IN THE WORK

# § 7.1 General

- § 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.
- § 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor, and Architect. A Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor. An order for a minor change in the Work may be issued by the Architect alone.
- § 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents. The Contractor shall proceed promptly with changes in the Work, unless otherwise provided in the Change Order, Construction Change Directive, or order for a minor change in the Work.

# § 7.2 Change Orders

§ 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor, and Architect stating their agreement upon all of the following:

- .1 The change in the Work:
- The amount of the adjustment, if any, in the Contract Sum; and .2
- .3 The extent of the adjustment, if any, in the Contract Time.

### § 7.3 Construction Change Directives

§ 7.3.1 A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both, The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

- § 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.
- § 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:
  - Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to .1 permit evaluation;
  - Unit prices stated in the Contract Documents or subsequently agreed upon; .2
  - Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
  - As provided in Section 7.3.4. .4
- § 7.3.4 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.4 shall be limited to the following:
  - Costs of labor, including applicable payroll taxes, fringe benefits required by agreement or custom, .1 workers' compensation insurance, and other employee costs approved by the Architect;
  - .2 Costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or
  - .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
  - .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes, directly related to the change; and
  - Costs of supervision and field office personnel directly attributable to the change.
- § 7.3.5 If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.
- § 7.3.6 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.
- § 7.3.7 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.
- § 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.
- § 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The

Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

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

# § 7.4 Minor Changes in the Work

The Architect may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The Architect's order for minor changes shall be in writing. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the Architect and shall not proceed to implement the change in the Work. If the Contractor performs the Work set forth in the Architect's order for a minor change without prior notice to the Architect that such change will affect the Contract Sum or Contract Time, the Contractor waives any adjustment to the Contract Sum or extension of the Contract Time.

#### ARTICLE 8 TIME

#### § 8.1 Definitions

- § 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.
- § 8.1.2 The date of commencement of the Work is the date established in the Agreement.
- § 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.
- § 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

#### § 8.2 Progress and Completion

- § 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.
- § 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, commence the Work prior to the effective date of insurance required to be furnished by the Contractor and Owner.
- § 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time,

# § 8.3 Delays and Extensions of Time

- § 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by (1) an act or neglect of the Owner or Architect, of an employee of either, or of a Separate Contractor; (2) by changes ordered in the Work; (3) by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, adverse weather conditions documented in accordance with Section 15.1.6.2, or other causes beyond the Contractor's control; (4) by delay authorized by the Owner pending mediation and binding dispute resolution; or (5) by other causes that the Contractor asserts, and the Architect determines, justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may determine.
- § 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.
- § 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

# ARTICLE 9 PAYMENTS AND COMPLETION

# § 9.1 Contract Sum

§ 9.1.1 The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable

by the Owner to the Contractor for performance of the Work under the Contract Documents.

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

#### § 9.2 Schedule of Values

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

# § 9.3 Applications for Payment

- § 9.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. The application shall be notarized, if required, and supported by all data substantiating the Contractor's right to payment that the Owner or Architect require, such as copies of requisitions, and releases and waivers of liens from Subcontractors and suppliers, and shall reflect retainage if provided for in the Contract Documents.
- § 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.
- § 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or supplier, unless such Work has been performed by others whom the Contractor intends to pay.
- § 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage, and transportation to the site, for such materials and equipment stored off the site.
- § 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests, or encumbrances, in favor of the Contractor, Subcontractors, suppliers, or other persons or entities that provided labor, materials, and equipment relating to the Work.

# § 9.4 Certificates for Payment

- § 9.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either (1) issue to the Owner a Certificate for Payment in the full amount of the Application for Payment, with a copy to the Contractor; or (2) issue to the Owner a Certificate for Payment for such amount as the Architect determines is properly due, and notify the Contractor and Owner of the Architect's reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Application for Payment, and notify the Contractor and Owner of the Architect's reason for withholding certification in whole as provided in Section 9.5.1.
- § 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data in the Application for Payment, that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is entitled to payment in the amount certified. The

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

#### § 9.5 Decisions to Withhold Certification

§ 9.5.1 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3,2, because of

- defective Work not remedied;
- third party claims filed or reasonable evidence indicating probable filing of such claims, unless security .2 acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;
- reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- damage to the Owner or a Separate Contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 repeated failure to carry out the Work in accordance with the Contract Documents.
- § 9.5.2 When either party disputes the Architect's decision regarding a Certificate for Payment under Section 9.5.1, in whole or in part, that party may submit a Claim in accordance with Article 15.
- § 9.5.3 When the reasons for withholding certification are removed, certification will be made for amounts previously withheld.
- § 9.5.4 If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or supplier to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Contractor shall reflect such payment on its next Application for Payment,

# § 9.6 Progress Payments

- § 9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.
- § 9.6.2 The Contractor shall pay each Subcontractor, no later than seven days after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.
- § 9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.
- § 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors and suppliers

to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law.

§ 9.6.5 The Contractor's payments to suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

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

§ 9.6.8 Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.

# § 9.7 Failure of Payment

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

# § 9.8 Substantial Completion

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate. Upon such acceptance, and consent of surety if any, the Owner shall make payment of retainage applying to the Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

# § 9.9 Partial Occupancy or Use

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor, and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

# § 9.10 Final Completion and Final Payment

§ 9.10.1 Upon receipt of the Contractor's notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection. When the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect, (3) a written statement that the Contractor knows of no reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment, (5) documentation of any special warranties, such as manufacturers' warranties or specific Subcontractor warranties, and (6) if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts and releases and waivers of liens, claims, security interests, or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien, claim, security interest, or encumbrance. If a lien, claim, security interest, or encumbrance remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging the lien, claim, security interest, or encumbrance, including all costs and reasonable attorneys' fees.

§ 9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed, corrected, and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of the surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not

constitute a waiver of Claims.

- § 9.10.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from
  - .1 liens, Claims, security interests, or encumbrances arising out of the Contract and unsettled;
  - .2 failure of the Work to comply with the requirements of the Contract Documents;
  - .3 terms of special warranties required by the Contract Documents; or
  - .4 audits performed by the Owner, if permitted by the Contract Documents, after final payment.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor, or a supplier, shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

## ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

## § 10.1 Safety Precautions and Programs

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

## § 10.2 Safety of Persons and Property

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury, or loss to

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.
- § 10.2.2 The Contractor shall comply with, and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities, bearing on safety of persons or property or their protection from damage, injury, or loss.
- § 10.2.3 The Contractor shall implement, erect, and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards.
- § 10.2.4 When use or storage of explosives or other hazardous materials or equipment, or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.
- § 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3. The Contractor may make a Claim for the cost to remedy the damage or loss to the extent such damage or loss is attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.
- § 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.
- § 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

§ 10.2.8 Injury or Damage to Person or Property

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

### § 10.3 Hazardous Materials and Substances

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

§ 10.3.2 Upon receipt of the Contractor's notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of the material or substance or who are to perform the task of removal or safe containment of the material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up.

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

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for hazardous materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for hazardous materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

§ 10.3.5 The Contractor shall reimburse the Owner for the cost and expense the Owner incurs (1) for remediation of hazardous materials or substances the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

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

§ 10.4 Emergencies

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

## ARTICLE 11 INSURANCE AND BONDS

§ 11.1 Contractor's Insurance and Bonds

§ 11.1.1 The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the

endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Contractor shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Owner, Architect, and Architect's consultants shall be named as additional insureds under the Contractor's commercial general liability policy or as otherwise described in the Contract Documents.

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

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

§ 11.1.4 Notice of Cancellation or Expiration of Contractor's Required Insurance. Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by the Contract Documents, the Contractor shall provide notice to the Owner of such impending or actual cancellation or expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage.

## § 11.2 Owner's Insurance

§ 11.2.1 The Owner shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Owner shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located.

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

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

## § 11.3 Waivers of Subrogation

§ 11.3.1 The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, subsubcontractors, agents, and employees, each of the other; (2) the Architect and Architect's consultants; and (3) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The

Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Architect, Architect's consultants, Separate Contractors, subcontractors, and subsubcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this section 11.3.1 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

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

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

The Owner, at the Owner's option, may purchase and maintain insurance that will protect the Owner against loss of use of the Owner's property, or the inability to conduct normal operations, due to fire or other causes of loss. The Owner waives all rights of action against the Contractor and Architect for loss of use of the Owner's property, due to fire or other hazards however caused.

## §11.5 Adjustment and Settlement of Insured Loss

§ 11.5.1 A loss insured under the property insurance required by the Agreement shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.5.2. The Owner shall pay the Architect and Contractor their just shares of insurance proceeds received by the Owner, and by appropriate agreements the Architect and Contractor shall make payments to their consultants and Subcontractors in similar manner.

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

## ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

## § 12.1 Uncovering of Work

§ 12.1.1 If a portion of the Work is covered contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, be uncovered for the Architect's examination and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an equitable adjustment to the Contract Sum and Contract Time as may be appropriate. If such Work is not in accordance with the Contract Documents, the costs of uncovering the Work, and the cost of correction, shall be at the Contractor's expense.

## § 12.2 Correction of Work

## § 12.2.1 Before Substantial Completion

The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, discovered before Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the

Contractor's expense.

### § 12.2.2 After Substantial Completion

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so, unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.5.

- § 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.
- § 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.
- § 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.
- § 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction of the Owner or Separate Contractors, whether completed or partially completed, caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.
- § 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

## § 12.3 Acceptance of Nonconforming Work

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

## **ARTICLE 13 MISCELLANEOUS PROVISIONS**

### § 13.1 Governing Law

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

## § 13.2 Successors and Assigns

- § 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to covenants, agreements, and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.
- § 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate the assignment.

§ 13.3 Rights and Remedies

§ 13.3.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law.

§ 13.3.2 No action or failure to act by the Owner, Architect, or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed upon in writing.

#### § 13.4 Tests and Inspections

§ 13.4.1 Tests, inspections, and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules, and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of tests, inspections, or approvals that do not become requirements until after bids are received or negotiations concluded. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

§ 13.4.2 If the Architect, Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included under Section 13.4.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection, or approval, by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.4.3, shall be at the Owner's expense.

§ 13.4.3 If procedures for testing, inspection, or approval under Sections 13.4.1 and 13.4.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Architect's services and expenses, shall be at the Contractor's expense.

§ 13.4.4 Required certificates of testing, inspection, or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

§ 13.4.5 If the Architect is to observe tests, inspections, or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.4.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

#### § 13.5 Interest

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

## ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

## § 14.1 Termination by the Contractor

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, for any of the following reasons:

- .1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- .2 An act of government, such as a declaration of national emergency, that requires all Work to be stopped;
- .3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- .4 The Owner has failed to furnish to the Contractor reasonable evidence as required by Section 2.2.

- § 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, repeated suspensions, delays, or interruptions of the entire Work by the Owner as described in Section 14.3, constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.
- § 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, as well as reasonable overhead and profit on Work not executed, and costs incurred by reason of such termination.
- § 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor, a Sub-subcontractor, or their agents or employees or any other persons or entities performing portions of the Work because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

## § 14.2 Termination by the Owner for Cause

§ 14.2.1 The Owner may terminate the Contract if the Contractor

- .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or suppliers;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.
- § 14.2.2 When any of the reasons described in Section 14.2.1 exist, and upon certification by the Architect that sufficient cause exists to justify such action, the Owner may, without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:
  - .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
  - .2 Accept assignment of subcontracts pursuant to Section 5.4; and
  - .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.
- § 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.
- § 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

## § 14.3 Suspension by the Owner for Convenience

- § 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work, in whole or in part for such period of time as the Owner may determine.
- § 14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay, or interruption under Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent
  - .1 that performance is, was, or would have been, so suspended, delayed, or interrupted, by another cause for which the Contractor is responsible; or
  - .2 that an equitable adjustment is made or denied under another provision of the Contract.

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§ 14.4 Termination by the Owner for Convenience

§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

- § 14.4.2 Upon receipt of notice from the Owner of such termination for the Owner's convenience, the Contractor shall
  - 1 cease operations as directed by the Owner in the notice;
  - .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
  - .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed; costs incurred by reason of the termination, including costs attributable to termination of Subcontracts; and the termination fee, if any, set forth in the Agreement.

#### ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 Claims

§ 15.1.1 Definition

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, a change in the Contract Time, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim. This Section 15.1.1 does not require the Owner to file a Claim in order to impose liquidated damages in accordance with the Contract Documents.

## § 15.1.2 Time Limits on Claims

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

## § 15.1.3 Notice of Claims

§ 15.1.3.1 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party under this Section 15.1.3.1 shall be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

§ 15.1.3.2 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party. In such event, no decision by the Initial Decision Maker is required.

## § 15.1.4 Continuing Contract Performance

§ 15.1.4.1 Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

§ 15.1.4.2 The Contract Sum and Contract Time shall be adjusted in accordance with the Initial Decision Maker's decision, subject to the right of either party to proceed in accordance with this Article 15. The Architect will issue Certificates for Payment in accordance with the decision of the Initial Decision Maker.

## § 15.1.5 Claims for Additional Cost

If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

## § 15.1.6 Claims for Additional Time

§ 15.1.6.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section

15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

§ 15.1.6.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated, and had an adverse effect on the scheduled construction.

## § 15.1.7 Waiver of Claims for Consequential Damages

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

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

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

## § 15.2 Initial Decision

§ 15.2.1 Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim. If an initial decision has not been rendered within 30 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation and binding dispute resolution without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 15.2.2 The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of the request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished, or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

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

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

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- § 15.2.6.1 Either party may, within 30 days from the date of receipt of an initial decision, demand in writing that the other party file for mediation. If such a demand is made and the party receiving the demand fails to file for mediation within 30 days after receipt thereof, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.
- § 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.
- § 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

#### § 15.3 Mediation

- § 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract, except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.7, shall be subject to mediation as a condition precedent to binding dispute resolution.
- § 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.
- § 15.3.3 Either party may, within 30 days from the date that mediation has been concluded without resolution of the dispute or 60 days after mediation has been demanded without resolution of the dispute, demand in writing that the other party file for binding dispute resolution. If such a demand is made and the party receiving the demand fails to file for binding dispute resolution within 60 days after receipt thereof, then both parties waive their rights to binding dispute resolution proceedings with respect to the initial decision.
- § 15.3.4 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

## § 15.4 Arbitration

- § 15.4.1 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. The Arbitration shall be conducted in the place where the Project is located, unless another location is mutually agreed upon. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.
- § 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.
- § 15.4.2 The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.
- § 15.4.3 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly

consented to by parties to the Agreement, shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

## § 15.4.4 Consolidation or Joinder

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

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

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





#### STATE OF NEW JERSEY

Department of Labor and Workforce Development
Division of Wage and Hour Compliance - Public Contracts Section
PO Box 389
Trenton, NJ 08625-0389

#### PREVAILING WAGE RATE DETERMINATION

The New Jersey Prevailing Wage Act (N.J.S.A. 34:11-56.25 et seq.) requires that the Department of Labor and Workforce Development establish and enforce a prevailing wage level for workers engaged in public works in order to safeguard their efficiency and general well being and to protect them as well as their employers from the effects of serious and unfair competition.

Prevailing wage rates are wage and fringe benefit rates based on the collective bargaining agreements established for a particular craft or trade in the locality in which the public work is performed. In New Jersey, these rates vary by county and by the type of work performed.

Applicable prevailing wage rates are those wages and fringe benefits in effect on the date the contract is awarded. All pre-determined rate increases listed at the time the contract is awarded must also be paid, beginning on the dates specified. Rates that have expired will remain in effect until new rates are posted.

#### **Prevailing Wage Rate**

The prevailing wage rate for each craft will list the effective date of the rate and the following information:

W =Wage Rate per Hour

**B** = Fringe Benefit Rate per Hour\*

T = Total Rate per Hour

\* Fringe benefits are an integral part of the prevailing wage rate. Employers not providing such benefits must pay the fringe benefit amount directly to the employee each payday. Employers providing benefits worth less than the fringe benefit amount must pay the balance directly to the employee each payday.

Unless otherwise stated in the Prevailing Wage Rate Determination, the fringe benefit rate for overtime hours remains at the straight time rate.

When the Overtime Notes in the Prevailing Wage Rate Determination state that the overtime rates are "inclusive of benefits," the benefit rate is increased by the same factor as the wage rate (i.e. multiplied by 1.5 for time and one-half, multiplied by 2 for double time, etc.).

## **Apprentice Rate Schedule**

An "apprentice" is an individual who is registered with the United States Department of Labor - Office of Apprenticeship and enrolled in a certified apprenticeship program during the period in which they are working on the public works project.

The apprentice <u>wage</u> rate is a percentage of the journeyman wage rate, unless otherwise indicated. The apprentice <u>benefit</u> rate is the full journeyman benefit rate, unless otherwise indicated.

If there is no apprentice rate schedule listed, the individual must be paid at least the journeyman rate even if that individual is in a certified apprentice program for that trade.

If there is no ratio of apprentices to journeymen listed for a particular craft, then the ratio shall be one (1) apprentice to every four (4) journeymen.

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#### Comments/Notes

For each craft listed there will be comments/notes that cover the definition of the regular workday, shift differentials, overtime, recognized holidays, and any other relevant information.

### **Public Works Contractor Registration**

The Public Works Contractor Registration Act (N.J.S.A. 34:11-56.48, et seq.) requires that **all** contractors, subcontractors, or lower tier subcontractors who are working on or who bid on public works projects register with the Department of Labor and Workforce Development. Applications are available at <a href="https://www.nj.gov/labor">www.nj.gov/labor</a> (click on Wage & Hour and then go to Registration & Permits).

#### Pursuant to N.J.S.A. 34:11-56.51:

No contractor shall bid on any contract for public work as defined in section 2 of P.L.1963, c. 150 (C.34:11-56.26) unless the contractor is registered pursuant to this act. No contractor shall list a subcontractor in a bid proposal for the contract unless the subcontractor is registered pursuant to P.L.1999, c.238 (C.34:11-56.48 et seq.) at the time the bid is made. No contractor or subcontractor, including a subcontractor not listed in the bid proposal, shall engage in the performance of any public work subject to the contract, unless the contractor or subcontractor is registered pursuant to that act.

## **Snow Plowing**

Snow plowing contracts are <u>not</u> subject to the New Jersey Prevailing Wage Act or the Public Works Contractor Registration Act.

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County - UNION

Craft: Air Conditioning & Refrigeration - Service and Repair

PREVAILING WAGE RATE

	03/01/23
Journeyman (Mechanic)	W44.23
	B28.63
	T72.86

Craft: Air Conditioning & Refrigeration - Service and Repair

#### APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
As Shown	1st Year	2nd Year	3rd Year	4th Year	5th Year	Wage = %	of Jnymn	Wage		
Wage and Bene	40%	50%	60%	70%	80%	Bene = %	of Jnymn	Bene		

Ratio of Apprentices to Journeymen - 1:4

Craft: Air Conditioning & Refrigeration - Service and Repair

**COMMENTS/NOTES** 

THESE RATES MAY BE USED FOR THE FOLLOWING:

- Service/Repair/Maintenance Work to EXISTING facilities.
- Replacement or Installation of air conditioning and refrigeration equipment when the combined tonnage does not exceed 15 tons for refrigeration, or 25 tons for air conditioning.
- Replacement or Installation of "packaged" or "unitary" rooftop-type units when the combined tonnage of the units does not exceed 75 tons.

NOTE: These rates may NOT be used for any work in new construction (including work on new additions).

The regular workday shall consist of 8 hours, starting between 6:00 AM and 10:00 AM, Monday through Friday.

#### SHIFT DIFFERENTIALS:

- The second and third shifts shall be paid an additional 15% of the hourly rate.
- All shifts must run for a minimum of 5 consecutive days.

## **OVERTIME:**

Hours worked in excess of 8 per day or before or after the regular workday, that are not shift work, and all hours on Saturday shall be paid at time and one-half the hourly rate, inclusive of benefits. All hours on Sunday and holidays shall be paid at double the hourly rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day, Christmas Day.

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County - UNION

Craft: Boilermaker PREVAILING WAGE RATE

	01/01/23
Foreman	W53.50
	B46.66
	T100.16
General Foreman	W55.50
	B47.71
	T103.21
Journeyman	W48.50
	B44.92
	T93.42
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Craft: Boilermaker APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
1000 Hours	65%	70%	75%	80%	85%	90%	95%			
Benefit =	38.07	39.03	40.03	41.00	41.99	42.97	43.93			

### Ratio of Apprentices to Journeymen - \*

\* 1 apprentice will be allowed for the first 5 journeymen, 1 apprentice for the next 10 journeymen and 1 apprentice for each succeeding 20 journeymen up to a maximum of 5 apprentices per contractor on any one job.

#### Craft: Boilermaker COMMENTS/NOTES

HIGH WORK: All apprentices working on the erection, repair, or dismantling of smoke stacks, standpipes, or water towers shall be paid the Journeyman rate.

The regular workday shall consist of 8 hours, between 8:00 AM and 4:30 PM.

#### SHIFT DIFFERENTIALS:

- The second shift shall work 7½ hours and receive 8 hours pay, at a rate equal to the regular hourly rate plus 10%.
- The third shift shall work 7 hours and receive 8 hours pay, at a rate equal to the regular hourly rate plus 20%.
- For "Municipal Water Works" projects only, the following shall apply: Two, four day, 10 hour shifts may be worked at straight time Monday through Thursday. The day shift shall work four days, at 10 hours, for 10 hours pay. The second shift shall work four days, at nine and a half hours, for 10 hours pay, plus 10% the hourly rate for new work and .25 cents on repair work. Friday may be used as a make-up day at straight time, due to weather conditions, hoilday or any other circumstances beyond the employer's control.

#### **OVERTIME:**

- Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays (except Labor Day) shall be paid at double the hourly rate. All hours on Labor Day shall be paid at four times the hourly rate.
- If any other craft employed by the same contractor, or a subcontractor thereof, receives double time in lieu of time and one-half, then the Boilermaker shall receive double time in lieu of time and one-half.
- For "Municipal Water Works" projects only, the following shall apply: Four 10 hour days may be worked Monday through Thursday at straight time. Friday may be used as a make-up day for a day lost to inclement weather, holiday or other conditions beyond the control of the employer. Overtime shall be paid for any hours that exceed 10 hours per day or 40 hours per week.

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RECOGNIZED HOLIDAYS: New Year's Day, Washington's Birthday, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday.

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County - UNION

Craft: Boilermaker - Minor Repairs PREVAILING WAGE RATE

	01/01/23
Foreman	W35.45 B17.78 T53.23
General Foreman	W35.95 B17.78 T53.73
Mechanic	W33.95 B17.78 T51.73

Craft: Boilermaker - Minor Repairs

#### **COMMENTS/NOTES**

NOTE: These rates apply to MINOR REPAIR WORK ONLY (repair work in the field for which the contract amount does not exceed \$125,000.00), for boilers that do not produce electric or are not used in the heating of petroleum products.

## **OVERTIME:**

Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays (except Labor Day) shall be paid at double the hourly rate. All hours on Labor Day shall be paid at four times the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Washington's Birthday, Good Friday, Memorial Day, July 4th, Labor Day, Presidential Election Day, Thanksgiving Day, day after Thanksgiving, Christmas Day. Saturday holidays observed the following Monday.

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County - UNION

Craft: Bricklayer, Stone Mason PREVAILING WAGE RATE

	06/01/23
Deputy Foreman	W51.00
	B36.28
	T87.28
Foreman	W55.75
	B36.28
	T92.03
Journeyman	W48.00
	B36.28
	T84.28

Craft: Bricklayer, Stone Mason APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
6 Months	40%	50%	55%	60%	65%	70%	75%	80%		
Benefits	4.00	5.00	5.50	6.00	24.29	26.00	27.73	29.43		

### Ratio of Apprentices to Journeymen - 1:5

## Craft: Bricklayer, Stone Mason COMMENTS/NOTES

The regular workday shall consist of 8 hours, between 6:00 AM and 4:30 PM.

## SHIFT DIFFERENTIALS:

- When a 2 shift schedule (including a day shift) is established, the first, or day shift, shall be established on an 8 hour basis. The second shift shall be established on an 8 hour basis, and receive the regular rate plus 10%, inclusive of benefits
- When a three shift schedule is established, the first shift shall be established on an 8 hour basis, the second shift on a 7.5 hour basis, and the third shift on a 7 hour basis. The first shift shall receive the regular hourly rate, the second shift shall receive the regular rate plus 10%, inclusive of benefits, and the third shift shall receive the regular rate plus 15%, inclusive of benefits.
- When there is no day shift, and a second or third shift is established, it shall be established on an 8 hour basis. The second shift shall receive the regular rate plus 10%, inclusive of benefits, and the third shift shall receive the regular rate plus 15%, inclusive of benefits.
- When an irregular shift must be established, this shift shall receive the regular rate plus 10%, inclusive of benefits.

## OVERTIME:

- The first 2 hours in excess of 8 per day, or before or after the regular workday that are not shift work, Monday through Friday, shall be paid at time and one-half the regular rate, inclusive of benefits. Any additional overtime shall be paid at double the regular rate, inclusive of benefits. The first 10 hours on Saturday shall be paid at time and one-half the regular rate, inclusive of benefits. Any additional overtime shall be paid at double the regular rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.
- Saturday may be used as a make-up day for hours lost to inclement weather.
- When Bricklayers/Stone Masons work on Saturday with Laborers, and no other crafts are working on the project for the day, benefits may be paid at straight time. If other crafts are present, the applicable overtime rate for benefits shall be paid.

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**County - UNION** 

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays will be observed the following Monday.

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County - UNION

Craft: Carpenter PREVAILING WAGE RATE

	05/04/23
Foreman	W62.72 B37.56 T100.28
Journeyman	W54.54 B32.73 T87.27

Craft: Carpenter APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
Yearly	40%	55%	65%	80%	90%					
Benefit	59% of	Appren	tice	Wage Rate	for all	intervals	+ \$0.56			

## Ratio of Apprentices to Journeymen - 1:3

For Solar installation- all work on solar projects that fall under the jurisdiction of the carpenters, and does not require an electrician, the ratio of Apprentices to Journeymen shall be 1:1.

Craft: Carpenter COMMENTS/NOTES

APPRENTICE RATE SCHEDULE FOR THOSE APPRENTICES REGISTERED AS OF 5-1-19:

INTERVAL PERIOD AND RATES Yearly 40% 55% 65% 80%

Benefits 59% of apprentice wage rate for all intervals + \$0.56

#### FOREMAN REQUIREMENTS:

- When there are 2 or more Carpenters on a job, 1 shall be designated as a Foreman.
- When there are 21 or more Carpenters on a job, 2 shall be designated as Foremen.

The regular workday shall consist of 8 hours, starting between 6:00 AM and 9:00 AM.

## SHIFT DIFFERENTIALS:

- When a 2 shift schedule (including a day shift) is established, the day shift shall be established on an 8 hour basis. The second shift shall be established on an 8 hour basis, and receive the regular rate plus 10%, inclusive of benefits.
- When a three shift schedule is established, the first shift shall be established on an 8 hour basis, the second shift on a 7.5 hour basis, and the third shift on a 7 hour basis. The first shift shall receive the regular hourly rate, the second shift shall receive the regular rate plus 10% and the third shift shall receive the regular rate plus 15%, inclusive of benefits.
- When there is no day shift, and a second or third shift is established, it shall be established on an 8 hour basis. The second shift shall receive the regular rate plus 10% and the third shift shall receive the regular rate plus 15%, inclusive of benefits
- When an irregular shift must be established, this shift shall receive the regular rate plus 15%, inclusive of benefits.

#### **OVERTIME:**

- All hours in excess of 8 per day, or before or after an established shift that are not shift work, and all hours on Saturdays shall be paid at time and one-half the hourly rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the hourly rate, inclusive of benefits.

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## **County - UNION**

- Four 10-hour days may be worked, Monday to Thursday, at straight time. Friday may be used as a make-up day for a day lost due 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, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans' Day may be substituted for the day after Thanksgiving.

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County - UNION

Craft: Carpenter - Resilient Flooring PREVAILING WAGE RATE

	05/04/23
Foreman	W62.72 B37.47 T100.19
Journeyman	W54.54 B32.64 T87.18

Craft: Carpenter - Resilient Flooring APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
Yearly	40%	55%	65%	80%	90%					
Benefit	59%	of	Appren	tice	Wage Rate	for all	intervals	+ \$0.47		

### Ratio of Apprentices to Journeymen - \*

### Craft: Carpenter - Resilient Flooring

## COMMENTS/NOTES

APPRENTICE RATE SCHEDULE FOR THOSE APPRENTICES REGISTERED AS OF 5-1-19:

INTERVAL PERIOD AND RATES

Yearly 40% 55% 65% 80%

Benefits 59% of apprentice wage rate for all intervals + \$0.47

## FOREMAN REQUIREMENTS:

- On any job where there are 4 or more Carpenters of Resilient Flooring, 1 must be designated a Foreman.

### FOR SYNTHETIC TURF INSTALLATION ONLY:

- The rate shall be 90% of the wage and benefit rate.

The regular workday consists of 8 hours, starting between 6:00 AM and 9:00 AM.

#### SHIFT DIFFERENTIALS:

- When a 2 shift schedule (including a day shift) is established, the day shift, shall be established on an 8 hour basis. The second shift shall be established on an 8 hour basis, and receive the regular wage rate plus 10%.
- When a three shift schedule is established, the first shift shall be established on an 8 hour basis, the second shift on a 7.5 hour basis, and the third shift on a 7 hour basis. The first shift shall receive the regular wage rate, the second shift shall receive the regular wage rate plus 10% and the third shift shall receive the regular wage rate plus 15%.
- When there is no day shift, and a second or third shift is established, it shall be established on an 8 hour basis. The second shift shall receive the regular wage rate plus 10% and the third shift shall receive the regular wage rate plus 15%.
- When an irregular shift must be established, this shift shall receive the regular rate plus 15%, inclusive of benefits.

#### **OVERTIME:**

- Hours in excess of 8 per day or 40 per week, or before or after the regular workday, Monday through Friday, shall be paid at time and one-half the wage rate. Saturday may be used as a make-up day, at straight time, up to 8 hours, for hours lost to reasons beyond the control of the employer, up to a total of 40 hours per week; hours in excess of 8 on Saturday shall

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<sup>\* 1</sup> apprentice shall be allowed to every 2 journeymen or major fraction therof. No more than 3 apprentices on any one job or project.

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then be paid at time and one-half the wage rate. If Saturday is not a make-up day, all hours on Saturday shall be paid at time and one-half the wage rate. All hours on Sundays and holidays shall be paid at double the wage rate.

- Four 10-hour days may be worked, Monday to Thursday, at straight time. Friday may be used as a make-up day for hours lost to reasons beyond the control of the employer. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the wage rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays will be observed the following Monday. Veterans' Day may be substituted for the day after Thanksgiving.

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County - UNION

**Craft: Carpenter-Residential Construction** 

PREVAILING WAGE RATE

	07/19/23
Foreman	W52.62 B11.78 T64.40
Journeyman	W45.76 B10.97 T56.73

**Craft: Carpenter-Residential Construction** 

#### APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
Yearly	40%	55%	65%	80%						
Benefit	12% of	Appren	tice	wage rate	for all	intervals	+ \$5.47			

Ratio of Apprentices to Journeymen - 1:3

**Craft: Carpenter-Residential Construction** 

**COMMENTS/NOTES** 

#### FOREMAN REQUIREMENTS:

- When there are 2 or more Carpenters on a job, 1 shall be designated as a Foreman.
- When there are 21 or more Carpenters on a job, 2 shall be designated as Foremen.

The regular workday shall consist of 8 hours, starting between 6:00 AM and 9:00 AM.

## RESIDENTIAL CONSTRUCTION:

All residential construction (excluding commercial buildings and institutional housing), no more than four (4) floors in height above grade consisting of those projects involving the construction, alteration, or repair of town houses or row houses, single family homes, mobile homes, multi-family homes, mixed-use buildings that include commercial space on the first floor or below grade, and apartment buildings.

#### SHIFT DIFFERENTIALS:

- When a 2 shift schedule (including a day shift) is established, the day shift shall be established on an 8 hour basis. The second shift shall be established on an 8 hour basis, and receive the regular rate plus 10%, inclusive of benefits.
- When a three shift schedule is established, the first shift shall be established on an 8 hour basis, the second shift on a 7.5 hour basis, and the third shift on a 7 hour basis. The first shift shall receive the regular hourly rate, the second shift shall receive the regular rate plus 10% and the third shift shall receive the regular rate plus 15%, inclusive of benefits.
- When there is no day shift, and a second or third shift is established, it shall be established on an 8 hour basis. The second shift shall receive the regular rate plus 10% and the third shift shall receive the regular rate plus 15%, inclusive of banefits
- When an irregular shift must be established, this shift shall receive the regular rate plus 15%, inclusive of benefits.

#### OVERTIME:

- All hours in excess of 8 per day, or before or after an established shift that are not shift work, and all hours on Saturdays shall be paid at time and one-half the hourly 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 be worked, Monday to Thursday, at straight time. Friday may be used as a make-up day for a

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day lost due 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, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans' Day may be substituted for the day after Thanksgiving.

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County - UNION

Craft: Cement Ma	ason P	REVAILING WAGE RAT	E					
See "Bricklayer, Stone Mason" Rates								
Craft: Cement Ma	ason A	PPRENTICE RATE SCH	EDULE					
INTERVAL	PERIO	OD AND RATES						
Ratio of Apprentic	es to Journeymen - 1:4	•	+					
Craft: Cement Mason COMMENTS/NOTES								
***See "Bricklayer	***See "Bricklayer, Stone Mason" Rates***							

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County - UNION

Craft: Commercial Painter PREVAILING WAGE RATE

	05/02/23
Foreman	W48.02
	B29.51
	T77.53
General Foreman	W52.38
	B29.51
	T81.89
Journeyman	W43.65
	B29.51
	T73.16

Craft: Commercial Painter APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
6 Months	40%	45%	55%	65%	70%	75%	80%	80%		
Benefits	8.85	8.85	11.25	11.25	12.30	12.30	15.10	15.10		

### Ratio of Apprentices to Journeymen - 1:4

## Craft: Commercial Painter COMMENTS/NOTES

\* Commercial Painters perform work on all commercial structures such as offices, schools, hotels, shopping malls, restaurants, condominiums, etc.

Spraying, sandblasting, lead abatement work on commercial buildings, work performed above 3 stories or 30 feet in height, or using swing scaffolds requires an additional 10% of the wage rate.

#### FOREMEN REQUIREMENTS:

- When there are 4 or more Painters on a job, 1 shall be designated a Foreman.
- When there are 15 or more Painters on a job, 1 shall be designated a General Foreman.

The regular workday shall consist of 8 hours between 7:00 AM and 5:30 PM.

#### SHIFT DIFFERENTIALS:

- The second shift shall receive an additional 10% of the hourly rate, per hour, and the third shift shall receive an additional 15% of the hourly rate, per hour.

#### **OVERTIME:**

- Hours in excess of 8 per day, or before or after the regular workday, Monday through Friday, and all hours on Saturdays 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.
- Saturday or Sunday may be used to make up a day lost to inclement weather, at straight time.
- Four 10-hour days may be worked, at straight time, Monday through Friday.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day, July 4th, Labor Day, General Election Day,

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Veterans' Day, Thanksgiving Day, Christmas Day.

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County - UNION

Craft: Diver PREVAILING WAGE RATE

	06/01/23
Diver	W63.24
	B51.72
	T114.96
Tender	W51.50
	B51.72
	T103.22

Craft: Diver COMMENTS/NOTES

NOTE: All dive crews must consist of a Tender, a Diver, and a standby Diver (standby Diver is the same rate as a Diver).

DEPTH & PENETRATION RATES: Divers shall be paid the following depth and penetration rates, in addition to the regular hourly rate, when applicable:

### AIR DIVES: MIXED GAS DIVES:

## PENETRATION DIVES:

126-200 feet: + \$1.50 per foot 201-275 feet: + \$1.75 per foot 276-350 feet: + \$2.00 per foot 351-425 feet: + \$2.50 per foot

## SHIFT DIFFERENTIAL:

- When a 2 shift schedule (including a day shift) is established, the day shift shall be established on an 8 hour basis. The second shift shall be established on an 8 hour basis and receive an additional 113% of the wage rate.
- When a three shift schedule is established, all three shifts shall be established on an 8 hour basis, but the second and third shifts shall receive an additional 113% of the wage rate.
- Benefits on shift work shall be paid at the straight-time rate.

#### **OVERTIME:**

Hours in excess of 8 per day, Monday through Friday, 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.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Presidential Election Day, Thanksgiving Day, Christmas Day. Veterans' Day may be switched with the day after Thanksgiving.

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County - UNION

Craft: Dockbuilder/Pile Driver PREVAILING WAGE RATE

	06/01/23
Foreman	W59.23
	B51.72
	T110.95
Foreman (Concrete Form	W58.13
Work)	B38.36
	T96.49
Journeyman	W51.50
	B51.72
	T103.22
Journeyman (Concrete	W50.55
Form Work)	B38.36
	T88.91

Craft: Dockbuilder/Pile Driver APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
Yearly	20.60	25.75	33.48	41.20						
Benefits	33.96	for all	intervals							

## Ratio of Apprentices to Journeymen - \*

\* When there are 4 or fewer Dockbuilders/Pile Drivers on a job, no more than 1 may be an apprentice. When there are 5 or more Dockbuilders/Pile Drivers, there may be 1 apprentice for every 5 Dockbuilders/Pile Drivers.

Craft: Dockbuilder/Pile Driver COMMENTS/NOTES

APPRENTICE RATE SCHEDULE FOR CONCRETE FORM WORK ONLY:

INTERVAL PERIOD AND RATES
Yearly 20.22 25.28 32.86 40.44

Benefits 26.14 for all intervals

### CREOSOTE HANDLING:

When handling creosote products on land piledriving, floating marine construction, and construction of wharves, the worker shall receive an additional \$0.25 per hour.

## HAZARDOUS WASTE WORK:

- Hazardous waste removal work on a state or federally designated hazardous waste site where Level A, B, or C personal protection is required: an additional 20% of the hourly rate, per hour.
- Hazardous waste removal work in Level D, or where personal protection is not required: an additional \$1.00 per hour.

CERTIFIED WELDER: When required on the job by the project owner, a Certified Welder shall receive an additional \$1.00 per hour.

#### FOREMAN REQUIREMENTS:

The first Dockbuilder/Pile Driver on the job shall be designated a Foreman.

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#### SHIFT DIFFERENTIAL:

- When a 2 shift schedule (including a day shift) is established, the day shift shall be established on an 8 hour basis. The second shift shall be established on an 8 hour basis and receive an additional 113% of the wage rate.
- When a three shift schedule is established, all three shifts shall be established on an 8 hour basis, but the second and third shifts shall receive an additional 113% of the wage rate.
- Benefits on shift work shall be paid at the straight-time rate.

#### **OVERTIME:**

Hours in excess of 8 per day, Monday through Friday, 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.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Presidential Election Day, Thanksgiving Day, Christmas Day. Veterans' Day may be switched with the day after Thanksgiving.

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County - UNION

Craft: Drywall Finisher PREVAILING WAGE RATE

	05/02/23
Foreman	W47.17
	B29.54
	T76.71
General Foreman	W49.31
	B29.54
	T78.85
Journeyman	W42.88
	B29.54
	T72.42

Craft: Drywall Finisher APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
6 Months	40%	% 50% 60% 70% 80% 90%								
Benefits	Intervals	1 to 2 =	11.45	Intervals	3 to 4 =	14.33	Intervals	5 to 6 =	18.04	

### Ratio of Apprentices to Journeymen - 1:4

Craft: Drywall Finisher COMMENTS/NOTES

The regular workday shall consist of 8 hours between 7:00 AM and 5:30 PM.

### SHIFT DIFFERENTIALS:

- The second shift shall receive an additional 10% of the hourly rate, per hour, and the third shift shall receive an additional 15% of the hourly rate, per hour.
- When 3 shifts are worked, the second shift shall receive 8 hours pay for 7.5 hours of work, and the third shift shall receive 8 hours pay for 7 hours of work.
- Shift work must run for a minimum of 5 consecutive workdays.

#### **OVERTIME:**

- Hours in excess of 8 per day, Monday through Friday, 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.
- Saturday or Sunday may be used to make up a day lost to inclement weather, at straight time.

RECOGNIZED HOLIDAYS: New Year's Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Saturday holiday observed the preceding Friday. Sunday holiday observed the following Monday.

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**County - UNION** 

Craft: Electrician PREVAILING WAGE RATE

	05/29/23	06/03/24
Cable Splicer	W68.06	W69.72
	B43.20	B44.96
	T111.26	T114.68
Foreman (11-20	W72.39	W74.15
Journeymen)	B45.95	B47.84
	T118.34	T121.99
Foreman (1-3	W68.06	W69.72
Journeymen)	B43.20	B44.96
	T111.26	T114.68
Foreman (4-10	W71.15	W72.89
Journeymen)	B45.17	B47.02
	T116.32	T119.91
General Foreman (21-30	W74.24	W76.06
Journeymen)	B47.14	B49.06
	T121.38	T125.12
General Foreman (31-60	W80.43	W82.39
Journeymen)	B51.07	B53.15
	T131.50	T135.54
General Foreman (61+	W81.67	W83.66
Journeymen)	B51.85	B53.97
	T133.52	T137.63
Journeyman	W61.87	W63.38
	B39.30	B40.89
	T101.17	T104.27
Sub-Foreman	W70.52	W72.25
	B44.79	B46.61
	T115.31	T118.86

Craft: Electrician APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
Yearly	40%	49%	58%	68%	80%		of Jour	neyman	Wage	Rate
Benefit	40%	49%	58%	68%	80%		of Jour	neyman	Benefit	Rate

Ratio of Apprentices to Journeymen - 2:3

Craft: Electrician COMMENTS/NOTES

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County - UNION

#### THESE RATES ALSO APPLY TO THE FOLLOWING:

- -All burglar and fire alarm work.
- -All fiber optic work.
- -Teledata work in new construction.
- -Teledata work involving 16 Voice/Data Lines or more.

The regular workday shall be 8 hours, between 8:00 AM and 4:30 PM.

#### FOREMAN REQUIREMENTS:

- 1 to 3 Journeymen- 1 must be a Foreman (Foreman/1-3 Journeymen rate).
- -4 to 10 Journeymen- 1 must be a Foreman (Foreman/4-10 Journeymen rate).
- -11 to 20 Journeymen- 1 must be Foreman (Foreman/11-20 Journeymen rate) and 1 must be a Sub-Foreman.
- -21 to 30 Journeymen- 1 must be a General Foreman (General Foreman/21-30 Journeymen rate) and 2 must be a Sub-Foreman.
- -31 to 40 Journeymen- 1 must be a General Foreman (General Foreman/31-40 Journeymen rate) and 3 must be a Sub-Foreman.
- -41 to 50 Journeymen- 1 must be a General Foreman (General Foreman/31-60 Journeymen rate) and 4 must be a Sub-Foreman.
- -51 to 60 Journeymen- 1 must be a General Foreman (General Foreman/31-60 Journeymen rate) and 5 must be a Sub-Foreman.
- -61+ Journeymen- 1 must be a General Foreman (General Foreman/61+ Journeymen rate) and 6 must be a Sub-Foreman.

## SHIFT DIFFERENTIALS:

- Shift work must run for a minimum of 5 consecutive workdays.
- 2nd Shift (4:30 PM to 12:30 AM) shall receive 8 hours pay for 7.5 hours work + an additional 10% of the regular rate, per hour, inclusive of benefits.
- 3rd Shift (12:30 AM to 8:00 AM) shall receive 8 hours pay for 7 hours work + an additional 15% of the regular rate, per hour, inclusive of benefits.

### **OVERTIME:**

Hours in excess of 8 per day, or outside of the regular workday, Monday through Friday, 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, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day.

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County - UNION

Craft: Electrician - Teledata (15 Voice/Data Lines & Less)

## PREVAILING WAGE RATE

	11/28/22	12/04/23	12/02/24
Journeyman Technician	W45.86	W47.08	W48.21
(1-2 Workers on Job)	B27.05	B27.78	B28.45
	T72.91	T74.86	T76.66
Master Tech/General	W59.62	W61.20	W62.67
Foreman	B35.16	B36.12	B36.99
(26 + Workers on Job)	T94.78	T97.32	T99.66
Senior Technician/Lead	W54.57	W56.03	W57.37
Foreman	B32.19	B33.05	B33.86
(16-25 Workers on Job)	T86.76	T89.08	T91.23
Technician A/Foreman	W52.28	W53.67	W54.96
(9-15 Workers on Job)	B30.84	B31.67	B32.43
	T83.12	T85.34	T87.39
Technician B/Working	W49.99	W51.32	W52.55
Foreman	B29.48	B30.28	B31.01
(4-8 Workers on Job)	T79.47	T81.60	T83.56
Technician C/Foreman	W47.69	W48.96	W50.14
(3 Workers on Job)	B28.14	B28.89	B29.59
	T75.83	T77.85	T79.73

Craft: Electrician - Teledata (15 Voice/Data Lines & Less)

## APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
6 Months	35%	35%	40%	43%	48%	54%	61%	67%	74%	81%
Benefits	7.45	7.45	8.51	9.15	10.22	11.49	12.98	14.26	15.76	17.24

Ratio of Apprentices to Journeymen - 2:3

Craft: Electrician - Teledata (15 Voice/Data Lines & Less) COMMENTS/NOTES

APPRENTICE RATE SCHEDULE FOR THOSE APPRENTICES ENTERING PROGRAM AFTER 11-28-22:

NTERVAL PERIOD AND RATES

6 Months 35% 35% 40% 43% 48% 54% 61% 67% 74% 81% Benefits 7.67 7.67 8.76 9.43 10.52 11.84 13.38 14.69 16.22 17.76

APPRENTICE RATE SCHEDULE FOR THOSE APPRENTICES ENTERING PROGRAM AFTER 12-4-23:

NTERVAL PERIOD AND RATES

6 Months 35% 35% 40% 43% 48% 54% 61% 67% 74% 81% Benefits 7.88 7.88 9.00 9.68 10.80 12.15 13.73 15.09 16.66 18.23

APPRENTICE RATE SCHEDULE FOR THOSE APPRENTICES ENTERING PROGRAM AFTER 12-2-24:

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NTERVAL PERIOD AND RATES
6 Months 35% 35% 40% 43% 48% 54% 61% 67% 74% 81%
Benefits 8.07 8.07 9.22 9.91 11.07 12.45 14.06 15.44 17.06 18.68

#### NOTES:

- These rates are for service, maintenance, moves, and/or changes affecting
- 15 Voice/Data (teledata) lines or less. These rates may NOT be used for any teledata work in new construction (including additions) or any fiber optic work.
- The number of Teledata workers on the jobsite is the determining factor for which Foreman category applies .

The regular workday shall be 8 hours, between 7:00 AM and 5:30 PM.

#### SHIFT DIFFERENTIALS:

- Shift work must run for a minimum of 5 consecutive workdays.
- 2nd Shift (4:30 PM to 12:30 AM) shall receive 8 hours pay for 7.5 hours work + an additional 10% of the regular rate, per hour, inclusive of benefits.
- 3rd Shift (12:30 AM to 8:00 AM) shall receive 8 hours pay for 7 hours work + an additional 15% 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 are not shift work, and the first 10 hours on Saturday, shall be paid at time and one-half the regular rate, inclusive of benefits. Hours in excess of 10 on Saturday and all hours on Sunday and holidays shall be paid at double the regular rate, inclusive of benefits.

- Four 10-hour days may be worked Monday through Friday, between the hours of 7:00 AM and 5:30 PM. A make-up day may be used for a day not being worked during the four 10-hour day schedule if a holiday occurs during the week or for any other conditions that prevent an employee from working the four 10-hour day schedule.

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 will be observed the following Monday. Saturday holidays will be observed the preceding Friday.

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**County - UNION** 

Craft:	Electrician - Teledata (16 Instruments & More)	PREVAILING WAGE RATE
	See "Electrician" Rates	
Craft:	Electrician - Teledata (16 Instruments & More)	COMMENTS/NOTES
***See	ELECTRICIAN Rates***	

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**County - UNION** 

## Craft: Electrician- Outside Commercial

## PREVAILING WAGE RATE

	05/29/23	06/03/24
Cable Splicer	W68.37	W70.04
	B42.89	B44.66
	T111.26	T114.70
Certified Welder	W65.26	W66.86
	B40.95	B42.62
	T106.21	T109.48
Equipment Operator	W62.15	W63.67
	B39.00	B40.60
	T101.15	T104.27
Foreman (11-20	W72.72	W74.50
Journeymen workers on	B45.62	B47.50
job)	T118.34	T122.00
Foreman (1-3	W68.37	W70.04
Journeymen workers on	B42.89	B44.66
job)	T111.26	T114.70
Foreman (4-10	W71.47	W73.23
Journeymen workers on	B44.86	B46.70
job)	T116.33	T119.93
General Foreman (21-30	W74.58	W76.41
Journeymen workers on	B46.81	B48.71
job)	T121.39	T125.12
General Foreman (31-60	W80.80	W82.78
Journeymen workers on	B50.70	B52.76
job)	T131.50	T135.54
General Foreman (61+	W82.04	W84.05
Journeymen workers on	B51.48	B53.58
job)	T133.52	T137.63
Groundman	W37.29	W38.21
	B23.41	B24.35
	T60.70	T62.56
Journeyman	W62.15	W63.67
Lineman/Technician	B39.00	B40.60
	T101.15	T104.27
Sub-Foreman	W70.85	W72.59
	B44.46	B46.27
	T115.31	T118.86

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County - UNION

Craft: Electrician- Outside Commercial APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
1000 Hours	60%	65%	70%	75%	80%	85%	90%			
Benefits	61.75% of	Journey	man	wage	+ \$.01					

Craft: Electrician- Outside Commercial COMMENTS/NOTES

## APPRENTICE RATE SCHEDULE AS OF 5-29-23:

Interval Period and Rates

1000 Hours 60% 65% 70% 75% 80% 85% 90%

Benefits 62.75% of the Journeyman wage + \$.01

#### APPRENTICE RATE SCHEDULE AS OF 6-3-24:

Interval Period and Rates

1000 Hours 60% 65% 70% 75% 80% 85% 90%

Benefits 63.75% of the Journeyman wage + \$.01

## \* FOR UTILITY WORK PLEASE SEE STATEWIDE RATES

The regular worday shall be 8 hours, between 8:00 AM and 4:30 PM.

## FOREMAN REQUIREMENTS:

- 1 to 3 Journeymen- 1 must be a Foreman (Foreman/1-3 Journeymen rate).
- -4 to 10 Journeymen- 1 must be a Foreman (Foreman/4-10 Journeymen rate).
- -11 to 20 Journeymen- 1 must be Foreman (Foreman/11-20 Journeymen rate) and 1 must be a Sub-Foreman.
- -21 to 30 Journeymen- 1 must be a General Foreman (General Foreman/21-30 Journeymen rate) and 2 must be a Sub-Foreman.
- -31 to 40 Journeymen- 1 must be a General Foreman (General Foreman/31-40 Journeymen rate) and 3 must be a Sub-Foreman.
- -41 to 50 Journeymen- 1 must be a General Foreman (General Foreman/31-60 Journeymen rate) and 4 must be a Sub-Foreman.
- -51 to 60 Journeymen- 1 must be a General Foreman (General Foreman/31-60 Journeymen rate) and 5 must be a Sub-Foreman.
- -61+ Journeymen- 1 must be a General Foreman (General Foreman/61+ Journeymen rate) and 6 must be a Sub-Foreman.

#### SHIFT DIFFERENTIALS:

Shift work must run for a minimum of 5 consecutive workdays.

2nd Shift (4:30 PM to 12:30 AM): 8 hrs. pay for 7.5 hrs. work + an additional 10% of the regular rate, inclusive of benefits.

3rd Shift (12:30 AM to 8:00 AM): 8 hrs. pay for 7 hrs. work + an additional 15% of the regular rate per hour, inclusive benefits.

### **OVERTIME:**

Hours in excess of 8 per day, or outside of the regular workday, Monday through Friday, 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, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day,

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Thanksgiving Day and Christmas Day.

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County - UNION

	Craft:	<b>Electrician-Utility</b>	Work (North)	PREVAILING WAGE RATE
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Rates are located in the "Statewide" rate package

Craft: Electrician-Utility Work (North)

## APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES									
* 6 Months	60%	65%	70%	75%	80%	85%	90%				
Benefits	69% of	Appren	tice	Wage	Rate	for all	intervals				

Craft: Electrician-Utility Work (North)

**COMMENTS/NOTES** 

Electrician-Utility Work (North) rates are located in the "Statewide" rate package.

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<sup>\*</sup> The apprentice wage rate is paid at the percentage of the Journeyman Lineman wage rate located in the "Statewide" rate package.

County - UNION

Craft: Electrician-Utility Work (South) PREVAILING WAGE RATE

Rates are located in the "Statewide" rate package

Craft: Electrician-Utility Work (South)

## APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES									
6 Months	31.65	34.29	36.93	39.56	42.20	44.84	47.78				
Benefits	28.02	29.62	31.20	32.80	34.40	36.00	37.58				

Craft: Electrician-Utility Work (South)

**COMMENTS/NOTES** 

Electrician-Utility Work (South) rates are located in the "Statewide" rate package.

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County - UNION

Craft: Elevator Constructor PREVAILING WAGE RATE

	03/29/23
Journeyman	W77.49 B45.23 T122.72

Craft: Elevator Constructor APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
Yearly	34.60	42.62	50.37	58.12						
Benefits	35.56	36.49	38.02	39.55						

## Ratio of Apprentices to Journeymen - 1:1

### Craft: Elevator Constructor COMMENTS/NOTES

The regular workday shall consist of either 7 or 8 hours to be established at the beginning of the project, between 7:00 AM and 4:30 PM.

### **OVERTIME:**

For all hours worked before or after the regular workday, Monday through Friday, and all hours on Saturday and Sunday, shall be paid at double the hourly rate. Holiday pay is one days wages (8 hours) plus double the hourly rate for all hours worked.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Good Friday, Memorial Day, July 4th, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day and the day after, Christmas Day. Saturday holidays shall be observed on the previous Friday and Sunday holidays shall be observed on the following Monday.

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County - UNION

**Craft: Elevator Modernization & Service** 

PREVAILING WAGE RATE

	03/29/23
Journeyman	W60.89
	B44.07
	T104.96

**Craft: Elevator Modernization & Service** 

#### APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES									
Yearly	34.60	33.49	39.58	45.67							
Benefits	35.50	36.07	37.52	38.97							

### Ratio of Apprentices to Journeymen - 1:1

#### **Craft: Elevator Modernization & Service**

#### **COMMENTS/NOTES**

MODERNIZATION (addition, replacement, refurbishing, relocation, or changes in design or appearance, of elevator equipment in existing buildings):

- The regular workday consists of 8 hours, between 7:00 AM and 4:30 PM.

#### - Overtime:

Hours in excess of 8 per day, or before or after the regular workday, Monday through Friday, and all hours on Saturday and Sunday shall be paid at time and one-half the hourly rate. Holiday pay is one days wages (8 hours) plus time and one-half the hourly rate for all hours worked.

SERVICE (repair or replacement of parts for the purpose of maintaining elevator equipment in good operating condition):

- The regular workday consists of 8 hours, between 6:00 AM and 6:00 PM.

#### - Overtime:

Hours in excess of 8 per day, or before or after the regular workday, Monday through Friday, and all hours on Saturday shall be paid at time and one-half the hourly rate. All hours on Sunday and holidays shall be paid at double the hourly rate.

RECOGNIZED HOLIDAYS (Modernization and Service): New Year's Day, Presidents' Day, Good Friday, Memorial Day, July 4th, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day and the day after, Christmas Day. Saturday holidays shall be observed on the previous Friday and Sunday holidays shall be observed on the following Monday.

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Craft: Glazier PREVAILING WAGE RATE

	06/20/23
* Leadman	W52.53
	B30.38
	T82.91
Foreman	W54.53
	B30.62
	T85.15
General Foreman	W56.53
	B30.86
	T87.39
Journeyman	W50.53
	B30.14
	T80.67

Craft: Glazier APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
6 Months	50%	55%	60%	65%	70%	75%	80%	90%		
Benefits	10.16	10.16	12.85	12.85	16.15	16.15	17.64	17.64		

## Ratio of Apprentices to Journeymen - 1:4

Craft: Glazier COMMENTS/NOTES

Hazard/Height Pay: +\$1.00 per hour

\* When there are three (3) men working on a jobsite for three (3) days or longer, 1 Journeyman may be designated as a Leadman for the duration of the job, provided he has his OSHA certification.

## FOREMAN REQUIREMENTS:

- When there are 4 or more Glaziers on a job, 1 must be designated a Foreman.
- When there are 15 or more Glaziers on a job, 1 must be designated a General Foreman.

The regular workday shall consist of 8 hours, between 7:00 AM and 5:30 PM, Monday to Friday.

### SHIFT DIFFERENTIALS:

- The second shift shall receive an additional 10% of the hourly rate, per hour, and the third shift shall receive an additional 15% of the hourly rate, per hour.
- When 3 shifts are worked, the second shift shall receive 8 hours pay for 7.5 hours of work, and the third shift shall receive 8 hours pay for 7 hours of work.

## **OVERTIME:**

Hours in excess of 8 per day, or before or after the regular workday Monday through Friday, and all hours on Saturdays shall be paid at time and one-half the regular rate. All hours on Sundays and holidays shall be paid at double the regular

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**County - UNION** 

rate.

RECOGNIZED HOLIDAYS: New Year's Day, Memorial Day, July 4th, Labor Day, General Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Saturday holiday observed the preceding Friday. Sunday holiday observed the following Monday.

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Craft: Heat & Frost Insulator PREVAILING WAGE RATE

	09/20/22
Foreman	W60.72
	B36.22
	T96.94
General Foreman	W63.06
	B37.33
	T100.39
Journeyman	W58.44
	B35.66
	T94.10

Craft: Heat & Frost Insulator APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES									
Yearly	27.38	8 32.49 39.13 45.71									
Benefits	20.86	24.73	27.41	30.01							

### Ratio of Apprentices to Journeymen - 1:3

## Craft: Heat & Frost Insulator COMMENTS/NOTES

NOTE: These rates apply to the installing of insulation on hot and cold mechanical systems.

The regular workday shall be 8 hours between 7:00 AM and 3:30 PM. In addition, the regular workday may also be 8 hours between 6:00 AM and 2:30 PM.

## SHIFT DIFFERENTIAL:

- Shift work must run for a minimum of 5 consecutive workdays.
- Second Shift shall work 7.5 hours and receive 8 hours pay, at the regular rate, plus 25% per hour.
- Third Shift shall work 7 hours and receive 8 hours pay, at the regular rate, plus 30% per hour.

### **OVERTIME:**

The first 2 hours in excess of 8 per day, hours outside of the regular workday Monday through Friday that are not shift work, and the first 10 hours on Saturday, shall be paid at time and one-half the regular rate, inclusive of benefits. All hours in excess of 10 per day, and all hours on Sunday and holidays (except Labor Day) shall be paid at double the regular rate, inclusive of benefits. All hours on Labor Day shall be paid at triple the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Presidential Election Day, Thanksgiving Day and Christmas Day. Sunday holidays observed the following Monday.

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County - UNION

Craft: Heat & Frost Insulator - Asbestos Worker PREVAILING WAGE RATE

	09/20/22
Asbestos Helper	W36.89
Abatement	B24.92
	T61.81

Craft: Heat & Frost Insulator - Asbestos Worker APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES									
	SEE	OP.									
				OK .							

Ratio of Apprentices to Journeymen - 1:3

Craft: Heat & Frost Insulator - Asbestos Worker COMMENTS/NOTES

NOTE: These rates apply only to the removal of insulation materials/asbestos from mechanical systems, including containment erection and demolition, and placing material in appropriate containers.

The regular workday shall be 8 hours between 7:00 AM and 3:30 PM. In addition, the regular workday may also be 8 hours between 6:00 AM and 2:30 PM.

## SHIFT DIFFERENTIALS:

- Shift work must run for a minimum of 5 consecutive workdays.
- The second shift shall work 7.5 hours and receive 8 hours pay at the regular rate, plus 25% per hour.
- The third shift shall work 7 hours and receive 8 hours pay at the regular rate, plus 30% per hour.

OVERTIME: The first 2 hours in excess of 8 per day, hours outside of the regular workday Monday through Friday that are not shift work, and the first 10 hours on Saturday, shall be paid at time and one-half the regular rate, inclusive of benefits. All hours in excess of 10 per day, and all hours on Sunday and holidays (except Labor Day) shall be paid at double the regular rate, inclusive of benefits. All hours on Labor Day shall be paid at triple the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Presidential Election Day, Thanksgiving Day and Christmas Day. Sunday holidays observed the following Monday.

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County - UNION

Craft: Industrial Painter- Bridges PREVAILING WAGE RATE

	02/01/23	02/01/24	02/01/25	02/01/26
Foreman	W63.28	W0.00	W0.00	W0.00
	B34.92	B0.00	B0.00	B0.00
	T98.20	T100.20	T102.20	T104.20
General Foreman	W65.78	W0.00	W0.00	W0.00
	B34.92	B0.00	B0.00	B0.00
	T100.70	T102.70	T104.70	T106.70
Journeyman	W58.28	W0.00	W0.00	W0.00
	B34.92	B0.00	B0.00	B0.00
	T93.20	T95.20	T97.20	T99.20

Craft: Industrial Painter- Bridges APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES									
6 Months	50%	% 70% 90%									
Benefits	13.65	20.81	27.43								

### Ratio of Apprentices to Journeymen - 1:3

## Craft: Industrial Painter- Bridges

## COMMENTS/NOTES

These rates apply to: All bridges that span waterways, roadways, railways and canyons. All tunnels, overpasses, viaducts and all appurtenances.

## FOREMEN REQUIREMENTS:

- When there are 4 or more Painters on a job, 1 shall be designated a Foreman.
- When there are 15 or more Painters on a job, 1 shall be designated a General Foreman.

The regular workday shall consist of 8 hours between 7:00 AM and 5:30 PM.

## SHIFT DIFFERENTIALS:

- The second shift shall receive an additional 10% of the hourly rate, per hour, and the third shift shall receive an additional 15% of the hourly rate, per hour.

### **OVERTIME:**

- Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays and Sundays shall be paid at time and one-half the regular rate. All hours on holidays shall be paid at double the regular rate, except Veterans Day, which shall be paid at time and one-half the regular rate.
- During a regular work week schedule, Saturday may be used as a make-up day lost to inclement weather, paid at the regular rate.
- Four 10-hour days may be worked, at the regular rate, Monday through Thursday. When the four 10-hour day schedule is used, the 11th and 12th hours shall be paid at time and one-half the regular rate. After the 12th hour, a worker shall be paid at double the regular rate. Friday may be used as a make-up day lost to inclement weather, paid at the regular rate.

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<sup>\*</sup> Industrial Painters perform work on all industrial structures, such as bridges.

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RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans Day, Thanksgiving Day, Christmas Day. Saturday holiday observed the preceding Friday. Sunday holiday observed the following Monday.

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County - UNION

Craft: Industrial Painter- Structural Steel

#### PREVAILING WAGE RATE

	02/01/23	02/01/24	02/01/25	02/01/26	
Foreman	W52.02	W0.00	W0.00	W0.00	
	B32.57	B0.00	B0.00	B0.00	
	T84.59	T86.59	T88.59	T90.59	
General Foreman	W54.52	W0.00	W0.00	W0.00	
	B32.57	B0.00	B0.00	B0.00	
	T87.09	T89.09	T91.09	T93.09	
Journeyman	W47.02	W0.00	W0.00	W0.00	
	B32.57	B0.00	B0.00	B0.00	
	T79.59	T81.59	T83.59	T85.59	

Craft: Industrial Painter- Structural Steel

### APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES									
	SEE	E INDUST RIAL PAINTER BRIDGES									

### Ratio of Apprentices to Journeymen - 1:3

## **Craft: Industrial Painter- Structural Steel**

## **COMMENTS/NOTES**

\* Industrial Painters perform work on all industrial structures, such as water tanks, waste water facilitites, refineries, any structural steel work, etc.

These rates apply to: All work in power plants (any aspect). On steeples, on dams, on hangers, transformers, substations, on all open steel, in refineries, tank farms, water/sewerage treatment facilities and on pipelines.

## FOREMEN REQUIREMENTS:

- When there are 4 or more Painters on a job, 1 shall be designated a Foreman.
- When there are 15 or more Painters on a job, 1 shall be designated a General Foreman.

The regular workday shall consist of 8 hours between 7:00 AM and 5:30 PM.

## SHIFT DIFFERENTIALS:

- The second shift shall receive an additional 10% of the hourly rate, per hour, and the third shift shall receive an additional 15% of the hourly rate, per hour.

#### **OVERTIME:**

- Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays and Sundays shall be paid at time and one-half the regular rate. All hours on holidays shall be paid at double the regular rate, except for Veterans Day, which shall be paid at time and one-half the regular rate.
- During the regular work week schedule, Saturday may be used to make-up a day lost to inclement weather, paid at the regular rate.
- Four 10-hour days may be worked, at the regular rate, Monday through Thursday. When the four 10-hour day schedule is used, the 11th and 12th hours shall be paid at time and one-half the regular rate. After the 12th hour, a worker shall be paid at double the regular rate. Friday may be used as a make-up day lost to inclement weather, paid at the regular rate.

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RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans Day, Thanksgiving Day, Christmas Day. Saturday holiday observed the preceding Friday. Sunday holiday observed the following Monday.

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County - UNION

Craft: Industrial Painter-Water Tanks PREVAILING WAGE RATE

	02/01/23	02/01/24	02/01/25	02/01/26			
Foreman	W53.07	W0.00	W0.00	W0.00			
	B32.22	B0.00	B0.00	B0.00			
	T85.29	T87.29	T89.29	T91.29			
General Foreman	W55.57	W0.00	W0.00	W0.00			
	B32.22	B0.00	B0.00	B0.00			
	T87.79	T89.79	T91.79	T93.79			
Journeyman	W48.07	W0.00	W0.00	W0.00			
	B32.22	B0.00	B0.00	B0.00			
	T80.29	T82.29	T84.29	T86.29			

Craft: Industrial Painter-Water Tanks APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES									
6 Months	50%	% 70% 90%									
Benefits	13.65	20.81	27.43								

### Ratio of Apprentices to Journeymen - 1:3

## Craft: Industrial Painter- Water Tanks

## **COMMENTS/NOTES**

\* Industrial Painters perform work on all industrial structures, such as water tanks, waste water facilitites, refineries, any structural steel work, etc.

These rates apply to: All new and repaint water tanks (interior and exterior).

## FOREMEN REQUIREMENTS:

- When there are 4 or more Painters on a job, 1 shall be designated a Foreman.
- When there are 15 or more Painters on a job, 1 shall be designated a General Foreman.

The regular workday shall consist of 8 hours between 7:00 AM and 5:30 PM.

## SHIFT DIFFERENTIALS:

- The second shift shall receive an additional 10% of the hourly rate, per hour, and the third shift shall receive an additional 15% of the hourly rate, per hour.

## OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays and Sundays shall be paid at time and one-half the regular rate. All hours on holidays shall be paid at double the regular rate, except Veterans Day, which shall be paid at time and one-half the regular rate.
- During a regular work week schedule, Saturday may be used to make-up a day lost to inclement weather, paid at the regular rate.
- Four 10-hour days may be worked, at the regular rate, Monday through Thursday. When the four 10-hour day schedule is used, the 11th and 12th hours shall be paid at time and one-half the regular rate. After the 12th hour, a worker shall be paid at double the regular rate. Friday may be used as a make-up day lost to inclement weather, paid at the regular rate.

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RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans Day, Thanksgiving Day, Christmas Day. Saturday holiday observed the preceding Friday. Sunday holiday observed the following Monday.

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Craft: Ironworker PREVAILING WAGE RATE

	07/07/23
Rod /Fence Foreman	W49.89
	B49.67
	T99.56
Rod/Fence Journeyman	W46.89
	B49.67
	T96.56
Structural Foreman	W52.19
	B49.67
	T101.86
Structural Journeyman	W49.19
	B49.67
	T98.86

Craft: Ironworker APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES									
6 Months	50%	0% 60% Yearly 70% 80% 90%									
Benefits	same as	journeyma	amount								

## Ratio of Apprentices to Journeymen - 1:4

## Craft: Ironworker COMMENTS/NOTES

HAZARDOUS WASTE WORK: On hazardous waste removal work on a state or federally designated hazardous waste site where the Ironworker is required to wear Level A,B, or C personal protection: + \$3.00 per hour

The regular workday consists of 8 hours between 6:00 AM and 4:30 PM.

## FOREMAN REQUIREMENTS:

When there are 2 or more Ironworkers on a job, 1 shall be designated a Foreman.

## SHIFT DIFFERENTIALS:

- When a 2 shift schedule is established, the first, or day shift, shall be established on an 8 hour basis. The second shift shall be established on an 8 hour basis, and receive the regular rate plus 15%.
- When a three shift schedule is established, the first shift shall be established on an 8 hour basis, the second shift on a 7.5 hour basis, and the third shift on a 7 hour basis. The first shift shall receive the regular hourly rate, the second shift shall receive the regular rate plus 15%, and the third shift shall receive the regular rate plus 20%.
- When there is no day shift, and a second or third shift is established, it shall be established on an 8 hour basis.
- When an irregular shift is established for the Ironworker (Structural) classification, the rate shall be paid at time and one-half the regular rate, inclusive of benefits. When an irregular shift is established for the Rod/Fence classification, the shift shall be established on an 8 hour basis and receive the regular rate, plus 20%.

## **OVERTIME:**

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## County - UNION

- All hours in excess of 8 per day, or before or after an established shift that are 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 Sunday and holidays shall be paid at double the hourly rate, inclusive of benefits. Saturday may be used as a make-up day for a day lost to inclement weather. If Saturday is not a make-up day, all hours on Saturday shall be paid at time and one-half the hourly rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday to Thursday, at straight time. Friday may be 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, 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.

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County - UNION

Craft: Laborer - Asbestos & Hazardous Waste Removal

PREVAILING WAGE RATE

	08/09/22
Foreman	W41.38 B24.21 T65.59
Journeyman (Handler)	W36.78 B24.21 T60.99

Craft: Laborer - Asbestos & Hazardous Waste Removal

### APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
Yearly	22.07	25.75	29.42	33.10						
Benefits	22.06	for	all	intervals						

## Ratio of Apprentices to Journeymen - \*

## Craft: Laborer - Asbestos & Hazardous Waste Removal

## **COMMENTS/NOTES**

NOTE: These rates apply to work in connection with Asbestos, Radiation, Hazardous Waste, Lead, Chemical, Biological, Mold Remediation and Abatement.

The regular workday shall be 8 hours.

## **OVERTIME:**

- Hours in excess of 8 per day, Monday through Saturday, and all hours on Sunday and holidays shall be paid at time and one-half the regular rate.
- Benefits on ALL overtime hours shall be paid at straight time.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Easter, Memorial Day, July 4th, Labor Day, Veterans Day, Thanksgiving Day, Christmas Day. (Holidays start at 12:00 am).

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<sup>\*</sup> Ratio of apprentices to journeymen shall not be more than one apprentice for the first journeyman and no more than (1) apprentice for each additional three (3) journeymen.

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Craft: Laborer - Building PREVAILING WAGE RATE

	06/01/23
Class A Journeyman	W38.00
	B32.17
	T70.17
Class B Journeyman	W37.00
	B32.17
	T69.17
Class C Journeyman	W31.45
	B32.17
	T63.62
Foreman	W42.75
	B32.17
	T74.92
General Foreman	W47.50
	B32.17
	T79.67

Craft: Laborer - Building APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
6 Months	60%	70%	80%	90%	of Class B	wage rate				
Benefit	28.92	28.92	28.92	28.92						

## Ratio of Apprentices to Journeymen - \*

## Craft: Laborer - Building COMMENTS/NOTES

CLASS A: Specialist laborer including mason tender or concrete pour crew; scaffold builder (scaffolds up to 14 feet in height); operator of forklifts, Bobcats (or equivalent machinery), jack hammers, tampers, motorized tampers and compactors, vibrators, street cleaning machines, hydro demolition equipment, riding motor buggies, conveyors, burners; and nozzlemen on qunite work.

CLASS B: Basic laborer - includes all laborer work not listed in Class A or Class C.

CLASS C: Janitorial-type light clean-up work associated with the TURNOVER of a project, or part of a project, to the owner. All other clean-up work is Class B.

The regular workday shall be 8 hours between 6:00 AM and 6:00 PM.

### SHIFT DIFFERENTIALS:

- Shift work must run for a minimum of 5 consecutive workdays.
- When a 2-shift schedule is worked, including a day shift, both shifts shall be established on the basis of 8 hours pay for 8 hours worked. The second shift shall receive the regular rate plus an additional 10%.
- When a 3-shift schedule is worked, the day shift shall be established on the basis of 8 hours pay for 8 hours worked, the second shift shall be established on the basis of 8 hours pay for 7.5 hours worked, and the third shift shall be established

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<sup>\*</sup> Ratio of apprentices to journeymen shall not be more than one apprentice for the first journeyman and no more than (1) apprentice for each additional three (3) journeymen.

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on the basis of 8 hours pay for 7 hours worked. The day shift shall receive the regular rate, the second shift shall receive the regular rate plus an additional 10%, and the third shift shall receive the regular rate plus an additional 15%.

- When a second or third shift is worked with no day shift, the second or third shift shall be established on the basis of 8 hours pay for 8 hours worked. The second shift shall receive the regular rate plus an additional 10%, and the third shift shall receive the regular rate plus an additional 15%.
- When an irregular shift must be established this shift shall receive the regular rate plus an additional 10%.

### **OVERTIME:**

- Hours in excess of 8 per day, or outside the regular workday that are not shift work, Monday through Friday, and all hours on Saturdays shall be paid at time and one-half the regular rate. Saturday may be used as a make-up day (paid at straight time) for a day lost to inclement weather, or for a holiday that is observed during the work week, Monday through Friday. All hours on Sundays and holidays shall be paid at double the regular rate.
- Four 10-hour days may be worked Monday to Thursday, at straight time, with Friday used 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 regular rate.
- Benefits on ALL overtime hours shall be paid at time and one-half.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday.

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County - UNION

Craft: Laborer - Heavy & General PR	EVAILING WAGE RATE
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Rates are located in the "Statewide" rate package

Craft: Laborer - Heavy & General

## APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
1000 Hours	60%	70%	80%	90%						
Benefit	23.98	for	all	intervals						

Ratio of Apprentices to Journeymen - \*

Craft: Laborer - Heavy & General

**COMMENTS/NOTES** 

Heavy & General Laborer rates are located in the "Statewide" rate package.

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<sup>\*</sup> No more than 1 apprentice for the first journeyman and no more than 1 apprentice for each additional 3 journeymen.

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Craft: Laborer-Residential and Modular Construction

PREVAILING WAGE RATE

	04/01/23
* Skilled Tradesman (only	W27.90
applies to Modular	B5.45
Construction)	T33.35
Foreman (person directing	W31.90
crew, regardless of his	B5.45
skill classification)	T37.35
Laborer (for single family	W17.85
and stand-alone duplex	B2.95
owned by single owner)	T20.80
Residential and Modular	W23.90
Construction Laborer	B5.45
	T29.35

Craft: Laborer-Residential and Modular Construction

#### APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
As shown	800 hours	00 hours   600 hours   600 hours								
wage & benefits	70%	80%	90%							

Ratio of Apprentices to Journeymen-

One (1) apprentice shall be allowed for the first journeyman on site and no more than one (1) additional apprentice for each additional three (3) journeymen on site.

Craft: Laborer-Residential and Modular Construction

**COMMENTS/NOTES** 

## \* SKILLED TRADESMAN-

any worker doing work not typically done by a Building Laborer. Some examples are installing interior doors, sheet rock, hooking up appliances, installing light fixtures, installing railing systems, etc. Please note where local building codes require that certain work be performed under the supervision of a licensed tradesman (i.e. Plumber, Electrician, etc.) Laborers shall work under such supervision.

RESIDENTIAL CONSTRUCTION- All residential construction (not commercial), single-family, stand-alone duplex houses, townhouses and multi-family buildings of not more than four (4) floors. Each housing unit must be fully and independently functional; each housing unit must have its own kitchen and bathroom. The definition includes all incidental items such as site work, parking areas, utilities, streets and sidewalks. Please note the construction must be Residential in nature. A First Floor at or below grade may contain commercial space not to exceed 50% square footage of the floor; at least 50% of the First Floor must contain living accommodations or related nonresidential uses (e.g. laundry space, recreation/hobby rooms, and/or corridor space). Basement stories below grade used for storage, parking, mechanical systems/equipment, etc., are considered basement stories which are not used in determining the building's height even if used for storage purposes. In addition, barracks and dormitories are not considered residential projects.

MODULAR RESIDENTIAL CONSTRUCTION- all aspects of modular residential construction (not commercial) at the site of installation of structures of no more than four (4) stories, including all excavation and site preparation, footings and

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foundation systems whether poured on-site or prefabricated, all underground waterproofing, underground utilities, concrete slabs, sidewalks, driveways, paving, hardscape and landscaping. Please note the construction must be Residential as defined above. All work performed by the Set Crew (the crew of workers who set the modular boxes on the foundation), including the rigging, setting, attaching and assembly of all modules and structural members, preparation of the foundation to accept modules, such as sill plates, connection of all in-module and under-module connections including, but not limited to, plumbing, electrical, HVAC, fire suppression, CATS, telephone, television/internet, and fiber optic, the building or installation of any porches or decks regardless of material or method of construction, the on-site installation of, or completion of any roof system, doors, windows and fenestrations, including flashing, gutter and soffit systems, waterproofing, insulation and interior and exterior trim work, and painting. Please note that modular construction does not include on-site stick built construction, tip up construction or panel built construction.

The regular workday shall be 8 hours between 6:00 AM and 6:00 PM.

### **OVERTIME:**

Hours worked in excess of 8 per day/40 per week, Monday through Saturday, and all hours worked on Sunday and holidays shall be paid at time and one-half the hourly rate.

### RECOGNIZED HOILDAYS:

New Year's Day, Martin Luther King Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day and Christmas Day.

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Craft: Millwright PREVAILING WAGE RATE

	05/04/23
Foreman	W64.35 B38.57 T102.92
Journeyman	W55.96 B33.62 T89.58

Craft: Millwright APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
6 Months	40%	55%	65%	80%	90%					
Benefits	59% of	Appren	tice	Wage	Rate	for all	intervals	+ \$0.61		

Ratio of Apprentices to Journeymen - 1:3

Craft: Millwright COMMENTS/NOTES

## FOREMAN REQUIREMENTS:

- When there are 2 or more Millwrights on a job, 1 shall be designated as a Foreman.

The regular workday shall consist of 8 hours, starting between 6:00 AM and 9:00 AM.

## SHIFT DIFFERENTIALS:

- When a 2 shift schedule (including a day shift) is established, the day shift shall be established on an 8 hour basis. The second shift shall be established on an 8 hour basis, and receive the regular rate plus 15%, inclusive of benefits.
- When a three shift schedule is established, the first shift shall be established on an 8 hour basis, the second shift on a 7.5 hour basis, and the third shift on a 7 hour basis. The first shift shall receive the regular hourly rate, the second shift shall receive the regular rate plus 15% and the third shift shall receive the regular rate plus 20%, inclusive of benefits.
- When there is no day shift, and a second or third shift is established, it shall be established on an 8 hour basis. The second shift shall receive the regular rate plus 15% and the third shift shall receive the regular rate plus 20%, inclusive of benefits.
- When an irregular shift must be established, this shift shall receive the regular rate plus 15%, inclusive of benefits.

## OVERTIME:

- All hours in excess of 8 per day, or before or after an established shift that are not shift work, and all hours on Saturdays shall be paid at time and one-half the hourly 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 be worked, Monday to Thursday, at straight time. Friday may be used as a make-up day for a day lost due 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, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays will be observed the following Monday. Veterans' Day may be substituted for the day after Thanksgiving.

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County - UNION

Craft:	Operating Engineer	PREVAILING WAGE RATE

Rates are located in the "Statewide" rate package

Craft: Operating Engineer APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
Yearly	60%	9% 70% 80% 90%								

Ratio of Apprentices to Journeymen - \*

Craft: Operating Engineer COMMENTS/NOTES

Operating Engineer rates are located in the "Statewide" rate package.

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<sup>\* 1</sup> apprentice for each piece of heavy equipment. At least 10 pieces of heavy equipment or a minimum of 5 Operating Engineers must be on site.

County - UNION

Craft:	Operating Engineer - Field Engineer	PREVAILING WAGE RATE

Rates are located in the "Statewide" rate package

**Craft: Operating Engineer - Field Engineer** 

## APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES										
Yearly	70%	75%	of Rod/	Chainman	Wage							
Yearly			80%	90%	Transit/	Instrument	man	Wage				

**COMMENTS/NOTES** 

Ratio of Apprentices to Journeymen - \*

Craft: Operating Engineer - Field Engineer

Operating Engineer - Field Engineer rates are located in the "Statewide" rate package.

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<sup>\*</sup> No more than 1 Field Engineer Apprentice per Survey Crew.

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Craft: Painter - Line Striping PREVAILING WAGE RATE

	12/07/22
Apprentice (1st year)	W29.15
	B14.75
	T43.90
Apprentice (2nd year)	W33.25
	B25.70
	T58.95
Foreman (Charge Person)	W42.05
	B26.48
	T68.53
Journeyman 1 (at least 1	W37.28
year of working exp. as a	B26.48
journeyman)	T63.76
Journeyman 2 (at least 2	W41.05
years of working exp. as a	B26.48
journeyman)	T67.53

Craft: Painter - Line Striping COMMENTS/NOTES

## OVERTIME:

Hours in excess of 8 per day, Monday through Saturday, and all hours on Sundays and holidays 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, Veterans Day, Thanksgiving Day and Christmas Day. Veterans Day may be substituted for the day after Thanksgiving.

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County - UNION

Craft: Paperhanger PREVAILING WAGE RATE

	05/02/23
Foreman	W52.82 B29.51 T82.33
Journeyman	W48.02 B29.51 T77.53

Craft: Paperhanger APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES									
	SEE	COMME	CIAL	PAINTER							
		K									

Craft: Paperhanger COMMENTS/NOTES

## FOREMEN REQUIREMENTS:

- When there are 4 or more Paperhangers on a job, 1 shall be designated a Foreman.

The regular workday shall consist of 8 hours between 7:00 AM and 5:30 PM.

## SHIFT DIFFERENTIALS:

- The second shift shall receive an additional 10% of the hourly rate, per hour, and the third shift shall receive an additional 15% of the hourly rate, per hour.

## **OVERTIME:**

- Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays 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.
- Saturday or Sunday may be used to make up a day lost to inclement weather, at straight time.
- Four 10-hour days may be worked, at straight time, Monday through Friday.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day, July 4th, Labor Day, General Election Day, Veterans Day, Thanksgiving Day, Christmas Day

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County - UNION

Craft: Pipefitter PREVAILING WAGE RATE

	05/02/23
Foreman	W58.68 B49.97 T108.65
Journeyman	W54.43 B46.36 T100.79

Craft: Pipefitter APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES										
Yearly	35%	45%	55%	65%	75%							
Benefit	26.80	29.79	32.79	35.78	38.78							

### Ratio of Apprentices to Journeymen - 1:5

Craft: Pipefitter COMMENTS/NOTES

## FOREMAN REQUIREMENTS:

- When there are 2 or more Journeyman Pipefitters on a job, 1 shall be designated a Foreman.
- There shall be a Foreman for every 8 Journeyman Pipefitters on a job.

The regular workday shall be 8 hours between 7:00 AM and 3:30 PM.

## SHIFT DIFFERENTIAL:

- 2nd Shift (3:30 PM-11:30 PM) shall work 7.5 hours and receive 8 hours pay at the regular rate, plus 10% per hour on the total rate.
- 3rd Shift (11:30 PM-7:00 AM) shall work 7 hours and receive 8 hours pay at the regular rate, plus 15% per hour on the total rate.

### **OVERTIME:**

- All hours worked in excess of 8 per day, Monday through Friday, and all hours worked on Saturday, shall be paid at time and one-half, inclusive of benefits. All hours on Sunday and holidays shall be paid at double time, inclusive of benefits.
- By mutual agreement, employees may work four 10-hour days, Monday to Thursday, at straight time rate. Friday may be used as a make-up day for a day lost to inclement weather, and may be paid at straight time. If Friday is not a make-up day, the first 8 hours shall be paid at time and one-half, inclusive of benefits; hours in excess of 8 shall be paid at double time, inclusive of benefits.

## SHIFT DIFFERENTIAL (Maintenance Work Only):

- 2nd Shift (3:30 PM-11:30 PM) shall work 7.5 hours and receive 8 hours pay at the regular rate, plus 10% per hour on the total rate.
- 3rd Shift (11:30 PM-7:00 AM) shall work 7 hours and receive 8 hours pay at the regular rate, plus 15% per hour on the total rate.

## OVERTIME (Maintenance Work Only):

- All hours in excess of 8 per day, Monday through Saturday, shall be paid at time and one-half, inclusive of benefits. All

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## **County - UNION**

hours on Sundays and holidays shall be paid at double time, inclusive of benefits.

NOTE: Maintenance work is work to repair, restore, or improve the efficiency of existing facilities. This does NOT apply to ANY new construction.

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 are observed the following Monday.

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**County - UNION** 

Craft:	Plasterer	PREVAILING WAGE RATE

See Bricklayer, Stone Mason Rates

Craft: Plasterer COMMENTS/NOTES

\*\*\*See BRICKLAYER, STONE MASON Rates\*\*\*

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County - UNION

Craft: Plumber PREVAILING WAGE RATE

	05/02/23
Foreman	W64.25
	B41.62
	T105.87
General Foreman	W68.41
	B41.62
	T110.03
Journeyman	W59.49
	B41.62
	T101.11
I .	1

Craft: Plumber APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES										
Yearly	30%	45%	55%	65%	75%							
Benefits	17.09	23.48	25.72	27.96	30.19							

### Ratio of Apprentices to Journeymen - \*

#### Craft: Plumber COMMENTS/NOTES

### FOREMAN REQUIREMENTS:

- On any job having 2 or more Plumbers, 1 must be designated a Foreman.
- On any job having 9 or more Plumbers, 2 shall be designated as Foremen.

The regular workday shall consist of 8 hours between 7:00 AM and 4:30 PM.

### SHIFT DIFFERENTIALS:

- Shift work must continue for a minimum of 5 consecutive workdays.
- When two shifts are worked, the second shift shall work 7.5 hours and receive 8 hours pay, at a rate equal to the hourly rate plus 10%, inclusive of benefits.
- When a third shift is worked, the third shift shall work 7 hours and receive 8 hours pay, at a rate equal to the hourly rate plus 15%, inclusive of benefits.

## **OVERTIME:**

- All hours in excess of 8 per day, or before of after the regular workday that are not shift work, Monday through Friday, and all hours on Saturday, shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sunday and holidays, shall be paid at double the hourly rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday to Thursday, at straight time. Friday may be used as a make-up day for a day lost due to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half, 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 will be observed the following Monday.

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<sup>\*</sup> Employers may employ 1 apprentice on any job where 1 or 2 journeymen are employed. Thereafter, 1 apprentice may be employed for every 4 journeymen.

County - UNION

Craft: Roofer PREVAILING WAGE RATE

	06/13/23
Foreman	W46.77 B30.81 T77.58
Journeyman	W43.77 B30.81 T74.58

Craft: Roofer APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES										
6 Months	17.50	21.88	26.26	28.45	30.63	32.83	35.01	39.39				
Benefits	2.16	2.16	27.31	27.31	27.31	27.31	27.31	27.31				

## Ratio of Apprentices to Journeymen - \*

- \* A) For roofing jobs that are of the 1 or single ply nature: 1:2 or fraction thereof
- B) For roofing jobs on new built up roofs: 1:3 or fraction thereof
- C) For roofing jobs that are of a tear-off nature: 1:2 or fraction thereof
- D) For roofing jobs {not requiring complete removal of existing systems, installation done over existing roof}: 1:3 or

fraction thereof

Craft: Roofer COMMENTS/NOTES

Pitch: +.50 per hour

Mop Man: +.30 per hour

The regular workday consists of 8 hours between 8:00 AM and 4:30 PM.

## **OVERTIME:**

Hours in excess of 8 per day, or before or after the regular workday, Monday through Friday, and all hours on Saturdays, Sundays, and holidays shall be paid at time and one-half the regular rate.

RECOGNIZED HOLIDAYS: New Year's Day, Good Friday, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day.

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Craft: Sheet Metal Sign Installation PREVAILING WAGE RATE

	06/13/23
Foreman	W42.32 B41.76 T84.08
Journeyman	W40.07 B41.76 T81.83

Craft: Sheet Metal Sign Installation APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES										
1000 hours	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%		
Benefits	13.85	15.77	17.72	19.69	22.11	24.09	26.07	28.06	30.04	32.02		

Ratio of Apprentices to Journeymen - 1:3

Craft: Sheet Metal Sign Installation COMMENTS/NOTES

### FOREMAN REQUIREMENT:

When there are 6 or more Sheet Metal Sign Installers on a job, 1 shall be designated a Foreman.

The regular workday consists of 8 hours, between 7:00 AM and 3:30 PM.

### OVERTIME:

Hours before or after the regular workday, Monday though Friday, and all hours worked on Saturday shall be paid at time and one-half the hourly rate. All hours on Sunday and holidays shall be paid at double the hourly rate.

Four(4) 10 hour days may be worked, Monday through Friday, at straight time, for projects lasting at least one week in duration. The fifth day may be used as a make-up day at straight time for a day lost due to inclement weather. However, if the fifth day is not a make-up day, all hours worked will be paid at time and one-half the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Good Friday, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day and the day after, Christmas Day. Saturday holidays observed the preceding Friday, Sunday holidays observed the following Monday.

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County - UNION

Craft: Sheet Metal Worker PREVAILING WAGE RATE

	07/19/23
Foreman	W58.90
	B49.52
	T108.42
General Foreman	W59.90
	B49.52
	T109.42
Journeyman	W55.40
	B49.52
	T104.92

Craft: Sheet Metal Worker APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES									
Yearly	35%	45%	55%	65%	of	Journey	man	Wage	Rate		
Benefit	35%	45%	55%	65%	of	Journey	man	Benefit	Rate		

### Ratio of Apprentices to Journeymen - 1:4

Craft: Sheet Metal Worker COMMENTS/NOTES

### FOREMAN REQUIREMENTS:

- When there are 2 or more Sheet Metal Workers on a project, 1 must be designated a Foreman.
- When there are 17 or more Sheet Metal Workers on a project, 1 must be designated a General Foreman.
- When there is only 1 Sheet Metal Worker (1 Journeyman) on a project, he/she shall receive \$1.00 more than the regular Journeyman's rate.

The regular workday is 8 hours between 7:00 AM and 4:30 PM.

### SHIFT DIFFERENTIAL:

- 2nd Shift (3:30 PM 12:00 AM): +17% of regular hourly rate
- Shift work must run for a minimum of 5 consecutive workdays.

### **OVERTIME:**

- Hours in excess of 8 per day, or before or after the regular workday, that are not shift work, and the first 10 hours on Saturdays shall be paid at time and one-half of the regular rate, inclusive of benefits. Hours in excess of 10 per day on Saturday, and all hours on Sundays and holidays shall be at double the regular rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday through Friday, at straight time, with hours in excess of 10 per day, and hours in excess of 40 per week paid at the overtime rates listed above.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Good Friday, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays will be observed the following Monday.

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County - UNION

Craft: Sprinkler Fitter PREVAILING WAGE RATE

1/23
N71.62
B37.55
109.17
N75.17
B37.55
112.72
V67.12
B37.55
104.67

Craft: Sprinkler Fitter APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES									
1000 Hours	80% 85%							85%			
Benefits							Intervals	9 to 10	Jourymn	Ben.	

Craft: Sprinkler Fitter COMMENTS/NOTES

Apprentice rate schedule for those apprentices registered as of 7-1-13:

Interval Period and Rates

Apprentice rate schedule for those apprentices registered as of 7-1-22:

Interval Period and Rates

1000 Hrs. 30% 35% 40% 45% 50% 55% 60% 70% 85% 95% Ben. 13.85 13.85 29.30 29.30 29.30 Intervals 7-10 Journy. Ben.

The regular workday consists of 8 consecutive hours between 6:00 AM and 4:30 PM.

### FOREMAN REQUIREMENTS:

- The first Sprinkler Fitter on the job must be designated a Foreman.
- On any job having 12 or more Sprinkler Fitters, one must be designated a General Foreman.

### SHIFT DIFFERENTIALS:

- Shift work must run for a minimum of 2 consecutive workdays.
- 2nd and 3rd shift shall receive an additional 15% of the regular rate, per hour.
- Any "off hours" shift starting at 8:00 PM or later shall receive an additional 25% of the regular rate, per hour.

### **OVERTIME:**

The first 2 hours in excess of 8 per day, after the regular workday that are not shift work, Monday through Friday, shall be paid at time and one-half the regular rate. Hours worked in excess of 10 per day, Monday through Friday, and all hours on Saturday, Sunday and holidays, shall be paid double the regular rate.

Four 10 hour days may be worked, Monday through Friday, at straight-time.

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**County - UNION** 

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans Day, Thanksgiving Day, Christmas Day.

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County - UNION

Craft: Tile Finisher-Marble PREVAILING WAGE RATE

	07/07/23
Finisher	W49.65
	B36.82
	T86.47

Craft: Tile Finisher-Marble APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES									
750 Hours	40%	60%	65%	70%	75%	85%	95%				
Benefits	Interval 1	thru 5 =	75% of	jyrnm. ben	rate	Interval 6	thru 7 =	full jyrnm	benefit	rate	

### Ratio of Apprentices to Journeymen - 1:4

Craft: Tile Finisher-Marble COMMENTS/NOTES

### OVERTIME:

Hours in excess of 7 per day, Monday through Friday, and the first 7 hours on Saturdays shall be paid at time and one half the regular rate, inclusive of benefits. Hours in excess of 7 on Saturdays and all hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Good Friday, Memorial Day, July 4th, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day and the day after, Christmas Day. Sunday holidays observed the following Monday.

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County - UNION

Craft: Tile Setter - Ceramic PREVAILING WAGE RATE

	06/13/23
Finisher	W48.36 B32.52 T80.88
Setter	W62.98 B35.75 T98.73

Craft: Tile Setter - Ceramic APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES										
750 Hours	35%	40%	50%	55%	60%	65%	70%	75%	80%	90%		

Ratio of Apprentices to Journeymen - 1:4

Craft: Tile Setter - Ceramic COMMENTS/NOTES

### **OVERTIME**:

Hours in excess of 7 per day, and the first 10 hours on Saturdays shall be paid at time and one-half the hourly rate. All hours on Saturdays after 10 hours shall be paid double the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day, Christmas Day.

8/9/2023 Page 67 of 73

County - UNION

Craft: Tile Setter - Marble PREVAILING WAGE RATE

	07/07/23
Tile Setter	W63.12
	B39.49
	T102.61

Craft: Tile Setter - Marble APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES									
750 Hours	40%	40% 60% 65% 70% 75% 85% 95%									
Benefits	Interval 1	thru 5 =	75% of	jyrnm. ben	rate	Interval 6	thru 7 =	full jyrnm	benefit	rate	

### Ratio of Apprentices to Journeymen - 1:4

Craft: Tile Setter - Marble COMMENTS/NOTES

### **OVERTIME:**

Hours in excess of 7 per day, Monday through Friday, and the first 7 hours on Saturdays shall be paid at time and one-half the regular rate, inclusive of benefits. Hours in excess of 7 on Saturdays, and all hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Good Friday, Memorial Day, July 4th, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day and the day after, Christmas Day. Sunday holidays observed the following Monday.

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County - UNION

Craft: Tile Setter - Mosaic & Terrazzo PREVAILING WAGE RATE

	08/09/23
Grinder or Assistant	W59.04
	B39.69
	T98.73
Mechanic	W60.65
	B39.70
	T100.35
Terrazzo Resinous	W50.47
Worker	B32.37
	T82.84

Craft: Tile Setter - Mosaic & Terrazzo APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
750 Hours	50%	55%	60%	65%	70%	75%	85%	95%	100%	

Ratio of Apprentices to Journeymen - 1:5

Craft: Tile Setter - Mosaic & Terrazzo COMMENTS/NOTES

APPRENTICE RATE SCHEDULE FOR THOSE APPRENTICES ENTERING PROGRAM AFTER 7-1-17:

INTERVAL PERIOD AND RATES

1500 Hours 35% 45% 60% 70% 80% 90% 100%

The regular workday consists of 7 hours, between 8:00 AM and 3:30 PM.

### **OVERTIME:**

- Hours in excess of 7 per day, or before or after the regular workday, Monday through Friday, 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.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Good Friday, Monday after Easter, Memorial Day, July 4th, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day and the day after, Christmas Day. Sunday holidays observed the following Monday.

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**County - UNION** 

Craft: Truck Driver PREVAILING WAGE RATE

	05/01/23	05/01/24
Bucket, Utility,	W43.56	W45.41
Pick-up, Fuel	B41.78	B43.28
Delivery trucks	T85.34	T88.69
Dump truck, Asphalt	W43.56	W45.41
Distributor, Tack	B41.78	B43.28
Spreader	T85.34	T88.69
Euclid-type vehicles	W43.66	W45.51
(large, off-road	B41.78	B43.28
equipment)	T85.44	T88.79
Helper on Asphalt	W43.56	W45.41
Distributor truck	B41.78	B43.28
	T85.34	T88.69
Low Boy Driver	W45.16	W47.01
-	B41.78	B43.28
	T86.94	T90.29
Slurry Seal,	W43.56	W45.41
Seeding/Fertilizing/	B41.78	B43.28
Mulching truck	T85.34	T88.69
Straight 3-axle truck	W43.56	W45.41
	B41.78	B43.28
	T85.34	T88.69
Tractor Trailer	W43.66	W45.51
(all types)	B41.78	B43.28
	T85.44	T88.79
Vacuum or Vac-All	W43.56	W45.41
truck (entire unit)	B41.78	B43.28
	T85.34	T88.69
Winch Trailer	W43.76	W45.61
	B41.78	B43.28
	T85.54	T88.89

Craft: Truck Driver COMMENTS/NOTES

### **BLENDED RATE:**

When a truck driver is performing work on the site and also serving as a material delivery driver, the driver shall be paid a "blended rate" which shall be 80% of the above-listed wage rates, plus the full benefit rate. This rate shall be used when the driver "round robins" for a minimum of 6 hours during the work day.

### HAZARDOUS WASTE REMOVAL:

- On hazardous waste removal work on a State designated hazardous waste site where the driver is in direct contact with hazardous materials and when personal protective equipment is required for respiratory, skin, and eye protection, the driver shall receive an additional \$3.00 per hour (with or without protective gear).
- A hazardous waste related certified worker at a designated hazardous waste site who is not working in a zone requiring level A, B or C personal protection shall receive an additional \$1.00 per hour.

Page 70 of 73

County - UNION

TRUCK FOREMAN: \$.75 cents per hour above regular rate. Overtime shall be increased accordingly.

The regular workday shall be 8 hours, starting between 6:00 AM and 8:00 AM.

### SHIFT DIFFERENTIAL:

- Shifts starting at 4:00 PM (2nd Shift): + \$3.00 per hour.
- Shifts starting at 12:00 AM (midnight/3rd Shift): time and one-half the hourly rate.
- Shifts starting at a time other than from 6:00 AM to 8:00 AM, when such hours are mandated by the project owner: + \$3.00 per hour.

### **OVERTIME:**

- Hours in excess of 8 per day, or before or after 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 hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Employees may work four 10-hour days at straight time, Monday through Thursday, with Friday used as a make-up day for a lost day. If Friday is not a make-up day, then all hours on Friday shall be paid at time and one-half the hourly rate.
- -Benefits on overtime shall be \$40.03.
- As of 5-1-23, benefits on overtime shall be \$41.53.
- As of 5-1-24, benefits on overtime shall be \$43.03.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day (Decoration Day), July 4th, Labor Day, Veterans Day, Thanksgiving Day, Christmas Day. Sunday holidays will be observed the following Monday. The day after Thanksgiving may be substituted for Veteran's Day.

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County - UNION

### Craft: Truck Driver-Material Delivery Driver

### PREVAILING WAGE RATE

	05/01/23	05/01/24
Driver	W35.87	W37.62
	B41.78	B43.28
	T77.65	T80.90

### Craft: Truck Driver-Material Delivery Driver COMMENTS/NOTES

#### **BLENDED RATE:**

When a truck driver is performing work on the site and also serving as a material delivery driver, the driver shall be paid a "blended rate". See the "Truck Driver" craft for the blended rates.

Truck Foreman/Shop Steward: +\$0.25 per hour

### SHIFT DIFFERENTIALS:

- 2nd Shift shall receive an additional \$0.50 per hour
- 3rd Shift shall receive time and one-half the hourly rate.

### **OVERTIME:**

- Hours in excess of 8 per day, or before or after the regular workday that are not shift work, Monday through Friday, and all hours on Saturday shall be paid at time and one-half the hourly rate. All hours on Sunday and holidays shall be paid at double the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day (Decoration Day), July 4th, Labor Day, Veterans Day, Thanksgiving Day, Christmas Day. Sunday holidays will be observed the following Monday. The day after Thanksgiving may be substituted for Veterans Day.

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**County - UNION** 

Craft:	Welder	PREVAILING WAGE RATE			
	Welder				
Craft:	Welder	COMMENTS/NOTES			
Welder	Nelders rate is the same as the craft to which the welding is incidental.				

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# STATEWIDE RATES

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

### **OPERATING ENGINEERS** Rates Expiration Date:

{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 5:30 PM.

### SHIFT DIFFERENTIALS:

- Shift work must be established for 5 consecutive workdays.
- Any work started outside of the allowed start time, 6:00 AM to 9:00 AM, except for \* tidal work, shall be considered an irregular shift and paid at straight time, plus 15% for the first eight hours, inclusive of benefits.
- \* FOR TIDAL WORK- a contractor can start their job according to tide schedules (tide schedules are the various high and low tides related to this work), providing the eight hour shift is completed between the hours of 5:00 AM and 6:30 PM.
- All time worked in excess of an established shift (an established shift is a shift that is determined at the time of the bid) shall be paid at the applicable overtime rate. When a portion of an established shift works into Saturday, Sunday or a holiday, that time worked shall be paid at the established shift rate.
- When working with other trades who receive a higher irregular shift differential, these employees shall also receive the higher differential 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 Saturday shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sunday 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 Veterans Day.

For projects bid after April 1, 2020, on hazardous waste removal work of any kind, including a state or federally designated site, where the operating engineer is required to wear level A, B, or C personal protection, the operating engineer shall receive an hourly wage rate of his regular hourly wage plus \$5.00 per hour.

- An operating engineer working at a hazardous waste removal project or site at a task requiring hazardous waste related certification, but who is not working in a zone requiring level A, B, or C personal protection, shall receive an hourly wage rate of his regular rate plus \$1.00 per hour.

Hydro-Blaster

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

OPERATING ENGINEERS Rates Expiration Date :
Effective Dates:
07/01/2023
Rate Fringe Total
57.63 37.65 95.28
CLASSIFICATIONS:
A-Frame
Backhoe (combination)
Boom Attachment on loaders (Except pipehook)
Boring & Drilling Machine
Brush Chopper, Brush Shredder, Tree Shredder, Tree Shearer
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: Outside Material Tower 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) * receives an additional \$1.00 per hour on 100 ft. up to 199 ft. tota height, and an additional \$2.00 per hour on 200 ft. and over total height.
Hydraulic Crane (10 tons & under)
Hydraulic Dredge
Hydro-Axe

07/07/2023

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

### PREVAILING WAGE RATE DETERMINATION ENTIRE STATE

OPERATING ENGINEERS	Rates Expiration Date:

**Effective Dates:** 

07/01/2023

Total Rate Fringe 37.65 57.63 95.28

### **CLASSIFICATIONS:**

Jack (screw, air hydraulic, power-operated unit, or console type, Except hand jack or pile load test type)

Log Skidder

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)

Whiphammer

Winch Truck (hoisting)

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

## ENTIRE STATE PREVAILING WAGE RATE DETERMINATION

OPERATING ENGINEERS Rates Expiration Date :

07/01/2023

Rate Fringe Total 55.72 37.65 93.37

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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 (Hetzel, Rexomatic & similar types)

Concrete Vibrator

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

## OPERATING ENGINEERS Rates Expiration Date :

Tice		ъ.	
Effect	tive	Da	tes:

Ladder (motorized)

Effective Date	es:	
	07/01/2023	
Rate 55.72	Fringe 37.65	Total 93.37
CLASSIFICA		
Conveyors - 1	under 125 feet	
Crane Signalı	man	
Crushing Ma	chine	
Directional B	oring Machine	
Ditching Mac	chine - Small (Dite	chwitch, Vermeer or similar types)
Dope Pot - M	Iechanical (with or	r without pump)
Dumpster		
Elevator		
Fireman		
Fork Lift (Ec	onomobile, Lull &	z similar types)
		d over but less than 2 cu. yds.)
Generator (2		
Giraffe Grind		
	ydraulic Jacking T	railer
Grader & Mo		Tallel
	nor Patrois	
Grout Pump		
	hine (Excluding n	
Hammer - Vi	bratory (in conjun	ction with generator)
Heavy Equip	ment Robotics - O	perator/Technician
Hoist (roof, to	ugger, aerial platfo	orm hoist, house car)
Hopper		
Hopper Door	s (power operated	

07/07/2023

Tamrock Drill

Transfer Machines

Tractor

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

ENTIRE STA	ГЕ	PREVAILING WAGE RATE DETERMINATION	
<b>OPERATING</b>	<b>ENGINEERS</b>	Rates Expiration Date :	
Effective Dat	es:		
	07/01/2023		
Rate	Fringe	Total	
55.72	37.65	93.37	
CLASSIFIC	ATIONS:		
Laddervator			
Locomotive	(Dinky-type)		
Maintenance	e Utility Man		
Master Envi	ronmental Maint	enance Technician	
Mechanic			
Mixer (Exce	ept paving mixers	)	
Pavement Bride-on typ		unted or small self-propelled	
Pavement B	reaker - maintena	ance of compressor or hydraulic unit	
Pipe Bendin	g Machine (powe	er)	
Pitch Pump			
Plaster Pump	p (regardless of s	ize)	
Post Hole D	igger (post pound	der, auger)	
Rod Bending	g Machines		
Roller (black	( top)		
Scale (powe	r)		
Seamen Pulv	verizing Mixer		
Shoulder Wi	dener		
Silo			
Skimmmer I	Machine (boom t	ype)	
Steel Cutting	g Machine (servi	ce & maintenance)	

07/07/2023

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# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

### **OPERATING ENGINEERS** Rates Expiration Date:

**Effective Dates:** 

07/01/2023

Rate Fringe Total 55.72 37.65 93.37

### **CLASSIFICATIONS:**

**Tug Captains** 

Tug Master (Power Boats)

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:**

### 07/01/2023

Rate Fringe Total 50.38 37.65 88.03

### **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

Tire Repair & Maintenance

### **Effective Dates:**

### 07/01/2023

Rate Fringe Total 47.80 37.65 85.45

### **CLASSIFICATIONS:**

Field Engineer - Rodman or Chainman

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

OPERATING ENGINEERS Rates Expiration Date :

**Effective Dates:** 

07/01/2023

Rate Fringe Total 57.96 37.65 95.61

## **CLASSIFICATIONS:**

Lead Engineer, Foreman Engineer, Safety Engineer (minimum)

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

## ENTIRE STATE

## **OPERATING ENGINEERS** Rates Expiration Date:

T 00		T	
Ette	ctive	Dates	۰

Mucking Machine

Effective Dates:
07/01/2023
Rate Fringe Total
59.22 37.65 96.87
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
Cranes, Derricks, Pile Drivers (all types), under 100 tons with a boom (including jib and/or leads) under 100 ft.
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
Helicoptor Co-Pilot
Helicoptor Communications Engineer
Juntann Pile Driver
Locomotive (large)

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE PREVAILING WAG

OPERATING ENGINEERS	Rates Expiration Date:

**Effective Dates:** 

07/01/2023

Rate Fringe Total 59.22 37.65 96.87

### **CLASSIFICATIONS:**

Pavement & Concrete Breaker (Superhammer & Hoe Ram)

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

Vacuum Truck

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

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Rate Fringe Total 54.09 37.65 91.74

### **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

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

### **OPERATING ENGINEERS** Rates Expiration Date:

### **Effective Dates:**

07/01/2023

Rate Fringe Total 54.09 37.65 91.74

### **CLASSIFICATIONS:**

Steam Generator or Boiler

Stone Spreader

Tamping Machine (vibrating ride-on type)

Temporary Heating Plant (Nelson or other type, including proprane, 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:**

### 07/01/2023

Rate	Fringe	Total
61.04	37.65	98.69

### **CLASSIFICATIONS:**

Helicoptor Pilot/Engineer

### **Effective Dates:**

### 07/01/2023

Rate	Fringe	e Total	
65.72	37.65	103.37	

### **CLASSIFICATIONS:**

Cranes, Derricks, Pile Driver (all types), 100 tons and over and TOWER CRANE with boom (including jib and/or leads) 140 ft. and over

## **Effective Dates:**

### 07/01/2023

Rate	Fringe	Total
64.72	37.65	102 37

## **CLASSIFICATIONS:**

Cranes, Derricks, Pile Driver (all types), 100 tons and over and TOWER CRANE with boom (including jib and/or leads) from 100 ft. to 139 ft.

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

### ENTIRE STATE

### **OPERATING ENGINEERS** Rates Expiration Date :

### **Effective Dates:**

07/01/2023

Rate Fringe Total 61.22 37.65 98.87

### **CLASSIFICATIONS:**

Cranes, Derricks, Pile Driver (all types), under 100 tons with a boom (including jib and/or leads) 140 ft. and over

### **Effective Dates:**

### 07/01/2023

Rate	Fringe	Total
63.72	37.65	101.37

## **CLASSIFICATIONS:**

Cranes, Derricks, Pile Driver (all types), 100 tons and over and TOWER CRANE with a boom (including jib and/or leads) under 100 ft.

### **Effective Dates:**

### 07/01/2023

Rate	Fringe	Total
60.22	37.65	97.87

### **CLASSIFICATIONS:**

Cranes, Derricks, Pile Driver (all types), under 100 tons with a boom (including jib and/or leads) from 100 ft. to 139 ft.

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

### STRUCTURAL STEEL ERECTION Rates Expiration Date:

{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 5:30 PM.

### SHIFT DIFFERENTIALS:

- Shift work must be established for 5 consecutive workdays.
- Any work started outside of the allowed start time, 6:00 AM to 9:00 AM, except for \* tidal work, shall be considered an irregular shift and paid at straight time, plus 15% for the first eight hours, inclusive of benefits.
- \* FOR TIDAL WORK- a contractor can start their job according to tide schedules (tide schedules are the various high and low tides related to this work), providing the eight hour shift is completed between the hours of 5:00 AM and 6:30 PM.
- All time worked in excess of an established shift (an established shift is a shift that is determined at the time of the bid) shall be paid at the applicable overtime rate. When a portion of an established shift works into Saturday, Sunday or a holiday, that time worked shall be paid at the established shift rate.
- When working with other trades who receive a higher irregular shift differential, these employees shall also receive the higher differential 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 Saturday shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sunday 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 Veterans Day.

For projects bid after April 1, 2020, on hazardous waste removal work of any kind, including a state or federally designated site, where the operating engineer is required to wear level A, B, or C personal protection, the operating engineer shall receive an hourly wage rate of his regular hourly wage plus \$5.00 per hour.

- An operating engineer working at a hazardous waste removal project or site at a task requiring hazardous waste related certification, but who is not working in a zone requiring level A, B, or C personal protection, shall receive an hourly wage rate of his regular rate plus \$1.00 per hour.

### **Effective Dates:**

### 07/01/2023

Rate	Fringe	Total
62.85	37.65	100.50

### **CLASSIFICATIONS:**

Helicopter Co-Pilot & Communications Engineer

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

## ENTIRE STATE PREVAILING WAGE RATE DETERMINATION

Rates Expiration Date:

### **Effective Dates:**

07/01/2023

Rate Fringe Total 58.79 37.65 96.44

STRUCTURAL STEEL ERECTION

### **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

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

## ENTIRE STATE PREVAILING WAGE RAT

## **STRUCTURAL STEEL ERECTION** Rates Expiration Date:

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Effective Date		
	07/01/2023	
Rate	Fringe	Total
56.13	37.65	93.78
CLASSIFICA	TIONS:	
Aerial Platfor	m Used On Hoi	sts
Apprentice E	ngineer/Oiler wi	th Compressor or Welding Machine
Captain (Pow	er Boats)	
Compressor (	2 or 3 in battery	
Concrete Clea	aning/Decontam	ination Machine Operator
Conveyor or	Tugger Hoist	
Directional B	oring Machine	
Elevator or H	ouse Car	
Fireman		
Forklift		
Generator (2	or 3)	
Heavy Equip	ment Robotics, (	Operator/Technician
Maintenance	Utility Man	
Master Enviro	onmental Mainte	enance Technician
Tug Master (I	Power Boats)	
Ultra High Pr	essure Waterjet	Cutting Tool System Operator/Maintenance Technician
Vacuum Blast	ting Machine Op	perator/Maintenance Technician

Welding Machines, Gas or Electric Converters on any type-2 or 3 in battery including diesels

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

### ENTIRE STATE

### **STRUCTURAL STEEL ERECTION** Rates Expiration Date:

### **Effective Dates:**

07/01/2023

Rate Fringe Total 54.60 37.65 92.25

### **CLASSIFICATIONS:**

Compressor (Single)

Generators

Welding Machines, Gas, Diesel, Or Electric Converters of any type-single

Welding System, Multiple (Rectifier Transformer Type)

### **Effective Dates:**

### 07/01/2023

Rate	Fringe	Total
50.84	37.65	88.49

### **CLASSIFICATIONS:**

Assistant Engineer/Oiler

Drillers Helper

Field Engineer - Transit/Instrument Man

Maintenance Apprentice (Deckhand)

Maintenance Apprentice (Oiler)

Off Road Back Dump

### **Effective Dates:**

### 07/01/2023

Rate	Fringe	Total	
58.41	37.65	96.06	

### **CLASSIFICATIONS:**

Lead Engineer, Foreman Engineer, Safety Engineer (Minimum)

### **Effective Dates:**

### 07/01/2023

Rate	Fringe	Total
47.80	37.65	85.45

### **CLASSIFICATIONS:**

Field Engineer - Rodman or Chainman

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

### **ENTIRE STATE**

### **STRUCTURAL STEEL ERECTION** Rates Expiration Date:

### **Effective Dates:**

07/01/2023

Rate Fringe Total 59.55 37.65 97.20

### **CLASSIFICATIONS:**

Field Engineer-Chief of Party

Vacuum Truck

### **Effective Dates:**

### 07/01/2023

Rate	Fringe	Total
67.74	37.65	105.39

#### **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) 100 tons and over and Tower Cranes.

### **Effective Dates:**

### 07/01/2023

Rate	Fringe	Total	
66.08	37.65	103.73	

### **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), 100 tons and over and Tower Crane.

### **Effective Dates:**

### 07/01/2023

Rate	Fringe	Total	
63.24	37.65	100.89	

### **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:**

### 07/01/2023

Rate	Fringe	Total
61.58	37.65	99.23

### **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.

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

## **STRUCTURAL STEEL ERECTION** Rates Expiration Date:

**Effective Dates:** 

07/01/2023

Rate Fringe Total 63.24 37.65 100.89

## **CLASSIFICATIONS:**

Helicopter Pilot & Engineer

## NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

### TEST BORING PRELIMINARY TO CONSTRUCTION-SOUTH/WEST Rates Expiration Date:

### 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 5:30 PM.

### SHIFT DIFFERENTIALS:

- Shift work must be established for 5 consecutive workdays.
- Any work started outside of the allowed start time, 6:00 AM to 9:00 AM, except for \* tidal work, shall be considered an irregular shift and paid at straight time, plus 15% for the first eight hours, inclusive of benefits.
- \* FOR TIDAL WORK- a contractor can start their job according to tide schedules (tide schedules are the various high and low tides related to this work), providing the eight hour shift is completed between the hours of 5:00 AM and 6:30 PM.
- All time worked in excess of an established shift (an established shift is a shift that is determined at the time of the bid) shall be paid at the applicable overtime rate. When a portion of an established shift works into Saturday, Sunday or a holiday, that time worked shall be paid at the established shift rate.
- When working with other trades who receive a higher irregular shift differential, these employees shall also receive the higher differential 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 Saturday shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sunday 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 Veterans Day.

For projects bid after April 1, 2020, on hazardous waste removal work of any kind, including a state or federally designated site, where the operating engineer is required to wear level A, B, or C personal protection, the operating engineer shall receive an hourly wage rate of his regular hourly wage plus \$5.00 per hour.

- An operating engineer working at a hazardous waste removal project or site at a task requiring hazardous waste related certification, but who is not working in a zone requiring level A, B, or C personal protection, shall receive an hourly wage rate of his regular rate plus \$1.00 per hour.

### **Effective Dates:**

### 07/01/2023

Rate	Fringe	Total
59.22	37.65	96.87

### **CLASSIFICATIONS:**

Driller

### **Effective Dates:**

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Rate	Fringe	Total	
52.38	37.65	90.03	

### **CLASSIFICATIONS:**

Driller's Helper

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

### FREE AIR TUNNEL JOBS Rates Expiration Date:

{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 \$3.00 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:**

03/01/2023	03	/01	/20	023
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Rate	Fringe	Total
50.30	35.73	86.03

### **CLASSIFICATIONS:**

Walking Boss & Superintendent

### **Effective Dates:**

### 03/01/2023

Rate	Fringe	Total
50.00	35.73	85.73

### **CLASSIFICATIONS:**

Heading Foreman, Shaft Foreman, Rod Foreman, Electrician Foreman, Rigging Foreman

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

### ENTIRE STATE

### FREE AIR TUNNEL JOBS Rates Expiration Date :

#### **Effective Dates:**

### 03/01/2023

Rate	Fringe	Total
49.50	35.73	85.23

### **CLASSIFICATIONS:**

Iron Foreman, Caulking Foreman, Form Foreman, Cement Finishing Foreman, Concrete Foreman, Track Foreman, Cleanup Foreman, Grout Foreman

### **Effective Dates:**

### 03/01/2023

Rate	Fringe	Total
52.00	35.73	87.73

### **CLASSIFICATIONS:**

Blaster

### **Effective Dates:**

### 03/01/2023

Rate	Fringe	Total
48.95	35.73	84.68

### **CLASSIFICATIONS:**

Top Labor Foreman

### **Effective Dates:**

### 03/01/2023

Rate	Fringe	Total
48 60	35 73	84 33

## **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:**

### 03/01/2023

Rate	Fringe	Total
48.45	35.73	84.18

### **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)

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

## FREE AIR TUNNEL JOBS Rates Expiration Date :

**Effective Dates:** 

03/01/2023

Rate Fringe Total 48.05 35.73 83.78

## **CLASSIFICATIONS:**

All Others (including Powder Watchman, Change House Attendant, Top Laborer)

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

### DRILL FOR GROUND WATER SUPPLY Rates Expiration Date:

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:**

07/01/2023
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Rate	Fringe	Total
57.97	37.65	95.62

### **CLASSIFICATIONS:**

Driller

#### **Effective Dates:**

### 07/01/2023

Rate	Fringe	Total
51.13	37.65	88.78

### **CLASSIFICATIONS:**

Driller's Helper

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

## OPERATING ENGINEERS MARINE-DREDGING Rates Expiration Date:

NOTE: These wage rates only apply to dredging and other marine construction activities occurring in navigable waters and their tributaries.

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:**

10/01/2022			10/01/2023
Rate	Fringe	Total	Total
43.94	14.54	58.48	60.48

### **CLASSIFICATIONS:**

Lead Dredgerman, Operator, Leverman

Licensed Tug Operator (over 1000 HP)

### **Effective Dates:**

10/01/2022			10/01/2023
Rate	Fringe	Total	Total
38.00	14.18	52.18	53.93

### **CLASSIFICATIONS:**

Derrick Operator, Spider/Spill Barge Operator

Engineer, Electrician, Chief Welder, Chief Mate

Fill Placer, Operator II

Licensed Boat Operator

Maintenance Engineer

### **Effective Dates:**

	10/01/202	2	10/01/2023
Rate	Fringe	Total	Total
35.77	14.05	49.82	51.47

### **CLASSIFICATIONS:**

Certified Welder

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

# ENTIRE STATE PREVAILING WAGE RATE DETERMINATION

# **Effective Dates:**

	10/01/202	2	10/01/2023
Rate	Fringe	Total	Total
34.79	13.74	48.53	50.14

OPERATING ENGINEERS MARINE-DREDGING Rates Expiration Date :

# **CLASSIFICATIONS:**

Mate, Drag Barge Operator, Steward, Assistant Fill Placer

Welder

### **Effective Dates:**

10/01/2022			10/01/2023
Rate	Fringe	Total	Total
33.67	13.67	47.34	48.91

## **CLASSIFICATIONS:**

**Boat Operator** 

### **Effective Dates:**

	10/01/202	2	10/01/2023
Rate	Fringe	Total	Total
27.97	13.33	41.30	42.63

## **CLASSIFICATIONS:**

Shoreman, Deckhand, Rodman, Scowman

# **Effective Dates:**

	10/01/202	2	10/01/2023
Rate	Fringe	Total	Total
39.16	14.25	53.41	55.20

## **CLASSIFICATIONS:**

Crane Operator

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

#### MICROSURFACING/SLURRY SEAL Rates Expiration Date:

# 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:**

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Rate	Fringe	Total
36.50	21.27	57.77

#### CLASSIFICATIONS:

Foreman

### **Effective Dates:**

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Rate	Fringe	Total	
33.80	21.27	55.07	

### **CLASSIFICATIONS:**

Box man

### **Effective Dates:**

03/01	1/2017
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Rate	Fringe	Tota	
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

TERRITORY
ENTIRE STATE

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

# MICROSURFACING/SLURRY SEAL Rates Expiration Date :

**Effective Dates:** 

03/01/2017

Rate Fringe Total 30.30 21.27 51.57

# **CLASSIFICATIONS:**

Cleaner, Taper

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

### ENTIRE STATE

#### ASPHALT LABORERS - SOUTH Rates Expiration Date :

"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 \$3.00 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: + \$5.00/hr
- -other Hazardous Waste site: + \$1.00/hr

FOR TIDE WORK (pertains to tidal water): A contractor can start their job according to tide schedules (tide schedules are the various high and low tides related to this work) providing the eight (8) hour shift is completed between the hours of 5:00 AM and 6:30 PM.

### **Effective Dates:**

03	/01	/20	123

Rate	Fringe	Total	
51.80	35.73	87.53	

### **CLASSIFICATIONS:**

Paving Foreman

### **Effective Dates:**

#### 03/01/2023

Rate	Fringe	Total
48.35	35.73	84.08

### **CLASSIFICATIONS:**

Head Raker

### **Effective Dates:**

<b>03</b>	/01	/20	)23
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Rate	Fringe	Total	
48.50	35.73	84.23	

# **CLASSIFICATIONS:**

Screedman

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

# ENTIRE STATE

# ASPHALT LABORERS - SOUTH Rates Expiration Date :

### **Effective Dates:**

03/01/2023

Rate Fringe Total 47.95 35.73 83.68

# **CLASSIFICATIONS:**

Tampers, Smoothers, Kettlemen, Painters, Shovelers, Roller Boys

### **Effective Dates:**

03/01/2023

Rate Fringe Total 48.05 35.73 83.78

### **CLASSIFICATIONS:**

Milling Controller

# **Effective Dates:**

### 03/01/2023

Rate Fringe Total 48.25 35.73 83.98

# **CLASSIFICATIONS:**

Traffic Control Coordinator

## **Effective Dates:**

# 03/01/2023

Rate Fringe Total 48.20 35.73 83.93

# **CLASSIFICATIONS:**

Raker, Luteman

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

# ENTIRE STATE

## TEST BORING PRELIMINARY TO CONSTRUCTION-NORTH Rates Expiration Date:

### 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 \$2.00 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 15% 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:**

### 10/18/2022

Rate	Fringe	Total	
0.00	0.00	65.92	

### **CLASSIFICATIONS:**

Helper (4th year helper)

### **Effective Dates:**

### 10/18/2022

Rate	Fringe	Tota	
0.00	0.00	75.24	

## **CLASSIFICATIONS:**

Driller

# **Effective Dates:**

### 10/18/2022

Rate	Fringe	Total
0.00	0.00	81.28

### **CLASSIFICATIONS:**

Foreman

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

### HEAVY & GENERAL LABORERS - NORTH Rates Expiration Date :

### 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 \$3.00 per hour.

FOR TIDE WORK (pertains to tidal water): A contractor can start their job according to tide schedules (tide schedules are the various high and low tides related to this work) providing the eight (8) hour shift is completed between the hours of 5:00 AM and 6:30 PM.

#### 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: + \$5.00/hr
- -other Hazardous Waste site: + \$1.00/hr

## **Effective Dates:**

## 03/01/2023

Rate	Fringe	Total
47.55	35.73	83.28

# 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:**

#### 03/01/2023

Rate	Fringe	Total
48.25	35.73	83.98

### **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

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

# ENTIRE STATE

## HEAVY & GENERAL LABORERS - NORTH Rates Expiration Date :

# **Effective Dates:**

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Rate	Fringe	Total
48.50	35.73	84.23

### **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:**

### 03/01/2023

Rate	Fringe	Total
52.05	35.73	87.78

### **CLASSIFICATIONS:**

"A" Rate:

blaster

### **Effective Dates:**

# 03/01/2023

Rate	Fringe	Total
51.80	35.73	87.53

# **CLASSIFICATIONS:**

"FOREMAN" Rate:

labor foreman, asphalt foreman, drill foreman, pipe foreman, grade foreman, finisher foreman, concrete foreman

# **Effective Dates:**

# 03/01/2023

Rate	Fringe	Total
52.80	35.73	88.53

# **CLASSIFICATIONS:**

"GENERAL FOREMAN" Rate

# TERRITORY ENTIRE STATE

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

## HEAVY & GENERAL LABORERS - SOUTH Rates Expiration Date :

### 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 \$3.00 per hour.

FOR TIDE WORK (pertains to tidal water): A contractor can start their job according to tide schedules (tide schedules are the various high and low tides related to this work) providing the eight (8) hour shift is completed between the hours of 5:00 AM and 6:30 PM. 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: + \$5.00/hr
- -other Hazardous Waste site: + \$1.00/hr

### **Effective Dates:**

### 03/01/2023

Rate	Fringe	Total
47 55	35.73	83.28

### **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:**

### 03/01/2023

Rate	Fringe	Total
47.55	35.73	83.28

### **CLASSIFICATIONS:**

wagon drill or drill master helper; powder carrier; magazine tender; signal man

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

### ENTIRE STATE

# HEAVY & GENERAL LABORERS - SOUTH Rates Expiration Date :

### **Effective Dates:**

### 03/01/2023

Rate	Fringe	Total
48.25	35.73	83.98

### **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:**

### 03/01/2023

Rate	Fringe	Total
48.25	35.73	83.98

### **CLASSIFICATIONS:**

wagon or directional drill operator; drill master

### **Effective Dates:**

### 03/01/2023

Rate	Fringe	Total
52.05	35.73	87.78

### **CLASSIFICATIONS:**

blaster

## **Effective Dates:**

# 03/01/2023

Rate	Fringe	Total
51.80	35.73	87.53

# **CLASSIFICATIONS:**

labor foreman, drill foreman, pipe foreman, grade foreman, finisher foreman, concrete foreman

### **Effective Dates:**

### 03/01/2023

Rate	Fringe	Total
52.80	35.73	88.53

### **CLASSIFICATIONS:**

general foreman

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

# HEAVY & GENERAL LABORERS - SOUTH Rates Expiration Date :

**Effective Dates:** 

03/01/2023

Rate Fringe Total 48.50 35.73 84.23

# **CLASSIFICATIONS:**

concrete finisher; setter of brick or stone pavers; stone cutter; form setter; manhole, catch basin, or inlet builder; rammer; gunite nozzle

# TERRITORY ENTIRE STATE

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

#### PIPELINE - MAINLINE TRANSMISSION Rates Expiration Date :

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: \$80.50; Pipeline Journeyman Welder: \$140.50; and Pipeline Helper: \$64.50. 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:**

07/01	/2023

Rate	Fringe	Total
57.34	34.70	92.04

### **CLASSIFICATIONS:**

Pipeline Journeyman Welder

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

# ENTIRE STATE

# PIPELINE - MAINLINE TRANSMISSION Rates Expiration Date :

**Effective Dates:** 

07/01/2023

Rate Fringe Total 57.34 34.70 92.04

**CLASSIFICATIONS:** 

Pipeline Journeyman

**Effective Dates:** 

07/01/2023

Rate Fringe Total 33.84 24.32 58.16

**CLASSIFICATIONS:** 

Pipeline Helper

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

## PIPELINE - GAS DISTRIBUTION Rates Expiration Date :

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:**

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Rate	Fringe	Total
63.90	29.83	93.73

### **CLASSIFICATIONS:**

Pipeline Journeyman Welder

### **Effective Dates:**

### 11/02/2022

Rate	Fringe	Total
63.90	29.83	93.73

## **CLASSIFICATIONS:**

Pipeline Journeyman

### **Effective Dates:**

### 11/02/2022

Rate	Fringe	Total
40.53	22.15	62.68

### **CLASSIFICATIONS:**

Pipeline Helper

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

### ENTIRE STATE

### ASPHALT LABORERS- NORTH Rates Expiration Date:

### 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 \$3.00 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: + \$5.00/hr
- -other Hazardous Waste site: + \$1.00/hr

FOR TIDE WORK (pertains to tidal water): A contractor can start their job according to tide schedules (tide schedules are the various high and low tides related to this work) providing the eight (8) hour shift is completed between the hours of 5:00 AM and 6:30 PM.

## **Effective Dates:**

Rate	Fringe	Total
51.80	35.73	87.53

## **CLASSIFICATIONS:**

Asphalt Foreman

### **Effective Dates:**

#### 03/01/2023

Rate	Fringe	Total
48.50	35.73	84.23

#### **CLASSIFICATIONS:**

Asphalt Screedman

### **Effective Dates:**

03/01	/2023
03/01	12023

Rate	Fringe	Total
48.25	35.73	83.98

# **CLASSIFICATIONS:**

Asphalt Raker or Lute Man

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

# ASPHALT LABORERS- NORTH Rates Expiration Date :

**Effective Dates:** 

03/01/2023

Rate Fringe Total 47.55 35.73 83.28

# **CLASSIFICATIONS:**

Asphalt Laborer

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

# ENTIRE STATE

#### **ELECTRICIAN- UTILITY WORK (NORTH)** Rates Expiration Date:

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 wokday 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 6:00 AM and 6:00 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:**

12/04/2022		12/03/2023	12/01/2024	
Rate	Fringe	Total	Total	Total
61.07	42.13	103.20	106.36	109.56

#### **CLASSIFICATIONS:**

Chief Lineman

# **Effective Dates:**

12/04/2022			12/03/2023	12/01/2024
Rate	Fringe	Total	Total	Total
57.61	39.75	97.36	100.35	103.36

# **CLASSIFICATIONS:**

Journeyman Lineman

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

# ELECTRICIAN- UTILITY WORK (NORTH) Rates Expiration Date :

### **Effective Dates:**

12/04/2022			12/03/2023	12/01/2024
Rate	Fringe	Total	Total	Total
57.61	39.75	97.36	100.35	103.36

# **CLASSIFICATIONS:**

Special License Operator

# **Effective Dates:**

12/04/2022		12/03/2023	12/01/2024	
Rate	Fringe	Total	Total	Total
57.03	39.35	96.38	99.35	102.32

# **CLASSIFICATIONS:**

Transit Man

### **Effective Dates:**

12/04/2022			12/03/2023	12/01/2024
Rate	Fringe	Total	Total	Total
55.31	38.16	93.47	96.33	99.21

# **CLASSIFICATIONS:**

Line Equipment Operator

# **Effective Dates:**

12/04/2022		12/03/2023	12/01/2024	
Rate	Fringe	Total	Total	Total
48.39	33.38	81.77	84.29	86.81

### **CLASSIFICATIONS:**

Dynamite Man

# **Effective Dates:**

12/04/2022			12/03/2023	12/01/2024
Rate	Fringe	Total	Total	Total
72.01	49.68	121.69	125.44	129.20

# **CLASSIFICATIONS:**

General Foreman

## **Effective Dates:**

12/04/2022		12/03/2023	12/01/2024	
Rate	Fringe	Total	Total	Total
66.25	45.71	111.96	115.41	118.85

# **CLASSIFICATIONS:**

Assistant General Foreman

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

# ELECTRICIAN- UTILITY WORK (NORTH) Rates Expiration Date :

### **Effective Dates:**

12/04/2022		12/03/2023	12/01/2024	
Rate	Fringe	Total	Total	Total
64.52	44.51	109.03	112.40	115.76

### **CLASSIFICATIONS:**

Line Foreman

### **Effective Dates:**

12/04/2022		12/03/2023	12/01/2024	
Rate	Fringe	Total	Total	Total
46.66	32.19	78.85	81.28	83.72

# **CLASSIFICATIONS:**

Street Light Mechanical Leader

### **Effective Dates:**

12/04/2022			12/03/2023	12/01/2024
Rate	Fringe	Total	Total	Total
44.36	30.60	74.96	77.26	79.58

### **CLASSIFICATIONS:**

Groundman Winch Operator

### **Effective Dates:**

12/04/2022		12/03/2023	12/01/2024	
Rate	Fringe	Total	Total	Total
44.36	30.60	74.96	77.26	79.58

### **CLASSIFICATIONS:**

Groundman Truck Operator

# **Effective Dates:**

12/04/2022		12/03/2023	12/01/2024	
Rate	Fringe	Total	Total	Total
43.78	30.20	73.98	76.26	78.55

# **CLASSIFICATIONS:**

Street Light Mechanic

## **Effective Dates:**

12/04/2022		12/03/2023	12/01/2024	
Rate	Fringe	Total	Total	Total
43.78	30.20	73.98	76.26	78.55

# **CLASSIFICATIONS:**

Line Equipment Mechanic

# TERRITORY ENTIRE STATE

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

# ELECTRICIAN- UTILITY WORK (NORTH) Rates Expiration Date:

### **Effective Dates:**

12/04/2022		12/03/2023	12/01/2024	
Rate	Fringe	Total	Total	Total
37.45	25.84	63.29	65.23	67.17

# **CLASSIFICATIONS:**

Groundman 2nd Year

### **Effective Dates:**

	12/04/202	2	12/03/2023	12/01/2024
Rate	Fringe	Total	Total	Total
34.57	23.85	58.42	60.21	62.02

# **CLASSIFICATIONS:**

Groundman 1st Year

# **Effective Dates:**

12/04/2022			12/03/2023	12/01/2024
Rate	Fringe	Total	Total	Total
57.03	39.35	96.38	99.35	102.32

# **CLASSIFICATIONS:**

Line Equipment Foreman

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

### ENTIRE STATE

### **ELECTRICIAN- UTILITY WORK (SOUTH)** Rates Expiration Date:

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 wokday 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 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:**

### 12/04/2022

Rate	Fringe	Total
67.52	55.11	122.63

### **CLASSIFICATIONS:**

General Foreman

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

# ENTIRE STATE

# **ELECTRICIAN- UTILITY WORK (SOUTH)** Rates Expiration Date:

**Effective Dates:** 

12/04/2022

Rate Fringe Total 60.14 50.62 110.76

**CLASSIFICATIONS:** 

Foreman

**Effective Dates:** 

12/04/2022

Rate Fringe Total 56.97 48.72 105.69

**CLASSIFICATIONS:** 

Small Job Foreman

**Effective Dates:** 

12/04/2022

Rate Fringe Total 52.75 46.18 98.93

**CLASSIFICATIONS:** 

Heavy Equipment Operator

**Effective Dates:** 

12/04/2022

Rate Fringe Total 52.75 46.18 98.93

**CLASSIFICATIONS:** 

Cable Splicer

**Effective Dates:** 

12/04/2022

Rate Fringe Total 52.75 46.18 98.93

**CLASSIFICATIONS:** 

Journeyman Lineman

**Effective Dates:** 

12/04/2022

Rate Fringe Total 52.75 46.18 98.93

**CLASSIFICATIONS:** 

Journeyman Welder

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

### **ENTIRE STATE**

## **ELECTRICIAN- UTILITY WORK (SOUTH)** Rates Expiration Date:

### **Effective Dates:**

12/04/2022

Rate Fringe Total 52.75 46.18 98.93

# **CLASSIFICATIONS:**

Journeyman Painter

**Effective Dates:** 

12/04/2022

Rate Fringe Total 42.20 39.80 82.00

# **CLASSIFICATIONS:**

Light Equipment Operator

**Effective Dates:** 

12/04/2022

Rate Fringe Total 36.93 36.60 73.53

### **CLASSIFICATIONS:**

Groundman Truck Driver

**Effective Dates:** 

12/04/2022

Rate Fringe Total 34.29 35.02 69.31

### **CLASSIFICATIONS:**

Groundman 3rd Year

**Effective Dates:** 

12/04/2022

Rate Fringe Total 31.65 33.42 65.07

## **CLASSIFICATIONS:**

Groundman 2nd Year

**Effective Dates:** 

12/04/2022

Rate Fringe Total 29.01 31.83 60.84

# **CLASSIFICATIONS:**

Groundman 1st Year

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

ELECTRICIAN- UTILITY WORK (SOUTH) Rates Expiration Date :

**Effective Dates:** 

12/04/2022

Rate Fringe Total 23.21 28.31 51.52

**CLASSIFICATIONS:** 

Flagman

# TERRITORY ENTIRE STATE

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

#### HEAVY & GENERAL LABORERS- NEW TRANS HUDSON TUNNELS Rates Expiration Date :

\*\*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 \$3.00 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:**

### 03/01/2023

Rate Fringe Total 75.46 35.73 111.19

### **CLASSIFICATIONS:**

Walking Boss & Superintendent

### **Effective Dates:**

### 03/01/2023

Rate Fringe Total 75.01 35.73 110.74

#### **CLASSIFICATIONS:**

Heading Foreman, Shaft Foreman, Rod Foreman, Electrical Foreman, Rigging Foreman

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

### ENTIRE STATE

## HEAVY & GENERAL LABORERS- NEW TRANS HUDSON TUNNELS Rates Expiration Date:

### **Effective Dates:**

### 03/01/2023

Rate	Fringe	Total
74.26	35.73	109.99

### **CLASSIFICATIONS:**

Iron Foreman, Caulking Foreman, Form Foreman, Cement Finishing Foreman, Concrete Foreman, Track Foreman, Clean-up Foreman, Grout Foreman

### **Effective Dates:**

### 03/01/2023

Rate	Fringe	Total
78.01	35.73	113.74

### **CLASSIFICATIONS:**

Blaster

### **Effective Dates:**

### 03/01/2023

Rate	Fringe	Total
73.43	35.73	109.16

### **CLASSIFICATIONS:**

Top Labor Foreman

## **Effective Dates:**

# 03/01/2023

Rate	Fringe	Total
72 91	35 73	108 64

# **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:**

# 03/01/2023

Rate	Fringe	Total
72.68	35.73	108.41

# 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)

TERRITORY
ENTIRE STATE

# NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

# HEAVY & GENERAL LABORERS- NEW TRANS HUDSON TUNNELS Rates Expiration Date :

**Effective Dates:** 

03/01/2023

Rate Fringe Total 72.08 35.73 107.81

# **CLASSIFICATIONS:**

All others (including Powder Watchman, Change House Attendant, Top Laborer, Job Steward)

### SECTION 011000 - SUMMARY

### PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Project information.
  - 2. Work covered by Contract Documents.
  - 3. Owner-furnished/Contractor-installed (OFCI) products.
  - 4. Contractor's use of site and premises.
  - 5. Coordination with occupants.
  - 6. Work restrictions.
  - 7. Specification conventions.
- B. Related Requirements:
  - 1. Section 01 50 00 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.
  - 2. Section 01 73 00 "Execution" for coordination of Owner-installed products.

# 1.3 PROJECT INFORMATION

- A. Project Identification: Union County Parks, Various Restroom Facility Upgrades.
  - 1. Project Location:
    - a. Madison Ave Park: 1333 Madison Ave, Rahway, NJ 07065
    - b. Phil Rizzuto Park: 8 North Ave, Elizabeth, NJ 07208
    - c. Mattano Park: 360-484 5<sup>th</sup> Ave, Elizabeth, NJ 07202
- B. Owner: County of Union.
  - 1. Owner's Representative: Department of Engineering, Public Works, and Facilities Management: Matthew Ferraro.
- C. Architect: SSP Architects: 50 Division Street; Suite 503, Somerville, NJ 08876.
  - 1. Architect's Representative: Adam Finkle, AIA

a. Email: afinkle@ssparchitects.com

b. Phone: 908-725-7800

- D. Web-Based Project Software: Project software will be used for purposes of managing communication and documents during the construction stage.
  - 1. See Section 01 31 00 "Project Management and Coordination." for requirements for using web-based Project software.

### 1.4 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of Project is defined by the Contract Documents and includes, but is not limited to, the following:
  - Work includes renovations to Madison Ave Park, Phil Rizzuto Park, and Mattano Park including new floor, wall, and ceiling finishes, replacement of doors, replacement of plumbing fixtures, upgrades to lighting and mechanical systems, and other Work indicated in the Contract Documents
- B. Type of Contract:
  - 1. Project will be constructed under a single prime contract.

### 1.5 OWNER-FURNISHED/CONTRACTOR-INSTALLED (OFCI) PRODUCTS

- A. Owner's Responsibilities: Owner will furnish products indicated and perform the following, as applicable:
  - 1. Provide to Contractor Owner-reviewed Product Data.
  - 2. Provide for delivery of Owner-furnished products to Project site.
  - 3. Upon delivery, inspect, with Contractor present, delivered items.
    - a. If Owner-furnished products are damaged, defective, or missing, arrange for replacement.
  - 4. Inform Contractor of earliest available delivery date for Owner-furnished products.
- B. Contractor's Responsibilities: The Work includes the following, as applicable:
  - 1. Designate delivery dates of Owner-furnished products in Contractor's construction schedule, utilizing Owner-furnished earliest available delivery dates.
  - 2. Review Owner-reviewed Product Data, noting discrepancies and other issues in providing for Owner-furnished products in the Work.
  - 3. Receive, unload, handle, store, protect, and install Owner-furnished products.
  - 4. Protect Owner-furnished products from damage during storage, handling, and installation and prior to Substantial Completion.
  - 5. Repair or replace Owner-furnished products damaged following receipt.
- C. Owner-Furnished/Contractor-Installed (OFCI) Products:
  - 1. Toilet Room Accessories as indicated in Section 10 28 00.

# 1.6 OWNER-FURNISHED/OWNER-INSTALLED (OFOI) PRODUCTS

### 1.7 CONTRACTOR'S USE OF SITE AND PREMISES

- A. Unrestricted Use of Site: Contractor shall have full use of Project site for construction operations during construction period. Contractor's use of Project site is limited only by Owner's right to perform work or to retain other contractors on portions of Project.
- B. Limits on Use of Site: Limit use of Project site to Work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
  - 1. Driveways, Walkways and Entrances: Keep driveways and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or for storage of materials.
    - a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
    - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- C. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period. Repair damage caused by construction operations.
- D. Condition of Existing Grounds: Maintain portions of existing grounds, landscaping, and hardscaping affected by construction operations throughout construction period. Repair damage caused by construction operations.

# 1.8 COORDINATION WITH OCCUPANTS

- A. Partial Owner Occupancy: Owner will occupy the premises during entire construction period, with the exception of areas under construction. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits unless otherwise indicated.
  - 1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
  - 2. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.

## 1.9 WORK RESTRICTIONS

- A. Comply with restrictions on construction operations.
  - 1. Comply with limitations on use of public streets, work on public streets, rights of way, and other requirements of authorities having jurisdiction.
- B. On-Site Work Hours: Limit work to between 7:00 am and 5:00 pm, Monday through Friday, unless otherwise indicated. Work hours may be modified to meet Project requirements if approved by Owner and authorities having jurisdiction.

- 1. Weekend Hours: 7:00 am to 3:00 pm on Saturday with expressed approval by Owner.
- C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging for temporary utility services according to requirements indicated:
  - 1. Notify Owner not less than two (2) days in advance of proposed utility interruptions.
  - 2. Obtain Owner's written permission before proceeding with utility interruptions.
- D. Smoking and Controlled Substance Restrictions: Use of tobacco products, alcoholic beverages, and other controlled substances on Owner's property is not permitted.
- E. Employee Identification: Provide identification tags for Contractor personnel working on Project site. Require personnel to use identification tags at all times.
- F. Employee Screening: Comply with Owner's requirements for background screening of Contractor personnel working on Project site.
  - 1. Maintain list of approved screened personnel with Owner's representative.

#### 1.10 SPECIFICATION FORMATS AND CONVENTIONS

- A. Specification Format: The Specifications are organized into Divisions and Sections using the 48-division format and CSI/CSC's "MasterFormat" numbering system.
  - 1. Section Identification: The Specifications use section numbers and titles to help cross-referencing in the Contract Documents. Sections in the Project Manual are in numeric sequence; however, the sequence is incomplete. Consult the table of contents at the beginning of the Project Manual to determine numbers and names of sections included in the Contract Documents.
- B. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
  - 1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
  - 2. Text Color: Text used in the Specifications, including units of measure, manufacturer and product names, and other text may appear in multiple colors or underlined as part of a hyperlink; no emphasis is implied by text with these characteristics.
  - 3. Hypertext: Text used in the Specifications may contain hyperlinks. Hyperlinks may allow for access to linked information that is not residing in the Specifications. Unless otherwise indicated, linked information is not part of the Contract Documents.
  - 4. Specification requirements are to be performed by Contractor unless specifically stated otherwise.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 01 10 00** 

### **SECTION 01 14 00 - WORK RESTRICTIONS**

PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

### 1.2 USE OF PREMISES

- A. Use of Site: Limit use of premises to work in areas indicated. Do not disturb portions of site beyond areas in which the Work is indicated unless otherwise approved by the Architect.
  - 1. Owner Occupancy: Allow for Owner occupancy of site and use by the public.
  - 2. Driveways and Entrances: Keep driveways and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
    - a. Schedule deliveries to minimize use of driveways and entrances.
    - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

### 1.3 OCCUPANCY REQUIREMENTS

- A. Full Owner Occupancy: Owner will occupy site and existing building during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations.
- B. Partial Owner Occupancy: Owner reserves the right to occupy and to place and install equipment in completed areas of building, before Substantial Completion, provided such occupancy does not interfere with completion of the Work. Such placement of equipment and partial occupancy shall not constitute acceptance of the total Work.
  - 1. Architect will prepare a Certificate of Substantial Completion for each specific portion of the Work to be occupied before Owner occupancy.
  - 2. Obtain a Certificate of Occupancy from authorities having jurisdiction before Owner occupancy.
  - 3. Before partial Owner occupancy, mechanical and electrical systems shall be fully operational, and required tests and inspections shall be successfully completed. On occupancy, Owner will provide, operate, and maintain mechanical and electrical systems serving occupied portions of building.
  - 4. On occupancy, Owner will assume responsibility for maintenance and custodial service for occupied portions of building.

### 1.4 MISCELLANEOUS REQUIREMENTS

A. Working hours are from 7 AM to 4 PM. Coordinate access to the building with the Owner.

WORK RESTRICTIONS 01 14 00 - 1

- B. Use of profanities within earshot or offensive gestures within view of occupants or neighboring residents is prohibited.
- C. Neither alcoholic beverages nor controlled substances are allowed on or near the job site. Personnel under the influence of either shall not be permitted on site.
- D. Smoking and Vaping are not permitted on the site.
- E. Failure to comply with any of the above requirements will lead to the immediate removal of the offending person(s) from the site at the Prime Contractor's expense. Determinations will be made by the Owner and/or Architect.

# 1.5 AMERICANS WITH DISABILITIES ACT; FACILITIES FOR HANDICAPPED PERSONS

- A. The contractor must comply with all provisions of Title II of the Americans with Disabilities Act (ADA), P.L 101-336, in accordance with 42 U.S.C. S121.01 et seq. The Board of Education further recognizes that all specifications for the construction, remodeling or renovation of any public building shall provide facilities for the physically handicapped. Reference N.J.S.A. 18A:18A-17.
- B. It is further recommended that bidders are required to read the Americans with Disabilities language form that is included in these specifications. The form shall be signed to show agreement with the provision of Title II of the Act and the provisions are to be made a part of the contact. The signed form shall be submitted with the bid proposal. The contactor is obligated to comply with the Act and to hold the owner harmless.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 01 14 00** 

WORK RESTRICTIONS 01 14 00 - 2

#### **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 1 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements governing allowances.
  - Certain materials and equipment are specified in the Contract Documents by allowances. In some
    cases, these allowances include installation. Allowances have been established in lieu of additional
    requirements and to defer selection of actual materials and equipment to a later date when
    additional information is available for evaluation. If necessary, additional requirements will be issued
    by Change Order.
- B. Types of allowances include the following:
  - 1. Contingency allowances.
- C. Related Requirements:
  - 1. Section 01 25 00 "Contract Modification Procedures" for procedures for submitting and handling Change Orders.
  - 2. Section 01 40 00 "Quality Requirements" for procedures governing the use of allowances for field testing by an independent testing agency.

#### 1.3 SELECTION AND PURCHASE

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

## 1.4 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

ALLOWANCES 01 21 00 - 1

fulfillment of each allowance.

C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

## 1.5 CONTINGENCY ALLOWANCES

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

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. Refer to Bid Proposal Forms.

# **END OF SECTION 01 21 00**

ALLOWANCES 01 21 00 - 2

# **SECTION 01 23 00 - ALTERNATES**

## PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

## 1.2 SUMMARY

A. This Section includes administrative and procedural requirements for Alternates.

## 1.3 DEFINITIONS

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

# 1.4 PROCEDURES

- A. Coordination: Each Contractor is responsible to modify or adjust affected adjacent work as necessary to completely integrate work of the Alternate into Project.
  - 1. Include as part of each Alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not specifically indicated as part of the Alternate.
- B. The Owner reserves the right to accept or reject the Alternate Bids in any sequential order as the Owner sees fit.
- C. Notification: Immediately following Notice of Contract Award, notify each party involved, in writing, of the status of each Alternate. Indicate if Alternates have been accepted, rejected, or deferred for later consideration.
- D. Execute accepted Alternates under the same conditions as other work of the Contract.

PART 2 - PRODUCTS (Not Used)

### **PART 3 - EXECUTION**

# 3.1 SCHEDULE OF ALTERNATES

A. Refer to Bid Proposal Form.

ALTERNATES 01 23 00 - 1

Comm. No. 22-8845

**END OF SECTION 01 23 00** 

ALTERNATES 01 23 00 - 2

## **SECTION 01 25 00 - CONTRACT MODIFICATION PROCEDURES**

PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

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

## 1.2 SUMMARY

- Section includes administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Requirements:
  - 1. Section 01 60 00 "Product Requirements" for administrative procedures for handling requests for substitutions made after Contract award.

## 1.3 MINOR CHANGES IN THE WORK

A. Architect will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710 – "Architect's Supplemental Instructions", or by other written means as circumstances permit.

## 1.4 PROPOSAL REQUESTS

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

- d. Quotation Form: Use forms acceptable to Architect.
- B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Architect.
  - Include a statement outlining reasons for the change and the effect of the change on the Work.
     Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
  - 2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
  - 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
  - 4. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
  - 5. Comply with requirements in Section 01 60 00 "Product Requirements" if the proposed change requires substitution of one product or system for product or system specified.
  - 6. Proposal Request Form: Uploaded through the Project Management Software with contractor's cost and all associated backup documents.

# 1.5 ALLOWANCES

- A. Allowance Adjustment: To adjust allowance amounts, base each Change Order proposal on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place.
  - 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. Submit claims within [21] days of receipt of the Request for Change Order or Construction Change Directive authorizing work to proceed. Claims submitted later than [21] days after such authorization will be rejected.
  - 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.

## 1.6 ADMINISTRATIVE CHANGE ORDERS

A. Allowance Adjustment: See Section 01 21 00 "Allowances" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect actual costs of allowances.

## 1.7 CHANGE ORDER PROCEDURES

A. On Owner's approval of a Work Change Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor on AIA Document G701.

## 1.8 CONSTRUCTION CHANGE DIRECTIVE

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

PART 2 - PRODUCTS (Not Used) PART 3 - EXECUTION (Not Used)

**END OF SECTION 01 26 00** 

## **SECTION 01 29 00 - PAYMENT PROCEDURES**

#### PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

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

## 1.2 SUMMARY

- A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Requirements:
  - 1. Section 01 21 00 "Allowances" for procedural requirements governing the handling and processing of allowances.
  - 2. Section 01 25 00 "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
  - 3. Section 01 32 00 "Construction Progress Documentation" for administrative requirements governing the preparation and submittal of the Contractor's construction schedule.

## 1.3 DEFINITIONS

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

## 1.4 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.
  - 1. Coordinate line items in the schedule of values with other required administrative forms, and schedules, including the following:
    - a. Application for Payment forms with Continuation Sheets.
    - b. Submittals Schedule.
    - c. Progress Schedule.
  - 2. Submit the schedule of values to Architect at earliest possible date, but no later than seven days before the date scheduled for submittal of initial Applications for Payment.
  - 3. Sub-schedules for Phased Work: Where the Work is separated into phases requiring separately phased payments, provide sub-schedules showing values coordinated with each phase of payment.

- B. Format and Content: Use Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one line item for each Specification Section. Utilize AIA Form G703.
  - Provide a breakdown of the Contract Sum, subject to Architect approval, in enough detail to
    facilitate continued evaluation of Applications for Payment and progress reports. Coordinate
    with the Project Manual table of contents. Provide several line items for principal subcontract
    amounts, where appropriate.
  - 2. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
  - 3. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
    - a. Differentiate between items stored on-site and items stored off-site. Include evidence of insurance or bonded warehousing if required.
  - 4. Allowances: Provide a separate line item in the schedule of values for each allowance. Show lineitem value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
  - 5. The following shall be included in the Schedule of Values as separate line items. The value shall be the indicated percentage of the total contract amount.
    - a. General Conditions
    - b. Bond
    - c. Supervision
    - d. Punch List 2%
    - e. Record Drawings 1% (Not to exceed \$20,000) f. Close-out Documents 1% (Not to exceed \$20,000)
  - 6. Retainage: When the outstanding balance of the Contract is greater than \$100,000, the Owner shall retain 2% of each payment. When the outstanding balance is less than \$100,000, the Owner will withhold 10% of the payment.
  - 7. Schedule Updating: Update and resubmit the Schedule of Values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum. Include at least one separate line item for each Change Order and Construction Change Directive.

## 1.5 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments, as certified by Architect and paid for by Owner.
  - Initial Application for Payment, and final Application for Payment involve additional requirements.
- B. Payment Application Times: The dates for submission of Applications for Payment shall be determined with the Architect following Contract Award.
  - 1. Submit draft copy of Application for Payment seven days prior to due date for review by Architect.
- C. Application for Payment Forms: Use AIA Document G702 and AIA Document G703 as form for

Applications for Payment. An original copy of the Owner's Purchase Order or Voucher must accompany each Application for Payment.

- 1. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules as appropriate.
- D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.
  - 1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
  - 2. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
- E. Transmittal: Submit Four (4) signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt.
  - 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- F. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from entities lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.
  - 1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
  - 2. When an application shows completion of an item, submit conditional final or full waivers.
  - 3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
  - 4. Submit final Application for Payment with or preceded by conditional final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
  - 5. Waiver Forms: Submit executed waivers of lien on forms acceptable to Owner.
- G. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
  - List of subcontractors.
  - 2. Schedule of values.
  - 3. Contractor's construction schedule approved by Architect.
  - 4. Submittal schedule approved by Architect.
  - Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
  - 6. Certificates of insurance and insurance policies.
  - 7. Performance and payment bonds.
  - 8. Signed Contract between Owner and Contractor.
- H. Final Payment Application: Submit final Application for Payment with releases and supporting documentation required, including, but not limited, to the following:
  - 1. Evidence of completion of Project closeout documentation and requirements. Refer to Section 01 77 00 "Closeout Procedures".

- 2. Certification of completion of final punch list items.
- 3. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
- 4. Updated final statement, accounting for final changes to the Contract Sum.
- 5. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims" [for General Contractor and all Subcontractors].
- 6. AIA Document G706A, "Contractor's Affidavit of Release of Liens", [for General Contractor and all Subcontractors].
- 7. AIA Document G707, "Consent of Surety to Final Payment".
- 8. Evidence that claims have been settled.
- 9. No Asbestos in Materials Certification.
- 10. Copy of Final Inspections, if applicable.
- 11. Any other requirements outlined in Section 01 77 00 "Closeout Procedures".
- 12. Maintenance Bond.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 01 29 00** 

## **SECTION 01 31 00 - PROJECT MANAGEMENT AND COORDINATION**

#### PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

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

## 1.2 SUMMARY

- A. Section includes administrative provisions for coordinating construction operations on Project, including, but not limited to, the following:
  - 1. General coordination procedures.
  - 2. Conservation.
  - 3. Coordination drawings.
  - 4. Administrative and supervisory personnel.
  - 5. RFIs
  - 6. Digital project management procedures.
  - 7. Web-based Project management software package.
  - 8. Project meetings.
- B. Each contractor shall participate in coordination requirements. Certain areas of responsibility are assigned to a specific contractor.
- C. Related Requirements:
  - Section 01 32 00 "Construction Progress Documentation" for preparing and submitting Contractor's construction schedule.
  - 2. Section 01 73 00 "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
  - 3. Section 01 77 00 "Closeout Procedures" for coordinating closeout of the Contract.

# 1.3 GENERAL COORDINATION PROCEDURES

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations included in different Sections that depend on each other for proper installation, connection, and operation.
  - Schedule construction operations in sequence required to obtain the best results, where
    installation of one part of the Work depends on installation of other components, before or after
    its own installation.
  - 2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
  - 3. Make adequate provisions to accommodate items scheduled for later installation.

- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
  - 1. Preparation of Contractor's construction schedule.
  - 2. Preparation of the schedule of values.
  - 3. Installation and removal of temporary facilities and controls.
  - 4. Delivery and processing of submittals.
  - 5. Progress meetings.
  - 6. Preinstallation conferences.
  - 7. Project closeout activities.
  - 8. Startup and adjustment of systems.
- D. 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 into, the Work.

## 1.4 COORDINATION DRAWINGS

- A. Coordination Drawings, General: Prepare coordination drawings according to requirements in individual Sections, and additionally where installation is not completely indicated on Shop Drawings, where limited space availability necessitates coordination, or if coordination is required to facilitate integration of products and materials fabricated or installed by more than one entity.
  - 1. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordination drawings on standard printed data. Include the following information, as applicable:
    - a. Use applicable Drawings as a basis for preparation of coordination drawings. Prepare sections, elevations, and details as needed to describe relationship of various systems and components.
    - b. Indicate functional and spatial relationships of components of architectural, mechanical, and electrical systems.
    - c. Indicate space requirements for routine maintenance and for anticipated replacement of components during the life of the installation.
    - d. Show location and size of access doors required for access to concealed dampers, valves, and other controls.
    - e. Indicate required installation sequences.
    - f. Indicate dimensions shown on Drawings. Specifically note dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternative sketches to Architect indicating proposed resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.
- B. Coordination Drawing Organization: Organize coordination drawings as follows:

- Floor Plans and Reflected Ceiling Plans: Show architectural and structural elements, and mechanical, plumbing, fire-protection, fire-alarm, and electrical Work. Show locations of visible ceiling-mounted devices relative to acoustical ceiling grid. Supplement plan drawings with section drawings where required to adequately represent the Work.
- 2. Mechanical and Plumbing Work: Show the following:
  - a. Sizes and bottom elevations of ductwork, piping, and conduit runs, including insulation, bracing, flanges, and support systems.
  - b. Dimensions of major components, such as dampers, valves, diffusers, access doors, cleanouts and electrical distribution equipment.
- 3. Electrical Work: Show the following:
  - a. Runs of vertical and horizontal conduit 1-1/4 inches in diameter and larger.
  - b. Light fixture, exit light, emergency battery pack, smoke detector, and other fire-alarm locations.
  - c. Panel board, switchboard, switchgear, transformer, busway, generator, and motor-control center locations.
  - d. Location of pull boxes and junction boxes, dimensioned from column center lines.
- 4. Review: Architect will review coordination drawings to confirm that, in general, the Work is being coordinated, but not for the details of the coordination, which are Contractor's responsibility. If Architect determines that coordination drawings are not being prepared in sufficient scope or detail, or are otherwise deficient, Architect will so inform Contractor, who shall make suitable modifications and resubmit.
- 5. Coordination Drawing Prints: Prepare coordination drawing prints according to requirements in Section 01 33 00 "Submittal Procedures."

# 1.5 SUBMITTALS

- A. Coordination Drawings: Prepare Coordination Drawings to maximize utilization of space and to organize installation of materials and systems by other trades.
  - 1. Indicate relationship of components shown on separate Shop Drawings.
  - 2. Indicate required installation sequences.
  - 3. Refer to MEP Specifications for specific Coordination Drawing requirements for mechanical, electrical, and plumbing installations.

## 1.6 ADMINISTRATIVE AND SUPERVISORY PERSONNEL

- A. General: In addition to Project superintendent, provide other administrative and supervisory personnel as required for proper performance of the Work.
  - Include special personnel satisfactory to the Architect required for coordination of operations with other contractors.

#### 1.7 DIGITAL PROJECT MANAGEMENT PROCEDURES

- A. Use of Architect's Digital Data Files: Digital data files of Architect's CAD drawings will be provided by Architect, in accord with Section 01 33 00 Submittals Article 1.4 paragraphs 'A' and 'B' for Contractor's use during construction.
  - 1. Digital data files may be used by Contractor in preparing coordination drawings, Shop Drawings, and Project Record Drawings.
  - 2. Architect makes no representations as to the accuracy or completeness of digital data files as they relate to Contract Drawings.
  - 3. Digital Drawing Software Program: Contract Drawings are available in Windows operating system version of AUTOCAD.
  - Contractor shall execute a data licensing agreement in the form of Agreement included in Project Manual.
    - a. Subcontractors and other parties granted access by Contractor to Architect's digital data files shall execute a data licensing agreement in the form of Agreement included in this Project Manual.
  - 5. If requested, the following digital data files will be furnished for each appropriate discipline:
    - a. Floor plans.
    - b. Reflected ceiling plans.
    - c. HVAC ductwork plans.
- B. Web-Based Project Management Software Package: Use Architect's web-based Project management software package for purposes of hosting and managing Project communication and documentation until Final Completion.
  - 1. Web-based Project management software includes, at a minimum, the following features:
    - a. Compilation of Project data, including Contractor, subcontractors, Architect, Architect's consultants, Owner, and other entities involved in Project. Include names of individuals and contact information.
    - b. Access control for each entity for each workflow process, to determine entity's digital rights to create, modify, view, and print documents.
    - c. Document workflow planning, allowing customization of workflow between project entities.
    - d. Creation, logging, tracking, and notification for Project communications required in other Specification Sections, including, but not limited to, RFIs, submittals, Minor Changes in the Work, Construction Change Directives, and Change Orders.
    - e. Track status of each Project communication in real time, and log time and date when responses are provided.
    - f. Procedures for handling PDFs or similar file formats, allowing markups by each entity. Provide security features to lock markups against changes once submitted.
    - g. Creating and distributing meeting minutes.
    - h. Document management for Drawings, Specifications, and coordination drawings, including revision control.
    - i. Management of construction progress photographs.
    - j. Mobile device compatibility, including smartphones and tablets.
- C. PDF Document Preparation: Where PDFs are required to be submitted to Architect, prepare as follows:

- 1. Assemble complete submittal package into a single indexed file, incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
- 2. Name file with submittal number or other unique identifier, including revision identifier.
- 3. Certifications: Where digitally submitted certificates and certifications are required, provide a digital signature with digital certificate on where indicated.

## 1.8 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at Project site unless otherwise indicated.
- B. Preconstruction Conference: A preconstruction conference will be scheduled before starting construction, at a time convenient to Owner and Architect, but no later than [15] days after execution of the Agreement. The conference will be held at the Project site or another convenient location designated by the Architect.
  - Attendees: Authorized representatives of Owner Architect, and their consultants; Contractor and
    its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the
    conference. Participants at the conference shall be familiar with Project and authorized to
    conclude matters relating to the Work.
  - 2. Agenda: Discuss items of significance that could affect progress, including the following:
    - a. Tentative construction schedule.
    - b. Phasing.
    - c. Critical work sequencing and long lead items.
    - d. Designation of key personnel and their duties.
    - e. Lines of communications.
    - f. Use of web-based Project software.
    - g. Procedures for processing field decisions and Change Orders.
    - h. Procedures for RFIs.
    - i. Procedures for testing and inspecting.
    - j. Procedures for processing Applications for Payment.
    - k. Distribution of the Contract Documents.
    - I. Submittal procedures.
    - m. Preparation of Record Documents.
    - n. Use of the premises.
    - o. Work restrictions.
    - p. Working hours.
    - q. Owner's occupancy requirements.
    - r. Responsibility for temporary facilities and controls.
    - s. Procedures for moisture and mold control.
    - t. Procedures for disruptions and shutdowns.
    - u. Construction waste management and recycling.
    - v. Parking availability.
    - w. Office, work, and storage areas.
    - x. Equipment deliveries and priorities.
    - y. First aid.
    - z. Security.
    - aa. Progress cleaning.
  - Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.

- C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity when required by other Sections and when required for coordination with other construction.
  - Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect of scheduled meeting dates.
  - 2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
    - a. Contract Documents.
    - b. Options.
    - c. Related Change Orders.
    - d. Purchases.
    - e. Deliveries.
    - f. Submittals.
    - g. Review of mockups.
    - h. Possible conflicts.
    - i. Compatibility requirements.
    - j. Time schedules.
    - k. Weather limitations.
    - I. Manufacturer's written instructions.
    - m. Warranty requirements.
    - n. Compatibility of materials.
    - o. Acceptability of substrates.
    - p. Temporary facilities and controls.
    - q. Space and access limitations.
    - r. Regulations of authorities having jurisdiction.
    - s. Testing and inspecting requirements.
    - t. Installation procedures.
    - u. Coordination with other work.
    - v. Required performance results.
    - w. Protection of adjacent work.
    - x. Protection of construction and personnel.
  - 3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
  - 4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
  - 5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.
- D. Project Closeout Conference: Schedule and conduct a project closeout conference, at a time convenient to Owner and Architect, but no later than 15 days prior to the scheduled date of Substantial Completion.
  - 1. Conduct the conference to review requirements and responsibilities related to Project closeout.
  - 2. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall

- attend the meeting. Participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
- 3. Agenda: Discuss items of significance that could affect or delay Project closeout, including the following:
  - a. Preparation of Record Documents.
  - b. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
  - c. Procedures for completing and archiving web-based Project software site data files.
  - d. Submittal of written warranties.
  - e. Requirements for completing sustainable design documentation.
  - f. Requirements for preparing operations and maintenance data.
  - g. Requirements for delivery of material samples, attic stock, and spare parts.
  - h. Requirements for demonstration and training.
  - i. Preparation of Contractor's punch list.
  - j. Procedures for processing Applications for Payment at Substantial Completion and for final payment.
  - k. Submittal procedures.
  - I. Coordination of separate contracts.
  - m. Owner's partial occupancy requirements.
  - n. Installation of Owner's furniture, fixtures, and equipment.
  - o. Responsibility for removing temporary facilities and controls.
- 4. Reporting: Architect will record and distribute minutes of the meeting to each party present and to parties who should have been present.
- E. Progress Meetings: Architect will conduct progress meetings at biweekly intervals, or other appropriate intervals as determined by the Architect.
  - Attendees: In addition to representatives of Owner and Architect, the Prime Contractor shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
  - 2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
    - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
    - b. Review present and future needs of each entity present, including the following:
      - 1) Interface requirements.
      - 2) Sequence of operations.
      - 3) Status of submittals.
      - Deliveries.
      - 5) Off-site fabrication.
      - 6) Access.

- 7) Site use.
- 8) Temporary facilities and controls.
- 9) Work hours.
- 10) Progress cleaning.
- 11) Hazards and Risks.
- 12) Quality and work standards.
- 13) Status of correction of deficient items.
- 14) Field observations.
- 15) Status of RFIs.
- 16) Status of Proposal Requests.
- 17) Pending changes.
- 18) Status of Change Orders.
- 19) Pending claims and disputes.
- 20) Documentation of information for payment requests.
- 3. Reporting: Architect will record and distribute minutes of the meeting to each party present and to parties who should have been present.
- 4. The attendance at all meetings set forth above by a qualified representative of the Contractor and his subcontractors is mandatory. Any Contractor who is not represented at these meetings without previously being excused by the Architect, or who is not present at the appointed starting time of the meeting, will be assessed a penalty in the amount of \$250.00 per occurrence. The amount of this penalty will be deducted from the Contractor's account through the issuance of a Change Order. The assessment of this penalty does not relieve the contractor from the fulfillment of all other obligations of its Contract Agreement with the Owner.
- 5. At the preconstruction meeting, Contractors shall identify those individuals who shall supervise and direct the Work including both office and field supervisors. The on-site supervisor shall be present at all times that the Contractor's forces are present to perform work, shall attend all progress meetings, shall attend all coordination and scheduling meetings and such other meetings as may be reasonably requested and scheduled by the Architect. Upon the Architect's request, where there is a concern as to the progress or quality of the Contractor's work, the Contractor shall cause the President or other similarly authorized representative of the Contractor with the power to make decisions of financial consequence to the Contractor, to attend meetings scheduled by the Architect.

PART 2 - PRODUCTS (Not Used)
PART 3 - EXECUTION (Not Used)

**END OF SECTION 01 31 00** 

## **SECTION 01 32 00 - CONSTRUCTION PROGRESS DOCUMENTATION**

#### PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

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

## 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
  - 1. Contractor's Construction Schedule.
  - 2. Submittals Schedule.
  - 3. Construction schedule updating reports.
  - Daily construction reports.
  - 5. Material location reports.
  - 6. Site condition reports.
  - 7. Unusual event reports.

# B. Related Requirements:

- 1. Section 01 29 00 "Payment Procedures" for schedule of values.
- Section 01 31 00 "Project Management and Coordination" for submitting and distributing meeting and conference minutes.
- 3. Section 01 33 00 "Submittal Procedures" for submitting schedules and reports.
- 4. Section 01 40 00 "Quality Requirements" for schedule of tests and inspections.

## 1.3 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction Project. Activities included in a construction schedule consume time and resources.
  - 1. Critical Activity: An activity on the critical path that must start and finish on the planned early start and finish times.
  - 2. Predecessor Activity: An activity that precedes another activity in the network.
  - 3. Successor Activity: An activity that follows another activity in the network.
- B. Event: The starting or ending point of an activity.
- C. Float: The measure of leeway in starting and completing an activity.
  - 1. Float time is not for the exclusive use or benefit of either Owner or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule

- milestones and Contract completion date.
- 2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.
- 3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.
- D. Major Area: A story of construction, a separate building, or a similar significant construction element.
- E. Milestone: A key or critical point in time for reference or measurement.

## 1.4 SUBMITTALS

- A. Submittals Schedule: Submit via project management software. Arrange for following information in a tabular format:
  - 1. Scheduled date for first submittal.
  - 2. Specification Section number and title.
  - 3. Submittal category (action or informational).
  - 4. Name of subcontractor.
  - 5. Description of the Work covered.
  - 6. Anticipated date for Architect's approval.
- B. Preliminary Construction Schedule: Submit in PDF format, via project management software. Provide additional hard copies for the owner if requested.
- C. Contractor's Construction Schedule: Submit in PDF format, in a size that is large enough to show entire schedule for an entire construction period, via project management software. Provide additional hard copies for Owner if requested.
- D. . Construction Photographs: Submit electronic progress photos via project management software, on a weekly basis or as directed by Architect.

## 1.5 QUALITY ASSURANCE

- A. Prescheduling Conference: Conduct conference at Project site to comply with requirements in Section 01 31 00 "Project Management and Coordination." Review methods and procedures related to the preliminary construction schedule and Contractor's Construction Schedule, including, but not limited to, the following:
  - 1. Review software limitations and content and format for reports.
  - 2. Verify availability of qualified personnel needed to develop and update schedule.
  - 3. Review delivery dates for Owner-furnished products.
  - 4. Review schedule for work of Owner's separate contracts.
  - 5. Review submittal requirements and procedures.
  - 6. Review time required for review of submittals and resubmittals.
  - Review requirements for tests and inspections by independent testing and inspecting agencies.
  - 8. Review time required for Project closeout and Owner startup procedures.
  - 9. Review and finalize list of construction activities to be included in schedule.
  - 10. Review procedures for updating schedule.

#### 1.6 COORDINATION

- A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.
- B. Coordinate Contractor's Construction Schedule with the schedule of values, list of subcontracts, submittal schedule, progress reports, payment requests, and other required schedules and reports.
  - 1. Secure time commitments for performing critical elements of the Work from entities involved.
  - 2. Coordinate each construction activity in the network with other activities, and schedule them in proper sequence.

## 1.7 SUBMITTALS SCHEDULE

- A. Preparation: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, resubmittal, ordering, manufacturing, fabrication, and delivery when establishing dates.
- B. Coordinate Submittals Schedule with list of subcontracts, the Schedule of Values, and Contractor's Construction Schedule.
- C. Initial Submittal: Submit concurrently with preliminary bar-chart schedule. Include submittals required during the first 60 days of construction. List those required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
- D. Final Submittal: Submit concurrently with the first complete submittal of Contractor's Construction Schedule.

# 1.8 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Time Frame: Extend schedule from date established for commencement of the Contract to date of Final Completion.
  - 1. Contract completion date to not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
  - 2.
- B. Activities: Treat each floor or separate area as a separate numbered activity for each main element of the Work. Comply with the following:
  - 1. Activity Duration: Define activities so no activity is longer than 20 days, unless specifically allowed by Architect.
  - 2. Temporary Facilities: Indicate start and completion dates for the following as applicable:
    - a. Securing of approvals and permits required for performance of the Work.
    - b. Temporary facilities.
    - c. Construction of mock-ups, prototypes and samples.
    - d. Owner interfaces and furnishing of items.
    - e. Interfaces with Separate Contracts.
    - f. Regulatory agency approvals.

- g. Punch list.
- 3. Procurement Activities: Include procurement process activities for the following long lead-time items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
- 4. Submittal Review Time: Include review and resubmittal times indicated in Section 01 33 00 "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with submittal schedule.
- 5. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow two (2) weeks for Architect's administrative procedures necessary for certification of Substantial Completion.
- C. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, interim milestones indicated below, Substantial Completion, and Final Completion.
  - 1. Refer to Bid Proposal Form Section 'C' for all required milestones.
- D. Contract Modifications: For each proposed contract modification and concurrent with its submission, indicate the effect of the proposed change on the overall project schedule, if any.

## 1.9 PRELIMINARY CONSTRUCTION SCHEDULE

- A. Bar-Chart Schedule: Submit preliminary horizontal bar-chart-type construction schedule within seven days of date established for commencement of the Work.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line. Outline significant construction activities for first 60 days of construction. Include skeleton diagram for the remainder of the Work and a cash requirement prediction based on indicated activities.

# 1.10 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Engage an experienced, competent individual satisfactory to the Architect to prepare the Contractor's Construction Schedule.
- B. General: Prepare Bar Chart type schedule.
- C. Schedule Preparation: Prepare a list of all activities required to complete the Work.
  - 1. Activities: Indicate the estimated time duration, sequence requirements, and relationship of each activity in relation to other activities. Include estimated time frames for the following activities:
    - a. Preparation and processing of submittals.
    - b. Purchase of materials.
    - c. Delivery.
    - d. Fabrication.
    - e. Installation.

- 2. Processing: Process data to produce output data or a computer-drawn, time-scaled diagram. Revise data, reorganize activity sequences, and reproduce as often as necessary to produce the schedule within the limitations of the Contract Time.
- D. Initial Issue of Schedule: Submit schedule to Architect for acceptance.
- E. Schedule Updating: Concurrent with making revisions to schedule, prepare tabulated reports showing the following and as applicable:
  - 1. Identification of activities that have changed.
  - 2. Changes in start dates.
  - 3. Changes in finish dates.
  - 4. Changes in activity durations in workdays.
  - 5. Changes in total float or slack time.
  - 6. Changes in the Contract Time.
- F. Distribution: Distribute copies of approved schedule to Architect, Owner, sub-contractors, and other parties identified by the Architect as having a need-to-know schedule responsibility.
  - 1. Post copies in Project meeting rooms and temporary field offices.
  - 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

## 1.11 REPORTS

- A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:
  - 1. List of subcontractors at Project site.
  - 2. List of separate contractors at Project site.
  - 3. Approximate count of personnel at Project site.
  - 4. List of visitors to site.
  - 5. Equipment at Project site.
  - 6. Material deliveries.
  - 7. High and low temperatures and general weather conditions, including presence of rain or snow.
  - 8. Testing and inspection.
  - 9. Accidents.
  - 10. Meetings and significant decisions.
  - 11. Unusual events.
  - 12. Stoppages, delays, shortages, and losses.
  - 13. Meter readings and similar recordings.
  - 14. Emergency procedures.
  - 15. Orders and requests of authorities having jurisdiction.
  - 16. Change Orders received and implemented.
  - 17. Construction Change Directives received and implemented.
  - 18. Services connected and disconnected.
  - 19. Equipment or system tests and startups.
  - 20. Partial completions and occupancies.
  - 21. Substantial Completions authorized.

#### 1.12 CONSTRUCTION PHOTOGRAPHS

A. Photographer: Engage a qualified photographer to take construction photographs.

#### B. Format:

- 1. Digital Photographs: Provide color images in JPG format, produced by a digital camera with minimum sensor size of 12 megapixels, and at an image resolution of not less than 3200 by 2400 pixels. Use flash in low light levels or backlit conditions.
- C. Digital Photographs: Submit image files within three days of taking photographs.
  - Submit photos by uploading to web-based Project management software site. Include copy of a key plan indicating each photograph's location and direction.
  - 2. Identification: Provide the following information with each image description in attachment loaded through web-based Project management software site.
    - a. Name of Project.
    - b. Name and contact information for photographer.
    - c. Name of Architect.
    - d. Name of Contractor.
    - e. Date photograph was taken.
    - f. Description of location, vantage point, and direction.
    - g. Unique sequential identifier keyed to accompanying key plan.
- D. Preconstruction Photographs: Before starting construction, take a minimum of **20** photographs of Project site and surrounding properties from different vantage points. Show existing conditions adjacent to property.
- E. Contractor shall photograph or otherwise document any areas of existing damage or imperfections in the existing conditions prior to commencing demolition work. Any areas of damage not documented as such prior to demolition activities starting will be assumed to have been caused by the Contractor's Work and shall be repaired at the sole expense of the Contractor.
- F. Concealed Work Photographs: Before proceeding with installing work that will conceal other work, take photographs sufficient in number, with annotated descriptions, to record nature and location of concealed Work, including, but not limited to, the following:
  - 1. Underground utilities.
  - 2. Underslab services.
  - 3. Piping.
  - 4. Electrical conduit.
  - 5. Waterproofing and weather-resistant barriers.
- G. Periodic Construction Photographs: Take **20** photographs weekly. Photographer shall select vantage points to best show status of construction and progress since last photographs were taken.
- H. Final Completion Construction Photographs: Take **24** color photographs after date of Substantial Completion for submission as Project Record Documents. Architect will direct photographer for desired vantage points.

# UNION COUNTY BOARD OF COUNTY COMMISSIONERS Park Restroom Facilities Upgrades

Comm. No. 22-8845

PART 2 - PRODUCTS (Not Used)
PART 3 - EXECUTION (Not Used)

**END OF SECTION 01 32 00** 

## **SECTION 01 33 00 - SUBMITTAL PROCEDURES**

PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

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

## 1.2 SUMMARY

A. Section Includes: administrative and procedural requirements for submitting Shop Drawings, Product Data, Material/Equipment Purchase Confirmation Documents, Samples, and other miscellaneous submittals.

## B. Related Requirements:

- 1. Section 01 29 00 "Payment Procedures" for submitting Applications for Payment.
- 2. Section 01 31 00 "Project Management and Coordination" for submitting Coordination Drawings.
- Section 01 32 00 "Construction Progress Documentation" for submitting schedules and reports, including Contractor's Construction Schedule, Submittals Schedule, and Construction Photographs.
- 4. Section 01 40 00 "Quality Requirements" for submitting test and inspection reports, Delegated Design Submittals, and for erecting mockups.
- 5. Section 01 77 00 "Closeout Procedures" for submitting warranties, Project Record Documents and operations and maintenance manuals.

# 1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action.
- B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."

## 1.4 SUBMITTAL PROCEDURES

- A. General Electronic copies of CAD drawings of the full set of Contract Drawings will NOT be provided by the Architect for Contractor's use in preparing submittals.
- B. Electronic copies of CAD drawings of the base floor plans, reflected ceiling plans and HVAC ductwork layout will be provided by Architect for Contractor's use in preparing submittals for a flat fee of \$250.00, by request only. Plans will only be provided after receipt of the fee and execution of a release. Use of the CAD plans is for the Contractor's convenience only and does not relieve the Contractor from any obligations, responsibilities, or liabilities otherwise outlined in the Project Manual.

- C. All information on the CAD files shall be considered instruments of service of the Architect and shall not be used for other projects, for additions to this project, or for completion of this project by others. CAD files shall remain the property of the Architect, and in no case shall the transfer of these files be considered a sale.
- D. The Architect makes no representation regarding the accuracy, completeness, or permanence of CAD files, for their merchantability or fitness for a particular purpose. Addenda information or revisions made after the date indicated on the CAD files may not have been incorporated. In the event of a conflict between the Architect's sealed contract drawings and CAD files, the sealed contract drawings shall govern. It is the Contractor's responsibility **to verify conditions** as defined by the General Conditions of the Contract for Construction.
- E. The use of CAD files prepared by the Architect shall not in any way negate the Contractor's responsibility for coordination with other trades or for the proper checking and coordination of dimensions, details, member sizes and gage, and quantities of materials as required to facilitate complete and accurate fabrication and erection.
- F. The Contractor agrees to make no claim and hereby waive, to the fullest extent permitted by law, any claim or cause of action of any nature against the Architect, its officers, directors, employees, agents, or subconsultants arising out of or in connection with the use of the CAD files by the Contractor.
- G. The Contractor shall, to the fullest extent permitted by law, indemnify, defend and hold harmless the Architect and its subconsultants from any and all claims, damages, losses, expenses, penalties and liabilities of any kind, including attorney's fees and defense costs, arising out of or resulting from the use of the CAD files by the Contractor, or by third party recipients of the CAD files from the Contractor.
- H. The Architect believes that no licensing or copyright fees are due to others on account of the transfer of the CAD files, but to the extent any are, the Contractor will pay the appropriate fees and hold the Architect harmless from such claims as may arise.
- Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
  - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
  - Coordinate transmittal of different types of submittals for related parts of the Work so
    processing will not be delayed because of need to review submittals concurrently for
    coordination.
    - a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- J. Submittals Schedule: Comply with requirements in Division 1 Section "Construction Progress Documentation" for list of submittals and time requirements for scheduled performance of related construction activities. The list of submittals is the contractor's responsibility to create from requirements set forth in Section 01 32 00 "Construction Progress Documentation", and the technical sections of the specifications.
- K. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of complete submittal.
  - 1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if

- processing must be delayed to permit coordination with subsequent submittals. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
- 2. Sequential Review: Where sequential review of submittals by Architect's consultants, Owner, or other parties is required, allow 21 days for initial review of each submittal.
- 3. Direct Transmittal to Consultant: When uploaded into the project management system, the submittal can be identified to be reviewed by the consultant first, then the architect.
- 4. If re-submittal is necessary, process it in same manner as initial submittal.
- 5. Allow 15 days for processing each resubmittal.
- 6. No extension of the Contract Time will be authorized due to contractor's failure to timely transmit submittals in advance of the Work to permit processing.
- L. Identification: Place a permanent label or title block on each submittal for identification.
  - 1. Indicate name of firm or entity that prepared each submittal on label or title block.
  - 2. Provide a space approximately 3 by 3 inches on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
  - 3. Include the following information on label for processing and recording action taken.
    - a. Project name.
    - b. Date.
    - c. Name and address of Architect.
    - d. Name and address of Contractor.
    - e. Name and address of subcontractor.
    - f. Name and address of supplier.
    - g. Name of manufacturer.
    - h. Unique identifier, including revision number.
    - i. Number and title of appropriate Specification Section.
    - j. Drawing number and detail references, as appropriate.
- M. Deviations: Highlight, encircle, or otherwise identify deviations from the Contract Documents or from prior submittal reviews on submittals.
- N. Additional Copies: Unless additional copies are required for final submittal, and unless Architect observes noncompliance with provisions of the Contract Documents, initial submittal may serve as final submittal.
- O. Transmittal: Utilizing the Architect's web-based management system, upload all files. Complete all required fields (subject, spec section, discipline, etc.).
  - As an attachment, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements of the Contract Documents, including minor variations and limitations. Include the same label information as the related submittal.
  - 2. Include Contractor's certification stating that information submitted complies with requirements of the Contract Documents.
- P. Distribution: Furnish true copies of final return submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- Q. Use for Construction: Use only final submittals with mark indicating action taken by Architect in connection with construction.

#### PART 2 - PRODUCTS

#### 2.1 ACTION SUBMITTALS

- A. General: Prepare and submit Action Submittals required by individual Specification Sections.
  - 1. All submittals to be uploaded through the Architect's web-based management system. Submittals will be reviewed and returned through the same process. All accompanying product samples or color samples are to be delivered by the Contractor to the Architect's Office.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
  - 1. All product data to be submitted through the Architect's web-based management system under the heading of Submittals.
  - 2. If product data is submitted, each item to be used, and the application of that product, must be clearly identified in the documentation. If nothing is identified, the submittal will be returned with no action having been taken.
  - 3. Mark each submittal to show which products and options are applicable.
  - 4. Include the following information, as applicable:
    - a. Manufacturer's written recommendations.
    - b. Manufacturer's product specifications.
    - c. Manufacturer's installation instructions.
    - d. Color charts for selection. Hard copies to be sent to Architect for final selection.
    - e. Manufacturer's catalog cuts.
    - f. Wiring diagrams showing factory-installed wiring.
    - g. Printed performance curves.
    - h. Operational range diagrams.
    - i. Mill reports.
    - j. Standard product operating and maintenance manuals.
    - k. Compliance with recognized trade association standards.
    - I. Compliance with recognized testing agency standards.
    - m. Application of testing agency labels and seals.
    - n. Notation of coordination requirements.
    - o. Power control and fuel requirements, as applicable.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data. Neither Bid documents nor copies of the Contract Documents, whether marked or not, will be accepted as Shop Drawings.
  - 1. Preparation: Include the following information, as applicable:
    - a. Dimensions.
    - b. Identification of products.
    - c. Fabrication and installation drawings construction details, sections, elevations.
    - d. Roughing-in and setting diagrams.
    - e. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
    - f. Shopwork manufacturing instructions.
    - g. Templates and patterns.

- h. Schedules.
- i. Design calculations.
- j. Compliance with specified standards.
- k. Notation of coordination requirements.
- I. Notation of dimensions established by field measurement.
- 2. Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.
- 3. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 30 by 42 inches.
- 4. Number of Copies: Submit copies of each submittal, as follows:
  - a. All submittals to be uploaded to the Architect's on-line based management system. Submittals will be reviewed and returned through the same process.
- D. Coordination Drawings: Comply with requirements in Section 013100 "Project Management and Coordination."
- E. Samples: Prepare physical units of materials or products, including the following:
  - 1. Comply with requirements in Section 014000 "Quality Requirements" for mockups.
  - 2. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
  - 3. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from the same material to be used for the Work, cured and finished in manner specified, and physically identical with the product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
  - 4. Preparation: Mount, display, or package Samples in manner sufficient to facilitate review of qualities indicated. Prepare Samples to match Architect's sample where so indicated. Attach label on unexposed side that includes the following:
    - a. Generic description of Sample.
    - b. Product name or name of manufacturer.
    - c. Sample source.
    - d. Name of Project.
    - e. Name of Contractor.
  - 5. Additional Information: On an attached separate sheet, prepared on Contractor's letterhead, provide the following:
    - a. Size limitations.
    - b. Compliance with recognized standards.
    - c. Availability.
    - d. Delivery time.
  - 6. 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 final submittal and actual component as delivered and installed.
    - a. If variation in color, pattern, texture, or other characteristic is inherent in the product

- represented by a Sample, submit at least three sets of paired units that show limits of the variations.
- b. Refer to individual Specification Sections for requirements for Samples that illustrate workmanship, fabrication techniques, details of assembly, connections, operation, and similar construction characteristics.
- 7. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
  - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
  - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, shall remain the property of Contractor.
- 8. Physical samples are to be sent to the Architect unless directed otherwise by the Architect.
- F. Product Schedule or List: Prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
  - 1. Type of product. Include unique identifier for each product.
  - 2. Number and name of room or space.
  - 3. Location within room or space.
- G. Delegated-Design Submittal: Comply with requirements in Section 01 40 00 "Quality Requirements."
- H. Contractor's Construction Schedule: Comply with requirements in Section 01 32 00 "Construction Progress Documentation".
- Submittals Schedule: Comply with requirements in Section 01 32 00 "Construction Progress Documentation."
- J. Application for Payment: Comply with requirements in Section 01 29 00 "Payment Procedures."
- K. Schedule of Values: Comply with requirements in Section 01 29 00 "Payment Procedures."
- L. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
  - 1. Name, address, and telephone number and contact person of the entity performing subcontract or supplying products.
  - Number and title of related Specification Section(s) covered by subcontract.
  - 3. Drawing number and detail references, as appropriate, covered by subcontract.

# 2.2 INFORMATION SUBMITTALS

- A. General: Prepare and submit Informational Submittals required by other Specification Sections.
  - All submittals are to be uploaded to the Architect's web-based project management system.
     Submittals will be returned via the same system. All accompanying product samples or color

- samples are to be delivered by the Contractor to the Architect's Office.
- 2. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
- 3. Test and Inspection Reports: Comply with requirements in Section 01 40 00 "Quality Requirements."
- B. Contractor's Construction Schedule: Comply with requirements in Section 01 32 00 "Construction Progress Documentation."
- C. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of architects and owners for reference, and other information specified.
- D. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements.
- E. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements. Submit record of Welding Procedure Specification (WPS) and Procedure Qualification Record (PQR) on AWS forms. Include names of firms and personnel certified.
- F. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements and, where required, is authorized for this specific Project.
- G. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements. Include evidence of manufacturing experience where required.
- H. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements.
- I. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements.
- J. Preconstruction Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements.
- K. Compatibility Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- L. Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements.
- M. Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with requirements. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.

- N. Research/Evaluation Reports: Prepare written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
  - 1. Name of evaluation organization.
  - 2. Date of evaluation.
  - 3. Time period when report is in effect.
  - 4. Product and manufacturers' names.
  - 5. Description of product.
  - 6. Test procedures and results.
  - 7. Limitations of use.
- O. Maintenance Data: Prepare written and graphic instructions and procedures for operation and normal maintenance of products and equipment. Comply with requirements in Division 1 Section "Closeout Procedures."
- P. Design Data: Prepare written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.
- Q. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating their product or equipment. Include name of product and name, address, and telephone number of manufacturer. Include the following, as applicable:
  - 1. Preparation of substrates.
  - 2. Required substrate tolerances.
  - 3. Sequence of installation or erection.
  - 4. Required installation tolerances.
  - 5. Required adjustments.
  - 6. Recommendations for cleaning and protection.
- R. Manufacturer's Field Reports: Prepare written information documenting factory-authorized service representative's tests and inspections. Include the following, as applicable:
  - 1. Name, address, and telephone number of factory-authorized service representative making report.
  - 2. Statement on condition of substrates and their acceptability for installation of product.
  - 3. Statement that products at Project site comply with requirements.
  - 4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
  - 5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
  - 6. Statement whether conditions, products, and installation will affect warranty.
  - 7. Other required items indicated in individual Specification Sections.
- S. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.
- T. Construction Photographs: Comply with requirements in Section 013200"Construction Progress

Documentation."

U. Safety Data Sheets: Submit information directly to Owner. If submitted to Architect, Architect will not review this information but will return it with no action taken.

## **PART 3 - EXECUTION**

#### 3.1 CONTRACTOR'S REVIEW

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

## 3.2 ARCHITECT'S REVIEW

- A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or modifications required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken.
  - 1. PDF Submittals: Architect will indicate, via markup on each submittal, the appropriate action.
  - 2. Paper Submittals: Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action.
  - 3. Submittals by Web-Based Project Management Software: Architect will indicate, on Project management software website, the appropriate action.
- C. Informational Submittals: Architect will review each submittal and will not return it, or will reject and return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- D. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect.
- E. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.
- F. Architect will return without review submittals received from sources other than Contractor.
- G. Submittals not required by the Contract Documents will not be reviewed and may be discarded.

## **END OF SECTION 01 33 00**

## **SECTION 01 40 00 - QUALITY REQUIREMENTS**

PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

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

## 1.2 SUMMARY

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

# C. Related Requirements:

- 1. Section 01 21 00 "Allowances" for testing and inspection allowances.
- 2. Section 13 20 00 "Construction Progress Documentation" for developing a schedule of required tests and inspections.
- 3. Divisions 2 through 48 Sections for specific test and inspection requirements.

## 1.3 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and ensure that proposed construction complies with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that completed construction complies with requirements. Services do not include contract enforcement activities performed by Architect.
- C. Mockups: Full-size, physical example assemblies to illustrate finishes and materials. Mockups are used to verify selections made under Sample submittals, to demonstrate aesthetic effects and, where indicated, qualities of materials and execution, and to review construction, coordination, testing, or

operation; they are not Samples. Mockups establish the standard by which the Work will be judged.

D. Testing Agency: An entity engaged to perform specific tests, inspections, or both. The term "testing laboratory" has the same meaning as the term "testing agency."

## 1.4 DELEGATED DESIGN SERVICES

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

## 1.5 SUBMITTALS

- A. Qualification Data: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- B. Delegated-Design Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit a statement, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional, indicating that the products and systems are in compliance with performance and design criteria indicated. Include list of codes, loads, and other factors used in performing these services.
- C. Schedule of Tests and Inspections: Prepare in tabular form and include the following:
  - 1. Specification Section number and title.
  - 2. Entity responsible for performing tests and inspections.
  - 3. Description of test and inspection.
  - 4. Identification of applicable standards.
  - 5. Identification of test and inspection methods.
  - 6. Number of tests and inspections required.
  - 7. Time schedule or time span for tests and inspections.
  - 8. Requirements for obtaining samples.
  - 9. Unique characteristics of each quality-control service.
- D. Reports: Prepare and submit certified written reports and documents as specified.
  - 1. Date of issue.
  - 2. Project title and number.
  - 3. Name, address, telephone number, and email address of testing agency.
  - 4. Dates and locations of samples and tests or inspections.

- 5. Names of individuals making tests and inspections.
- 6. Description of the Work and test and inspection method.
- 7. Identification of product and Specification Section.
- 8. Complete test or inspection data.
- 9. Test and inspection results and an interpretation of test results.
- 10. Record of temperature and weather conditions at time of sample-taking and testing and inspection.
- 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
- 12. Name and signature of laboratory inspector.
- 13. Recommendations on retesting and reinspecting.
- E. Permits, Licenses, and Certificates: For Owner's record, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents established for compliance with standards and regulations bearing on performance of the Work.

## 1.6 QUALITY ASSURANCE

- A. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- B. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect, demonstrate, repair, and perform service on installations of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- C. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units. As applicable, procure products from manufacturers able to meet qualification requirements, warranty requirements, and technical or factory-authorized service representative requirements.
- D. Installer Qualifications: A firm or individual experienced in installing, erecting, applying, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- E. Specialists: Certain Specification Sections require that specific construction activities be performed by entities who are recognized experts in those operations. Specialists will satisfy qualification requirements indicated and engage in the activities indicated.
  - 1. Requirements of authorities having jurisdiction supersede requirements for specialists.
- F. Testing and Inspecting Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspection indicated, as documented in accordance with ASTM E329, and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.
- G. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated

for the completed Work:

- 1. Build mockups in location and of size indicated, or if not indicated, as directed by the Architect.
- 2. Notify Architect seven days in advance of dates and times when mockups will be constructed.
- 3. Demonstrate the proposed range of aesthetic effects and workmanship.
- 4. Obtain Architect's approval of mockups before starting corresponding Work, fabrication, or construction.
- 5. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
- 6. Demolish and remove mockups when directed unless otherwise indicated.

## 1.7 QUALITY CONTROL

- A. Contractor Responsibilities: Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction.
  - 1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
    - a. Contractor will not employ same entity engaged by Owner, unless agreed to in writing by Owner.
  - 2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspection will be performed.
  - 3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
  - 4. Testing and inspection requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
  - 5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- B. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Section 013300 "Submittal Procedures."
- C. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- D. Contractor's Associated Requirements and Services: Cooperate with agencies and representatives performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
  - 1. Access to the Work.
  - 2. Incidental labor and facilities necessary to facilitate tests and inspections.
  - 3. Adequate quantities of representative samples of materials that require testing and inspection. Assist agency in obtaining samples.
  - 4. Facilities for storage and field curing of test samples.
  - 5. Delivery of samples to testing agencies.

- 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
- 7. Security and protection for samples and for testing and inspection equipment at Project site.
- E. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspection.
  - 1. Schedule times for tests, inspections, obtaining samples, and similar activities.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

#### 3.1 TEST AND INSPECTION LOG

- A. Test and Inspection Log: Prepare a record of tests and inspections. Include the following:
  - 1. Date test or inspection was conducted.
  - 2. Description of the Work tested or inspected.
  - 3. Date test or inspection results were transmitted to Architect.
  - 4. Identification of testing agency or special inspector conducting test or inspection.
- B. Maintain log at Project site. Post changes and revisions as they occur. Provide access to test and inspection log for Architect's reference during normal working hours.
  - 1. Submit log at Project closeout as part of Project Record Documents.

# 3.2 REPAIR AND PROTECTION

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

## **END OF SECTION 01 40 00**

## **SECTION 01 42 00 - REFERENCES**

PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

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

## 1.2 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": The term "approved," when used in conjunction with Architect's action on Contractor's submittals, applications, and requests, is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean directed by Architect, requested by Architect, and similar phrases.
- D. "Indicated": The term "indicated" refers to graphic representations, notes, or schedules on Drawings; or to other paragraphs or schedules in Specifications and similar requirements in the Contract Documents. Terms such as "shown," "noted," "scheduled," and "specified" are used to help the user locate the reference.
- E. "Regulations": 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" means to supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": The term "install" describes operations at Project site including unloading, temporary storage, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. "Provide": The term "provide" means to furnish and install, complete and ready for the intended use.
- I. "Installer": An installer is Contractor or another entity engaged by Contractor, as an employee, subcontractor, or contractor of lower tier, to perform a particular construction operation, including installation, erection, application, and similar operations.
- J. The term "experienced," when used with the term "installer," means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with the special requirements indicated; and having complied with requirements of authorities having jurisdiction.
  - 1. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as

REFERENCES 01 42 00 - 1

"carpenter." It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.

K. "Project site" is the space available for performing construction activities, either exclusively or in conjunction with others performing other work as part of Project. The extent of Project site is shown on the Drawings and may or may not be identical with the description of the land on which Project is to be built.

## 1.3 INDUSTRY STANDARDS

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

PART 2 - PRODUCTS (Not Used)
PART 3 - EXECUTION (Not Used)

**END OF SECTION 01 42 00** 

REFERENCES 01 42 00 - 2

## **SECTION 01 50 00 - TEMPORARY FACILITIES AND CONTROLS**

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and all Division 01 through 48 Specification Sections, apply to this Section.

## 1.2 SUMMARY

- A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
- B. Temporary utilities may include, but are not limited to, the following, all as required to complete the Work:
  - 1. Water service and distribution.
  - 2. Sanitary facilities, including toilets, wash facilities, and drinking-water facilities.
  - 3. Heating and cooling facilities.
  - 4. Ventilation.
  - 5. Lighting.
- C. Support facilities may include, but are not limited to, the following, all as required to complete the Work:
  - 1. Project identification and temporary signs.
  - 2. Waste disposal facilities.
  - 3. Lifts and hoists.
  - 4. Construction aids and miscellaneous services and facilities.
- D. Security and protection facilities may include, but are not limited to, the following, all as required to complete the Work:
  - 1. Security enclosure and lockup.
  - 2. Barricades, warning signs, and lights.
  - 3. Fire protection.

## E. Related Requirements:

- 1. Section 01 10 00 "Summary" for work restrictions and limitations on utility interruptions.
- 2. Section 01 21 00 "Allowances" for allowance for metered use of temporary utilities.
- 3. Section 01 73 00 "Execution Requirements" for progress cleaning requirements.
- 4. Division 2 through 48 for temporary heat, ventilation, and humidity requirements for products in those sections.

#### 1.3 USE CHARGES

- A. General: Cost or use charges for temporary facilities are not chargeable to Owner or Architect and shall be included in the Contract Sum. Allow other entities to use temporary services and facilities without cost, including, but not limited to, the following:
  - 1. Owner's construction forces.
  - 2. Occupants of Project.
  - 3. Architect.
  - 4. Testing agencies.
  - Personnel of authorities having jurisdiction.
- B. Water and Sewer Service from Existing System: Water from Owner's existing water system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.
- C. Electric Power Service from Existing System: Electric power from Owner's existing system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.

## 1.4 INFORMATIONAL SUBMITTALS

- A. Site Utilization Plan: Show temporary facilities, temporary utility lines and connections, staging areas, construction site entrances, vehicle circulation, and parking areas for construction personnel.
- B. Implementation and Termination Schedule: Within 10 days of date established for commencement of the Work, submit schedule indicating implementation and termination dates of each temporary utility.
- C. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire-prevention program.
- D. Moisture- and Mold-Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage and mold. Describe delivery, handling, storage, installation, and protection provisions for materials subject to water absorption or water damage.
  - 1. Indicate procedures for discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and requirements for replacing water-damaged Work.
  - 2. Indicate sequencing of work that requires water, such as sprayed fire-resistive materials, plastering, and terrazzo grinding, and describe plans for dealing with water from these operations. Show procedures for verifying that wet construction has dried sufficiently to permit installation of finish materials.
  - 3. Indicate methods to be used to avoid trapping water in finished work.

## 1.5 QUALITY ASSURANCE

- A. Standards: Comply with industry standards and applicable laws and regulations of authorities having jurisdiction, including but not limited to the following:
  - Department of Health; Utility Companies; Police, Fire and Rescue Squads; Department of Environmental Protection; Federal Occupational Safety and Health Act (OSHA); and Soil Conservation District.

- 2. Trade Jurisdictions: Assigned responsibilities for installation and operation of temporary utilities are not intended to interfere with trade regulations and union jurisdictions.
- 3. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.
- B. Accessible Temporary Egress: Comply with applicable provisions in the United States Access Board's ADA-ABA Accessibility Guidelines and ICC/ANSI A117.1.

## 1.6 PROJECT CONDITIONS

- A. Conditions of Use: The following conditions apply to use of temporary services and facilities by all parties engaged in the Work:
  - 1. Keep temporary services and facilities clean and neat.
  - 2. Do not overload facilities, or permit them to interfere with progress.
  - 3. Do not allow hazardous or unsanitary conditions, or public nuisances to develop or persist on the site.
  - 4. Relocate temporary services and facilities as required by progress of the Work as directed by the Architect.
- B. Parking: All Contractors and workers shall park their vehicles in the areas designated by the Owner.
- C. Deliveries: All deliveries of materials and equipment to the jobsite shall be confined to the location so designated by the Owner. Each Contractor shall maintain storage of his items in a safe and secure manner.
- D. The Owner may require that deliveries not be accepted during certain hours.
- E. Advertising: No advertising shall be permitted upon any part of the building, fences, trees, signs or remainder of the site by any parties.

## PART 2 - PRODUCTS

## 2.1 MATERIALS

- A. General: Provide new materials. Undamaged, previously used materials in serviceable condition may be used if approved by Architect. Provide materials suitable for use intended.
- B. Chain-Link Fencing: Minimum 2-inch, 0.148-inch-thick, galvanized-steel, chain-link fabric fencing; minimum 6 feet high with galvanized-steel pipe posts; minimum 2-3/8-inch-OD line posts and 2-7/8-inch-OD corner and pull posts, with 1-5/8-inch-OD top rails.
- C. Portable Chain-Link Fencing: Minimum 2-inch, 0.148-inch-thick, galvanized-steel, chain-link fabric fencing; minimum 6 feet high with galvanized-steel pipe posts; minimum 2-3/8-inch-OD line posts and 2-7/8-inch-OD corner and pull posts, with 1-5/8-inch-OD top and bottom rails. Provide concrete bases for supporting posts.
- D. Polyethylene Sheet: Reinforced, fire-resistive sheet, 10-mil minimum thickness, with flame-spread rating of 15 or less in accordance with ASTM E84 and passing NFPA 701 Test Method 2.

- E. Water: Potable.
- F. Dust-Control Adhesive-Surface Walk-Off Mats: Provide mats, minimum 36 by 60 inches.
- G. Insulation: Unfaced mineral-fiber blanket, manufactured from glass, slag wool, or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively.

# 2.2 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
- B. HVAC Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.
  - Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
  - 2. Heating, Cooling, and Dehumidifying Units: Listed and labeled for type of fuel being consumed, by a qualified testing agency acceptable to authorities having jurisdiction, and marked for intended location and application.
  - 3. Permanent HVAC System: If Owner authorizes use of permanent HVAC system for temporary use during construction, provide filter with MERV of 8 at each return-air grille in system and remove at end of construction and clean HVAC system as required in Section 01 77 00 "Closeout Procedures."
- C. Air-Filtration Units: Primary and secondary HEPA-filter-equipped portable units with four-stage filtration. Provide single switch for emergency shutoff. Configure to run continuously.

#### **PART 3 - EXECUTION**

## 3.1 TEMPORARY FACILITIES, GENERAL

- A. Conservation: Coordinate construction and use of temporary facilities with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.
  - 1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. See other Sections for disposition of salvaged materials that are designated as Owner's property.

## 3.2 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
  - 1. Locate facilities to limit site disturbance as specified in Section 01 10 00 "Summary."
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

- C. Isolation of Work Areas in Occupied Facilities: Prevent dust, fumes, and odors from entering occupied areas.
  - 1. Prior to commencing work, isolate the HVAC system in area where work is to be performed according to coordination drawings.
    - Disconnect supply and return ductwork in work area from HVAC systems servicing occupied areas.
    - b. Maintain negative air pressure within work area, using HEPA-equipped air-filtration units, starting with commencement of temporary partition construction, and continuing until removal of temporary partitions is complete.
  - 2. Maintain dust partitions during the Work. Use vacuum collection attachments on dust-producing equipment. Isolate limited work within occupied areas using portable dust-containment devices.
  - 3. Perform daily construction cleanup and final cleanup using approved, HEPA-filter-equipped vacuum equipment.

## 3.3 TEMPORARY UTILITY INSTALLATION

- A. General: Install temporary service or connect to existing service.
  - 1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
- B. Sanitary Facilities: Provide temporary toilets, wash facilities, safety shower and eyewash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
  - 1. Use of Permanent Toilets: Use of Owner's existing or new toilet facilities is not permitted
- C. Temporary Heating and Cooling: Provide temporary heating and cooling required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.
  - 1. Provide temporary dehumidification systems when required to reduce ambient and substrate moisture levels to level required to allow installation or application of finishes and their proper curing or drying.
- D. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.
  - 1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.
  - 2. Provide lighting at the following minimum levels, or to satisfy the requirements of OSHA or the AHJ, whichever is greater:
    - a. Provide a minimum of one 100-W incandescent lamp per 500 sq. ft., uniformly distributed, for general lighting, or equivalent illumination.
    - b. Provide a minimum of one 100-W incandescent lamp every 50 feet in traffic areas.
    - c. Provide a minimum of one 100-W incandescent lamp per story in stairways and ladder runs, located to illuminate each landing and flight.

d. Install exterior-yard site lighting that will provide adequate illumination for construction operations, traffic conditions, and signage visibility when the Work is being performed.

## 3.4 SUPPORT FACILITIES INSTALLATION

- A. Comply with the following:
  - 1. Provide construction for temporary field offices, shops, and sheds located within construction area or within 30 feet of building lines that is noncombustible in accordance with ASTM E136. Comply with NFPA 241.
  - 2. Utilize designated area within existing building for temporary field offices.
  - 3. Maintain support facilities until Architect schedules Substantial Completion inspection. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.
- B. Parking: Use designated areas of Owner's existing parking areas for construction personnel.
- C. Storage and Staging: Use designated areas of Project site for storage and staging needs.
- D. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.
  - 1. Identification Signs: Provide Project identification signs as indicated on Drawings.
  - 2. Temporary Signs: Provide other signs as indicated and as required to inform public and individuals seeking entrance to Project.
    - a. Provide temporary, directional signs for construction personnel and visitors.
  - 3. Maintain and touch up signs, so they are legible at all times.
- E. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with progress cleaning requirements in Section 01 73 00 "Execution."
- F. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.
  - 1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

## 3.5 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.
  - 1. Where access to adjacent properties is required in order to affect protection of existing facilities, obtain written permission from adjacent property owner to access property for that purpose.
- B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.

- Comply with work restrictions specified in Section 01 10 00 "Summary."
- C. Site Enclosure Fence: Before construction operations begin, furnish and install site enclosure fence in a manner that will prevent people from easily entering site except by entrance gates.
  - 1. Extent of Fence: As required to enclose entire Project site or portion determined sufficient to accommodate construction operations.
  - 2. Maintain security by limiting number of keys and restricting distribution to authorized personnel. Furnish one set of keys to Owner.
- D. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241; manage fireprevention program.
  - 1. Provide fire extinguishers, installed on walls on mounting brackets, visible and accessible from space being served, with sign mounted above.
    - a. Class ABC dry-chemical extinguishers or a combination of extinguishers of NFPA-recommended classes for exposures.
    - b. Locate fire extinguishers where convenient and effective for their intended purpose; provide not less than one extinguisher on each floor at or near each usable stairwell.
  - 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 firefighting. Prohibit smoking in construction areas.
  - 4. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition.

## 3.6 MOISTURE AND MOLD CONTROL

- A. Moisture and Mold Protection: Protect stored materials and installed Work in accordance with Moisture and Mold Protection Plan.
- B. Controlled Construction Period: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:
  - 1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
  - 2. Use temporary or permanent HVAC system to control humidity within ranges specified for installed and stored materials.
  - 3. Comply with manufacturer's written instructions for temperature, relative humidity, and exposure to water limits.
    - a. Hygroscopic materials that may support mold growth, including wood and gypsum-based products, that become wet during the course of construction and remain wet for 48 hours are considered defective and require replacing.
    - b. Measure moisture content of materials that have been exposed to moisture during construction operations or after installation. Record readings beginning at time of exposure and continuing daily for 48 hours. Identify materials containing moisture levels higher than allowed. Report findings in writing to Architect.
    - c. Remove and replace materials that cannot be completely restored to their manufactured moisture level within 48 hours.

- 3.7 OPERATION, TERMINATION, AND REMOVAL
  - A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
  - B. Maintenance: Maintain facilities in good operating condition until removal.
    - 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
  - C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
  - D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been 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 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 Contractor. Owner reserves right to take possession of Project identification signs.
    - 2. Remove temporary roads and paved areas not intended for or acceptable for integration into permanent construction. Where area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at temporary entrances, as required by authorities having jurisdiction.
    - 3. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 01 77 00 "Closeout Procedures."

**END OF SECTION 01 50 00** 

## **SECTION 01 60 00 - PRODUCT REQUIREMENTS**

PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

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

## 1.2 SUMMARY

- A. The Work of This Section Includes: Administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.
- B. Related Requirements:
  - 1. Section 01 21 00 "Allowances" for products selected under an allowance.
  - 2. Section 01 23 00 "Alternates" for products selected under an alternate.
  - 3. Section 01 42 00 "References" for applicable industry standards for products specified.
  - 4. Section 01 77 00 "Closeout Procedures" for submitting warranties.

## 1.3 DEFINITIONS

- A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
  - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
  - New Products: Items that have not previously been incorporated into another project or facility.
     Salvaged items or items reused from other projects are not considered new products. Items that are manufactured or fabricated to include recycled content materials are considered new products unless otherwise indicated.
  - 3. Comparable Product: Product by named manufacturer that is demonstrated and approved through the comparable product submittal process described in "Comparable Products" Article, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Basis-of-Design Product Specification: A specification in which a single manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation. Published attributes and characteristics of basis-of-design product establish salient characteristics of products.
  - Evaluating Comparable Products: In addition to the basis-of-design product description, product

attributes and characteristics may be listed to establish the significant qualities related to type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other special features and requirements for purposes of evaluating comparable products of additional manufacturers named in the specification.

- C. Subject to Compliance with Requirements: Where the phrase "Subject to compliance with requirements" introduces a product selection procedure in an individual Specification Section, provide products qualified under the specified product procedure. In the event that a named product or product by a named manufacturer does not meet the other requirements of the specifications, select another named product or product from another named manufacturer that does meet the requirements of the specifications; submit a comparable product request or substitution request, if applicable.
- D. Comparable Product Request Submittal: An action submittal requesting consideration of a comparable product, including the following information:
  - 1. Identification of basis-of-design product or fabrication or installation method to be replaced, including Specification Section number and title and Drawing numbers and titles.
  - 2. Data indicating compliance with the requirements specified in "Comparable Products" Article.
- E. Basis-of-Design Product Specification Submittal: An action submittal complying with requirements in Section 01 33 00 "Submittal Procedures."
- F. Manufacturer's Warranty: Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
- G. Special Warranty: Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide additional rights for the Owner.

## 1.4 SUBMITTALS

- A. Product List: Submit a list, in tabular from, showing specified products. Include generic names of products required. Include manufacturer's name and proprietary product names for each product.
  - 1. Coordinate product list with Contractor's Construction Schedule and the Submittals Schedule.
  - 2. Form: Tabulate information for each product under the following column headings:
    - a. Specification Section number and title.
    - b. Generic name used in the Contract Documents.
    - c. Proprietary name, model number, and similar designations.
    - d. Manufacturer's name and address.
    - e. Supplier's name and address.
    - f. Installer's name and address.
    - g. Projected delivery date or time span of delivery period.
    - h. Identification of items that require early submittal approval for scheduled delivery date.
  - 3. Initial Submittal: Within 30 days after date of commencement of the Work, submit –initial product list. Include a written explanation for omissions of data and for variations from Contract requirements. Completed List: Within 60 days after date of commencement of the Work, submit completed product list. Include a written explanation for omissions of data and for variations from Contract requirements. Architect's Action: Architect will respond in writing to Contractor

within 15 days of receipt of completed product list. Architect's response will include a list of unacceptable product selections and a brief explanation of reasons for this action. Architect's response, or lack of response, does not constitute a waiver of requirement that products comply with the Contract Documents.

- B. Substitution Requests: Submit each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
  - 1. Substitution Request Form: Use Form SSP 2 "Summary Comparison Sheet" provided.
  - 2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
    - a. Statement indicating why specified material or product cannot be provided.
    - b. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.
    - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
    - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
    - e. Samples, where applicable or requested.
    - f. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
    - g. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
    - h. Research/evaluation reports evidencing compliance with building code in effect for Project, from a model code organization acceptable to authorities having jurisdiction.
    - i. Detailed comparison of Contractor's Construction Schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating lack of availability or delays in delivery.
    - j. Cost information, including a proposal of change, if any, in the Contract Sum.
    - k. Contractor's certification that proposed substitution complies with requirements in the Contract Documents and is appropriate for applications indicated.
    - Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
  - Architect's Action: If necessary, Architect will request additional information or documentation
    for evaluation of a request for substitution. Architect will notify Contractor of acceptance or
    rejection of proposed substitution within 15 days of receipt of request, or 7 days of receipt of
    additional information or documentation, whichever is later.
    - Form of Acceptance: Contractor to secure acceptance of substitutions in writing from the Architect.
    - b. Use product specified if Architect cannot make a decision on use of a proposed substitution within time allocated.

## 1.5 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.
  - 1. Resolution of Compatibility Disputes between Multiple Contractors:
    - a. Contractors are responsible for providing products and construction methods compatible with products and construction methods of other contractors.
    - b. If a dispute arises between the multiple contractors over concurrently selectable but incompatible products, Architect will determine which products will be used.
- B. Identification of Products: Except for required labels and operating data, do not attach or imprint manufacturer or product names or trademarks on exposed surfaces of products or equipment that will be exposed to view in occupied spaces or on the exterior.
  - 1. Labels: Locate required product labels and stamps on a concealed surface, or, where required for observation following installation, on a visually accessible surface that is inconspicuous.
  - 2. Equipment Nameplates: Provide a permanent nameplate on each item of service- or poweroperated equipment. Locate on a visually accessible but inconspicuous surface. Include information essential for operation, including the following:
    - a. Name of product and manufacturer.
    - b. Model and serial number.
    - c. Capacity.
    - d. Speed.
    - e. Ratings.
  - 3. See individual identification Sections in Divisions 21, 22, 23, and 26 for additional equipment identification requirements.

## 1.6 COORDINATION

- A. Modify or adjust affected work as necessary to integrate work of approved comparable products and approved substitutions.
- 1.7 PRODUCT DELIVERY, STORAGE, AND HANDLING
  - A. Deliver, store, and handle products, using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.
  - B. Delivery and Handling:
    - 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
    - 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
    - 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing,

- unpacking, protecting, and installing.
- 4. Inspect products on delivery to determine compliance with the Contract Documents and that products are undamaged and properly protected.

## C. Storage:

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

## 1.8 PRODUCT WARRANTIES

- A. Warranties specified in other Sections are to be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
  - Manufacturer's Warranty: Written standard warranty form furnished by individual manufacturer for a particular product and issued in the name of Owner or endorsed by manufacturer to Owner.
  - 2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner and issued in the name of Owner or endorsed by manufacturer to Owner.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.
  - 1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
  - 2. Specified Form: When specified forms are included in the Project Manual, prepare a written document, using indicated form properly executed.
  - 3. Refer to Divisions 2 through 48 Sections for specific content requirements and particular requirements for submitting special warranties.
- C. Submittal Time: Comply with requirements in Section 01 77 00 "Closeout Procedures.

## PART 2 - PRODUCTS

# 2.1 PRODUCT SELECTION PROCEDURES

A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged, and unless otherwise indicated, that are new at time of installation.

- 1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
- 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
- 3. Architect reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
- 4. Where products are accompanied by the term "as selected," Architect will make selection.
- 5. Where products are accompanied by the term "match sample," sample to be matched is Architect's.
- 6. Descriptive, performance, and reference standard requirements in the Specifications establish "salient characteristics" of products.
- 7. Or Equal: Where products are specified by name and accompanied by the term "or equal" or "or approved equal" or "or approved," comply with provisions in "Comparable Products" Article to obtain approval for use of an unnamed product.
- B. Product Selection Procedures: Procedures for product selection include the following:
  - 1. Product: Where Specification paragraphs or subparagraphs titled "Product" name a single product and manufacturer, provide the product named.
  - 2. Manufacturer/Source: Where Specification paragraphs or subparagraphs titled "Manufacturer" or "Source" name single manufacturers or sources, provide a product by the manufacturer or from the source named that complies with requirements.
  - 3. Products: Where Specification paragraphs or subparagraphs titled "Products" introduce a list of names of both products and manufacturers, provide one of the products listed that complies with requirements.
  - 4. Manufacturers: Where Specification paragraphs or subparagraphs titled "Manufacturers" introduce a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements.
  - 5. Available Products: Where Specification paragraphs or subparagraphs titled "Available Products" introduce a list of names of both products and manufacturers, provide one of the products listed or another product that complies with requirements. Comply with provisions in "Comparable Products" Article to obtain approval for use of an unnamed product.
  - 6. Available Manufacturers: Where Specification paragraphs or subparagraphs titled "Available Manufacturers" introduce a list of manufacturers' names, provide a product by one of the manufacturers listed or another manufacturer that complies with requirements. Comply with provisions in "Comparable Products" Article to obtain approval for use of an unnamed product.
  - 7. Product Options: Where Specification paragraphs titled "Product Options" indicate that size, profiles, and dimensional requirements on Drawings are based on a specific product or system, provide either the specific product or system indicated or a comparable product or system by another manufacturer. Comply with provisions in "Product Substitutions" Article.
  - 8. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers. Drawings and Specifications may additionally indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one of the other named manufacturers.
    - a. For approval of products by unnamed manufacturers, comply with requirements in Section 01 25 00 "Contract Modification Procedures", and requirements in "Substitutions" Article.

- 9. Visual Matching Specification: Where Specifications require matching an established Sample, select a product (and manufacturer) that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches satisfactorily.
  - a. If no product available within specified category matches satisfactorily and complies with other specified requirements, comply with provisions of the Contract Documents on "substitutions" for selection of a matching product.
- 10. Visual Selection Specification: Where Specifications include the phrase "as selected from manufacturer's colors, patterns, textures" or a similar phrase, select a product (and manufacturer) that complies with other specified requirements.
  - a. Standard Range: Where Specifications include the phrase "standard range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, or texture from manufacturer's product line that does not include premium items.
  - b. Full Range: Where Specifications include the phrase "full range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, or texture from manufacturer's product line that includes both standard and premium items.

## 2.2 PRODUCT SUBSTITUTIONS

- A. Whenever a product or system is identified on the drawings or in the specifications by reference to manufacturers or vendors names, trade names, catalog numbers, or the like, it is so identified for the purpose of establishing a basis of design and shall not be construed as limiting competition. Any product or system of other manufacturers or vendors which will perform adequately the duties imposed by the general design will be considered equally acceptable provided the material, article, or piece of equipment so proposed is, in the opinion of the Architect, of equal substance, appearance and function.
- B. No substituted product or system shall be purchased or installed by the Contractor without the Architect's written approval.
- C. Only the Prime Contractors shall make requests for substitutions. Direct requests by Subcontractors and Vendors will not be entertained by the Architect.
- D. Substitutions indicated or implied on shop drawings or product data will not be considered without a prior written request.
- E. Substitutions After Contract Award: All written requests for substitutions must be received no later than sixty (60) days after the Notice of Contract Award. Such requests may either be considered or rejected at the discretion of the Architect. No requests for substitution will be accepted after that time, unless, through no fault of the Contractor, none of the specified products are available.
- F. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
  - Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other Prime Contractors' work, and similar considerations.
  - 2. Requested substitution does not require revisions to the Contract Documents.

- 3. Requested substitution is consistent with the Contract Documents and will produce indicated results.
- 4. Substitution request is fully documented and properly submitted.
- 5. Requested substitution will not adversely affect Contractor's Construction Schedule.
- 6. Requested substitution has received necessary approvals of authorities having jurisdiction.
- 7. Requested substitution is compatible with other portions of the Work.
- 8. Requested substitution has been coordinated with other portions of the Work.
- 9. Requested substitution provides specified warranty.
- 10. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
- G. Approval of a specific manufacturer or vendor shall not constitute waiver of any of the requirements of the Contract Documents. If the Architect does not accept the proposed substitute, then the Contractor shall provide the product (or one of the products) specified.

#### 2.3 COMPARABLE PRODUCTS

- A. Conditions for Consideration of Comparable Products: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with the following requirements:
  - 1. Evidence that the proposed product does not require revisions to the Contract documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
  - 2. If proposed product requires revisions to the Contract documents, costs incurred by the A/E to revise the Contract documents will be borne by the Contractor proposing the use of the comparable product.
  - 3. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and/or separate contractors, which will become necessary to accommodate the proposed change. Any additional costs incurred by Owner and/or other contractors will be borne by the Contractor proposing the use of the comparable product.
  - 4. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
  - 5. Evidence that proposed product provides specified warranty.
  - 6. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
  - 7. Samples, if requested.
- B. Architect's Action on Comparable Products Submittal: If necessary, Architect will request additional information or documentation for evaluation, as specified in Section 01 33 00 "Submittal Procedures."
  - 1. Form of Approval of Submittal: As specified in Section 01 33 00 "Submittal Procedures."
  - 2. Use product specified if Architect does not issue a decision on use of a comparable product request within time allocated.
- C. Submittal Requirements, Two-Step Process: Approval by the Architect of Contractor's request for use of comparable product is not intended to satisfy other submittal requirements. Comply with specified

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submittal requirements.

D. Submittal Requirements, Single-Step Process: When acceptable to Architect, incorporate specified submittal requirements of individual Specification Section in combined submittal for comparable products. Approval by the Architect of Contractor's request for use of comparable product and of individual submittal requirements will also satisfy other submittal requirements.

PART 3 - EXECUTION (Not Used)

**END OF SECTION 01 60 00** 

## **SECTION 01 73 00 – EXECUTION REQUIREMENTS**

## PART 1 - GENERAL

## 1.1 SUMMARY

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

# B. Related Requirements:

- 1. Section 013100 "Project Management and Coordination" for procedures for coordinating field engineering with other construction activities.
- 2. Section 013300 "Submittals Procedures" for submitting surveys.
- 3. Section 017700 "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, replacing defective work, and final cleaning.
- 4. Section 024119 "Selective Demolition" for demolition and removal of selected portions of the building.

#### 1.2 DEFINITIONS

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

## 1.3 SUBMITTALS

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

#### 1.4 QUALITY ASSURANCE

- A. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.
  - Structural Elements: When cutting and patching structural elements, or when encountering the need for cutting and patching of elements whose structural function is not known, notify Architect of locations and details of cutting and await directions from Architect before proceeding. Shore, brace, and support structural elements during cutting and patching. Do not

- cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection.
- 2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.
- Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.
- 4. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
- B. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of specified products and equipment.

#### PART 2 - PRODUCTS

## 2.1 MATERIALS

- A. Comply with requirements specified in other Sections.
  - 1. For projects requiring compliance with sustainable design and construction practices and procedures, use products for patching that comply with sustainable design requirements.
- B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
  - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to Architect for the visual and functional performance of in-place materials. Use materials that are not considered hazardous.
- C. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.
  - 1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

## **PART 3 - EXECUTION**

## 3.1 EXAMINATION

A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.

- 1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, gas service piping, and water-service piping; underground electrical services; and other utilities.
- 2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
- B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
  - 1. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
  - 2. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
  - 3. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
- C. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
  - 1. Description of the Work, including Specification Section number and paragraph, and Drawing sheet number and detail, where applicable.
  - 2. List of detrimental conditions, including substrates.
  - 3. List of unacceptable installation tolerances.
  - 4. Recommended corrections.
- D. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

## 3.2 PREPARATION

- A. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
  - 1. Notify Architect and Owner not less than **[two]** business days in advance of proposed utility interruptions.
  - 2. Do not proceed with utility interruptions without Owner's written permission.
- B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Architect in accordance with requirements in Section 013100 "Project Management and Coordination." Include a detailed

description of problem encountered, together with recommendations for changing the Contract Documents. Use only form provided by the Architect.

## 3.3 INSTALLATION

- A. Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
  - 1. Make vertical work plumb, and make horizontal work level.
  - 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
  - 3. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
  - 4. Unless otherwise noted, maintain minimum headroom clearance of 96 inches (2440 mm) in spaces without a suspended ceiling.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure satisfactory results as judged by Architect. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations, so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy of type expected for Project.
- E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on-site and placement in permanent locations.
- F. Tools and Equipment: Select tools or equipment that minimize production of excessive noise levels.
- G. Templates: Obtain and distribute to the parties' involved templates for Work specified to be factory prepared and field installed. Check Shop Drawings of other portions of the Work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- H. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions with manufacturer.
  - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
  - 2. Allow for building movement, including thermal expansion and contraction.
  - 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- I. Joints: Make joints of uniform width. Where joint locations in exposed Work are not indicated, arrange joints for the best visual effect, as judged by Architect. Fit exposed connections together to form hairline joints.

J. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

## 3.4 CUTTING AND PATCHING

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

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

## 3.5 PROGRESS CLEANING

- A. Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.
  - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
  - 2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F (27 deg C).
  - 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
    - a. Use containers intended for holding waste materials of type to be stored.
  - 4. Coordinate progress cleaning for joint-use areas where Contractor and other contractors are working concurrently.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where Work is in progress to the level of cleanliness necessary for proper execution of the Work.
  - 1. Remove liquid spills promptly.
  - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.

- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Section 015000 "Temporary Facilities and Controls."
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Limiting Exposures: Supervise construction operations to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

# 3.6 STARTING AND ADJUSTING

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

## 3.7 PROTECTION OF INSTALLED CONSTRUCTION

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

## 3.8 CORRECTION OF THE WORK

- A. Repair or remove and replace damaged, defective, or nonconforming Work. Restore damaged substrates and finishes.
  - 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Repair Work previously completed and subsequently damaged during construction period. Repair to like-new condition.
- C. Restore permanent facilities used during construction to their specified condition.
- D. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- E. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
- F. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

**END OF SECTION 01 73 00** 

## **SECTION 01 77 00 - CLOSEOUT PROCEDURES**

PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

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

## 1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
  - 1. Inspection procedures.
  - 2. Substantial Completion procedures.
  - 3. Final completion procedures.
  - 4. Project Record Documents.
  - 5. Operation and maintenance manuals.
  - 6. Warranties.
  - 7. Instruction of Owner's personnel.
  - 8. Final cleaning.

# B. Related Sections include the following:

- 1. Section 01 29 00 "Payment Procedures" for requirements for Applications for Payment for Substantial and Final Completion.
- 2. Section 01 32 00 "Construction Progress Documentation" for submitting Final Completion construction photographs and negatives.
- 3. Section 01 73 00 "Execution Requirements" for progress cleaning of Project site.
- 4. Divisions 2 through 48 Sections for specific closeout and special cleaning requirements for products of those Sections.

## 1.3 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.
  - 1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
  - 2. Advise Owner of pending insurance changeover requirements.
  - 3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
  - 4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
  - 5. Prepare and submit Project Record Documents, operation and maintenance manuals, Final Completion construction photographs, damage or settlement surveys, property surveys, and similar final record information.

- 6. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
- 7. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
- 8. Complete startup testing of systems.
- 9. Submit test/adjust/balance records.
- 10. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
- 11. Advise Owner of changeover in heat and other utilities.
- 12. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
- 13. Complete final cleaning requirements, including touchup painting.
- 14. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- B. Inspection: Submit a written request for inspection for Substantial Completion a minimum of 10 days prior to date the Work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.
  - 1. Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
  - 2. Results of completed inspection will form the basis of requirements for Final Completion.

## 1.4 FINAL COMPLETION

- A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:
  - 1. Submit a final Application for Payment according to Division 1 Section "Payment Procedures."
  - 2. Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
  - 3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
  - 4. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.
  - 5. Submit Final Completion photographic documentation.
- B. Inspection: Submit a written request for final inspection for acceptance a minimum of 10 days prior to date the Work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
  - 1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

# 1.5 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Preparation: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
  - 1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor.
  - 2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
  - 3. Include the following information at the top of each page:
    - a. Project name.
    - b. Date.
    - c. Name of Architect.
    - d. Name of Contractor.
    - e. Page number.
  - 4. Submit list of incomplete items in the following format:
    - a. Web-Based Project Software Upload: Utilize software feature for creating and updating list of incomplete items (punch list).

# 1.6 PROJECT RECORD DOCUMENTS

- A. General: Do not use Project Record Documents for construction purposes. Protect Project Record Documents from deterioration and loss. Provide access to Project Record Documents for Architect's reference during normal working hours.
- B. Record Drawings: Maintain and submit one set of blue- or black-line white prints of Contract Drawings and Shop Drawings and one PDF set on CD or USB drive.
  - 1. Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.
    - a. Give particular attention to information on concealed elements that cannot be readily identified and recorded later.
    - b. Accurately record information in an understandable drawing technique.
    - Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
    - d. Mark Contract Drawings completely and accurately.
  - 2. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at the same location.
  - 3. Mark important additional information that was either shown schematically or omitted from original Drawings.
  - 4. Note Construction Change Directive numbers, Change Order numbers, alternate numbers, and similar identification where applicable.
  - 5. Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location. Organize into manageable sets; bind each set with durable paper cover sheets. Include identification on cover sheets.

C. Miscellaneous Record Submittals: Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

#### 1.7 OPERATION AND MAINTENANCE MANUALS

A. Assemble a complete set of operation and maintenance data indicating the operation and maintenance of each system, subsystem, and piece of equipment not part of a system. Include operation and maintenance data required in individual Specification Sections and as follows:

## 1. Operation Data:

- a. Emergency instructions and procedures.
- b. System, subsystem, and equipment descriptions, including operating standards.
- c. Operating procedures, including startup, shutdown, seasonal, and weekend operations.
- d. Description of controls and sequence of operations.
- e. Piping diagrams.

## 2. Maintenance Data:

- a. Manufacturer's information, including list of spare parts.
- b. Name, address, and telephone number of Installer or supplier.
- c. Maintenance procedures.
- d. Maintenance and service schedules for preventive and routine maintenance.
- e. Maintenance record forms.
- f. Sources of spare parts and maintenance materials.
- g. Copies of maintenance service agreements.
- h. Copies of warranties and bonds.
- B. Organize operation and maintenance manuals into suitable sets of manageable size. Bind and index data in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, with pocket inside the covers to receive folded oversized sheets. Identify each binder on front and spine with the printed title "OPERATION AND MAINTENANCE MANUAL," Project name, and subject matter of contents.

## 1.8 WARRANTIES

- A. Submittal Time: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.
- B. Partial Occupancy: Submit properly executed warranties within 15 days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.
- C. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.
  - 1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.

- 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
- 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
- D. Provide additional copies of each warranty to include in operation and maintenance manuals.

## **PART 2 - PRODUCTS**

## 2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.
  - 1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

## **PART 3 - EXECUTION**

#### 3.1 DEMONSTRATION AND TRAINING

- A. Instruction: Instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.
  - 1. Provide instructors experienced in operation and maintenance procedures.
  - 2. Provide instruction at mutually agreed-on times. For equipment that requires seasonal operation, provide similar instruction at the start of each season.
  - 3. Schedule training with Owner with at least seven days' advance notice.
  - 4. Coordinate instructors, including providing notification of dates, times, length of instruction, and course content.
- B. Program Structure: Develop an instruction program that includes individual training modules for each system and equipment not part of a system, as required by individual Specification Sections. For each training module, develop a learning objective and teaching outline. Include instruction for the following:
  - 1. System design and operational philosophy.
  - 2. Review of documentation.
  - 3. Operations.
  - 4. Adjustments.
  - 5. Troubleshooting.
  - 6. Maintenance.
  - 7. Repair.

## 3.2 FINAL CLEANING

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
  - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
    - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
    - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
    - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
    - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
    - e. Remove snow and ice to provide safe access to building.
    - f. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
    - g. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
    - h. Sweep concrete floors broom clean in unoccupied spaces.
    - i. Vacuum carpet and similar soft surfaces, removing debris and excess nap; shampoo if visible soil or stains remain.
    - j. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
    - k. Remove labels that are not permanent.
    - I. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
      - 1) Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
    - m. Wipe surfaces of mechanical and electrical equipment, elevator equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
    - n. Replace parts subject to unusual operating conditions.
    - o. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
    - p. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
    - q. Clean ducts, blowers, and coils if units were operated without filters during construction.
    - r. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned-out bulbs, and those noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.
    - s. Leave Project clean and ready for occupancy.

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C. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

## 3.3 CHECKLIST OF CLOSE-OUT DOCUMENTS

A. The following items must be submitted by each Prime Contractor to the Architect prior to certification of Final Payment.

Final Release and Indemnity Agreement (Refer to Form SSP-6-1)	
Contractor's Written General Guarantee (Refer to Form SSP-5-1)	
Maintenance Bond – 1 year from Substantial Completion, contract amount, 100%	
Certification of No Asbestos in New Materials	
Certification of Payment of Wages	
Certification of Completion of Punch List Items	
Certification of Completion of Final Cleaning	
Certificate of Substantial Completion (AIA G704)	
Contractor's Affidavit of Payment of Debts & Claims – AIA G706- Prime Contractor	
Contractor's Affidavit of Payment of Debts & Claims-AIA G706-Each named subcontractor	
Contractor's Affidavit of Release of Liens – AIA G706A- Prime Contractor	
Contractor's Affidavit of Release of Liens – AIA G706A- Each named subcontractor	
Consent of Surety to Final Payment – AIA G707	
Manufacturers' Special Written Warrantees, Bonds, Guarantees, Etc.	
Record As-Built Drawings –2 sets hard copies, 1 set PDF	
Operation & Maintenance Manuals- Two (2) bound and approved sets for all operable equipment,	
fixtures, furnishing, etc. or as otherwise required by the Specifications.	
Copies of Final Inspection Certificates by AHJ	
Copy of Certificate of Occupancy/ Approval	
Certificate of Insurance for One-Year Following Substantial Completion	
Documentation Turn Over of Keys	
Documentation Turn Over of all Attic Stock- signed receipt by Owner's designated representative	
Documentation of Completion of All Demonstrations	
Documentation of All equipment Start-ups	
Testing and Balancing Report for HVAC System	
Reconciliation of Change Orders / Final Adjustment to Allowances, if any	
Final Application for Payment	

# Warranty (W) and Extra Material (EM) Requirements

(below listing is for reference only and may not be inclusive of all requirements in these Specifications. Contractor is required to provide all special warrantees and extra materials as per the technical sections of the Specifications whether or not included in this tables.)

Section	Section 07 92 00 Joint Sealants		
1.	W: Two (2) years – installer		

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2.	W: Twenty (20) years – manufacturer		
Section	Section 08 16 13 FRP Doors		
1.	W: Ten (10) years – materials and workmanship		
Section	Section 08 45 00 Translucent Wall Assemblies		
1.	W: Five (5) years – materials and workmanship		
2.	W: Ten (10) years – finishes		
3.	W: Ten (10) years – translucent Panels		
Section	08 71 00 Door Hardware		
1.	W: One (1) year – structural failures, operators, hardware, metal deterioration		
2.	W: Lifetime – electromagnetic delayed-egress locks		
3.	W: Ten (10) years – Manual closers		
Section 09 31 00 Tiling			
1.	EM: 3% of each tile installed		
Section 09 67 00 Fluid Applied Flooring			
	W: One (1) year – materials and workmanship		
Section	Section 09 90 00 Painting		
1.	EM: Five (5) gallons of each material and color applied		
Section	Section 10 21 13 Toilet and Bath Accessories		
1.	W: Twenty-Five (25) years – standard warranty		
Section	Section 10 28 00 Toilet and Bath Accessories		
W: Five	(5) years – mirrors (visible silver spoilage defects)		
1.	W: Ten (10) years – all other accessories		
2.	W: Five (5) years – mirrors (visible silver spoilage defects)		

**END OF SECTION 01 77 00** 

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#### **SECTION 02 41 10: CUTTING AND PATCHING**

# PART 1 - GENERAL

#### 1.01 RELATED DOCUMENTS

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

#### 1.02 SUMMARY

- A. This Section includes procedural requirements for cutting and patching.
- B. Related Sections include the following:
  - Division 2 Section "Selective Demolition" for demolition of selected portions of the building for alterations.
  - 2. Technical Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.
    - Requirements in this Section apply to mechanical and electrical installations. Refer to Technical Sections for other requirements and limitations applicable to cutting and patching mechanical and electrical installations.

#### 1.03 DEFINITIONS

- A. Cutting: Removal of existing construction necessary to permit installation or performance of other Work.
- B. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.

#### 1.04 QUALITY ASSURANCE

- A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio. Obtain approval of the Architect prior to proceeding.
- B. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.
  - 1. Primary operational systems and equipment.
  - 2. Air or smoke barriers.
  - 3. Fire-protection systems.
  - 4. Control systems.
  - 5. Communication systems.
  - 6. Electrical wiring systems.
- C. Miscellaneous Elements: Do not cut and patch the following elements or related components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.
  - 1. Water, moisture, or vapor barriers.
  - 2. Membranes and flashings.
  - 3. Equipment supports.
  - 4. Piping, ductwork, vessels, and equipment.
- D. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner

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that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

- If possible, retain original Installer or fabricator to cut and patch exposed Work listed below. If it is impossible to engage original Installer or fabricator, engage another recognized, experienced, and specialized firm.
  - a. Roofing.
  - b. Firestopping.
- E. Cutting and Patching Conference: Before proceeding, meet at Project 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.

#### 1.05 WARRANTY

A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, by methods, installers and with materials so as not to void existing warranties.

#### **PART 2 - PRODUCTS**

#### 2.01 MATERIALS

- A. General: Comply with requirements specified in other Sections of these Specifications.
- B. Existing Materials: Use materials identical to existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
  - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of existing materials to the satisfaction of the Architect.

#### **PART 3 EXECUTION**

### 3.01 EXAMINATION

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.
  - 1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
  - 2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

## 3.02 PREPARATION

- A. Temporary Support: Provide temporary support of Work to be cut.
- B. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- D. Existing Services: Where existing services are required to be removed, relocated, or abandoned, bypass such services before cutting to minimize interruption of services to occupied areas.

# 3.03 PERFORMANCE

A. General: Employ skilled workers of the appropriate trade to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.

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- 1. Cut existing construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- 2. Each Contractor shall not endanger or damage any Work of any other Contractors by cutting, excavating or otherwise altering any Work. Contractors shall not cut or alter the Work of any other Contractor except with the written consent of the Architect.
- 3. Any costs caused by defective or ill-timed work shall be borne by the party responsible for the fault.
- B. Cutting: Cut existing construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
  - 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
  - 2. Existing Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
  - 3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
  - 4. Excavating and Backfilling: Comply with requirements in applicable Division 2 Sections where required by cutting and patching operations.
  - 5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
  - 6. Proceed with patching after construction operations requiring cutting are complete.
  - 7. Cap, plug or seal remaining pipe or conduit to be abandoned behind finished surfaces.
- C. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections of these Specifications.
  - Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
  - 2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
  - 3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove existing floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
    - a. Where patching occurs in a painted surface, apply primer and intermediate paint coats over the patch and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces. Obtain approval of the extent of finish paint coat from the Architect.
  - 4. Ceilings: Patch, repair, or rehang existing ceilings as necessary to provide an even-plane surface of uniform appearance.
  - Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.

# **END OF SECTION 02 41 10**

CUTTING AND PATCHING 02 41 10 - 3

#### **SECTION 02 41 19 - 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. Section Includes:

- 1. Demolition and removal of selected portions of building or structure.
- 2. Salvage of existing items to be reused or recycled.

#### 1.3 DEFINITIONS

- A. Remove: Detach items from existing construction and dispose of them off-site unless indicated to be salvaged or reinstalled.
- B. Remove and Salvage: Detach items from existing construction, in a manner to prevent damage, and deliver to Owner ready for reuse.
- C. Remove and Reinstall: Detach items from existing construction, in a manner to prevent damage, prepare for reuse, and reinstall where indicated.
- D. Existing to Remain: Leave existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled.
- E. Dismantle: To remove by disassembling or detaching an item from a surface, using gentle methods and equipment to prevent damage to the item and surfaces; disposing of items unless indicated to be salvaged or reinstalled.

# 1.4 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.
- B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.
  - 1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

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# 1.5 PREINSTALLATION MEETINGS

- A. Pre-demolition Conference: Conduct conference at Project site.
  - 1. Inspect and discuss condition of construction to be selectively demolished.
  - 2. Review structural load limitations of existing structure.
  - 3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
  - 4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
  - 5. Review areas where existing construction is to remain and requires protection.

# 1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For refrigerant recovery technician.
- B. Proposed Protection Measures: Submit report, including Drawings, that indicates the measures proposed for protecting individuals and property, for environmental protection and dust control. Indicate proposed locations and construction of barriers.
- C. Schedule of Selective Demolition Activities: Indicate the following:
  - Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's County's on-site operations are uninterrupted.
  - 2. Interruption of utility services. Indicate how long utility services will be interrupted.
  - 3. Coordination for shutoff, capping, and continuation of utility services.
  - 4. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.
- D. Schedule of selective demolition activities with starting and ending dates for each activity.
- E. Warranties: Documentation indicating that existing warranties are still in effect after completion of selective demolition.

# 1.7 CLOSEOUT SUBMITTALS

A. Inventory: Submit a list of items that have been removed and salvaged.

#### 1.8 QUALITY ASSURANCE

A. Demolition Firm Qualifications: An experienced firm that has specialized in demolition work in similar material and extent to that indicated for this project.

# 1.9 FIELD CONDITIONS

- A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
- B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as

practical.

- C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- D. Hazardous Materials:
  - 1. It is not expected that hazardous materials will be encountered in the Work.
    - a. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.
- E. Storage or sale of removed items or materials on-site is not permitted.
- F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

#### 1.10 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials and using approved contractors so as not to void existing warranties. Notify warrantor before proceeding.
- B. Notify warrantor on completion of selective demolition, and obtain documentation verifying that existing system has been inspected and warranty remains in effect. Submit documentation at Project closeout.

# 1.11 COORDINATION

A. Arrange selective demolition schedule so as not to interfere with Owner's operations.

#### PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ANSI/ASSP A10.6 and NFPA 241.
- C. Sustainable Design Requirements for Building Reuse:
  - 1. Maintain existing building structure (including structural floor and roof decking) and envelope (exterior skin and framing, excluding window assemblies and nonstructural roofing material) not indicated to be demolished; do not demolish such existing construction beyond indicated limits.
  - 2. Maintain existing interior nonstructural elements (interior walls, doors, floor coverings, and ceiling systems) not indicated to be demolished; do not demolish such existing construction beyond indicated limits.

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- 3. Maintain existing non-shell, nonstructural components (walls, flooring, and ceilings) not indicated to be demolished; do not demolish such existing construction beyond indicated limits.
- 4. Maintain the existing building structure, envelope, and interior nonstructural elements of a historic building or contributing building in a historic district. Do not demolish such existing construction beyond indicated limits.
- 5. Maintain the existing building structure, envelope, and interior nonstructural elements of an abandoned or blighted building. Do not demolish such existing construction beyond indicated limits.
- 6. Maintain the existing building structural systems where indicated to remain. Do not demolish such existing construction beyond indicated limits.
- 7. Maintain the existing interior ceilings, interior partitions, and/or demountable walls where indicated to remain. Do not demolish such existing construction beyond indicated limits.

#### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting selective demolition operations.
- B. Review Project Record Documents of existing construction or other existing condition and hazardous material information provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in Project Record Documents.
- C. Survey of Existing Conditions: Record existing conditions by use of measured drawings and preconstruction photographs.
  - 1. Comply with requirements specified in Section 01 32 0 "Construction Progress Documentation." for photograph requirements.
  - 2. Inventory and record the condition of items to be removed and salvaged. Provide photographs or video of conditions that might be misconstrued as damage caused by salvage operations.
  - 3. Before selective demolition or removal of existing building elements that will be reproduced or duplicated in final Work, make permanent record of measurements, materials, and construction details required to make exact reproduction.

# 3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.
- B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off utility services and mechanical/electrical systems serving areas to be selectively demolished.
  - 1. Owner will arrange to shut off indicated services/systems when requested by Contractor.
  - 2. Arrange to shut off utilities with utility companies.
  - 3. Disconnect, demolish, and remove plumbing, and HVAC systems, equipment, and components indicated on Drawings to be removed.
    - a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.

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- b. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material and leave in place.
- c. Equipment to Be Removed: Disconnect and cap services and remove equipment.
- d. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
- e. Ducts to Be Removed: Remove portion of ducts indicated to be removed and plug remaining ducts with same or compatible ductwork material.
- f. Ducts to Be Abandoned in Place: Cap or plug ducts with same or compatible ductwork material and leave in place.

#### 3.3 PROTECTION

- A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
  - 1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
  - 2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
  - 3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
  - 4. Cover and protect furniture, furnishings, and equipment that have not been removed.
- B. Temporary Shoring: Design, provide, and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
  - 1. Strengthen or add new supports when required during progress of selective demolition.
- C. Remove temporary barricades and protections where hazards no longer exist.

# 3.4 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
  - 1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
  - 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. Use hand tools 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. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before

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- starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
- 5. Maintain fire watch during and for at least 72 hours after flame-cutting operations.
- Maintain adequate ventilation when using cutting torches.
- 7. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
- 8. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
- 9. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
- 10. Dispose of demolished items and materials promptly.
- B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
- C. Removed and Salvaged Items:
  - 1. Clean salvaged items.
  - 2. Pack or crate items after cleaning. Identify contents of containers.
  - 3. Store items in a secure area until delivery to Owner.
  - 4. Transport items to Owner's designated storage area
  - 5. Protect items from damage during transport and storage.
- D. Removed and Reinstalled Items:
  - 1. Clean and repair items to functional condition adequate for intended reuse.
  - 2. Pack or crate items after cleaning and repairing. Identify contents of containers.
  - 3. Protect items from damage during transport and storage.
  - 4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.
- E. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

# 3.5 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

- A. Remove itmes intact when permitted by authorities having jurisdiction.
- B. Proceed with demolition of structural framing members systematically, from higher to lower level. Complete building demolition operations above each floor or tier before disturbing supporting members on the next lower level.
- C. Concrete: Demolish in sections. Cut concrete full depth at junctures with construction to remain and at regular intervals using power-driven saw, and then remove concrete between saw cuts.
- D. Masonry: Demolish in small sections. Cut masonry at junctures with construction to remain, using power-driven saw, and then remove masonry between saw cuts.

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- E. Concrete Slabs-on-Grade: Saw-cut perimeter of area to be demolished, and then break up and remove.
- F. Resilient Floor Coverings: Remove floor coverings and adhesive according to recommendations in RFCI's "Recommended Work Practices for the Removal of Resilient Floor Coverings."
- G. Building Components: Remove metal gratings, doors, door hardware, mirrors, toilet accessories, plumbing fixtures, and light fixtures, as whole units, intact and undamaged.
- H. Equipment: Disconnect equipment at nearest fitting connection to services, complete with service valves. Remove as whole units, complete with controls.
- I. Existing Utilities: Abandon existing utilities and below-grade utility structures. Cut utilities flush with grade.
- J. Existing Utilities: Demolish and remove existing utilities and below-grade utility structures.
  - 1. Piping: Disconnect piping at unions, flanges, valves, or fittings.
  - 2. Wiring Ducts: Disassemble into unit lengths and remove plug-in and disconnecting devices.

#### 3.6 EXPLOSIVE DEMOLITION

A. Explosives: Use of explosives is not permitted.

#### 3.7 SITE RESTORATION

A. Restore existing grounds disturbed by construction activities.

# 3.8 REPAIRS

- A. General: Promptly repair damage to adjacent construction caused by building demolition operations.
- B. Where repairs to existing surfaces are required, patch to produce surfaces suitable for new materials.
- C. Restore exposed finishes of patched areas and extend restoration into adjoining construction in a manner that eliminates evidence of patching and refinishing.

#### 3.9 RECYCLING DEMOLISHED MATERIALS

- A. General: Separate recyclable demolished materials from other demolished materials to the maximum extent possible. Separate recyclable materials by type.
  - 1. Provide containers or other storage method approved by Architect for controlling recyclable materials until they are removed from Project site.
  - 2. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
  - 3. Stockpile materials away from demolition area. Do not store within drip line of remaining trees.
  - 4. Store components off the ground and protect from the weather.
  - 5. Transport recyclable materials off Owner's property and legally dispose of them.
- B. Recycling Incentives: Revenues, savings, rebates, tax credits, and other incentives received for recycling

building demolition materials shall accrue to contractor.

- C. Concrete: Remove reinforcement and other metals from concrete and sort with other metals. Pulverize concrete to maximum **4-inch** size.
- D. Masonry: Remove metal reinforcement, anchors, and ties from masonry and sort with other metals.
  - 1. Pulverize masonry to maximum 4-inch size.
  - 2. Clean and stack undamaged, whole masonry units on wood pallets.
- E. Wood Materials: Sort and stack members according to size, type, and length. Separate dimensional and engineered lumber, panel products, and treated wood materials.
- F. Metals: Separate metals by type.
  - 1. Remove and dispose of bolts, nuts, washers, and other rough hardware.
- G. Doors and Hardware: Brace open end of door frames. Except for removing door closers, leave door hardware attached to doors.
- H. Equipment: Drain tanks, piping, and fixtures. Seal openings with caps or plugs.
- I. Piping: Reduce piping to straight lengths and store by type and size. Separate supports, hangers, valves, sprinkler heads, and other components by type and size.
- J. Lighting Fixtures: Separate lamps by type and protect from breakage.
- K. Electrical Devices: Separate switches, receptacles, switchgear, transformers, meters, panelboards, circuit breakers, and other devices by type.
- L. Conduit: Reduce conduit to straight lengths and store by type and size.

### 3.10 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove demolition waste materials from Project site.
  - 1. Do not allow demolished materials to accumulate on-site.
  - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
  - 3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
- B. Burning: Do not burn demolished materials.

# 3.11 CLEANING

A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

# **END OF SECTION 02 41 19**

#### SECTION 03 01 30: Maintenance of Cast-In-Place Concrete

# **PART 1 - GENERAL**

# 1.1 RELATED DOCUMENTS

A. Drawings, general provisions of the Contract, and other related construction documents such as Division 01 specifications apply to this Section.

#### 1.2 SUMMARY

- A. This Section includes the following:
  - Trowel-grade cementitious topping for interior and exterior fill and repair of concrete surfaces above, on, or below grade.
  - 2. Two-part polyurethane repair compound for cracks, control joints, spalls, and pop-outs and exterior applications
- B. Related Sections include the following:
  - 1. Section 03 54 16, Hydraulic Cement Underlayment

# 1.3 REFERENCES

- A. ASTM D638 Standard Test Method for Tensile Properties of Plastics
- B. ASTM D624 Standard Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers.
- C. ASTM C109/mod, Compressive Strength of Hydraulic Cement Mortars
- D. ICRI Technical Guideline No. 03732 Specifying Concrete Surface Preparation for Sealers, Coatings, and Polymer Overlays

# 1.4 SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used. Include manufacturer's Safety Data Sheets.
- B. Qualification Data: For Installer

#### 1.5 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: The manufacturer shall be a company with at least five years' experience and regularly engaged in the manufacture and marketing of products specified herein.
- B. Installation of the repair products must be completed by a factory-trained, certified application, using mixing equipment and tools approved by the manufacturer.

# 1.6 DELIVERY, STORAGE AND HANDLING

- A. Deliver products in original packaging, labeled with product identification, manufacturer, batch number and shelf life.
- B. Store products in a dry area with temperature maintained between 50° and 85°F (10° and 29°c and Protect from direct sunlight.
- C. Handle products in accordance with manufacturer's printed recommendations.

# 1.7 PROJECT CONDITIONS

A. Do not install material below 50°F (10°C) surface and air temperatures. These temperatures must also be maintained during and for 48 hours after the installation of products included in this section. Install quickly if substrate is warm and follow warm weather instructions available from the manufacturer's Technical Service Department.

#### PART 2 - PRODUCTS

# 2.1 MAINTENANCE OF CAST-IN-PLACE CONCRETE

- A. Portland cement-based, polymer-modified interior and exterior concrete repair material.
  - 1. Acceptable Manufacturers:
    - a. ARDEX CP™ Concrete Patch
    - b. Mapei
    - c. CTS
    - d. Alternate Manufacturer meeting project specifications
  - 2. Performance Requirements:
    - a. Application: Trowel
    - b. Compressive Strength: 3600 psi (253 kg/cm<sup>2</sup>) at 28 Days
    - c. Working Time: 30 minutes
    - d. Pot Life: 30 minutes
    - e. Walkable: Light foot traffic in 2 hours.
    - f. Color: Concrete Gray
- B. Low Viscosity Rigid Polyurethane Crack and Joint Repair
  - 1. Acceptable Products:
    - a. ARDEX ARDIFIX™; Manufactured by ARDEX Americas: 400 Ardex Park Drive, Aliquippa, PA, 15001, USA, (724) 203-5000, www.ardexamericas.com
    - b. Mapei
    - c. CTS
    - d. Alternate Manufacturer meeting project specifications
  - 2. Performance and Physical Properties: Meet or exceed the following values for material cured at  $70^{\circ}$  F+/-3°F ( $21^{\circ}$  C+/-3°C) and  $50^{\circ}$  +/-5% relative humidity:
    - a. Recommended thickness: No limits
    - b. Coverage: Varies with depth of fill area
    - c. Pot Life: Approx. 2 minutes
    - d. Percent Solids: 100% by weight
    - e. Tensile Strength (ASTM D638): Approx. 4,150 psi (292 kg/cm<sup>2</sup>)
    - f. Elongation (ASTMD624): 243 pli
    - g. Shore D Hardness: 70
    - h. Viscosity: 60 cps
    - i. Tack Free: Approx. 10 minutes
    - j. Full service: 45 minutes
    - k. VOC: 0 g/L, calculated SCAQMD 1168
- 2.2 WATER: Water shall be clean, potable, and sufficiently cool (not warmer than 70°F).

## **PART 3 - EXECUTION**

**PREPARATION** 

- A. General: Prepare substrate in accordance with manufacturer's instructions. Prior to proceeding with any repair, please refer to the International Concrete Repair Institute's ICRI 03730 Guide for Surface Preparation for the Repair of Deteriorated Concrete Resulting from Reinforcing Steel Corrosion; ICRI 03732 Guideline for Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, and Polymer Overlays; and the American Concrete Institute's ACI 546R-04 Concrete Repair Guide for general guidelines for concrete repair.
  - All concrete and masonry substrates must be sound, solid, dry, and completely free of all oil, grease, dirt, curing compounds and any substance that might act as a bond breaker.
     Overwatered, frozen or otherwise weak concrete surfaces must also be cleaned down to sound, solid concrete by mechanical methods such as scarifying, scabbling or similar in accordance with ICRI 03732 before priming. Acid etching and the use of sweeping compounds and solvents are not acceptable.
  - 2. The repair area must be saw cut in a basic rectangular shape at least  $\frac{1}{4}$ " (6 mm) in depth. The cuts should be made at 90° angle, and should be slightly keyed. Chip out the concrete inside the cuts to a minimum depth of  $\frac{1}{4}$ " (6 mm) until the area is squared or box shape.
  - 3. Mechanically prepare surface to obtain an exposed aggregate surface with a minimum surface profile of approximately 1/16" (1.5 mm).
  - 4. All cracks and spalls must be repaired prior to installing the patch.

## B. Joint Preparation

- 1. Moving Joints honor all expansion and isolation joints up through the underlayment. A flexible sealing compound may be installed.
- 2. Dormant Cracks and Dormant Control Joints fill all dormant control joints and dormant cracks with Joint Filler.

#### 3.2 APPLICATION PORTLAND CEMENT REPAIR MATERIAL

# A. Mixing:

- 1. Add 5 quarts (4.75 L) of clean potable water per 40-pound (18 kg) bag.
- 2. Mix using a ½" (12 mm, 650 rpm) low speed heavy-duty mixing drill with an approved ring mixing paddle. Mix to a uniform, lump-free consistency. Do not overwater.

# B. Application

- 1. Place a scratch coat of the compound onto an area of concrete using a steel trowel, applying enough pressure to ensure good compound-to-concrete contact. Then, use a wood or magnesium float, apply the repair compound over the area to be repaired. If necessary, use a straightedge to screed the surface to match existing elevation. After the compound takes an initial set (Approx. 30-40 minutes at 70° F (21° C), use a steel trowel to finish the surface.
- 2. Compound can be installed from ¼" to ½" (6 to 12 mm) neat and up to 2" (5 cm) with the addition of proper aggregate. For areas thicker than ½" (12mm) mix compound with washed and well-graded 1/8" to ¼" (3 to 6mm) pea gravel. Mix the compound with water first, then add 1 part by volume of aggregate, mixing until the aggregate is completely coated. Do not use sand. If aggregate is wet, reduce the amount of water to avoid over-watering. Please note that thicker areas will take longer to set and will reduce overall coverage.

# C. Curing

1. Although no special curing procedures are required, avoid applying this product if rain is expected within 6 to 8 hours, or if freezing temperatures could occur within 24 hours of application. As with any cementitious material, these conditions can alter the appearance and performance of the patching compound.

# D. Sealing

1. As is the case with all concrete surfaces in general, surface should be sealed with a waterborne, breathable concrete sealer, to resist damage from standing water, salt, oil as well as staining and

marking. Sealing of the surface can proceed once it has cured for a minimum of 24 hours.

#### E. Cleaning

1. Remove excess material before material cures. If material has cured, remove using mechanical methods which will not damage substrate.

#### 3.3 APPLICATION OF CRACK REPAIR:

- A. Examine substrates and conditions under which materials will be installed. Do not proceed with installation until unsatisfactory conditions are corrected.
- B. Coordinate installation with adjacent work to ensure proper sequence of construction. Protect adjacent areas from contact due to mixing and handling of materials.
- C. PRECAUTION: This is a fast setting material. The following procedures will minimize waste and achieve the desired results. Failure to follow these procedures can cause isolated soft spots or subsequent failure.
- D. IMPORTANT: During set-up of cartridge (purging air and balancing) and initial dispensing of material, keep cartridge and nozzle assembly pointed straight up. AFTER purging / balancing and initial shot of material, always keep the cartridge and nozzle pointed downward to prevent material in the nozzle from flowing back into the cartridge.
- E. Application: Comply with manufacturer's printed instructions and the following.
  - Prepare joints and cracks prior to starting a new cartridge. If at all possible, schedule dispensing to consume an entire cartridge with no interruption of material flow.
  - 2. Shake the cartridge vigorously for 10 seconds and then stand the cartridge upright for about a minute. Insert the cartridge into the dispenser, making sure it is properly positioned with the shoulder of the cartridge flush with the font bracket of the dispenser. Remove the plastic cap from the top of the cartridge. Important! Before attaching the static mixing nozzle, dispense a small amount of material onto a disposable surface until both components flow evenly from the cartridge. After purging and balancing always point cartridge downward when not dispensing to prevent mixed material in the nozzle from flowing back into the cartridge.
  - 3. Place the nozzle onto the cartridge and secure it by tightening in a clock-wise direction. Make sure the nozzle and cartridge assembly is secure before proceeding.
  - 4. Repair material has a pot life of only 2 minutes. Apply continuously once opened to prevent the tip from becoming clogged. Place the mixing nozzle directly over the crack, joint or repair area. Dispense material using full smooth trigger pulls (no short choppy strokes) and allow material to gravity feed into the crack, joint or repair area. Sand Clean- Up should be as follows:
    - i. Do not sweep. Using a rubber squeegee, consolidate excess sand into piles
    - ii. Shovel the piles of sand into barrels.
    - iii. Vacuum remaining sand using a heavy-duty, bucket-style (Shop-Vac®-style) vacuum and HEPA dust extraction vacuum system.
  - 5. For applications where no leveling or smoothing will be performed prior to installing finish flooring, repaired cracks should be filled and sand broadcasted as above; however, each crack should be filled to create a 1/8" 1/4" recessed repair. This recessed area can then be filled with ARDEX FEATHER FINISH or ARDEX FORTI FINISH and sanded to create a seamless repair.
  - 6. For installations where no further work will be done, overfill the crack, joint or repair area so the material is slightly higher than the face of the concrete slab. Allow the material to set for approximately 10 to 15 minutes, and then use a sharp razor scraper to shave excess material from the top of the slab.
  - 7. For filling spalls and pop-outs, mix material 1:1 with dry sand to a paste-like consistency, then fill and smooth with a trowel or putty knife. Repairs can be put into service in 10 to 15 minutes and ground smooth in as little as 45 minutes.
  - 8. For clean-up, use MEK or similar while the material is still fresh, carefully following all instructions and warnings on the solvent container. Once material cures, it can be removed by grinding or similar.
  - 9. Surface will be tack free in approximately 10 minutes, at which time it can be exposed to light

traffic and non-harsh chemicals. ARDEX ARDIFIX can be opened to full use after a minimum cure of 45 minutes.

# 3.4 FIELD QUALITY CONTROL

A. Where specified, field sampling of the ARDEX products is to be done by taking an entire unopened bag/unit of the product being installed to an independent testing facility to perform testing. There is no in-situ test method applicable for this system.

**END OF SECTION** 

#### **SECTION 03 54 16 - HYDRAULIC CEMENT UNDERLAYMENT**

# 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. Section Includes:
  - 1. Polymer-modified, self-leveling, hydraulic cement underlayment for application below interior floor coverings.

#### 1.3 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

## 1.4 ACTION SUBMITTALS

- A. Product Data: For the following:
  - 1. Hydraulic cement underlayment.
  - 2. Reinforcement.
  - 3. Primer.
  - 4. Corrosion-resistant coating.
  - 5. Surface sealer.
- B. Shop Drawings: Include plans indicating substrates, locations, and average depths of underlayment based on survey of substrate conditions.

# 1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

## 1.6 QUALITY ASSURANCE

A. Installer Qualifications: Installer who is approved by manufacturer for application of underlayment products required for this Project.

# 1.7 FIELD CONDITIONS

- A. Environmental Limitations: Comply with manufacturer's written instructions for substrate temperature, ventilation, ambient temperature and humidity, and other conditions affecting underlayment performance.
  - 1. Place hydraulic cement underlayment's only when ambient temperature and temperature of substrates are between 50 and 80 deg F.

#### **PART 2 - PRODUCTS**

#### 2.1 HYDRAULIC CEMENT UNDERLAYMENTS

- A. Hydraulic Cement Underlayment: Polymer-modified, self-leveling, hydraulic cement product that can be applied in minimum uniform thickness of [1/4"] [1/2"] and that can be feathered at edges to match adjacent floor elevations.
  - 1. <u>Manufacturers:</u> Subject to compliance with requirements, provide products by one of the following:
    - a. <u>ARDEX Americas</u> K15 Premium Self Leveling Underlayment
    - b. <u>H.B. Fuller Construction Products Inc. / TEC.</u> EZ Level Premium Self Leveling Underlayment
    - c. Schonox HPS North America AP Rapid Plus Self Leveling Underlayment
    - d. Comparable Products by other manufacturers approved by the Architect in accord with the provisions of 'Section 016000 Product Requirements', and the General Conditions of the Contract.
  - 2. Cement Binder: ASTM C150/C150M, portland cement, or hydraulic or blended hydraulic cement as defined by ASTM C219.
  - 3. Compressive Strength: Not less than 5000 psi at 28 days when tested according to ASTM C109/C109M.
  - 4. Underlayment Additive: Resilient-emulsion product of underlayment manufacturer, formulated for use with underlayment when applied to substrate and conditions indicated.
- B. Aggregate: Well-graded, washed gravel, 1/8 to 1/4 inch; or coarse sand as recommended by underlayment manufacturer.
  - 1. Provide aggregate when recommended in writing by underlayment manufacturer for underlayment thickness required.
- C. Water: Potable and at a temperature of not more than 70 deg F.
- D. Reinforcement: For underlayment applied to wood substrates, provide galvanized metal lath or other corrosion-resistant reinforcement recommended in writing by underlayment manufacturer.
- E. Primer: Product of underlayment manufacturer recommended in writing for substrate, conditions, and application indicated.
  - 1. VOC Content: Provide coating with VOC content of 100 g/L or less.

- 2. Low-Emitting Materials: Verify coating complies with the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
- F. Corrosion-Resistant Coating: Recommended in writing by underlayment manufacturer for metal substrates.
  - 1. VOC Content: Provide coating with VOC content of 100 g/L or less.
  - 2. Low-Emitting Materials: Verify coating complies with the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
- G. Surface Sealer: Designed to reduce porosity as recommended by manufacturer for type of floor covering to be applied to underlayment.

#### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine substrates, with Installer present, for conditions affecting performance of the Work.
- B. Proceed with application only after unsatisfactory conditions have been corrected.

#### 3.2 PREPARATION

- A. Prepare and clean substrate according to manufacturer's written instructions.
  - 1. Treat nonmoving substrate cracks according to manufacturer's written instructions to prevent cracks from telegraphing (reflecting) through underlayment.
  - 2. Fill substrate voids to prevent underlayment from leaking.
- B. Concrete Substrates: Mechanically remove, according to manufacturer's written instructions, laitance, glaze, efflorescence, curing compounds, form-release agents, dust, dirt, grease, oil, and other contaminants that might impair underlayment bond.
  - 1. Moisture Testing: Perform tests so that each test area does not exceed 200 sq. ft., and perform no fewer than three tests in each installation area and with test areas evenly spaced in installation areas.
    - a. Anhydrous Calcium Chloride Test, ASTM F1869: Proceed with installation only after substrates do not exceed a maximum moisture-vapor-emission rate of 3 lb of water/1000 sq. ft. in 24 hours.
    - b. Relative Humidity Test: Using in situ probes, ASTM F2170. Proceed with installation only after substrates have a maximum 85 percent relative humidity level measurement, or as recommended by hydraulic cement underlayment manufacturer.
- C. Nonporous Substrates: For ceramic tile, quarry tile, and terrazzo substrates, remove waxes, sealants, and other contaminants that might impair underlayment bond, and prepare surfaces according to manufacturer's written instructions.

 Adhesion Tests: After substrate preparation, test substrate for adhesion with underlayment according to manufacturer's written instructions.

#### 3.3 INSTALLATION

- A. Mix and install underlayment components according to manufacturer's written instructions.
  - 1. Close areas to traffic during underlayment installation and for time period after installation recommended in writing by manufacturer.
  - 2. Coordinate installation of components to provide optimum adhesion to substrate and between
  - 3. At substrate expansion, isolation, and other moving joints, allow joint of same width to continue through underlayment.
- B. Apply primer over prepared substrate at manufacturer's recommended spreading rate.
- C. Install underlayment to produce uniform, level surface.
  - 1. Install a final layer without aggregate to product surface.
  - 2. Feather edges to match adjacent floor elevations.
- Cure underlayment according to manufacturer's written instructions. Prevent contamination during installation and curing processes.
- E. Do not install floor coverings over underlayment until after time period recommended in writing by underlayment manufacturer.
- F. Apply surface sealer at rate recommended by manufacturer.
- G. Remove and replace underlayment areas that evidence lack of bond with substrate, including areas that emit a "hollow" sound when tapped.

#### 3.4 INSTALLATION TOLERANCES

A. Finish and measure surface, so gap at any point between gypsum cement underlayment surface and an unleveled, freestanding, 10-foot- long straightedge resting on two high spots and placed anywhere on the surface does not exceed 1/4 inch in 2 feet.

# 3.5 PROTECTION

A. Protect underlayment from concentrated and rolling loads for remainder of construction period.

#### **END OF SECTION 03 54 16**

#### **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 1 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Rooftop equipment bases and support curbs.
  - 2. Wood blocking, cants, and nailers.
  - 3. Wood furring and grounds.
  - 4. Plywood backing panels.
  - 5. Wood-preservative-treated lumber.
  - 6. Fire-retardant-treated lumber.

# 1.3 DEFINITIONS

- A. Boards or Strips: Lumber of less than 2 inches nominal size in least dimension.
- B. Dimension Lumber: Lumber of 2 inches nominal size or greater but less than 5 inches nominal size in least dimension.
- C. Exposed Framing: Framing not concealed by other construction.
- D. Lumber grading agencies, and abbreviations used to reference them, include the following:
  - 1. NeLMA: Northeastern Lumber Manufacturers' Association.
  - 2. NLGA: National Lumber Grades Authority.
  - 3. SPIB: The Southern Pine Inspection Bureau.
  - 4. WCLIB: West Coast Lumber Inspection Bureau.
  - 5. WWPA: Western Wood Products Association.
- E. Qualified Testing Agency: An independent testing agency, acceptable to authorities having jurisdiction, qualified according to ASTM C 1077-17 and ASTM E 329-14a to conduct the testing indicated, as documented according to ASTM E 548.

#### 1.4 ACTION SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.

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# 1.5 INFORMATIONAL SUBMITTALS

#### A. 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.
- 2. For preservative-treated wood products. Indicate type of preservative used and net amount of preservative retained.
- B. Evaluation Reports: For the following, from ICC-ES:
  - 1. Preservative-treated wood.
  - 2. Fire-retardant-treated wood.
  - 3. Power-driven fasteners.
  - 4. Powder activated fasteners.
  - 5. Expansion anchors.
  - 6. Metal framing anchors.

#### 1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A qualified manufacturer that is certified for chain of custody by an FSC-accredited certification body.
- B. Vendor Qualifications: A vendor that is certified for chain of custody by an FSC-accredited certification body.

#### 1.7 DELIVERY, STORAGE, AND HANDLING

A. Stack wood products flat with spacers beneath and between each bundle to provide air circulation. Protect wood products from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

#### PART 2 - PRODUCTS

#### 2.1 WOOD PRODUCTS

- A. Regional Materials: Wood products shall be manufactured within 500 miles of Project site from materials that have been extracted, harvested, or recovered, as well as manufactured, within 500 miles of Project site.
- B. Lumber: Comply with DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, comply with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Grade lumber by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
  - 1. Factory mark each piece of lumber with grade stamp of grading agency.
  - 2. 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 wood products.

3. Dress lumber, S4S, unless otherwise indicated.

# C. Maximum Moisture Content:

1. Boards: 15 percent.

2. Dimension Lumber: 15 percent unless otherwise indicated.

# 2.2 WOOD-PRESERVATIVE-TREATED LUMBER

- A. Preservative Treatment by Pressure Process: AWPA U1, Use categories as follows:
  - 1. UC2: Interior construction not in contact with ground but may be subject to moisture. Include all rough carpentry.
  - 2. UC3B (All Other Commodity Specifications): Uncoated products excluding sawn products in exterior construction not in contact with ground, exposed to all weather cycles including prolonged wetting. Include all rough carpentry.
  - 3. UC4A (All Other Commodity Specifications): Non-critical products excluding sawn products in contact with ground and exposed to all weather cycles, normal exposure conditions. Include all rough carpentry.
  - 4. After treatment, redry boards, and dimension lumber to 19 percent maximum moisture content.
- B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or that does not comply with requirements for untreated material.
- C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.
- D. Application: Treat items indicated on Drawings, 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.

#### 2.3 FIRE-RETARDANT-TREATED LUMBER

- A. General: Where fire-retardant-treated materials are indicated, materials are to comply with requirements in this article, that are acceptable to authorities having jurisdiction, and with fire-test-response characteristics specified as determined by testing identical products per test method indicated by a qualified testing agency.
- B. Fire-Retardant-Treated Lumber and Plywood by Pressure Process: Products with a flame-spread index of 25 or less when tested in accordance with ASTM E84, and with no evidence of significant progressive combustion when the test is extended an additional 20 minutes, and with the flame front not extending more than 10.5 feet beyond the centerline of the burners at any time during the test.
  - 1. Treatment is not to promote corrosion of metal fasteners.
  - 2. Exterior Type: Treated materials are to comply with requirements specified above for fire-

- retardant-treated lumber and plywood by pressure process after being subjected to accelerated weathering in accordance with ASTM D2898. Use for exterior locations and where indicated.
- 3. Interior Type A: Treated materials are to have a moisture content of 28 percent or less when tested in accordance with ASTM D3201/D3201M at 92 percent relative humidity. Use where exterior type is not indicated.
- 4. Design Value Adjustment Factors: Treated lumber is to be tested according to ASTM D5664 and design value adjustment factors are to be calculated according to ASTM D6841. For enclosed roof framing, framing in attic spaces, and where high temperature fire-retardant treatment is indicated, provide material with adjustment factors of not less than 0.85 modulus of elasticity and 0.75 for extreme fiber in bending for Project's climatological zone.
- C. Kiln-dry lumber after treatment to maximum moisture content of 19 percent. Kiln-dry plywood after treatment to maximum moisture content of 15 percent.
- D. Identify fire-retardant-treated wood with appropriate classification marking of qualified testing agency and other information required by authorities having jurisdiction.
- E. Application: Treat items indicated on Drawings, and the following:
  - 1. Concealed blocking.
  - 2. Wood cants, nailers, curbs, equipment support bases, blocking, and similar members in connection with roofing.
  - 3. Plywood backing panels.

#### 2.4 MISCELLANEOUS LUMBER

- A. Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:
  - 1. Blocking.
  - 2. Nailers.
  - 3. Rooftop equipment bases and support curbs.
  - 4. Furring.
  - 5. Grounds.
- B. Dimension Lumber Items: Construction or No. 2 grade lumber of any species.
- C. Concealed Boards: 15 percent maximum moisture content and any of the following species and grades:
  - 1. Mixed southern pine or southern pine; No. 2 grade; SPIB.
  - 2. Hem-fir or hem-fir (north); Construction or No. 2 Common grade; NLGA, WCLIB, or WWPA.
  - 3. Eastern softwoods; No. 2 Common grade; NeLMA.
  - 4. Northern species; No. 2 Common grade; NLGA.

# 2.5 PLYWOOD BACKING PANELS

A. Equipment Backing Panels: Plywood, DOC PS 1, Exterior, A-C, fire-retardant treated, in thickness

indicated or, if not indicated, not less than 3/4-inch nominal thickness.

# 2.6 FASTENERS

- A. General: Fasteners are to be of size and type indicated and comply with requirements specified in this article for material and manufacture. Provide nails or screws, in sufficient length, to penetrate not less than 1-1/2 inches into wood substrate.
  - Where rough carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners\_with hot-dip zinc coating complying with ASTM A153/A153M.
- B. Nails, Brads, and Staples: ASTM F1667.
- C. Power-Driven Fasteners: Fastener systems with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC70.
- D. Wood Screws: ASME B18.6.1.
- E. Lag Bolts: ASME B18.2.1. (ASME B18.2.3.8M).
- F. Bolts: Steel bolts complying with ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6); with ASTM A 563 (ASTM A 563M) hex nuts and, where indicated, flat washers.
- G. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to 6 times the load imposed when installed in unit masonry assemblies and equal to 4 times the load imposed when installed in concrete as determined by testing per ASTM E 488 conducted by a qualified independent testing and inspecting agency.
  - 1. Material: Carbon-steel components, zinc plated to comply with ASTM B 633, Class Fe/Zn 5.
  - 2. Material: Stainless steel with bolts and nuts complying with ASTM F 593 and ASTM F 594, Alloy Group 1 or 2 (ASTM F 738M and ASTM F 836M, Grade A1 or A4).

#### 2.7 MISCELLANEOUS MATERIALS

- A. Adhesives for Gluing Furring and Sleepers to Concrete or Masonry: Formulation complying with ASTM D3498 that is approved for use indicated by adhesive manufacturer.
  - 1. Adhesives shall have a VOC content of 70 g/L or less.
- B. Water-Repellent Preservative: NWWDA-tested and -accepted formulation containing 3-iodo-2-propynyl butyl carbamate, combined with an insecticide containing chloropyrifos as its active ingredient.

#### PART 3 - EXECUTION

#### 3.1 INSTALLATION

- A. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.
- B. Set work to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry accurately to other construction. Locate <u>furring</u>, nailers, blocking, <u>grounds</u>, and similar supports to comply with requirements for attaching other construction.
- C. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.
- D. Provide fire blocking in furred spaces, stud spaces, and other concealed cavities as indicated and as follows:
  - 1. Fire block furred spaces of walls, at each floor level, at ceiling, and at not more than 96 inches o.c. with solid wood blocking or noncombustible materials accurately fitted to close furred spaces.
  - Fire block concealed spaces behind combustible cornices and exterior trim at not more than 20 feet o.c.
- E. Sort and select lumber so that natural characteristics do not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.
- F. Comply with AWPA M4 for applying field treatment to cut surfaces of preservative-treated lumber.
  - 1. Use inorganic boron for items that are continuously protected from liquid water.
  - 2. Use copper naphthenate for items not continuously protected from liquid water.
- G. Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous flexible flashing separator between wood and metal decking.
- H. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
  - 1. Table 2304.10.1, "Fastening Schedule," in ICC's International Building Code (IBC).
  - 2. Table R602.3(1), "Fastener Schedule for Structural Members," and Table R602.3(2), "Alternate Attachments," in ICC's International Residential Code for One- and Two-Family Dwellings.
- Use steel common nails unless otherwise indicated. 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. Drive nails
  snug but do not countersink nail heads unless otherwise indicated.

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# 3.2 INSTALLATION OF WOOD BLOCKING AND NAILERS

- A. Install where indicated and where required for <u>screeding or</u> attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.
- B. Attach wood blocking to substrates to support applied loading. Recess bolts and nuts flush with surfaces unless otherwise indicated.

# 3.3 PROTECTION

A. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

**END OF SECTION 06 10 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. Section Includes:
  - 1. Silicone joint sealants.
  - 2. Non-staining silicone joint sealants.
  - 3. Urethane joint sealants.
  - 4. Immersible joint sealants.
  - 5. Mildew-resistant joint sealants.
  - Latex joint sealants.
- B. Related Requirements:
  - 1. Section 093000 "Tiling" for joint requirement in ceramic tile finishes.

# 1.3 ACTION SUBMITTALS

- A. Product Data: For each joint-sealant product.
- B. Sustainable Design Submittals:
  - 1. Product Data: For sealants, indicating VOC content.
  - 2. Laboratory Test Reports: For sealants, indicating compliance with requirements for low-emitting materials.
- C. Samples: For each kind and color of joint sealant required.
- D. 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 INFORMATIONAL SUBMITTALS

- A. Product test reports.
- B. Preconstruction laboratory test reports.

- C. Preconstruction field-adhesion-test reports.
- D. Field-adhesion-test reports.
- E. Sample warranties.

# 1.5 QUALITY ASSURANCE

A. Testing Agency Qualifications: Qualified according to ASTM C1021 to conduct the testing indicated.

# 1.6 PRECONSTRUCTION TESTING

- A. Preconstruction Laboratory Testing: Submit to joint-sealant manufacturers, for testing indicated below, samples of materials that will contact or affect joint sealants.
  - Adhesion Testing: Use ASTM C794 to determine whether priming and other specific
    joint preparation techniques are required to obtain rapid, optimum adhesion of joint
    sealants to joint substrates.
  - 2. Compatibility Testing: Use ASTM C1087 to determine sealant compatibility when in contact with glazing and gasket materials.
- B. Preconstruction Field-Adhesion Testing: Before installing sealants, field test their adhesion to Project joint substrates. Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1.1 in ASTM C1193 or Method A, Tail Procedure, in ASTM C1521.

# 1.7 WARRANTY

- A. Special Installer's Warranty: Installer agrees to repair or replace joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
  - 1. Warranty Period: two (2) years from date of Substantial Completion.
- B. Special Manufacturer's Warranty: Manufacturer agrees to furnish joint sealants to repair or replace those joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
  - 1. Warranty Period: five (5) years from date of Substantial Completion.

# PART 2 - PRODUCTS

# 2.1 JOINT SEALANTS, GENERAL

- A. <u>VOC Content</u>: Verify sealants and sealant primers comply with the following:
  - 1. Architectural sealants have a VOC content of [250] g/L or less.
  - Sealants and sealant primers for nonporous substrates have a VOC content of [250] g/L or less.

- 3. Sealants and sealant primers for porous substrates have a VOC content of [775] g/L or less
- B. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range.

# 2.2 SILICONE JOINT SEALANTS

- A. Silicone, S, NS, 100/50, T, NT: Single-component, nonsag, plus 100 percent and minus 50 percent movement capability, traffic- and nontraffic-use, neutral-curing silicone joint sealant; ASTM C920, Type S, Grade NS, Class 100/50, Uses T and NT.
  - 1. <u>Manufacturers:</u> Subject to compliance with requirements, available manufacturers offering products that may be incorporated in the Work include, but are not limited to the following:
    - May National Associates Inc.; a subsidiary of Sika Corporation Bondaflex Sil 750.
    - b. The Dow Chemical Company Dowsil 790.
    - c. Tremco Incorporated Spectrem 1 for NT use, Spectrem 800 for T use.
    - d. Comparable Products by other manufacturers approved by the Architect in accord with the provisions of 'Section 016000 Product Requirements', and the General Conditions of the Contract.

# 2.3 NONSTAINING SILICONE JOINT SEALANTS

- A. Non-staining Joint Sealants: No staining of substrates when tested according to ASTM C1248.
- B. Silicone, Non-staining, S, NS, 50, NT: Non-staining, single-component, non-sag, plus 50 percent and minus 50 percent movement capability, nontraffic-use, neutral-curing silicone joint sealant; ASTM C920, Type S, Grade NS, Class 50, Use NT.
  - 1. <u>Manufacturers:</u> Subject to compliance with requirements, provide products by one of the following:
    - a. <u>Pecora Corporation</u> 864 NST.
    - b. Sika Corporation; Joint Sealants SikaSil WS-295.
    - c. Tremco Incorporated Spectrem 3.
    - d. Comparable Products by other manufacturers approved by the Architect in accord with the provisions of 'Section 016000 Product Requirements', and the General Conditions of the Contract

# 2.4 URETHANE JOINT SEALANTS

- A. Urethane, S, NS, 25, NT: Single-component, non-sag, nontraffic-use, plus 25 percent and minus 25 percent movement capability, urethane joint sealant; ASTM C920, Type S, Grade NS, Class 25, Use NT.
  - 1. <u>Manufacturers:</u> Subject to compliance with requirements, provide products by one of the following:
    - a. <u>Pecora Corporation</u> Dynatrol 1-XL.
    - b. <u>Polymeric Systems, Inc</u>. Flexiprene 1000.
    - c. Tremco Incorporated Vulkem 116.

- d. Comparable Products by other manufacturers approved by the Architect in accord with the provisions of 'Section 01 60 00 Product Requirements', and the General Conditions of the Contract.
- B. Urethane, S, P, 25, T, NT: Single-component, nonsag, plus 25 percent and minus 25 percent movement capability, traffic- and nontraffic-use, urethane joint sealant; ASTM C920, Type S, Grade NS, Class 25, Uses T and NT.
  - Manufacturers: Subject to compliance with requirements, available manufacturers
    offering products that may be incorporated into the Work include, but are not limited to
    the following:
    - a. BASF Corporation Master Seal SL-1.
    - b. <u>Pecora Corporation NR-201.</u>
    - c. Tremco Incorporated Vulkem 45 SSL.
    - d. Comparable Products by other manufacturers approved by the Architect in accord with the provisions of 'Section 016000 Product Requirements', and the General Conditions of the Contract.

# 2.5 MILDEW-RESISTANT JOINT SEALANTS

- A. Mildew-Resistant Joint Sealants: Formulated for prolonged exposure to humidity with fungicide to prevent mold and mildew growth.
- B. Silicone, Mildew Resistant, Acid Curing, S, NS, 25, NT: Mildew-resistant, single-component, nonsag, plus 25 percent and minus 25 percent movement capability, nontraffic-use, acid-curing silicone joint sealant; ASTM C920, Type S, Grade NS, Class 25, Use NT.
  - 1. <u>Manufacturers:</u> Subject to compliance with requirements, provide products by one of the following:
    - a. May National Associates Inc.; a subsidiary of Sika Corp. Bondaflex Sil 100WF.
    - b. The Dow Chemical Company 786 Mildew Resistant.
    - c. Tremco Incorporated Tremsil 200.
    - d. Comparable Products by other manufacturers approved by the Architect in accord with the provisions of 'Section 016000 Product Requirements', and the General Conditions of the Contract.

#### 2.6 BUTYL JOINT SEALANTS

- A. Butyl-Rubber-Based Joint Sealants: ASTM C1311.
  - Manufacturers: Subject to compliance with requirements, available manufacturers
    offering products that may be incorporated into the Work include, but are not limited to
    the following:
    - a. <u>CR Laurance Co. Inc. CRL 777.</u>
    - b. <u>Pecora Corporation</u> BC158.
    - c. Tremco Inc. General Purpose Butyl Sealant.
    - d. Comparable Products by other manufacturers approved by the Architect in accord with the provisions of 'Section 01 60 00 Product Requirements', and the General Conditions of the Contract.

#### 2.7 LATEX JOINT SEALANTS

- A. Acrylic Latex: Acrylic latex or siliconized acrylic latex, ASTM C834, Type [OP][C], Grade [NF] [- [0 deg C].
  - 1. <u>Manufacturers:</u> Subject to compliance with requirements, provide products by one of the following:
    - a. BASF Corp. Master Seal NP520.
    - b. Pecora Corporation AC20+Silicone.
    - c. Tremco Incorporated Tremflex 834.
    - d. Comparable Products by other manufacturers approved by the Architect in accord with the provisions of 'Section 016000 Product Requirements', and the General Conditions of the Contract.

# 2.8 JOINT-SEALANT BACKING

- A. Cylindrical Sealant Backings: ASTM C1330, Type C closed-cell material with a surface skin; Type O (open-cell material), Type B (bicellular material with a surface skin), <u>or</u> any of the preceding types, as approved in writing by joint-sealant manufacturer for joint application indicated], and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.
  - 1. <u>Manufacturers:</u> Subject to compliance with requirements, provide products by one of the following:
    - a. Alcot Plastics Ltd.
    - b. BASF Corporation.
    - c. Construction Foam Products; a division of Nomaco, Inc.
    - d. Comparable Products by other manufacturers approved by the Architect in accord with the provisions of 'Section 016000 Product Requirements', and the General Conditions of the Contract.
- B. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer.

# 2.9 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.
- C. Masking Tape: Non-staining, non-absorbent material compatible with joint sealants and surfaces adjacent to joints.

#### PART 3 - EXECUTION

# 3.1 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:
  - 1. Remove laitance and form-release agents from concrete.
  - 2. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion.
- B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by preconstruction joint-sealant-substrate tests or prior experience.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces.

#### 3.2 INSTALLATION OF JOINT SEALANTS

- A. General: Comply with ASTM C1193 and joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.
- B. Install sealant backings of kind indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
- C. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- D. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
  - 1. Place sealants so they directly contact and fully wet joint substrates.
  - 2. Completely fill recesses in each joint configuration.
  - 3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- E. Tooling of Non-sag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants to form smooth, uniform beads of configuration indicated. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
  - 1. Provide concave joint profile per Figure 8A in ASTM C1193 unless otherwise indicated.

# 3.3 FIELD QUALITY CONTROL

- A. Field-Adhesion Testing: Field test joint-sealant adhesion to joint substrates as follows:
  - 1. Extent of Testing: Test completed and cured sealant joints as follows:

- a. Perform Ten (10) tests for the first 1,000 lf of joint length for each kind of sealant and joint substrate.
- 2. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1 in ASTM C1193 or Method A, Tail Procedure, in ASTM C1521.
- B. Evaluation of Field-Adhesion-Test Results: Sealants not evidencing adhesive failure from testing or noncompliance with other indicated requirements will be considered satisfactory. Remove sealants that fail to adhere to joint substrates during testing or to comply with other requirements. Retest failed applications until test results prove sealants comply with indicated requirements.

## 3.4 JOINT-SEALANT SCHEDULE

- A. Joint-Sealant Application: Exterior joints in vertical surfaces and horizontal nontraffic surfaces.
  - 1. Joint Locations:
    - a. Joints between plant-precast architectural concrete units.
    - b. Control and expansion joints in unit masonry.
    - c. Other joints as indicated on Drawings.
  - 2. Joint Sealant: Silicone, non-staining, S, NS, 50, NT.
  - 3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.
- B. Joint-Sealant Application: Interior joints in horizontal traffic surfaces.
  - 1. Joint Locations:
    - a. Isolation joints in cast-in-place concrete slabs.
    - b. Control and expansion joints in fluid applied flooring.
    - c. Other joints as indicated on Drawings.
  - 2. Joint Sealant: Silicone, S, NS, 100/50, T, NT.
  - 3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.
- C. Joint-Sealant Application: Interior joints in vertical surfaces and horizontal nontraffic surfaces.
  - 1. Joint Locations:
    - a. Control and expansion joints on exposed interior surfaces of exterior walls.
    - b. Tile control and expansion joints.
    - c. Other joints as indicated on Drawings.
  - 2. Joint Sealant: Silicone, S, NS, 100/50, T, NT.
  - 3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.
- D. Joint-Sealant Application: Interior joints in vertical surfaces and horizontal nontraffic surfaces not subject to significant movement.
  - 1. Joint Locations:
    - a. Perimeter joints between interior wall surfaces and frames of doors and windows on the interior side.
    - b. Other joints as indicated on Drawings.
  - 2. Joint Sealant: Acrylic latex.
  - 3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.

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- E. Joint-Sealant Application: Mildew-resistant interior joints in vertical surfaces and horizontal nontraffic surfaces.
  - Joint Locations:
    - a. Joints between plumbing fixtures and adjoining walls, floors, and counters.
    - b. Tile control and expansion joints where indicated.
    - c. Other joints as indicated on Drawings.
  - 2. Joint Sealant: Silicone, mildew resistant, acid curing, S, NS, 25, NT.
  - 3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.
- F. Joint-Sealant Application: Concealed mastics.
  - Joint Locations:
    - a. Aluminum thresholds.
    - b. Other joints as indicated on Drawings.
  - 2. Joint Sealant: Butyl-rubber based.
  - 3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.

**END OF SECTION 07 92 00** 

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### **SECTION 081213 - HOLLOW METAL FRAMES**

#### 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. Section Includes:
  - 1. Exterior standard steel frames.
- B. Related Requirements:
  - 1. Section 08 17 43 "FRP Doors and Panels" for FRP Doors.
  - 2. Section 08 71 00 "Door Hardware" for door hardware for hollow-metal doors.

#### 1.3 DEFINITIONS

A. Minimum Thickness: Minimum thickness of base metal without coatings according to NAAMM-HMMA 803 or SDI A250.8.

## 1.4 COORDINATION

- A. Coordinate anchorage installation for hollow-metal frames. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors. Deliver such items to Project site in time for installation.
- B. Coordinate requirements for installation of door hardware, electrified door hardware, and access control and security systems.

# 1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product.
  - Include construction details, material descriptions and finishes.
- B. Shop Drawings: Include the following:
  - 1. Elevations of each frame type.
  - 2. Frame details for each frame type, including dimensioned profiles and metal thicknesses.
  - 3. Locations of reinforcement and preparations for hardware.
  - 4. Details of each different wall opening condition.

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- 5. Details of electrical raceway and preparation for electrified hardware, access control systems, and security systems.
- 6. Details of anchorages, joints, field splices, and connections.
- 7. Details of accessories.
- C. Product Schedule: For hollow-metal frames, prepared by or under the supervision of supplier, using same reference numbers for details and openings as those on Drawings. Coordinate with final door hardware schedule.

### 1.6 INFORMATIONAL SUBMITTALS

A. Product Test Reports: For each type of fire-rated hollow-metal frame assembly, and, fire-rated borrowed-lite assembly for tests performed by a qualified testing agency indicating compliance with performance requirements.

# 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver hollow-metal frames palletized, packaged, or crated to provide protection during transit and Project-site storage. Do not use non-vented plastic.
  - 1. Provide additional protection to prevent damage to factory-finished units.
- B. Deliver welded frames with two removable spreader bars across bottom of frames, tack welded to jambs and mullions.
- C. Store hollow-metal frames vertically under cover at Project site with head up. Place on minimum 4-inch- high wood blocking. Provide minimum 1/4-inch space between each stacked door to permit air circulation.

## PART 2 - PRODUCTS

## 2.1 HOLLOW METAL FRAMES

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - 1. Curries, AADG, Inc.; ASSA ABLOY Group
  - 2. Mesker Door; Mesker Openings Group
  - 3. Steelcraft; Allegion plc
  - 4. Comparable Products by other manufacturers approved by the Architect in accord with the provisions of 'Section 01 60 00 Product Requirements', and the General Conditions of the Contract.

### 2.2 STANDARD STEEL FRAMES

- A. Construct hollow-metal frames to comply with standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified.
- B. Exterior Frames: SDI A250.8. At locations indicated in the Door and Frame Schedule.

- Materials: Metallic-coated steel sheet, minimum thickness of 0.067 inch, with minimum A60 coating.
- 2. Construction: Knocked down.
- 3. Exposed Finish: Prime.

### 2.3 FRAME ANCHORS

#### A. Jamb Anchors:

- 1. Type: Anchors of minimum size and type required by applicable door and frame standard, and suitable for performance level indicated.
- 2. Quantity: Minimum of three anchors per jamb, with one additional anchor for frames with no floor anchor. Provide one additional anchor for each 24 inches of frame height above 7 feet.
- 3. Post installed Expansion Anchor: Minimum 3/8-inch- diameter bolts with expansion shields or inserts, with manufacturer's standard pipe spacer.
- B. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor.
- C. Floor Anchors for Concrete Slabs with Underlayment: Adjustable-type anchors with extension clips, allowing not less than 2-inch height adjustment. Terminate bottom of frames at top of underlayment.
- D. Material: ASTM A879/A879M, Commercial Steel (CS), 04Z coating designation; mill phosphatized.
  - 1. For anchors built into exterior walls, steel sheet complying with ASTM A1008/A1008M or ASTM A1011/A1011M; hot-dip galvanized according to ASTM A153/A153M, Class B.

# 2.4 MATERIALS

- A. Recycled Content of Steel Products: Post-consumer recycled content plus one-half of pre-consumer recycled content not less than **25** percent.
- B. Cold-Rolled Steel Sheet: ASTM A1008/A1008M, Commercial Steel (CS), Type B; suitable for exposed applications.
- C. Hot-Rolled Steel Sheet: ASTM A1011/A1011M, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.
- D. Metallic-Coated Steel Sheet: ASTM A653/A653M, Commercial Steel (CS), Type B.
- E. Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A153/A153M.
- F. Power-Actuated Fasteners in Concrete: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with clips or other accessory devices for attaching hollow-metal frames of type indicated.

# 2.5 FABRICATION

A. Hollow-Metal Frames: Fabricate in one piece except where handling and shipping limitations require multiple sections. Where frames are fabricated in sections, provide alignment plates or angles at each joint, fabricated of metal of same or greater thickness as frames.

- Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.
- 2. Door Silencers: Except on weather-stripped frames, drill stops to receive door silencers as follows. Keep holes clear during construction.
  - a. Single-Door Frames: Drill stop in strike jamb to receive three door silencers.
- B. Hardware Preparation: Factory prepare hollow-metal frames to receive templated mortised hardware, and electrical wiring; include cutouts, reinforcement, mortising, drilling, and tapping according to SDI A250.6, the Door Hardware Schedule, and templates.
  - 1. Reinforce frames to receive non-templated, mortised, and surface-mounted door hardware.
  - 2. Comply with BHMA A156.115 for preparing hollow-metal frames for hardware.

# 2.6 STEEL FINISHES

- A. Prime Finish: Clean, pretreat, and apply manufacturer's standard primer.
  - Shop Primer: Manufacturer's standard, fast-curing, lead- and chromate-free primer complying with SDI A250.10; recommended by primer manufacturer for substrate; compatible with substrate and field-applied coatings despite prolonged exposure.

#### PART 4-PART 3 - EXECUTION

# 4.13.1 PREPARATION

- A. Remove welded-in shipping spreaders installed at factory. Restore exposed finish by grinding, filling, and dressing, as required to make repaired area smooth, flush, and invisible on exposed faces. Touch up factory-applied finishes where spreaders are removed.
- B. Drill and tap frames to receive non-templated, mortised, and surface-mounted door hardware.

### 4.23.2 INSTALLATION

- A. General: Install hollow-metal frames plumb, rigid, properly aligned, and securely fastened in place. Comply with approved Shop Drawings and with manufacturer's written instructions. Comply with SDI A250.11.
- B. Set frames accurately in position; plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces without damage to completed Work.
  - 1. Where frames are fabricated in sections, field splice at approved locations by welding face joint continuously; grind, fill, dress, and make splice smooth, flush, and invisible on exposed faces. Touch-up finishes.
  - 2. Install frames with removable stops located on secure side of opening.
- C. Floor Anchors: Secure with post installed expansion anchors.
  - 1. Floor anchors may be set with power-actuated fasteners instead of post installed expansion

anchors if so indicated and approved on Shop Drawings.

- D. Solidly pack mineral-fiber insulation inside frames.
- E. Masonry Walls: Coordinate installation of frames to allow for solidly filling space between frames and masonry with grout or mortar.
- F. In-Place Concrete or Masonry Construction: Secure frames in place with post installed expansion anchors. Countersink anchors, and fill and make smooth, flush, and invisible on exposed faces.
- G. Installation Tolerances: Adjust hollow-metal frames to the following tolerances:
  - 1. Squareness: Plus or minus 1/16 inch, measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
  - Alignment: Plus or minus 1/16 inch, measured at jambs on a horizontal line parallel to plane of wall.
  - 3. Twist: Plus or minus 1/16 inch, measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
  - 4. Plumbness: Plus or minus 1/16 inch, measured at jambs at floor.
- H. Glazing: Comply with installation requirements in Section 088000 "Glazing" and with hollow-metal manufacturer's written instructions.

### 4.33.3 CLEANING AND TOUCHUP

- A. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying, rust-inhibitive primer.
- B. Metallic-Coated Surface Touchup: Clean abraded areas and repair with galvanizing repair paint according to manufacturer's written instructions.
- C. Touchup Painting: Cleaning and touchup painting of abraded areas of paint are specified in painting Sections.

# **END OF SECTION 08 12 13**

## **SECTION 08 16 13: FIBERGLASS DOORS & PANELS**

# 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 SECTION INCLUDES

- A. Fiberglass reinforced polyester (FRP) flush doors.
- B. Related Sections
  - 1. Section 079200 -Joint Sealants.
  - 2. Section 081113 Hollow Metal Frames.
  - 3. Section 087100 Door Hardware.

### 1.3 REFERENCES - FRP FLUSH DOOR

- A. ANSI A250.4 Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors and Hardware Reinforcing.
- B. ASTM B 209 Aluminum and Aluminum-Alloy Sheet and Plate.
- C. ASTM B 221 Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
- D. ASTM D 256 Determining the Pendulum Impact Resistance of Notched Specimens of Plastics.
- E. ASTM D 543 Evaluating the Resistance of Plastics to Chemical Reagents.
- F. ASTM D 570 Water Absorption of Plastics.
- G. ASTM D 638 Tensile Properties of Plastics.
- H. ASTM D 790 Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
- J. ASTM D 1308 Effect of Household Chemicals on Clear and Pigmented Organic Finishes.
- K. ASTM D 1621 Compressive Properties of Rigid Cellular Plastics.
- L. ASTM D 1623 Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics.
- M. ASTM D 2126 Response of Rigid Cellular Plastics to Thermal and Humid Aging.
- N. ASTM D 2583 Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor.
- O. ASTM D 6670-01 Standard Practice for Full-Scale Chamber Determination of Volatile Organic Emissions from Indoor Materials/Products.
- P. ASTM E 84 Surface Burning Characteristics of Building Materials.

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- Q. ASTM E 283 Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.
- R. ASTM E 330 Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
- S. ASTM E 331 Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference.
- T. ASTM F 476 Security of Swinging Door Assemblies.
- U. NWWDA T.M. 7-90 Cycle Slam Test Method
- V. SFBC PA 201 Impact Test Procedures.
- W. SFBC PA 203 Criteria for Testing Products Subject to Cyclic Wind Pressure Loading.

# 1.4 PERFORMANCE REQUIREMENTS – FRP FLUSH DOOR

- A. General: Provide door assemblies that have been designed and fabricated to comply with specified performance requirements, as demonstrated by testing manufacturer's corresponding standard systems.
- B. Air Infiltration: For a single door 3'-0" x 7'-0", test specimen shall be tested in accordance with ASTM E 283 at pressure differential of 6.24 psf. Door shall not exceed 0.90 cfm per linear foot of perimeter crack.
- C. Water Resistance: For a single door 3'-0" x 7'-0", test specimen shall be tested in accordance with ASTM E 331 at pressure differential of 7.50 psf. Door shall not have water leakage.
- D. Hurricane Test Standards, Single Door with Single-Point Latching:
  - 1. Uniform Static Load, ASTM E 330: Plus or minus 75 pounds per square foot.
  - 2. Forced Entry Test, 300 Pound Load Applied, SFBC 3603.2 (b)(5): Passed.
  - 3. Cyclic Load Test, SFBC PA 203: Plus or minus 53 pounds per square foot.
- E. Swinging Door Cycle Test, Doors and Frames, ANSI A250.4: Minimum of 25,000,000 cycles.
- G. Cycle Slam Test Method, NWWDA T.M. 7-90: Minimum 5,000,000 Cycles.
- F. Swinging Security Door Assembly, Doors and Frames, ASTM F 476: Grade 40.
- G. Thermal Transmission, Exterior Doors, U-Value, AAMA 1503-98: Maximum of 0.29 BTU/hr x sf x degrees F. Minimum of 55 CRF value.
- H. Surface Burning Characteristics, FRP Doors and Panels, ASTM E 84:
  - 1. Flame Spread: Maximum of 200, Class C.
  - 2. Smoke Developed: Maximum of 450, Class C.
- J. Impact Strength, FRP Doors and Panels, Nominal Value, ASTM D 256: 15.0 foot-pounds per inch of notch.
- K. Tensile Strength, FRP Doors and Panels, Nominal Value, ASTM D 638: 14,000 psi.
- L. Flexural Strength, FRP Doors and Panels, Nominal Value, ASTM D 790: 21,000 psi.

- M. Water Absorption, FRP Doors and Panels, Nominal Value, ASTM D 570: 0.20 percent after 24 hours.
- N. Indentation Hardness, FRP Doors and Panels, Nominal Value, ASTM D 2583: 55.
- O. Abrasion Resistance, Face Sheet, Taber Abrasion Test, 25 Cycles at 1,000 Gram Weight with CS-17 Wheel: Maximum of 0.029 average weight loss percentage.
- P. Stain Resistance, ASTM D 1308: Face sheet unaffected after exposure to red cabbage, tea, and tomato acid. Stain removed easily with mild abrasive or FRP cleaner when exposed to crayon and crankcase oil.
- Q. Chemical Resistance, ASTM D 543. Excellent rating.
  - 1. Acetic acid, Concentrated.
  - 2. Ammonium Hydroxide, Concentrated.
  - 3. Citric Acid, 10%.
  - 4. Formaldehyde.
  - 5. Hydrochloric Acid, 10%
  - 6. Sodium hypochlorite, 4 to 6 percent solution.
- R. Compressive Strength, Foam Core, Nominal Value, ASTM D 1621: 79.9 psi.
- D. Compressive Modulus, Foam Core, Nominal Value, ASTM D 1621: 370 psi.
- T. Tensile Adhesion, Foam Core, Nominal Value, ASTM D 1623: 45.3 psi.
- U. Thermal and Humid Aging, Foam Core, Nominal Value, 158 Degrees F and 100 Percent Humidity for 14 Days, ASTM D 2126: Minus 5.14 percent volume change.

## 1.5 SUBMITTALS

- A. Comply with Section 013300 Submittal Procedures.
- B. Product Data: Submit manufacturer's product data, including description of materials, components, fabrication, finishes, and installation.
- C. Shop Drawings: Submit manufacturer's shop drawings, including elevations, sections, and details, indicating dimensions, tolerances, materials, fabrication, doors, panels, framing, hardware schedule, and finish.
- D. Samples:
  - 1. Door: Submit manufacturer's sample of door showing face sheets, core, framing, and finish.
  - 2. Color: Submit manufacturer's samples of standard colors of doors and frames.
- E. Test Reports: Submit certified test reports from qualified independent testing agency indicating doors comply with specified performance requirements.
- F. Maintenance Manual: Submit manufacturer's maintenance and cleaning instructions for doors, including maintenance and operating instructions for hardware.
- G. Warranty: Submit manufacturer's standard warranty.

## 1.6 QUALITY ASSURANCE

A. Standards: Comply with the requirements and recommendations in applicable specifications and standards by

NAAMM, AAMA and AA, including the terminology definitions and specifically including the "Entrance Manual" by NAAMM, except to the extent more stringent requirements are indicated.

- B. Code Compliance and Regulations: All materials supplied shall be in accordance with the International Building Code, State of New Jersey "Barrier-Free" Subcode, and all applicable State or Local Codes.
- C. Manufacturer shall have produced Fiberglass Reinforced Polyester/Aluminum Hybrid (FRP) Doors, Panels for not less than 25 years and shall have completed projects like this building in type and size.
  - 1. Obtain Doors and Components through one source from a single manufacturer.
- E. Instructions: The manufacturer or representatives will be available for consultation to all parties engaged in the project, including instruction to installation personnel.

### 1.7 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. All materials supplied shall be delivered to the jobsite in their original, unopened packages, with labels intact. Materials shall be inspected for damage, and the manufacturer shall be advised immediately of any discrepancies. Unsatisfactory materials are not to be used.
- B. All materials supplied shall be packaged in individual corrugated cartons. Doors and panels shall be "floated" within cartons, with no portion of the door having contact with the outer shell of the container.
- C. Handling: Protect materials and finish from damage during handling and installation.

# 1.8 WARRANTY

- A. Warrant doors, frames, and factory hardware against failure in materials and workmanship, including excessive deflection, faulty operation, defects in hardware installation, and deterioration of finish or construction in excess of normal weathering.
- B. Warranty Period: Ten years starting on date of substantial completion. In addition, a limited lifetime (while the door is in its specified application in its original installation) warranty covering: failure of corner joinery, core deterioration, delamination or bubbling of door skin.
- O. Finish
  - 1. Painted FRP face sheets: 5 years.
  - Anodized, aluminum:10 years.

## **PART 2 PRODUCTS**

#### 2.1 MANUFACTURER

- A. Basis-of –Design Manufacturer/Product: Subject to compliance with this specification, provide FRP Doors & Aluminum Frames based upon the products of Special-Lite, Inc., PO Box 6, Decatur, Michigan 49045. Toll Free (800) 821-6531. Phone (269) 423-7068. Fax (800) 423-7610. Web Site www.special-lite.com. E-Mail <a href="mailto:info@special-lite.com">info@special-lite.com</a> or a comparable product by one of the following:
  - 1. Commercial Door Systems
  - 2. Edgewater FRP Door
  - 3. OshKosh Door Company
  - Equal product meeting project specifications

#### 2.2 FRP FLUSH DOORS

- A. Model: SL-20 Flush Door with sandstone textured fiberglass reinforced polyester (FRP) face sheets
- B. Door Opening Size: As indicated on the Drawings.

#### C. Construction:

- 1. Door Thickness: 1-3/4 inches.
- 2. Stiles and Rails: Aluminum extrusions made from prime-equivalent billet that is produced from 100% reprocessed 6063-T5 alloy recovered from industrial processes, minimum of 2-5/16-inch depth.
- 3. Corners: Mitered.
- 4. Provide joinery of 3/8-inch diameter full-width tie rods through extruded splines top and bottom integral to standard tubular shaped stiles and rails reinforced to accept hardware as specified.
- 5. Securing Internal Door Extrusions: 3/16-inch angle blocks and locking hex nuts for joinery. Welds, glue, or other methods are not acceptable.
- 6. Furnish extruded stiles and rails with integral reglets to accept face sheets. Lock face sheets into place to permit flush appearance.
- 7. Rail caps or other face sheet capture methods are not acceptable.
- 8. Extrude top and bottom rail legs for interlocking continuous weather bar.
- 9. Bottom of Door: Install bottom weather bar with nylon brush weather-stripping into extruded interlocking edge of bottom rail.
- 10. Glue: Use of glue to bond sheet to core or extrusions is not acceptable.

### D. Face Sheet:

- 1. Material: SpecLite3 FRP, 0.120-inch thickness, finish color throughout.
- Protective coating: Abuse-resistant engineered surface. Provide FRP with SpecLite3 protective coating, or equal.
- 3. Texture: Non-directional Pebble.
- 4. Color: As selected by Architect from manufacturer's full range of colors.
- 5. Adhesion: The use of glue to bond face sheet to foam core is prohibited.

# E. Core:

- 1. Material: Poured-in-place polyurethane foam.
- 2. Density: Minimum of 5 pounds per cubic foot.
- 3. R-Value: Minimum of 9.

## F. Cutouts:

- 1. Manufacture doors with cutouts for required vision lites, louvers, and panels.
- 2. Factory install vision lites, louvers, and panels.

#### G. Hardware:

- Premachine doors in accordance with templates from specified hardware manufacturers and hardware schedule.
- 2. Factory install hardware.
- 3. Unless otherwise noted supply doors with manufacturers standard recessed pull. Finish to match aluminum edge of door, vision lite kits & framing.

# 2.3 MATERIALS

# A. Aluminum Members:

1. Aluminum extrusions made from prime-equivalent billet that is produced from 100% reprocessed 6063-T5 alloy recovered from industrial processes: ASTM B 221.

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- 2. Sheet and Plate: ASTM B 209.
- 3. Alloy and Temper: As required by manufacturer for strength, corrosion resistance, application of required finish, and control of color.
- B. Components: Door and frame components from same manufacturer.

#### C. Fasteners:

- 1. Material: Aluminum, 18-8 stainless steel, or other noncorrosive metal.
- 2. Compatibility: Compatible with items to be fastened.
- 3. Exposed Fasteners: Screws with finish matching items to be fastened.

### 2.4 FABRICATION

- A. Sizes and Profiles: Required sizes for door and frame units, and profile requirements shall be as indicated on the Drawings.
- B. Coordination of Fabrication: Field measure before fabrication and show recorded measurements on shop drawings.
- C. Assembly:
  - 1. Complete cutting, fitting, forming, drilling, and grinding of metal before assembly.
  - 2. Remove burrs from cut edges.
- D. Welding: Welding of doors or frames is not acceptable.
- E. Fasteners: Conceal fasteners, wherever possible, except as otherwise noted.
- F. Fit:
  - 1. Maintain continuity of line and accurate relation of planes and angles.
  - 2. Secure attachments and support at mechanical joints with hairline fit at contacting members.
- G. Reinforce the work as necessary for performance requirements and as required for support to the structure. Separate dissimilar metals and bituminous paint or performed separators, which will prevent corrosion. Separate metal surfaces at moving joints with non-metallic separators to prevent "freeze-up" of joints.

#### PART 3 EXECUTION

## 3.1 EXAMINATION

A. Examine areas to receive doors. Notify Architect of conditions that would adversely affect installation or subsequent use. Do not proceed with installation until unsatisfactory conditions are corrected.

# 3.2 PREPARATION

A. Ensure openings to receive frames are plumb, level, square, and in tolerance.

# 3.3 INSTALLATION – FRP FLUSH DOORS

- A. Install doors in accordance with manufacturer's instructions.
- B. Install doors plumb, level, square, true to line, and without warp or rack.

- C. Anchor frames securely in place.
- D. Separate aluminum from other metal surfaces with bituminous coatings or other means approved by Architect.
- E. Set thresholds in bed of mastic and backseal.
- F. Install exterior doors to be weathertight in closed position.
- G. Repair minor damages to finish in accordance with manufacturer's instructions and as approved by Architect.
- H. Remove and replace damaged components that cannot be successfully repaired as determined by Architect.
- H. Remove and replace damaged components that cannot be successfully repaired as determined by Architect.

# 3.4 FIELD QUALITY CONTROL

A. Manufacturer's Field Services: Manufacturer's representative shall provide technical assistance and guidance for installation of doors.

### 3.5 ADJUSTING

A. Adjust doors, hinges, and locksets for smooth operation without binding.

# 3.6 CLEANING

- A. Clean doors promptly after installation in accordance with manufacturer's instructions.
- B. Do not use harsh cleaning materials or methods that would damage finish.

## 3.7 PROTECTION

A. Protect installed doors to ensure that, except for normal weathering, doors will be without damage or deterioration at time of substantial completion.

# **END OF SECTION 081613**

#### **SECTION 08 45 00: TRANSLUCENT WALL AND ROOF ASSEMBLIES**

#### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

- A. Section includes aluminum-framed assemblies incorporating fiberglass-sandwich panels as follows:
  - Flat factory prefacbricated sturcutural insulated translucent sandwich panels.
  - 2. Alluminum installation system.
  - 3. Alluminum sill flashing.

# 1.02 RELATED REQUIREMENTS

A. Section 07 92 00 - Joint Sealants: Sealing joints between perimeter frame and adjacent construction.

#### 1.03 REFERENCE STANDARDS

- A. AAMA 501.2 Field Check of Metal Storefronts, Curtain Walls, and Sloped Glazing Systems for Water Leakage; 2009 (part of AAMA 501).
- B. AAMA 1503 Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors and Glazed Wall Sections; 2009.
- C. AAMA 2604 Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels; 2013.
- D. ASTM A123/A123M Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2015.
- E. ASTM B209 Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 2014.
- G. ASTM B221 Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes; 2013.
- ASTM E283 Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen; 2004 (Reapproved 2012).
- J. ASTM E330/E330M Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference; 2014.
- K. ASTM E331 Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference; 2000 (Reapproved 2009).
- L. SSPC-Paint 20 Zinc-Rich Primers (Type I, "Inorganic," and Type II, "Organic"); Society for Protective Coatings; 2002 (Ed. 2004).

# 1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate with installation of air barrier.
- B. Preinstallation Meeting: Convene one week before starting work of this section.

# 1.05 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.

- B. Product Data: Provide component dimensions, describe components within assembly, anchorage and fasteners, panel configuration, internal drainage details.
- C. Shop Drawings: Indicate system dimensions, framed opening requirements and tolerances, anticipated deflection under load, affected related Work, weep drainage network, expansion and contraction joint location and details, and field welding required. Include plans, elevations, sections, details and attachments to other work.
- D. Samples: Submit two sandwich panel samples, 14 by 28 inch (355.6 by 711.2 mm) in size, illustrating minimum 5 inch long prefinished aluminum surface section, specified panel with skins, glazing materials illustrating edge and corner.
- E. Test Reports: Submit substantiating engineering data, test results of previous tests by independent laboratory which purport to meet performance criteria, and other supportive data, based on comprehensive testing of current products.
  - 1. International Building Code Evaluation Report.
  - 2. Flame Spread and Smoke Developed (UL 723) Submit UL Card.
  - 3. Burn Extent (ASTM D 635).
  - 4. Color Difference (ASTM D 2244).
  - 5. Impact Strength (UL 972).
  - 6. Bond Tensile Strength (ASTM C 297 after aging by ASTMD 1037).
  - 7. Bond Shear Strength (ASTM D 1002).
  - 8. Beam Bending Strength (ASTM E 72).
  - 9. Insulation U-Factor Certification (NFRC 700).
  - 10. NFRC System U-Factor Certification (NFRC or Calculation).
  - 11. Condensation Resistance Factor (AAMA 1503).
  - 12. Air Leakage (ASTM e 283).
  - 13. Structural Performance (ASTM E 330).
  - 14. Water Penetration (ASTM E 331).
  - 15. 1200 deg.F Fire Resistance (SWRI).
  - 16. ASTM E1886/1996 or TAS 201, 202 and 203.
  - 17. Daylight Autonomy.
  - 18. USGBC LEED (K12) 2009: Laboratory Reports for Credit IEQ 4.1.
- F. Warranties: Sample of special warranties.
- G. Closeout Submittals: Maintenance Data.

## 1.06 QUALITY ASSURANCE

- A. Designer Qualifications: Design structural support framing components under direct supervision of a Professional Engineer experienced in design of this Work and licensed in the State in which the Project is located.
  - 1. The manufacturer shall be responsible for the configuration and fabrication of the complete panel system.
  - 2. Include signed and sealed structural analysis data by the qualified New Jersey professional engineer.
  - 3. Standard panel system shall have less than 0.01 cfm/ft² air leakage by ASTM E 283 at 6.24 PSF (50 mph) and no water penetration by ASTM E 331 at 15 PSF; and structural testing by ASTM E 330.
- B. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than 10 consecutive years years of documented experience.
  - 1. Panel system must be listed by an ANSI accredited Evaluation Service, which requires quality control inspections and fire, structural and water infiltration testing of sandwich panel systems by an accredited agency.

- 2. Quality control inspections shall be conducted at least once each year and shall include manufacturing facilities, sandwich panel components and production sandwich panels for conformance with AC177 "Translucent Fiberglass Reinforced Plastic (FRP) Faced Panel Wall, Roof and Skylight Systems" as issued by the ICC-ES.
- C. Installer Qualifications: Company specializing in performing the work of this section for installation of panel assemblies required for this Project; authorized, trained and approved by manufacturer.

#### 1.07 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of panel assemblies that fail in materials or workmanship within specified warranty period.
  - 1. Failures include, but are not limited to, the following:
    - a. Structural failures including, but not limited to, excessive deflection.
    - b. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
    - c. Water leakage.
  - 2. Warranty Period: Five years from date of Delivery.
- B. Installer's Warranty: 5 years from date of Substantial Completion of application.
- C. Special Fiberglass-Sandwich-Panel Warranty: Manufacturer's standard form in which manufacturer agrees to replace panels that exhibit defects in materials or workmanship.
  - 1. Defects include, but are not limited to, the following:
    - a. Fiberbloom.
    - b. Delamination of coating, if any, from exterior face sheet.
    - c. Color change exceeding requirements.
    - d. Delamination of panel face sheets from panel cores.
  - 2. Warranty Period: 10 years from date of Delivery.
- D. Special Aluminum-Finish Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components on which finishes fail within specified warranty period. Warranty does not include normal weathering.
  - 1. Failures include, but are not limited to, checking, crazing, peeling, chalking, and fading of finishes.
  - 2. Warranty Period: 10 years from date of Delivery.
  - 3. Warranty Period: 20 years for Reinforcing Fiber Bloom from date of Delivery.

# 1.08 DELIVERY, STORAGE, AND HANDLING

- A. Deliver panel system, components and materials in manufacturer's standard protective packaging.
- B. Store panels on the long edge; several inches above the ground, blocked and under cover in accordance with manufacturer's storage and handling instructions.

#### PART 2 PRODUCTS

# 2.01 MANUFACTURERS

- A. Basis of Design and approved Manufacturer: Kalwall Corporation. info@kalwall.com.
- B. Other Acceptable Sandwich Panel Wall/Roof System Manufacturers: Subject to and in compliance with the performance requirements of this specification the following products will be considered:
  - 1. Major Industries, Inc: www.majorskylights.com.
  - 2. Kingspan
  - 3. Or approved equal.

## 2.02 PERFORMANCE REQUIREMENTS

- A. System Design: Design and size components to withstand dead loads and live loads caused by snow, hail, and positive and negative wind loads acting on plane of panel without damage or permanent set.
  - 1. Design Loads: Calculate in accordance with applicable code and wind loads as indicated on Drawings.
    - a. Importance Factor: 1.0.
    - b. Exposure Category: C.
  - 2. Measure performance in accordance with ASTM E330/E330M, using test load of 1.5 times the design wind pressure and 10 second duration of maximum load.
- B. Deflection Limits: Vertical Panel Assemblies: Limited to L/120 of clear span for each assembly component.
- C. Light Transmission: 20 percent.
- D. Air Infiltration: Limit air infiltration through assembly to 0.06 cu ft/min sq ft (0.30 L/sec sq m) of glazed area, measured at a reference differential pressure across assembly of 1.57 psf (75 Pa) as measured in accordance with ASTM E283.
- E. Thermally broken Panels: Minimum Condensation Resistance Factor: CRF of 80 when measured in accordance with AAMA 1503 when measured on the bond line.
- F. Water Leakage: None, panel assemblies do not evidence water penetration through fixed glazing and faming areas when measured in accordance with ASTM E331 at a static -air-test pressure difference of 20 percent of positive wind-load deisgn pressure but not less than 6.24 lbf/sq ft (298.8 Pa).
- G. Thermal Movements: Allow for thermal movements from ambient- and surface-temperature changes. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
  - 1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.
- H. System Internal Drainage: Drain water entering joints, condensation occurring in framing system, or migrating moisture occurring within system, to the exterior by a weep drainage network.
- J. Not Permitted: Vibration harmonics, wind whistles, noises caused by thermal movement, thermal movement transmitted to other building elements, loosening, weakening, or fracturing of attachments or components of system.
- K. General Performance: Fiberglass-sandwich-panel assemblies shall withstand the effects of the following forces without failure due to defective manufacture, fabrication, installation, or other defects in construction:
  - 1. Structural loads.
  - 2. Thermal movements.
  - 3. Movements of supporting structure.
  - 4. Dimensional tolerances of building frame and other adjacent construction.
  - 5. Failure includes, but is not limited to, the following:
    - a. Deflection exceeding specified limits.
    - b. Water leakage.
    - c. Thermal stresses transferred to building structure.
    - d. Noise or vibration created by wind, thermal, or structural movements.
    - e. Loosening or weakening of fasteners, attachments, and other components.

## 2.03 MATERIALS

- A. Aluminum: Alloy and temper recommended in writing by manufacturer for type of use and finish indicated.
  - 1. Extruded Aluminum: ASTM B221 (ASTM B221M).
  - 2. Sheet Aluminum: ASTM B209 (ASTM B209M).

- B. Fasteners: Galvanized steel.
  - 1. Fasteners and Accessories: Manufacturer's standard, corrosion-resistant, nonstaining, and nonbleeding fasteners and accessories; compatible with adjacent materials.

### 2.04 COMPONENTS

- A. Translucent Wall and Roof System: Structurally reinforced translucent panels, with support framing, shop fabricated, factory prefinished, battens, cap strips, related flashings, anchorage and attachment devices.
  - 1. Thermally broken, extruded aluminum with thermal strut per IBC 2015. No thermal bridge permitted.
- B. Panels: Assembly of uniformly colored translucent thermoset fiberglass reinforced polymer base sheets permanently bonded to both sides of a thermally broken grid core of indicated nominal size pattern; exposed surfaces of exterior sheet chemically and permanently treated to protect against surface erosion and extreme weather conditions; exposed surface of interior sheets fire retardant to a flame rating of 50 and smoke rating of 450; polyvinyl fluoride film coated:
  - 1. Panel Thickness: 2.75 inches (69.85 mm).
  - 2. Exterior Facing Sheets: translucent.
    - Crystal color.
    - b. Face Sheet Thickness: [0.070] inches ([1.8] mm).
    - c. Color Change Stability: Full thickness of the exterior face sheet shall change color not more than 3.0 CIE units Delta E when measured according to ASTM D 2244, after 5 years outdoor weathering in southern Florida compliant with procedures in ASTM D 1435, with panels mounted at 5 degrees facing south, determined by the average of at least 3 white samples with and without a protective film or coating to ensure long-term color stability. Color stability shall be unaffected by abrasion or scratching.
    - d. Erosion Protection: Glass veil erosion barrier. FRP facesheets with gelcoat are not permitted.
    - e. Impact Resistance: No fracture or tear at impact of 70 ft. x lbf by a 3-1/4-inch- diameter, 5-lb freefalling ball according to UL 972 test procedure.
  - 3. Self-Ignition Temperature: 650 deg F or more per ASTM D 1929.
  - 4. Interior Finish Classification: Class B per ASTM E 84.
  - 5. Light transmission: 20%.
  - 6. Solar heat gain coefficient: 0.28.
  - 7. Panel U-factor by NFRC certified laboratory: 2-3/4" thermally broken grid 0.23U.
  - 8. Complete insulated panel system shall have NFRC certified U-factor of no more than 0.32.
  - 9. Panel Strength Characteristics:
    - a. Maximum Panel Deflection: 1 inch at 30 psf in 10'-0" span without a supporting frame per ASTM
    - Standard panels shall withstand 1200° F fire for minimum one hour without collapse or exterior flaming.
- C. Grid Core Support Framing Members: Mechanically interlocked, thermally broken, 7/16 inch (11.11 mm) wide minimum flange I-Beam profile construction; thermal break, of minimum 1 inch (25.40 mm) thick thermoset, thermally broken, extruded aluminum. Thermal Bridge not acceptable.
  - 1. Extruded Aluminum: ASTM B 221, of 6063-T6 or 6005-T5 alloy and temper or as recommended in writing by manufacturer.
- D. Battens, Cover Strips, Cover Plates, and Integral Flashings: Extruded aluminum, to suit location and application; sized to rigidly retain panels in place.
  - 1. Closure system: Thermally broken thermal strut, extruded aluminum 6063-T6 and 6063-T5 alloy and temper, clamping screw-type closure system.
  - 2. Sealing tape: Manufacturer's standard, factory applied.
  - 3. Fasteners: 300 series stainless steel screws for aluminum closures.

- E. Exposed Flashings: 0.040 inch (1.016 mm) thick aluminum, to match framing finish, secured with concealed fastening method.
- F. Concealed Flashing: Corrosion-resistant, nonstaining, nonbleeding flashing compatible with adjacent materials.
- G. Frame System Sealant for Within Translucent Assembly: As required by manufacturer.
  - Laboratory Reports: Credit IEQ 4.1: Sealants used inside the weatherproofing system shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- H. Sill Flashing Sealant: Elastomeric, silicone or polyurethane, and compatible with flashing material.
- I. Fiberglass Sandwich-Panel Laminate Adhesive: To comply with ASTM C 297, ASTM D1037, and ASTM D 1002.
  - Heat and pressure resin type adhesive engineered for structural sandwich panel use. Adhesive shall pass testing requirements specified by the International Code Council "Accesptance Criteria for Sandwich Panel Adhesives."
  - 2. Minimum tensile strength of 750 PSI when the panel assembly is tested by ASTM C297 after two exposures to six cycles each of the aging conditions perscribed by ASTM D 1037.
  - 3. Minimum shear strength of the panel adhesive by ASTM D 1002 after exposure to four separate conditions:
    - a. 50% Relative Humity at 68 degrees F: 540 PSI.
    - b. 182 degrees F: 100 PSI.
    - c. Accelerated Aging by ASTM D 1037 at room temperature: 800 PSI.
    - d. Accelerated Aging by ASTM D 1037 at 182 degrees F: 250 PSI.

## 2.05 FABRICATION

- A. Fabricate system components with minimum clearances and shim spacing around perimeter of assembly, yet enabling installation and dynamic movement of perimeter seal.
- B. Accurately fit and secure joints and corners. Make joints flush, hairline, and weatherproof.
- C. Prepare components to receive anchor devices. Fabricate anchors.
- D. Arrange fasteners and attachments to ensure concealment from view.
- E. Reinforce framing members for external imposed loads.

# 2.06 FINISHES

- A. Finish Coatings: Conform to AAMA 2604.
- B. Exterior Exposed Aluminum Surfaces:
  - 1. Organic coating to color as selected.
    - a. Color as selected by Architect from Manufacturer's full range of standard colors.
- C. Interior Exposed Aluminum Surfaces:
  - 1. Organic coating to color as selected.
    - a. Color as selected by Architect from Manufacturer's full range of standard colors.
- D. Touch-Up Primer for Galvanized Steel Surfaces: SSPC-Paint 20, zinc rich.
- E. Concealed Steel Items:

- 1. Galvanized in accordance with requirements of ASTM A123/A123M.
- F. Apply one coat of bituminous paint to concealed aluminum and steel surfaces in contact with cementitious or dissimilar materials.

### PART 3 EXECUTION

# 3.01 EXAMINATION

- A. Verify dimensions, tolerances, and method of attachment with other work.
- B. Verify wall openings and adjoining air barrier and vapor retarder materials are ready to receive work of this section.
- C. Installer shall examine substrates, supporting structure and installation conditions.
- D. Do not proceed with panel installation until unsatisfactory conditions have been corrected.

### 3.02 INSTALLATION

- A. Install translucent panel system in accordance with manufacturer instructions.
- B. Attach to structure to permit sufficient adjustment to accommodate construction tolerances and other irregularities.
- C. Provide alignment attachments and shims to permanently fasten system to building structure.
- D. Align assembly plumb and level, free of warp or twist. Maintain assembly dimensional tolerances and align with adjacent work.
- E. Provide thermal isolation where components penetrate or disrupt building insulation.
- F. Install sill flashings.
- G. Coordinate installation of air stop at edge of construction.
- H. Pack fibrous insulation in shim spaces at perimeter of assembly to maintain continuity of thermal barrier.
- I. General:
  - 1. Comply with manufacturer's written instructions.
  - 2. Do not install damaged components.
  - 3. Fit joints between aluminum components to produce hairline joints free of burrs and distortion.
  - 4. Rigidly secure nonmovement joints.
  - 5. Install anchors with separators and isolators to prevent metal corrosion, electrolytic deterioration, and immobilization of moving joints.
  - 6. Seal joints watertight unless otherwise indicated.
- J. Metal Protection: Where aluminum components will contact dissimilar materials, protect against galvanic action by painting contact surfaces with corrosion-resistant coating or by installing nonconductive spacers as recommended in writing by manufacturer for this purpose.
- K. Install continuous aluminum sill closures with weatherproof expansion joints and locked and sealed corners. Locate weep holes at rafters.
- L. Install components to drain water passing through joints, condensation occurring within aluminum members and panels, and moisture migrating within assembly to exterior.

#### 3.03 TOLERANCES

- A. Maximum Variation from Plumb: 1/8 inches in 12 feet, non-cumulative or no greater than 1/2 inches over total length, whichever is less.
- B. Maximum Misalignment of Two Adjoining Members Abutting in Plane: 1/32 inch (0.8 mm).
- C. Sealant Space Between Panel System Members and Adjacent Construction: Maximum of 3/4 inch (19 mm) and minimum of 1/4 inch (6 mm).

### 3.04 FIELD QUALITY CONTROL

- A. Independent inspection and testing will be provided under provisions of Section 01 40 00 Quality Requirements.
- B. Test installed translucent wall panels and system for water leakage in accordance with AAMA 501.2.
- C. Replace translucent wall panels and system components that have failed field testing and retest until performance is satisfactory.

### 3.05 CLEANING

- A. Remove protective material from prefinished aluminum surfaces.
- B. Wash down surfaces with a solution of mild detergent in warm water, applied with soft, clean wiping cloths. Take care to remove dirt from corners. Wipe surfaces clean.

### 3.06 PROTECTION

A. Protect finished work from damage until Date of Substantial Completion.

# **END OF SECTION**

# **SECTION 08 71 00: DOOR HARDWARE**

### PART 1 - GENERAL

#### 1.01 SUMMARY

- A. Section includes furnishing, installation, and commissioning of mechanical door hardware for doors s and required by actual conditions: including screws, bolts, expansion shields, electrified door hardware, and other devices for proper application of hardware.
- B. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
- C. Related Divisions:
  - 1. Division 07 Section "Joint Sealants"
  - 2. Division 08 Sections "Hollow Metal Doors and Frames" and "Fiberglass Doors and Panels"

#### 1.02 REFERENCES

- A. American National Standards Institute/Builders Hardware Manufacturers Association (ANSI):
  - 1. ANSI/BHMA A156.2 Bored & Preassembled Locks & Latches (2011)
  - 2. ANSI/BHMA A156.4 Door Controls Closers (2013)
  - 3. ANSI/BHMA A156.5 Cylinders and Input Devices for Locks (2014)
  - 4. ANSI/BHMA A156.6 Architectural Door Trim (2015)
  - 5. ANSI/BHMA A156.7 Template Hinge Dimensions (2016)
  - 6. ANSI/BHMA A156.12 Interconnected Locks & Latches (2013)
  - 7. ANSI/BHMA A156.13 Mortise Locks & Latches (2012)
  - 8. ANSI/BHMA A156.16 Auxiliary Hardware (2013)
  - 9. ANSI/BHMA A156.18 Materials & Finishes (2016)
  - 10. ANSI/BHMA A156.21 Thresholds (2014)
  - 11. ANSI/BHMA A156.22 Door Gasketing Systems (2012)
  - 12. ANSI/BHMA A156.26 Continuous Hinges (2012)
  - 13. ANSI/BHMA A156.28 Keying Systems (2013)
  - 14. ANSI/BHMA A156.115 Hardware Preparation in Steel Doors and Steel Frames (2014)
  - 15. ANSI/BHMA A156.115W Hardware Preparation in Wood Doors with Wood or Steel Frames (2016)
- B. International Code Council/American National Standards Institute (ICC/ANSI)/ADA:
  - 1. ICC/ANSI A117.1 Standards for Accessible and Usable Buildings and Facilities 2018.
- C. Underwriters Laboratories, Inc. (UL):
  - 1. UL 1784 Air Leakage Test of Door Assemblies.
  - 2. UL 294 Access Control System Units
- D. Door and Hardware Institute (DHI):
  - 1. DHI Publications Keying Systems and Nomenclature (1989).
  - 2. DHI Publication Installation Guide for Doors and Hardware.

# 1.03 SUBMITTALS

A. Submit in accordance with Conditions of the Contract and Division 1 Administrative Requirements and Submittal Procedures Section.

- B. Shop Drawings:
  - Organize hardware schedule in vertical format as illustrated in DHI Publications Sequence and Formatting for the Hardware Schedule. Include abbreviations and symbols page according to DHI Publications Abbreviations and Symbols. Complete nomenclature of items required for each door opening as indicated.
  - 2. Coordinate final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of hardware.
  - 3. Architectural Hardware Consultant (AHC), as certified by DHI, who will affix seal attesting to completeness and correctness, including the review of the hardware schedule prior to submittal.
- C. Submit manufacturer's catalog sheet on design, grade, and function of items listed in hardware schedule. Identify specific hardware item per sheet, provide an index, and cover sheet.
- D. Closeout Submittals: Submit to Owner in a three-ring binder or CD if requested.
  - 1. Warranties.
  - 2. Maintenance and operating manual.
  - 3. Maintenance service agreement.
  - 4. Record documents.
  - 5. Copy of approved hardware schedule.
  - 6. Copy of approved keying schedule with bitting list.
  - 7. Door hardware supplier name, phone number, and fax number.

# 1.04 QUALITY ASSURANCE

- A. Listed and Labeled electrified door hardware as defined in NFPA 70, Article 100, by a testing agency acceptable to authority having jurisdiction.
- B. Hardware supplier will employ an Architectural Hardware Consultant (AHC) as certified by DHI and a member of the seal program who will be available at reasonable times during course of work for Project hardware consultation.
- C. Door hardware conforming to ICC/ANSI A117.1: Handles pulls, latches locks and operating devices: Shape that is easy to grasp with one hand and does not require tight grasping, tight pinching, or twisting of the wrist.
- D. Door hardware certified to ANSI/BHMA standards as noted, participate and be listed in BHMA Certified Products Directory.
- E. Installer Qualifications: Specialized in performing installation of this Section and have five years minimum documented experience.

# 1.05 DELIVERY, STORAGE, AND HANDLING

- A. Provide clean, dry and secure room for hardware delivered to Project but not yet installed. Shelve hardware off of the floor and with larger items of hardware being stored on wooden pallets. Arrange locksets and keyed cylinders by opening number. Organize the balance of hardware by brand, model of hardware, and hardware set number. Leave the door markings of the hardware visible for installers.
- B. Furnish hardware that is not bulk packed with each unit marked and numbered in accordance with approved finish hardware schedule. Include architect's opening number, hardware set number, and item number for each type of hardware. Include keyset symbols and corresponding hardware component for keyed products.
- C. Pack each item complete with necessary parts and fasteners in manufacturer's original packaging.

- Comm. No. 22-8845
- D. Deliver architectural hardware to the job site according to the phasing agreed upon in the pre-installation meeting. Inventory the delivery with the supplier's assistance. Immediately note shortages and damages on the shipping receipts and bill of ladings. Coordinate replacement or repair with the supplier.
- E. Deliver permanent keys, cores, and related accessories directly to Owner via registered mail or overnight package service. Establish the instructions for delivery to Owner at "Keying Conference."
- F. Waste Management and Disposal: Separate waste materials for use or recycling in accordance with Division 1.

#### 1.06 WARRANTY

- A. General Warranty: Owner may have under provisions of the Contract Documents and be an addition and run concurrently with other warranties made by Contractor under requirements of the Contract documents.
- B. Special Warranty: Warranties specified in this article will not deprive Owner of other rights.
  - 1. One year for installer
  - 2. Ten years for manual door closers.
  - 3. Five years for mortise, auxiliary and bored locks.
  - 4. One year for electromechanical door hardware
- C. Replace or repair defective products during warranty period in accordance with manufacturer's warranty at no cost to Owner. There is no warranty against defects due to improper installation, abuse, and failure to exercise normal maintenance.
- D. Maintenance Tool and Instructions: Furnish a complete set of specialized tools and maintenance instructions for Owner's continued adjustment, maintenance, removal and replacement of door hardware.

# **PART 2 - PRODUCTS**

# 1.01 CONTINUOUS HINGES

- A. Continuous hinges of one manufacturer as listed for continuity of design and consideration of warranty.
- B. Standards: Products to be certified and listed by ANSI/BHMA A156.26 Grade 1.
- C. Continuous Geared Hinges:
  - 1. Determine model number by door and frame application, door thickness, frequency of use, and fire rating requirements according to manufacturer's recommendations.
    - a. Size length of hinge to equal the actual door height unless otherwise stated in hardware sets or as required by door and door frame manufacturers.

## D. Material and Design:

- Base material: Anodized aluminum manufactured from 6063-T6 material, unexposed working metal surfaces be coated with TFE dry lubricant.
- 2. Bearings:
  - a. Vertical loads be carried on Lubriloy RL bearings for non-fire rated doors.
  - b. Continuous hinges are to have a minimum spacing between bearings of 2-9/16". Typical door from 80" to 84" in height to have a minimum of 32 bearings.
- 3. Options:
  - a. Hinges shall have rounded back cover channel (RBCC).
  - b. When full width of opening is required, use hinges that are designed to swing door completely from opening when door is opened to 95 degrees.

# E. Acceptable Manufacturers:

	Heavy Duty
Hager	780-111HD/780-112HD
Bommer	FMHD/FMSLFHD
Zero	914A/910A
Alternate product meeting project specifications	

### 1.02 LOCKS AND LATCHES

- A. Locks and latches of one manufacturer as listed for continuity of design and consideration of warranty.
- B. Standards: Product to be certified and listed by following:
  - 1. ANSI/BHMA A156.2 Series 4000 Certified to Grade 1.
  - 2. UL/cUL Labeled and listed for functions up to 3 hours for single doors up to 48" in width and up to 96" in height.
  - 3. UL10C/UBC 7-2 Positive Pressure Rated.
  - 4. ICC/ANSI A1117.1
- C. Lock and latch function numbers and descriptions of manufacturer's series as listed in hardware sets.

## D. Material and Design:

- 1. Lock and latch chassis to be zinc dichromate for corrosion resistance.
- 2. Keyed functions to be of a freewheeling design to help resist against vandalism.
- 3. Non-handed, field reversible.
- 4. Thru-bolt mounting with no exposed screws.
- 5. Levers, zinc cast and plated to match finished designation in hardware sets.
- 6. Roses, wrought brass or stainless steel material.

# E. Latch and Strike:

- 1. Stainless Steel latch bolt with minimum of 1/2" throw and deadlocking for keyed and exterior functions. Provide 3/4" latch bolt for pairs of fire-rated doors where required by door manufacturer. Standard backset to be 2-3/4" and adjustable faceplate to accommodate a square edge door or a standard 1/8" beveled edge door.
- 2. Strike is to fit a standard ANSI A115 prep measuring 1-1/4" x 4-7/8" with proper lip length to protect surrounding trim.

# F. Options:

- 1. Doors requiring lead line protection provide locks with 1/16" lead applied to lock and 1/16" lead wrapped around latch bolt.
- 2. Provide knurled levers on entry side of doors that are potentially dangerous to visually impaired persons.

## G. Electric Locks:

- 1. Fail-Safe (power locks lever) outside trim is locked when power is applied and unlocked when power is removed. Lockset will unlock in the event of a power failure (EL).
- 2. Fail-Secure (power unlocks lever) outside trim is locked when there is no power and unlocked when power is applied. Lockset will be locked in the event of a power failure (EU).
- 3. Request to Exit: Monitors inside lever rotation (RX).

# H. Acceptable manufacturers:

Hager	3400 Series
Schlage	ND Series
Best	9K Series

# 1.03 CYLINDERS AND KEYING

- A. Cylinders of one manufacturer as listed for continuity of design and consideration of warranty.
- B. Products to be certified and listed by the following:
  - 1. Auxiliary Locks: ANSI/BHMA A156.5
- C. Cylinders: to be provided by Owner
- D. Keying:
  - 1. To be provided by Owner
  - 2. Keys to be shipped directly to the Owner's Representative as established during the keying conference.
    - a. Package the keys in individual envelopes, grouped by keyset symbol, and label envelopes with project name, factory registry number, and keyset symbol.
  - 3. Stamp large bow key blanks with visual key control (keyset symbol) and "Do Not Duplicate".
  - 4. Provide interchangeable cores with construction cores as required per the keying meeting.
  - 5. Single seven-pin key will operate both conventional cores and SFIC small format interchangeable cores.
- E. Acceptable Manufacturers:

as provided by owner	

#### 1.04 CLOSERS

- A. Closers of one manufacturer as listed for continuity of design and consideration of warranty, unless otherwise indicated on hardware schedule, comply with manufacturer's recommendations for size of closer, depending on width of door, frequency of use, atmospheric pressure, ADAAG requirement, and fire rating.
- B. Standards: Manufacturer to be certified and or listed by the following:
  - 1. BHMA Certified ANSI A156.4 Grade 1.
  - 2. ADA Complaint ANSI A117.1.
  - 3. UL/cUL Listed up to 3 hours.
  - 4. UL10C Positive Pressure Rated.
  - 5. UL10B Neutral Pressure Rated.
- C. Material and Design:
  - 1. Provide cast iron non-handed bodies with full plastic covers.
  - 2. Closers will have separated staked adjustable valve screws for latch speed, sweep speed, and backcheck.
  - 3. Provide Tri-Pack arms and brackets for regular arm, top jamb, and parallel arm mounting.
  - 4. One-piece seamless steel spring tube sealed in hydraulic fluid.
  - 5. Double heat-treated steel tempered springs.
  - 6. Precision-machined heat-treated steel piston.
  - 7. Triple heat-treated steel spindle.
  - 8. Full rack and pinion operation.
- D. Mounting:
  - 1. Out-swing doors use surface parallel arm mount closers except where noted on hardware schedule.
  - 2. In-swing doors use surface regular arm mount closers except where noted on hardware schedule.
  - 3. Provide brackets and shoe supports for aluminum doors and frames to mount fifth screw.
  - 4. Furnish drop plates where top rail conditions on door do not allow for mounting of closer and where backside of closer is exposed through glass.

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E. Size closers in compliance with requirements for accessibility (ADAAG). Comply with following maximum opening force

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- 1. Interior hinged openings: 5.0 lbs.
- 2. Fire-rated and exterior openings use minimum opening force allowable by authority having jurisdiction.
- F. Fasteners: Provide self-reaming, self-tapping wood and machine screws, and sex nuts and bolts for each closer.
- G. Acceptable manufacturers:

requirements.

Hager	5100 Series
LCN	4040XP Series
Sargent	281 Series

#### 1.05 PROTECTIVE TRIM

- A. Protective trim of one manufacturer as listed for continuity of design and consideration of warranty.
- B. Size of protection plate: single doors, size two inches less door width (LDW) on push side of door, and one inch less door width on pull side of door. For pairs of doors, size one inch less door width (LDW) on push side of door, and 1/2 inch on pull side of door. Adjust sizes to accommodate accompanying hardware, such as, edge guards, astragals and others.
  - 1. Kick Plates 10" high or sized to door bottom rail height.
  - 2. Mop Plates 6" high.
  - 3. Armor Plates 36" high.
- C. Products to be certified and listed by the following:
  - 1. Architectural Door Trim: ANSI/BHMA A156.6.
- D. Material and Design:
  - 1. 0.050" gage stainless steel.
  - 2. Corners square, polishing lines or dominant direction of surface pattern so they run across door width of plate.
  - 3. Bevel top, bottom, and sides uniformly leaving no sharp edges.
  - 4. Countersink holes for screws. Space screw holes so they are no more than eight inches CTC, along a centerline not over 1/2" in from edge around plate. End screws maximum of 0.53" from corners.
- E. UL label stamp required on protection plates when top of plate is more than 16 inches above bottom of door on fire rated openings. Verify door manufacturer's UL listing for maximum height and width of protection plate to be used.
- F. Acceptable Manufacturers:

Hager	190\$
Trimco	
Burns	

# 1.06 THRESHOLDS

A. Thresholds of one manufacturer as listed for continuity of design and consideration of warranty.

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and stainless steel machine screws

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- B. Set thresholds for exterior in full bed of sealant with lead expansion shields and stainless steel machine screws complying with requirements specified in Division 7 Section "Joint Sealants: Notched in field to fit frame by hardware installer. Refer to Drawings for special details.
- C. Standards: Manufacturer to be certified by the following:
  - 1. Thresholds: ANSI/BHMA A156.21.
  - 2. American with Disabilities Act Accessibility Guidelines (ADAAG).
- D. Acceptable Manufacturers:

Hager	413S/520S
K.N. Crowder	
Reese	

### 1.07 DOOR GASKETING AND WEATHERSTRIP

- A. Door gasketing and weatherstrip of one manufacturer as listed for continuity of design and consideration of warranty.
- B. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or sound gasketing where indicated on hardware schedule. Provide noncorrosive fasteners for exterior applications.
  - 1. Perimeter gasketing: Apply to head and jamb, forming seal between door and frame.
  - 2. Drip Guard: Apply to exterior face of frame header. Lip length to extend 4" beyond width of door.
- C. Products to be certified and listed by the following:
  - 1. Door Gasketing and Edge Seal Systems: ANSI/BHMA A156.22.
  - 2. BHMA certified for door sweeps, automatic door bottoms, and adhesive applied gasketing.
- D. Refer to Section 08 1416 Wood Doors for Category A or Category B. Comply with UBC 7-2 and UL10C positive pressure where frame applied intumescent seals are required.
- E. Acceptable Manufacturers:
  - 1. Perimeter Gasketing:

	Stop Applied	Adhesive Applied
Hager	8815	726
K.N. Crowder		
Reese		

2. Door Bottom Sweeps:

Hager	750S / 770SV
K.N. Crowder	
Reese	

3. Overhead Drip Guard

Hager	810S
K.N. Crowder	
Reese	

# 1.08 LATCH PROTECTORS

- A. Latch protectors of one manufacturer as listed for continuity of design and consideration of warranty.
- B. Standards: Manufacturer to be listed by the following: Auxiliary Hardware: ANSI/BHMA A156.16.

- C. Design:
  - 1. 12 ga. steel, stainless steel material.
  - 2. Size: 3" x 11".
  - 3. Non-handed.
  - 4. Frame pin prevents prying of door.
  - 5. Use with 1-3/4" thick door.
  - 6. Use with cylindrical locksets with a 2-3/4" backset at exterior outswinging doors.
  - 7. Fasteners: Two 5/16-18 x 1-1/2" carriage bolts with sex nuts.

## D. Acceptable Manufacturers:

	Cylindrical	Mortise
Hager	341D	342D
Rockwood		
Trimco		

# 1.09 FINISHES

- A. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if within range of approved samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within range of approved samples.
- B. Comply with base material and finish requirements indicated by ANSI/BHMA A156.18 designations in hardware schedule.

### **PART 3 - EXECUTION**

# 3.01 EXAMINATION

- A. Examine doors and frames, with Installers present, for compliance with requirements for installation tolerances, labeled fire-rated door assembly construction, wall and floor construction, and other conditions affecting performance.
- B. Notify Architect via a prepared written report and endorsed by Installer of any discrepancies between the door schedule, door types, drawings and scheduled hardware. Report will have a list of conditions detrimental to application, to the proper and timely completion of the work and performance of the hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

## 3.02 INSTALLATION

- A. Install hardware using manufactures recommended fasteners and installation instructions, at height locations and clearance tolerances that comply with:
  - 1. NFPA 80
  - 2. NFPA 105
  - 3. ICC/ANSI A117.1
  - 4. ANSI/BHMA A156.115 Hardware Preparation in Steel Doors and Steel Frames
  - ANSI/BHMA A156.115W hardware Preparation in Wood Doors with Wood or Steel Frames
  - 6. DHI Publication Installation Guide for Doors and Hardware
  - 7. Approved shop drawings
  - 8. Approved finish hardware schedule
- B. Install door closers so they are on the interior of the room side of the door.

- C. Mount mop and kick plates flush with the bottom of the door and centered horizontally on the door.
- D. Set thresholds for exterior, and acoustical doors at sound control openings in full bed of sealant complying with requirements specified in Division 07 Section "Joint Sealants" forming a tight seal between threshold and surface to which set.

- E. Anchor all components firmly into position and use anchoring devices furnished with the hardware item, unless otherwise specified.
- F. Do not install surface mounted items until finishes have been completed on substrates involved. Set unit level, plumb and true to line location. Adjust and reinforce attachment substrate as necessary for proper installation and operation.

### 3.03 FIELD QUALITY CONTROL

A. Material supplier to schedule final walk through to inspect hardware installation ten (10) business days before final acceptance of Owner. Material supplier will provide a written report detailing discrepancies of each opening to General Contractor within seven (7) calendar days of walk through.

# 3.04 ADJUSTMENT, CLEANING, AND DEMONSTRATING

- A. Adjustment: Adjust and check each opening to ensure proper operation of each item of finish hardware. Replace items that cannot be adjusted to operate freely and smoothly or as intended for application at no cost to Owner.
- B. Cleaning: Clean adjacent surfaces soiled by hardware installation. Clean finish hardware per manufacturer's instructions after final adjustments have been made. Replace items that cannot be cleaned to manufacturer's level of finish quality at no cost to Owner.
- C. Conduct a training class for building maintenance personnel demonstrating the adjustment, operation of mechanical and electrical hardware. Special tools for finish hardware to be turned over and explained usage at the meeting. Record all training and provide to the Owner for future reference.

## 3.05 PROTECTION

A. Leave manufacturer's protective film intact and provide proper protection for all other finish hardware items that do not have protective material from the manufacture until Owner accepts project as complete.

# **END OF SECTION 087100**

# SECTION 09 05 61: COMMON WORK RESULTS FOR FLOORING PREPARATION

#### **PART 1 GENERAL**

#### 1.01 SECTION INCLUDES

- A. This section applies to all floors identified in the contract documents as to receive the following types of floor coverings:
  - 1. Fluid Applied Flooring
- B. Preparation of existing concrete floor slabs for installation of floor coverings.
- C. Remediation of concrete floor slabs due to unsatisfactory moisture or alkalinity (pH) conditions.
  - Contractor shall perform all specified remediation of concrete floor slabs. If such remediation is
    indicated by testing agency's report and is due to a condition not under Contractor's control or could
    not have been predicted by examination prior to entering into the contract, a contract modification will
    be issued.

#### 1.02 RELATED REQUIREMENTS

- A. Section 01 40 00 Quality Requirements: Additional requirements relating to testing agencies and testing.
- B. Section 09 67 00 Fluid Applied Flooring: Requirements of floor covering

#### 1.03 REFERENCES

- A. ASTM F710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring; 2011.
- B. ASTM F1869 Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride; 2011.
- C. ASTM F2170 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes; 2011.

## 1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate scheduling of cleaning and testing, so that preliminary cleaning has been completed for at least 24 hours prior to testing.
- B. Coordination: Coordinate the installation of coating with testing specified elsewhere.

# 1.05 SUBMITTALS

- A. Floor Covering and Adhesive Manufacturers' Product Literature: For each specific combination of substrate, floor covering, and adhesive to be used; showing:
  - 1. Moisture and alkalinity (pH) limits and test methods.
  - 2. Manufacturer's required bond/compatibility test procedure.
- B. Adhesive Bond and Compatibility Test Report.
- Remedial Materials Product Data: Manufacturer's published data on each product to be used for remediation.
  - 1. Manufacturer's qualification statement.
  - 2. Test reports indicating compliance with specified performance requirements, performed by nationally recognized independent testing agency.
  - 3. Manufacturer's installation instructions.

4. Specimen Warranty: Copy of warranty to be issued by coating manufacturer and certificate of underwriter's coverage of warranty.

# 1.07 QUALITY ASSURANCE

- A. Moisture and alkalinity (pH) testing shall be performed by an independent testing agency employed and paid by Contractor.
- B. Contractor may perform adhesive and bond test with his own personnel or hire a testing agency.
- C. Testing Agency Qualifications: Independent testing agency experienced in the types of testing specified.
  - 1. Submit evidence of experience consisting of at least 3 test reports of the type required, with project Owner's project contact information.
- D. Contractor's Responsibility Relating to Independent Agency Testing:
  - 1. Provide access for and cooperate with testing agency.
  - 2. Confirm date of start of testing at least 10 days prior to actual start.
  - 3. Allow at least 4 business days on site for testing agency activities.
  - 4. Achieve and maintain specified ambient conditions.
  - 5. Notify Architect and Construction Manager when specified ambient conditions have been achieved and when testing will start.

### 1.08 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, handle, and protect products in accordance with manufacturer's instructions and recommendations.
- B. Deliver materials in manufacturer's packaging; include installation instructions.
- C. Keep materials from freezing.

# 1.09 FIELD CONDITIONS

- A. Maintain ambient temperature in spaces where concrete testing is being performed, and for at least 48 hours prior to testing, at not less than 50 degrees F (10 degrees C) or more than 85 degrees F (30 degrees C).
- B. Maintain relative humidity in spaces where concrete testing is being performed, and for at least 48 hours prior to testing, at not less than 40 percent and not more than 60 percent.

# PART 2 PRODUCTS

# 2.01 MATERIALS

- A. Patching Compound: Floor covering manufacturer's recommended product, suitable for conditions, and compatible with adhesive and floor covering. In the absence of any recommendation from flooring manufacturer, provide a product with the following characteristics: Primer as recommended by Manufacturer.
  - 1. Cementitious moisture-, mildew-, and alkali-resistant compound, compatible with floor, floor covering, and floor covering adhesive, and capable of being feathered to nothing at edges.
  - 2. 100%-percent Portland cement-based self-leveling compound capable of providing adequate bond for subsequently applied floor adhesives; approved by remedial coating manufacturer.
  - 3. Products:
    - a. ARDEX Engineered Cements, Inc; ARDEX K-15: www.ardexamericas.com. Primer ARDEX P51.
    - b. Mapei International; Mapei Ultraplan 1 Plus: www.mapei.com.
    - c. Approved Equal

- 4. Compressive Strength: 3000 psi, minimum, after 28 days, when tested in accordance with ASTM C109/C109M or ASTM C472, whichever is appropriate.
- B. Remedial Floor Coating: Single- or multi-layer coating or coating/overlay combination intended by its manufacturer to resist water vapor transmission to degree sufficient to meet flooring manufacturer's emission limits, resistant to the level of alkalinity (pH) found, and suitable for adhesion of flooring without further treatment.
  - 1. Thickness: As required for application and in accordance with manufacturer's installation instruction.
  - 2. If testing agency recommends any particular products, use one of those.
  - Products:
    - a. ARDEX Engineered Cements; Ardex MRF patching compound + Ardex MC Rapid Vapor Retarder.
    - b. Approved Equal

## 2.02 ACCESSORIES

- A. Primers: Waterproof; types recommended by coating manufacturer.
  - Primers shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

#### **PART 3 EXECUTION**

# 3.01 CONCRETE SLAB PREPARATION

- A. Follow recommendations of testing agency.
- B. Perform following operations in the order indicated:
  - Preliminary cleaning.
  - 2. Moisture vapor emission tests; 3 tests in the first 1000 square feet (100 square meters) and one test in each additional 1000 square feet (100 square meters), unless otherwise indicated or required by flooring manufacturer.
  - 3. Internal relative humidity tests; in same locations as moisture vapor emission tests, unless otherwise indicated.
  - 4. Alkalinity (pH) tests; in same locations as moisture vapor emission tests, unless otherwise indicated.
  - 5. Specified remediation, if required.
  - 6. Patching, smoothing, and leveling, as required.
  - 7. Other preparation specified.
  - 8. Adhesive bond and compatibility test.
  - 9. Protection.

### C. Remediations:

- 1. Active Water Leaks or Continuing Moisture Migration to Surface of Slab: Correct this condition before doing any other remediation; re-test after correction.
- 2. Excessive Moisture Emission or Relative Humidity: If an adhesive that is resistant to the level of moisture present is available and acceptable to flooring manufacturer, use that adhesive for installation of the flooring; if not, apply remedial floor coating over entire suspect floor area.
- 3. Excessive Alkalinity (pH): If remedial floor coating is necessary to address excessive moisture, no additional remediation is required; if not, if an adhesive that is resistant to the level present is available and acceptable to the flooring manufacturer, use that adhesive for installation of the flooring; otherwise, apply a skim coat of specified patching compound over entire suspect floor area.

#### 3.02 PRELIMINARY CLEANING

- A. Clean floors of dust, solvents, paint, wax, oil, grease, asphalt, residual adhesive, adhesive removers, film-forming curing compounds, sealing compounds, alkaline salts, excessive laitance, mold, mildew, and other materials that might prevent adhesive bond.
- B. Do not use solvents or other chemicals for cleaning.

## 3.03 MOISTURE VAPOR EMISSION TESTING

- A. Where the floor covering manufacturer's requirements conflict with either the referenced test method or this specification, comply with the manufacturer's requirements.
- B. Where this specification conflicts with the referenced test method, comply with the requirements of this section.
- C. Test in accordance with ASTM F1869 and as follows.
- D. Plastic sheet test and mat bond test may not be substituted for the specified ASTM test method, as those methods do not quantify the moisture content sufficiently.
- E. In the event that test values exceed floor covering manufacturer's limits, perform remediation as indicated. In the absence of manufacturer limits, perform remediation if test values exceed 3 pounds per 1000 square feet (1.4 kg per 93 square meters) per 24 hours.
- F. Report: Report the information required by the test method.

# 3.04 INTERNAL RELATIVE HUMIDITY TESTING

- A. Where the floor covering manufacturer's requirements conflict with either the referenced test method or this specification, comply with the manufacturer's requirements.
- B. Where this specification conflicts with the referenced test method, comply with the requirements of this section.
- C. Test in accordance with ASTM F2170 Procedure A and as follows.
- D. Testing with electrical impedance or resistance apparatus may not be substituted for the specified ASTM test method, as the values determined are not comparable to the ASTM test values and do not quantify the moisture content sufficiently.
- E. In the event that test values exceed floor covering manufacturer's limits, perform remediation as indicated. In the absence of manufacturer limits, perform remediation if any test value exceeds 75 percent relative humidity.
- F. Report: Report the information required by the test method.

### 3.05 ALKALINITY TESTING

- A. Where the floor covering manufacturer's requirements conflict with either the referenced test method or this specification, comply with the manufacturer's requirements.
- B. The following procedure is the equivalent of that described in ASTM F710, repeated here for the Contractor's convenience.
- C. Use a wide range alkalinity (pH) test paper, its associated chart, and distilled or deionized water.

- D. Place several drops of water on a clean surface of concrete, forming a puddle approximately 1 inch (25 mm) in diameter. Allow the puddle to set for approximately 60 seconds, then dip the alkalinity (pH) test paper into the water, remove it, and compare immediately to chart to determine alkalinity (pH) reading.
- E. In the event that test values exceed floor covering manufacturer's limits, perform remediation as indicated. In the absence of manufacturer limits, perform remediation if alkalinity (pH) test value is over 10.

### 3.06 PREPARATION

- A. See individual floor covering section(s) for additional requirements.
- B. Comply with recommendations of testing agency.
- C. Comply with requirements and recommendations of floor covering manufacturer.
- D. Fill and smooth surface cracks, grooves, depressions, control joints and other non-moving joints, and other irregularities with patching compound.
- E. Do not fill expansion joints, isolation joints, or other moving joints.

# 3.07 ADHESIVE BOND AND COMPATIBILITY TESTING

A. Comply with requirements and recommendations of floor covering manufacturer.

### 3.08 APPLICATION OF REMEDIAL FLOOR COATING

A. Comply with requirements and recommendations of coating manufacturer.

## 3.09 PROTECTION

A. Cover prepared floors with building paper or other durable covering.

## **END OF SECTION**

### **SECTION 09 21 16: GYPSUM BOARD ASSEMBLIES**

### **PART 1 - GENERAL**

# 1.1 RELATED DOCUMENTS

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

### 1.2 SUMMARY

- A. This Section includes the following:
  - 1. Suspension systems for interior ceilings and soffits.
  - 2. Interior Gypsum Board
  - 3. Joint Treatment materials.
- B. Related Sections include the following:
  - 1. Division 6 Section "Rough Carpentry" for wood framing and furring.
  - 2. Division 7 Section "Joint Sealants" for caulking

# 1.3 DEFINITIONS

A. Gypsum Board Terminology: Refer to ASTM C 11 for definitions of terms for gypsum board assemblies not defined in this Section or in other referenced standards.

### 1.4 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Product Certificates: For each type of code-compliance certification for studs and tracks

# 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in original packages, containers, or bundles bearing brand name and identification of manufacturer or supplier.
- B. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic, and other causes. Stack gypsum panels flat to prevent sagging.

# 1.6 PROJECT CONDITIONS

A. Environmental Limitations: Comply with ASTM C 840 requirements or gypsum board manufacturer's written recommendations, whichever are more stringent.

# **PART 2 - PRODUCTS**

# 2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - 1. Steel Framing and Furring:
    - a. Clark Steel Framing Systems.
    - b. Consolidated Systems, Inc.
    - c. Dale Industries, Inc. Dale/Incor.
    - d. Dietrich Industries, Inc.
    - e. MarinoWare; Division of Ware Ind.
    - f. National Gypsum Company.
    - g. Scafco Corporation.
    - h. Unimast, Inc.
    - i. Western Metal Lath & Steel Framing Systems.
  - 2. Gypsum Board and Related Products:
    - a. American Gypsum Co.
    - b. G-P Gypsum Corp.
    - c. National Gypsum Company.
    - d. United States Gypsum Co.
    - e. CertainTeed Gypsum

# 2.2 STEEL SUSPENDED CEILING AND SOFFIT FRAMING

- A. Components, General: Comply with ASTM C 754 for conditions indicated.
- B. Tie Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.0625-inch- (1.59-mm-) diameter wire, or double strand of 0.0475-inch- (1.21-mm-) diameter wire.
- D. Hangers: As follows:
  - 1. Wire Hangers: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.162-inch (4.12-mm) diameter.
  - 2. Rod Hangers: ASTM A 510 (ASTM A 510M), mild carbon steel.
    - a. Diameter: 1/4-inch (6.34-mm).
    - b. Protective Coating: ASTM A 153/A 153M, hot-dip galvanized.
  - 3. Flat Hangers: Commercial-steel sheet, ASTM A 653/A 653M, G60 (Z180), hot-dip galvanized.
    - a. Size: 1 by 3/16 inch (25.4 by 4.76 mm) by length indicated.
  - 4. Angle Hangers: ASTM A 653/A 653M, G60 (Z180), hot-dip galvanized commercial-steel sheet.
    - a. Minimum Base Metal Thickness: 0.0312 inch (0.79 mm).
    - b. Size: 2 by 2 inches (50.8 by 50.8 mm).

- E. Wire Hangers: ASTM A641/A641M, Class 1 zinc coating, soft temper, 0.16 inch in diameter.
- F. Flat Hangers: Steel sheet, 1 by 3/16 inch by length indicated
- G. Carrying Channels: Cold-rolled, commercial-steel sheet with a base metal thickness of 0.0538 inch (1.37 mm), a minimum 1/2-inch- (12.7-mm-) wide flange, with ASTM A 653/A 653M, G60 (Z180), hot-dip galvanized zinc coating.
  - 1. Depth: 2 inches (50.8 mm).
- F. Furring Channels (Furring Members): Commercial-steel sheet with ASTM A 653/A 653M, G60 (Z180), hot-dip galvanized zinc coating.
  - 1. Hat-Shaped, Rigid Furring Channels: ASTM C 645, 7/8 inch (22.2 mm) deep.
    - a. Minimum Base Metal Thickness: 0.0312 inch (0.79 mm).
- G. Grid Suspension System for Interior Ceilings: ASTM C 645, direct-hung system composed of main beams and cross-furring members that interlock.
  - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Armstrong World Industries, Inc.; Furring Systems/Drywall.
    - b. Chicago Metallic Corporation; Drywall Furring 660, Fire Front 670 System.
    - c. USG Interiors, Inc.; Drywall Suspension System

### 2.3 INTERIOR GYPSUM WALLBOARD

- A. Panel Size: Provide in maximum lengths and widths available that will minimize joints in each area and correspond with support system indicated.
- B. Gypsum Board, Type X: ASTM C1396/C1396M.
  - 1. Thickness: 1/2 inch
  - 2. Long Edges: Tapered
- C. Abuse-Resistant Gypsum Board: ASTM C1396/C1396M gypsum board, tested according to ASTM C1629/C1629M.
  - 1. Core: As indicated on Drawings.
  - 2. Surface Abrasion: ASTM C1629/C1629M, meets or exceeds Level 3 requirements.
  - 3. Indentation: ASTM C1629/C1629M, meets or exceeds Level 1 requirements.
  - 4. Soft-Body Impact: ASTM C1629/C1629M, meets or exceeds Level 2 requirements.
  - 5. Long Edges: Tapered.
  - 6. Mold Resistance: ASTM D3273, score of 10 as rated according to ASTM D3274.

# 2.4 JOINT TREATMENT MATERIALS

- A. General: Comply with ASTM C 475.
- B. Joint Tape:
  - 1. Interior Gypsum Board: Paper.
  - 2. Tile Backing Panels: As recommended by panel manufacturer.
- C. Joint Compound for Interior Gypsum Wallboard: For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.

- 1. Prefilling: At open joints, rounded or beveled panel edges, and damaged surface areas, use setting-type taping compound.
- 2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use drying-type, all-purpose compound.
  - a. Use setting-type compound for installing paper-faced metal trim accessories.
- 3. Fill Coat: For second coat, use drying-type, all-purpose compound.
- 4. Finish Coat: For third coat, use drying-type, all-purpose compound.
- 5. Skim Coat: For final coat of Level 5 finish, use drying-type, all-purpose compound.
- D. Joint Compound for Tile Backing Panels:
  - 1. Glass-Mat, Water-Resistant Backing Panel: As recommended by backing panel manufacturer. Cementitious Backer Units: As recommended by backer unit manufacturer.

### 2.5 AUXILIARY MATERIALS

- A. Provide auxiliary materials that comply with referenced installation standards and manufacturer's written instructions.
- B. Steel Drill Screws: ASTM C1002 unless otherwise indicated.
  - Use screws complying with ASTM C954 for fastening panels to steel members from 0.033 to 0.112 inch thick.
  - 2. For fastening cementitious backer units, use screws of type and size recommended by panel manufacturer.

### **PART 3 - EXECUTION**

### 3.1 EXAMINATION

- A. Examine areas and substrates, with Installer present, and including welded hollow-metal frames, castin anchors, and structural framing, for compliance with requirements and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.
- B. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

# 3.2 PREPARATION

A. Suspended Ceilings: Coordinate installation of ceiling suspension systems with installation of overhead structure to ensure that inserts and other provisions for anchorages to building structure have been installed to receive ceiling hangers at spacing required to support ceilings and that hangers will develop their full strength.

1. Furnish concrete inserts and other devises indicated to other trades for installation in advance of time needed for coordination and construction.

### 3.04 INSTALLING STEEL SUSPENDED CEILING AND SOFFIT FRAMING

- A. Suspend ceiling hangers from building structure as follows:
  - Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structural or ceiling suspension system. Splay hangers only where required to miss obstructions and offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.
  - 2. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with the location of hangers required to support standard suspension system members, install supplemental suspension members and hangers in form of trapezes or equivalent devices. Size supplemental suspension members and hangers to support ceiling loads within performance limits established by referenced standards.
  - 3. Secure wire hangers by looping and wire-tying, either directly to structures or to inserts, eyescrews, or other devices and fasteners that are secure and appropriate for substrate, and in a manner that will not cause them to deteriorate or otherwise fail.
  - 4. Secure rod, flat and angle hangers to structure, including intermediate framing members, by attaching to inserts, eyescrews, or other devices and fasteners that are secure and appropriate for structure and hanger, and in a manner that will not cause hangers to deteriorate or otherwise fail.
  - 5. Do not support ceilings directly from permanent metal forms. Furnish cast-in-place hanger inserts that extend through forms.
  - 6. Do not attach hangers to steel deck tabs.
  - 7. Do not attach hangers to steel roof deck. Attach hangers to structural members.
  - 8. Do not connect or suspend steel framing from ducts, pipes, or conduit.
- B. Installation Tolerances: Install steel framing components for suspended ceilings so members for panel attachment are level to within 1/8 inch in 12 feet (3 mm in 3.6 m) measured lengthwise on each member and transversely between parallel members.
- C. Sway-brace suspended steel framing with hangers used for support.
- D. Wire-tie furring channels to supports, as required to comply with requirements for assemblies indicated.
- E. Install suspended steel framing components in sizes and spacings indicated, but not less than that required by the referenced steel framing and installation standards.
  - 1. Hangers: 48 inches (1219 mm) o.c.
  - 2. Carrying Channels (Main Runners): 48 inches (1219 mm) o.c.
- F. Grid Suspension System: Attach perimeter wall track or angle where grid suspension system meets vertical surfaces. Mechanically join main beam and cross-furring members to each other and butt-cut to fit into wall track.

### 3.3 APPLYING AND FINISHING PANELS, GENERAL

- A. Gypsum Board Application and Finishing Standards: ASTM C 840 and GA-216.
- B. Install gypsum panels with face side out. Butt panels together for a light contact at edges and ends with not more than 1/16 inch (1.5 mm) of open space between panels. Do not force into place.

- C. Locate edge and end joints over supports, except in ceiling applications where intermediate supports or gypsum board back-blocking is provided behind end joints. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Do not make joints other than control joints at corners of framed openings.
- D. Attach gypsum panels to steel studs so leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.
- E. Attach gypsum panels to framing provided at openings and cutouts.
- F. Do not attach gypsum panels across the flat grain of wide-dimension lumber, including floor joists and headers. Float gypsum panels over these members using resilient channels, or provide control joints to counteract wood shrinkage.
- G. Form control and expansion joints with space between edges of adjoining gypsum panels.
- H. Cover both faces of steel stud partition framing with gypsum panels in concealed spaces (above ceilings, etc.), except in chases braced internally.
  - 1. Unless concealed application is indicated or required for sound, fire, air, or smoke ratings, coverage may be accomplished with scraps of not less than 8 sq. ft. (0.7 sq. m) in area.
  - 2. Fit gypsum panels around ducts, pipes, and conduits.
  - 3. Where partitions intersect open concrete coffers, concrete joists, and other structural members projecting below underside of floor/roof slabs and decks, cut gypsum panels to fit profile formed by coffers, joists, and other structural members; allow 1/4- to 3/8-inch- (6.4- to 9.5-mm-) wide joints to install sealant.
- I. Floating Construction: Where feasible, including where recommended in writing by manufacturer, install gypsum panels over wood framing, with floating internal corner construction.
- J. Space fasteners in gypsum panels according to referenced gypsum board application and finishing standard and manufacturer's written recommendations.
  - 1. Space screws a maximum of 12 inches (304.8 mm) o.c. for vertical applications.
- K. Space fasteners in panels that are tile substrates a maximum of 8 inches (203.2 mm) o.c.

# 3.4 PANEL APPLICATION METHODS

A. Single-Layer Fastening Methods: Apply gypsum panels to supports with steel drill screws.

# 3.5 FINISHING GYPSUM BOARD ASSEMBLIES

- A. General: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.
- B. Prefill open joints, rounded or beveled edges, and damaged surface areas.
- C. Apply joint tape over gypsum board joints, except those with trim having flanges not intended for tape.

- D. Gypsum Board Finish Levels: Finish panels to levels indicated below, according to ASTM C 840, for locations indicated:
  - 1. Level 4: Embed tape and apply separate first, fill, and finish coats of joint compound to tape, fasteners, and flanges at panel surfaces that will be exposed to view, unless otherwise indicated.

# 3.6 FIELD QUALITY CONTROL

- A. Above-Ceiling Observation: Before Contractor installs gypsum board ceilings, Local Authorities having jurisdiction will conduct an above-ceiling inspection and report deficiencies in the Work observed. Do not proceed with installation of gypsum board to ceiling support framing until deficiencies have been corrected.
  - 1. Notify Architect seven days in advance of date and time when Project, or part of Project, will be ready for above-ceiling observation.
  - 2. Before notifying Architect, complete the following in areas to receive gypsum board ceilings:
    - a. Installation of 80 percent of lighting fixtures, powered for operation.
    - b. Installation, insulation, and leak and pressure testing of water piping systems.
    - c. Installation of air-duct systems.
    - d. Installation of air devices.
    - e. Installation of mechanical system control-air tubing.
    - f. Installation of ceiling support framing.

### 3.7 PROTECTION

- A. Protect adjacent surfaces from drywall compound and promptly remove from floors and other non-drywall surfaces. Repair surfaces stained, marred, or otherwise damaged during drywall application.
- B. Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.
- C. Remove and replace panels that are wet, moisture damaged, and mold damaged.
  - 1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
  - 2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

# **END OF SECTION 09 21 16**

# **SECTION 09 30 00: TILING**

### **PART 1 GENERAL**

### 1.01 RELATED DOCUMENTS

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

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# 1.02 SUMMARY

- A. This Section includes the following:
  - Glazed wall tile.
  - 2. Waterproof membrane for thin-set tile installations.
  - 3. Crack-suppression membrane for thin-set tile installations.
  - 4. Metal edge strips installed as part of tile installations.
- B. Related Sections include the following:
  - 1. Division 9 Section "Gypsum Board Assemblies" for Tile Backing Panels.

### 1.03 DEFINITIONS

- Module Size: Actual tile size (minor facial dimension as measured per ASTM C 499) plus joint width indicated.
- B. Facial Dimension: Nominal tile size as defined in ANSI A137.1.

### 1.04 PERFORMANCE REQUIREMENTS

- A. Static Coefficient of Friction: For tile installed on walkway surfaces, provide products with the following values as determined by testing identical products per ASTM C 1028:
  - 1. Level Surfaces: Minimum 0.6.

# 1.05 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: Show locations of each type of tile and tile pattern. Show widths, details, and locations of expansion, contraction, control, and isolation joints in tile substrates and finished tile surfaces.
- C. Samples for Initial Selection: For each type of tile and grout indicated. Include Samples of accessories involving color selection.
- D. Samples for Verification:
  - 1. Full-size units of each type and composition of tile and for each color and finish required.
  - 2. Full-size units of each type of trim and accessory for each color and finish required.
  - 3. Metal edge strips in 6-inch (150-mm) lengths.
- E. Master Grade Certificates: For each shipment, type, and composition of tile, signed by tile manufacturer and Installer.
- F. Product Certificates: For each type of product, signed by product manufacturer.
- G. Qualification Data: For Installer.
- H. Material Test Reports: For each tile-setting and -grouting product and special-purpose tile.

### 1.06 QUALITY ASSURANCE

- A. Source Limitations for Tile: Obtain all tile of same type and color or finish from one source or producer.
  - 1. Obtain tile from same production run and of consistent quality in appearance and physical properties for each contiguous area.

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- B. Source Limitations for Setting and Grouting Materials: Obtain ingredients of a uniform quality for each mortar, adhesive, and grout component from a single manufacturer and each aggregate from one source or producer.
- C. Source Limitations for Other Products: Obtain each of the following products specified in this Section through one source from a single manufacturer for each product:
  - 1. Stone thresholds.
  - 2. Waterproofing.
  - 3. Joint sealants.
  - 4. Metal edge strips.
- D. Mockups: Build mockups to verify selections made under sample Submittals and to demonstrate aesthetic effects and qualities of materials and execution.
  - 1. Build mockup of each type of wall tile installation.
  - 2. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.
- E. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

# 1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver and store packaged materials in original containers with seals unbroken and labels intact until time of use. Comply with requirement in ANSI A137.1 for labeling sealed tile packages.
- B. Store tile and cementitious materials on elevated platforms, under cover, and in a dry location.
- C. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.
- D. Store liquid latexes and emulsion adhesives in unopened containers and protected from freezing.

# 1.08 PROJECT CONDITIONS

A. Environmental Limitations: Do not install tile until construction in spaces is complete and ambient temperature and humidity conditions are maintained at the levels indicated in referenced standards and manufacturer's written instructions.

### 1.09 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. Tile and Trim Units: Furnish quantity of full-size units equal to 3 percent of amount installed, for each type, composition, color, pattern, and size indicated or 1-box (whichever is more).

### **PART 2 PRODUCTS**

# 2.01 MANUFACTURERS

A. In other Part 2 articles where titles below introduce lists, the following requirements apply for product selection:

- 1. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.
- Basis-of-Design Product: The design for each tile type is based on the product named. Subject to
  compliance with requirements, provide either the named product or a comparable product by one of
  the other manufacturers specified.

### 2.02 PRODUCTS, GENERAL

- A. ANSI Ceramic Tile Standard: Provide tile that complies with ANSI A137.1, "Specifications for Ceramic Tile," for types, compositions, and other characteristics indicated.
  - 1. Provide tile complying with Standard grade requirements, unless otherwise indicated.
  - For facial dimensions of tile, comply with requirements relating to tile sizes specified in Part 1
    "Definitions" Article.
- B. ANSI Standards for Tile Installation Materials: Provide materials complying with ANSI standards referenced in "Setting and Grouting Materials" Article.
- C. Colors, Textures, and Patterns: Where manufacturer's standard products are indicated for tile, grout, and other products requiring selection of colors, surface textures, patterns, and other appearance characteristics, provide specific products or materials complying with the following requirements:
  - 1. As selected by Architect from manufacturer's full range.
- D. Factory Blending: For tile exhibiting color variations within ranges selected during Sample submittals, blend tile in factory and package so tile units taken from one package show same range in colors as those taken from other packages and match approved Samples.
- E. Mounting: For factory-mounted tile, provide back- or edge-mounted tile assemblies as standard with manufacturer, unless otherwise indicated.
  - 1. Where tile is indicated for installation in swimming pools on exteriors or in wet areas, do not use backor edge-mounted tile assemblies unless tile manufacturer specifies in writing that this type of mounting is suitable for installation indicated and has a record of successful in-service performance.

### 2.03 TILE PRODUCTS

- A. Glazed Wall Tile (Bathrooms): Flat tile as follows:
  - 1. Module Size: as indicated on drawings
  - 2. Thickness: 5/16 inch (8 mm).
  - 3. Face: Plain with cushion edges.
  - 4. Finish: gloss
  - 5. Mounting: Factory back-mounted.
  - Manufacturer
    - a. <u>Basis-of-Design Product: Daltile (Color as indicated in Finish Schedule)</u>
    - b. American Olean
    - c. Alternate product meeting specifications
- B. Glazed Wall Tile Trim Units: Matching characteristics of adjoining flat tile and coordinated with sizes and coursing of adjoining flat tile where applicable. Provide shapes required and as follows, selected from manufacturer's standard shapes:
  - Base for Portland Cement Mortar Installations: Coved, module size 6 by 6 inches (152 by 152 mm) to match wall tile size.
  - 2. External Corners for Portland Cement Mortar Installations: Bullnose shape with radius of at least 3/4 inch (19 mm), unless otherwise indicated.
  - 3. External Corners for Thin-Set Mortar Installations: Surface bullnose.
  - 4. Internal Corners: Field-butted square corners except with coved base and cap angle pieces designed to fit with stretcher shapes.

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- 2.04 WATERPROOFING AND CRACK-SUPPRESSION MEMBRANES FOR THIN-SET TILE INSTALLATIONS
  - A. General: Manufacturer's standard product that complies with ANSI A118.10.
  - B. Fabric-Reinforced, Fluid-Applied Product: System consisting of liquid-latex rubber and fabric reinforcement.
    - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
      - a. Custom Building Products; Trowel & Seal Waterproofing and Anti-Fracture Membrane.
      - b. LATICRETE International Inc.; Laticrete 9235 Waterproof Membrane.
      - c. MAPEI Corporation; PRP M19.
      - d. Summitville Tiles, Inc.; S-9000.

### 2.05 SETTING AND GROUTING MATERIALS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
  - 1. Atlas Minerals & Chemicals, Inc.
  - 2. Boiardi Products Corporation.
  - 3. Bonsal, W. R., Company.
  - 4. Bostik.
  - 5. C-Cure.
  - 6. Custom Building Products.
  - 7. DAP, Inc.
  - 8. Jamo Inc.
  - 9. LATICRETE International Inc.
  - 10. MAPEI Corporation.
  - 11. Southern Grouts & Mortars, Inc.
  - 12. Summitville Tiles, Inc.
  - 13. TEC Specialty Products Inc.
- B. Latex-Portland Cement Mortar (Thin Set): ANSI A118.4, consisting of the following:
  - 1. Prepackaged dry-mortar mix containing dry, redispersible, ethylene vinyl acetate additive to which only water must be added at Project site.
    - a. For wall applications, provide nonsagging mortar that complies with Paragraph F-4.6.1 in addition to the other requirements in ANSI A118.4.
- C. Medium-Bed, Latex-Portland Cement Mortar: Provide materials composed as follows, with physical properties equaling or exceeding those required for thin-set mortars based on testing of medium-bed specimens according to ANSI A118.4:
  - 1. Prepackaged dry-mortar mix combined with acrylic resin or styrene-butadiene-rubber liquid-latex additive.
- D. Chemical-Resistant, Water-Cleanable, Tile-Setting and -Grouting Epoxy: ANSI A118.3.
  - Provide product capable of withstanding continuous and intermittent exposure to temperatures of up to 140 deg F (60 deg C) and 212 deg F (100 deg C), respectively, and certified by manufacturer for intended use.
- E. Water-Cleanable, Tile-Setting Epoxy Adhesive: ANSI A118.3.
- F. Polymer-Modified Tile Grout: ANSI A118.7, color as indicated.
  - 1. Polymer Type: Acrylic resin or styrene-butadiene rubber in liquid-latex form for addition to prepackaged dry-grout mix.
    - a. Unsanded grout mixture for joints 1/8 inch (3.2 mm) and narrower.
    - b. Sanded grout mixture for joints 1/8 inch (3.2 mm) and wider.

#### 2.06 ELASTOMERIC SEALANTS

A. General: Provide manufacturer's standard chemically curing, elastomeric sealants of base polymer and characteristics indicated that comply with applicable requirements in Division 7 Section "Joint Sealants."

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- B. Colors: Provide colors of exposed sealants to match colors of grout in tile adjoining sealed joints, unless otherwise indicated.
- C. One-Part, Mildew-Resistant Silicone Sealant: ASTM C 920; Type S; Grade NS; Class 25; Uses NT, G, A, and, as applicable to nonporous joint substrates indicated, O; formulated with fungicide, intended for sealing interior ceramic tile joints and other nonporous substrates that are subject to in-service exposures of high humidity and extreme temperatures.
  - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Dow Corning Corporation; Dow Corning 786.
    - b. GE Silicones; Sanitary 1700.
    - c. Pecora Corporation; Pecora 898 Sanitary Silicone Sealant.
    - d. Tremco, Inc.; Tremsil 600 White.

### 2.07 MISCELLANEOUS MATERIALS

- A. Trowelable Underlayments and Patching Compounds: Latex-modified, portland cement-based formulation provided or approved by manufacturer of tile-setting materials for installations indicated.
- B. Metal Edge Strips: Angle or L-shape, height to match tile and setting-bed thickness, metallic or combination of metal and PVC or neoprene base, designed specifically for flooring applications, stainless steel; ASTM A 666, 300 Series exposed-edge material.
- C. Tile Cleaner: A neutral cleaner capable of removing soil and residue without harming tile and grout surfaces, specifically approved for materials and installations indicated by tile and grout manufacturers.
- D. Grout Sealer: Manufacturer's standard silicone product for sealing grout joints that does not change color or appearance of grout.
  - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Bonsal, W. R., Company; Grout Sealer.
    - b. Bostik; CeramaSeal Grout Sealer.
    - c. C-Cure; Penetrating Sealer 978.
    - d. Custom Building Products; Grout and Tile Sealer.
    - e. Jamo Inc.; Penetrating Sealer.
    - f. MAPEI Corporation; KER 003, Silicone Spray Sealer for Cementitious Tile Grout.
    - g. Southern Grouts & Mortars, Inc.; Silicone Grout Sealer.
    - h. Summitville Tiles, Inc.; SL-15, Invisible Seal Penetrating Grout and Tile Sealer.
    - i. TEC Specialty Products Inc.; TA-256 Penetrating Silicone Grout Sealer.

### 2.08 MIXING MORTARS AND GROUT

- A. Mix mortars and grouts to comply with referenced standards and mortar and grout manufacturers' written instructions.
- B. Add materials, water, and additives in accurate proportions.
- C. Obtain and use type of mixing equipment, mixer speeds, mixing containers, mixing time, and other procedures to produce mortars and grouts of uniform quality with optimum performance characteristics for installations indicated.

# 3.01 EXAMINATION

**PART 3 EXECUTION** 

- A. Examine substrates, areas, and conditions where tile will be installed, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of installed tile.
  - Verify that substrates for setting tile are firm; dry; clean; free of oil, waxy films, and curing compounds; and within flatness tolerances required by referenced ANSI A108 Series of tile installation standards for installations indicated.
  - 2. Verify that installation of grounds, anchors, recessed frames, electrical and mechanical units of work, and similar items located in or behind tile has been completed before installing tile.
  - 3. Verify that joints and cracks in tile substrates are coordinated with tile joint locations; if not coordinated, adjust joint locations in consultation with Architect.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

# 3.02 PREPARATION

- A. Remove coatings, including curing compounds and other substances that contain soap, wax, oil, or silicone, that are incompatible with tile-setting materials.
- B. Blending: For tile exhibiting color variations within ranges selected during Sample submittals, verify that tile has been factory blended and packaged so tile units taken from one package show same range of colors as those taken from other packages and match approved Samples. If not factory blended, either return to manufacturer or blend tiles at Project site before installing.
- C. Field-Applied Temporary Protective Coating: Where indicated under tile type or needed to prevent grout from staining or adhering to exposed tile surfaces, precoat them with continuous film of temporary protective coating, taking care not to coat unexposed tile surfaces.

### 3.03 INSTALLATION, GENERAL

- A. ANSI Tile Installation Standards: Comply with parts of ANSI A108 Series "Specifications for Installation of Ceramic Tile" that apply to types of setting and grouting materials and to methods indicated in ceramic tile installation schedules.
- B. TCA Installation Guidelines: TCA's "Handbook for Ceramic Tile Installation." Comply with TCA installation methods indicated in ceramic tile installation schedules.
- C. Extend tile work into recesses and under or behind equipment and fixtures to form complete covering without interruptions, unless otherwise indicated. Terminate work neatly at obstructions, edges, and corners without disrupting pattern or joint alignments.
- D. Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible surfaces. Carefully grind cut edges of tile abutting trim, finish, or built-in items for straight aligned joints. Fit tile closely to electrical outlets, piping, fixtures, and other penetrations so plates, collars, or covers overlap tile.
- E. Jointing Pattern: Lay tile in grid pattern, unless otherwise indicated. Align joints when adjoining tiles on floor, base, walls, and trim are same size. Lay out tile work and center tile fields in both directions in each space or on each wall area. Adjust to minimize tile cutting. Provide uniform joint widths, unless otherwise indicated.
- F. Lay out tile wainscots to next full tile beyond dimensions indicated.
- G. Expansion Joints: Locate expansion joints and other sealant-filled joints, including control, contraction, and isolation joints, where indicated during installation of setting materials, mortar beds, and tile. Do not saw-cut joints after installing tiles.
  - 1. Locate joints in tile surfaces directly above joints in concrete substrates.

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- 2. Prepare joints and apply sealants to comply with requirements in Division 7 Section "Joint Sealants."
- H. Grout tile to comply with requirements of the following tile installation standards:
  - 1. For ceramic tile grouts (sand-portland cement; dry-set, commercial portland cement; and latex-portland cement grouts), comply with ANSI A108.10.

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I. At showers, tubs, and where indicated, install cementitious backer units and treat joints to comply with ANSI A108.11 and manufacturer's written instructions for type of application indicated.

### 3.04 WATERPROOFING AND CRACK-SUPPRESSION MEMBRANE INSTALLATION

- A. Install waterproofing to comply with ANSI A108.13 and waterproofing manufacturer's written instructions to produce waterproof membrane of uniform thickness bonded securely to substrate.
- B. Install crack-suppression membrane to comply with manufacturer's written instructions to produce membrane of uniform thickness bonded securely to substrate.
- C. Do not install tile over waterproofing until waterproofing has cured and been tested to determine that it is watertight.

### 3.05 WALL AND CEILING TILE INSTALLATION

- A. Install types of tile designated for wall installations to comply with requirements in the Wall Tile Installation Schedule, including those referencing TCA installation methods and ANSI setting-bed standards.
- B. Install metal lath and scratch coat for walls to comply with ANSI A108.1A, Section 4.1.
- C. Joint Widths: Install tile on walls with the following joint widths:
  - 1. Glazed Wall Tile: 1/16 inch (1.6 mm).

### 3.06 CLEANING AND PROTECTING

- A. Cleaning: On completion of placement and grouting, clean all ceramic tile surfaces so they are free of foreign matter.
  - 1. Remove epoxy and latex-portland cement grout residue from tile as soon as possible.
  - 2. Clean grout smears and haze from tile according to tile and grout manufacturer's written instructions, but no sooner than 10 days after installation. Use only cleaners recommended by tile and grout manufacturers and only after determining that cleaners are safe to use by testing on samples of tile and other surfaces to be cleaned. Protect metal surfaces and plumbing fixtures from effects of cleaning. Flush surfaces with clean water before and after cleaning.
- B. When recommended by tile manufacturer, apply coat of neutral protective cleaner to completed tile walls and floors. Protect installed tile work with kraft paper or other heavy covering during construction period to prevent staining, damage, and wear.
- C. Before final inspection, remove protective coverings and rinse neutral cleaner from tile surfaces.

### **END OF SECTION**

# **SECTION 09 67 00: FLUID-APPLIED FLOORING**

# 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.
- B. Related Sections
  - 1. Division 3 Hydraulic Cement Underlayment
  - 2. Division 9 Common Work Results for Flooring prep
  - 3. Division 9 Tiling

### 1.2 SUMMARY

- A. This Section includes resinous flooring systems with epoxy body coat(s).
  - Application Method: Combination Self-leveling slurry with broadcast aggregates Troweled or screeded.

### 1.3 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

### 1.4 SUBMITTALS

- A. Product Data: For each type of product indicated. Include manufacturer's technical data, application instructions, and recommendations for each resinous flooring component required.
- B. Samples for Initial Selection: For each type of exposed finish required.
- C. Installer Certificates: Signed by manufacturer certifying that installers comply with specified requirements.
- D. Material Test Reports: For each resinous flooring component.
- E. Material Certificates: For each resinous flooring component, signed by manufacturer.
- F. Maintenance Data: For resinous flooring to include in maintenance manuals.

# 1.5 QUALITY ASSURANCE

A. Installer Qualifications: Engage an experienced installer (applicator) who is experienced in applying resinous flooring systems similar in material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance, and who is acceptable to resinous flooring manufacturer.

- 1. Engage an installer who employs only persons trained and approved by resinous flooring manufacturer for applying resinous flooring systems indicated.
- 2. Engage an installer who is certified in writing by resinous flooring manufacturer as qualified to apply resinous flooring systems indicated.
- B. Source Limitations: Obtain primary resinous flooring materials, including primers, resins, hardening agents, grouting coats, and topcoats, through one source from a single manufacturer. Provide secondary materials, including patching and fill material, joint sealant, and repair materials, of type and from source recommended by manufacturer of primary materials.
- C. Mockups: Apply mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
  - 1. Apply full-thickness mockups on 48-inch- square floor area selected by Architect.
    - a. Include 48-inch length of integral cove base.
  - 2. Simulate finished lighting conditions for Architect's review of mockups.
  - 3. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

# 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in original packages and containers, with seals unbroken, bearing manufacturer's labels indicating brand name and directions for storage and mixing with other components.
- B. Store materials to prevent deterioration from moisture, heat, cold, direct sunlight, or other detrimental effects.

# 1.7 PROJECT CONDITIONS

- A. Environmental Limitations: Comply with resinous flooring manufacturer's written instructions for substrate temperature, ambient temperature, moisture, ventilation, and other conditions affecting resinous flooring application.
- B. Lighting: Provide permanent lighting or, if permanent lighting is not in place, simulate permanent lighting conditions during resinous flooring application.
- C. Close spaces to traffic during resinous flooring application and for not less than 24 hours after application, unless manufacturer recommends a longer period.

### 1.8 WARRANTY

- A. The contractor and the manufacturer shall furnish a standard guarantee of the 1/8" Resinous Flooring System for a period of two years after installation. The labor and material guarantee shall include loss of bond and wear-through to the concrete substrate from normal use.
- B. Not included in the warranty are damage due to structural design deficiencies including but not limited to slab cracking from lateral, vertical or rotational movement, and gouging or other damage due to fork lifts, other equipment, delamination caused by vapor transmission, Acts of God, or other elements beyond the scope of protection of this system nor causes not related to the system materials.

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C. In case of a warranty claim, the owner will notify the manufacturer and contractor in writing within 30 days of the first appearance of problems covered under this warranty. The owner will provide free and unencumbered access to the area during normal working hours for warranty rework. Property protection is also the owner's responsibility. Remedy is limited to direct repair of the 1/8" Resinous Flooring System.

### **PART 2 - PRODUCTS**

### 2.1 RESINOUS FLOORING

- A. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
  - 1. Crossfield Products Corp.; Dex-O-Tex Decor-Flor.
  - 2. Basis of Design: Palma, Inc.; PalmaLite PaliKrom 125.
  - 3. Stonhard, Inc.; Stoneshield UTS.
  - 4. Or equal.
- B. System Characteristics:
  - 1. Color and Pattern: As selected by Architect from manufacturer's full range.
  - 2. Wearing Surface: Textured for slip resistance.
  - 3. Overall System Thickness: 1/8 inch.
- C. Primer: Type recommended by resinous flooring manufacturer for substrate and resinous flooring system indicated.
- D. Reinforcing Membrane: Flexible resin formulation that is recommended by resinous flooring manufacturer.
  - a. Provide fiberglass scrim embedded in reinforcing membrane.
- E. Patching and Fill Material: Resinous product of or approved by resinous flooring manufacturer and recommended by manufacturer for application indicated.
- F. System Components: Manufacturer's standard components that are compatible with each other and as follows:
  - Body Coat(s):
    - a. Resin: Epoxy.
    - b. Formulation Description: 100 percent solids.
    - c. Type: Clear
    - d. Application Method: Self-leveling slurry with broadcast aggregates troweled or screeded.
      - 1) Thickness of Coats: 1/8 inch.
      - 2) Number of Coats: One.
    - e. Aggregates: Colored quartz (ceramic-coated silica).
  - 2. Grout Coat:
    - a. Resin: Epoxy.
    - b. Formulation Description: 100 percent solids.
    - c. Type: Clear.
    - d. Application Method: Self -leveling, or troweled.
    - e. Number of Coats: One.
  - 3. Topcoat: Manufacturer's standard slip resistant sealing or finish coat(s).
    - a. Resin: Epoxy.

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# **Park Restroom Facilities Upgrades**

- b. Formulation Description: 100 percent solids.
- c. Type: Clear.d. Finish: Matte.
- e. Number of Coats: One.
- G. System Physical Properties: Provide resinous flooring system with the following minimum physical property requirements when tested according to test methods indicated:
  - 1. Compressive Strength: 12,000 psi per ASTM C 579.
  - 2. Tensile Strength: 2,000 psi per ASTM C 307.
  - 3. Flexural Modulus of Elasticity: 4,000 psi per ASTM C 580.
  - 4. Water Absorption: .04 percent per ASTM C 413.
  - 5. Coefficient of Thermal Expansion: 40 x 10 (-6) in/in degree F per ASTM C 531.
  - 6. Indentation: 7 percent maximum per MIL-D-3134.
  - 7. Impact Resistance: No chipping, cracking, or delamination and not more than 1/16-inch permanent indentation per MIL-D-3134.
  - 8. Flammability: Self-extinguishing per ASTM D 635.
  - 9. Bond Strength: 175 psi, 100 percent concrete failure per ACI 503R.

### 2.2 MOISTURE VAPOR REDUCTION SYSTEM

- A. Basis of Design: Allied Construction Technologies AC Tech 2170 Zero VOC Resin. Any product being used must be compatible with the Resinous Flooring Material.
- B. Technical Data:
  - 1. Mixing Ration A:B: A; 2.35; B:1
  - 2. Density (75°): 1.10g/cm3
  - 3. Volume Solids: 100%
  - 4. Viscosity (75°): 700cps
  - 5. Compressive Strength: 14,500 psi
  - 6. Tensile Strength: 4,300 psi
  - 7. Water Absorption: <1.5%
- C. ASTM E96 Test Results (tested at 16 mil thickness)
  - 1. Water Vapor Transmission.2lb / 1000 ft2 / 24 hours
  - 2. Average Measured Permeance .06gr / hr / ft2 in Hg

# 2.3 ACCESSORY MATERIALS

A. Patching and Fill Material: Resinous product of or approved by resinous flooring manufacturer and recommended by manufacturer for application indicated.

### **PART 3 - EXECUTION**

# 3.1 PREPARATION

A. General: Prepare and clean substrates according to resinous flooring manufacturer's written instructions for substrate indicated. Provide clean, dry, and neutral Ph substrate for resinous flooring application.

### Park Restroom Facilities Upgrades

- B. Concrete Substrates: Provide sound concrete surfaces free of laitance, glaze, efflorescence, curing compounds, form-release agents, dust, dirt, grease, oil, and other contaminants incompatible with resinous flooring.
  - 1. Roughen concrete substrates as follows:
    - a. Comply with ASTM C 811 requirements, unless manufacturer's written instructions are more stringent.
  - 2. Repair damaged and deteriorated concrete according to resinous flooring manufacturer's written recommendations.
  - 3. Verify that concrete substrates are dry.
    - a. Perform anhydrous calcium chloride test, ASTM F 1869. Proceed with application only after substrates have maximum moisture-vapor-emission rate of 3 lb of water/1000 sq. ft. in 24 hours.
    - b. Perform plastic sheet test, ASTM D 4263. Proceed with application only after testing indicates absence of moisture in substrates.
    - c. Perform additional moisture tests recommended by manufacturer. Proceed with application only after substrates pass testing.
  - 4. Verify that concrete substrates have neutral Ph and that resinous flooring will adhere to them. Perform tests recommended by manufacturer. Proceed with application only after substrates pass testing.
- C. Moisture Vapor Reduction System: Prepare and install materials in accordance to manufacturer's recommnedations.
- D. Resinous Materials: Mix components and prepare materials according to resinous flooring manufacturer's written instructions.
- E. Use patching and fill material to fill holes and depressions in substrates according to manufacturer's written instructions.
- F. Treat control joints and other nonmoving substrate cracks to prevent cracks from reflecting through resinous flooring according to manufacturer's written recommendations.

# 3.2 APPLICATION

- A. General: Apply components of resinous flooring system according to manufacturer's written instructions to produce a uniform, monolithic wearing surface of thickness indicated.
  - 1. Coordinate application of components to provide optimum adhesion of resinous flooring system to substrate, and optimum intercoat adhesion.
  - 2. Cure resinous flooring components according to manufacturer's written instructions. Prevent contamination during application and curing processes.
  - 3. At substrate expansion and isolation joints, provide joint in resinous flooring to comply with resinous flooring manufacturer's written recommendations.
- B. Apply primer over prepared substrate at manufacturer's recommended spreading rate.
- C. Apply self-leveling slurry body coat(s) in thickness indicated for flooring system.
  - 1. Broadcast aggregates and, after resin is cured, remove excess aggregates to provide surface texture indicated.

- D. Apply troweled or screeded body coat(s) in thickness indicated for flooring system. Hand or power trowel and grout to fill voids. When cured, sand to remove trowel marks and roughness.
- E. Apply grout coat, of type recommended by resinous flooring manufacturer to fill voids in surface of final body coat and to produce wearing surface indicated.
- F. Apply topcoat(s) in number of coats indicated for flooring system and at spreading rates recommended in writing by manufacturer.

# 3.3 FIELD QUALITY CONTROL

- A. Material Sampling: Owner may at any time and any number of times during resinous flooring application require material samples for testing for compliance with requirements.
  - 1. Owner will engage an independent testing agency to take samples of materials being used. Material samples will be taken, identified, sealed, and certified in presence of Contractor.
  - 2. Testing agency will test samples for compliance with requirements, using applicable referenced testing procedures or, if not referenced, using testing procedures listed in manufacturer's product data.
  - 3. If test results show applied materials do not comply with specified requirements, pay for testing, remove noncomplying materials, prepare surfaces coated with unacceptable materials, and reapply flooring materials to comply with requirements.

### 3.4 CLEANING AND PROTECTING

A. Protect resinous flooring from damage and wear during the remainder of construction period. Use protective methods and materials, including temporary covering, recommended in writing by resinous flooring manufacturer.

# **END OF SECTION 096700**

#### SECTION 09 90 00 - PAINTING

### 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 surface preparation and field painting of exposed exterior and interior items and surfaces.
  - 1. Surface preparation, priming, and finish coats specified in this Section are in addition to shop priming and surface treatment specified in other Sections.
- B. Paint exposed surfaces, except where these Specifications indicate that the surface or material is not to be painted or is to remain natural. If an item or a surface is not specifically mentioned, paint the item or surface the same as similar adjacent materials or surfaces. If a color of finish is not indicated, Architect will select from standard colors and finishes available.
  - 1. Painting includes field painting of exposed bare and covered pipes and ducts (including color coding), hangers, exposed steel and iron supports, and surfaces of mechanical and electrical equipment that do not have a factory-applied final finish.
- C. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels.
  - 1. Prefinished items include the following factory-finished components:
    - a. Elevator equipment.
    - b. Finished mechanical and electrical equipment.
    - c. Light fixtures.
  - 2. Concealed surfaces include walls or ceilings in the following generally inaccessible spaces:
    - Furred areas.
    - b. Ceiling plenums.
    - c. Pipe spaces.
    - d. Duct shafts.
  - 3. Finished metal surfaces include the following:
    - a. Anodized aluminum.
    - b. Stainless steel.
    - c. Chromium plate.
    - d. Copper and copper alloys.
    - e. Bronze and brass.

- 4. Operating parts include moving parts of operating equipment and the following:
  - a. Valve and damper operators.
  - b. Linkages.
  - c. Sensing devices.
  - d. Motor and fan shafts.
- 5. Labels: Do not paint over UL, FMG, or other code-required labels or equipment name, identification, performance rating, or nomenclature plates.
- D. Related Sections include the following:
  - 1. Section 08 12 13 "Hollow Metal Frames" for factory priming steel door frames.
  - 2. Section 09 29 00 "Gypsum Board" for surface preparation of gypsum board.

### 1.3 DEFINITIONS

- A. MPI Gloss Level 1: Not more than five units at 60 degrees and 10 units at 85 degrees, according to ASTM D523.
- B. MPI Gloss Level 2: Not more than 10 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D523.
- C. MPI Gloss Level 3: 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D523.
- D. MPI Gloss Level 4: 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees, according to ASTM D523.
- E. MPI Gloss Level 5: 35 to 70 units at 60 degrees, according to ASTM D523.
- F. MPI Gloss Level 6: 70 to 85 units at 60 degrees, according to ASTM D523.
- G. MPI Gloss Level 7: More than 85 units at 60 degrees, according to ASTM D523.

### 1.4 SUBMITTALS

- A. Product Data: For each paint system indicated, include block fillers and primers. Include preparation requirements and application instructions.
  - 1. Material List: An inclusive list of required coating materials. Indicate each material and cross-reference specific coating, finish system, and application. Identify each material by manufacturer's catalog number and general classification.
  - 2. Manufacturer's Information: Manufacturer's technical information, including label analysis and instructions for handling, storing, and applying each coating material.
- B. Samples for Verification: For each color and material to be applied, with texture to simulate actual conditions, on representative Samples of the actual substrate.
  - 1. Submit Samples on rigid backing 8 inches square.

- C. Product List: Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules. Include color designations.
- D. Qualification Data: For Applicator.

#### 1.5 OUALITY ASSURANCE

- A. Applicator Qualifications: A firm or individual experienced in applying paints and coatings similar in material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance.
- B. Source Limitations: Obtain block fillers and primers for each coating system from the same manufacturer as the finish coats.
- C. Mockups: Apply mockups of each paint system indicated and each color and finish selected to verify preliminary selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
  - 1. Architect will select one surface to represent surfaces and conditions for application of each paint system.
    - a. Vertical and Horizontal Surfaces: Provide samples of at least 100 sq. ft. (9 sq. m).
    - b. Other Items: Architect will designate items or areas required.
  - 2. Final approval of color selections will be based on mockups.
    - a. If preliminary color selections are not approved, apply additional mockups of additional colors selected by Architect at no added cost to Owner.
  - 3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.

# 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label and the following information:
  - 1. Product name or title of material.
  - 2. Product description (generic classification or binder type).
  - 3. Manufacturer's stock number and date of manufacture.
  - 4. Contents by volume, for pigment and vehicle constituents.
  - 5. Thinning instructions.
  - 6. Application instructions.
  - 7. Color name and number.
  - 8. VOC content.
- B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F (7 deg C). Maintain storage containers in a clean condition, free of foreign materials and residue.

1. Protect from freezing. Keep storage area neat and orderly. Remove oily rags and waste daily.

### 1.7 PROJECT CONDITIONS

- A. Apply waterborne paints only when temperatures of surfaces to be painted and surrounding air are between 50 and 90 deg F (10 and 32 deg C).
- B. Apply solvent-thinned paints only when temperatures of surfaces to be painted and surrounding air are between 45 and 95 deg F (7 and 35 deg C).
- C. Do not apply paint in snow, rain, fog, or mist; or when relative humidity exceeds 85 percent; or at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.
  - Painting may continue during inclement weather if surfaces and areas to be painted are enclosed and heated within temperature limits specified by manufacturer during application and drying periods.

# 1.8 EXTRA MATERIALS

- A. Furnish extra paint materials from the same production run as the materials applied and in the quantities described below. Package with protective covering for storage and identify with labels describing contents. Deliver extra materials to Owner.
  - 1. Quantity: Furnish Owner with an additional ,Two (2) gallons of each material and color applied.

# PART 2 - PRODUCTS

# 2.1 MANUFACTURERS

- A. Products: Subject to compliance with requirements, provide products from one of the following manufacturers:
  - 1. PPG Paints
  - 2. Benjamin Moore Co.
  - 3. **Basis of Design**: Sherwin-Williams.
  - 4. Comparable Products by other manufacturers approved by the Architect in accord with the provisions of 'Section 016000 Product Requirements', and the General Conditions of the Contract.

# 2.2 PAINT MATERAILS – GENERAL

- A. MPI Standards: Products shall comply with MPI standards indicated and shall be listed in its "MPI Approved Products Lists."
- B. Material Compatibility:

- Materials for use within each paint system shall be compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
- 2. For each coat in a paint system, products shall be recommended in writing by topcoat manufacturers for use in paint system and on substrate indicated.
- C. <u>VOC Content</u>: For field applications that are inside the weatherproofing system, paints and coatings shall comply with VOC content limits of authorities having jurisdiction and the following VOC content limits:
  - 1. Flat Paints and Coatings: 50 g/L.
  - 2. Nonflat Paints and Coatings: 50 g/L.
  - 3. Primers, Sealers, and Undercoaters: 100 g/L.
- D. Low-Emitting Materials: For field applications that are inside the weatherproofing system, 90 percent of paints and coatings shall comply with the requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
- E. Colors: As indicated on Owner approved color schedule.

#### 2.3 CONCRETE UNIT MASONRY BLOCK FILLERS

- A. Concrete Unit Masonry Block Filler: Factory-formulated high-performance latex block fillers.
  - 1. Benjamin Moore; Ultra Spec High Build Masonry Block Filler No. 571: Applied at a dry film thickness of not less than 8.1 mils.
  - 2. PPG Paints; SpeedHide Interior/Exterior Masonry Hi-Fill Block Filler Series 6-15XI: Applied at a dry film thickness of not less than 6.0 to 12.5 mils.
  - 3. Sherwin-Williams; PrepRite Interior/Exterior Latex Block Filler B25W00025: Applied at a dry film thickness of not less than 8.0 mils.

# 2.4 INTERIOR PRIMERS

- A. Interior Concrete Primer: Factory-formulated alkali-resistant acrylic-latex interior primer for interior application. (Excludes floors)
  - 1. Benjamin Moore; Ultra Spec Interior/Exterior Acrylic High-Build Masonry Primer No. 609: Applied at a dry film thickness of not less than 1.0 mil.
  - 2. PPG Paints; 4-603 Perma-Crete Interior/Exterior Acrylic Latex Alkali Resistant Primer: Applied at a dry film thickness of not less than 1.5 mil.
  - 3. Sherwin-Williams; Loxon Concrete and Masonry Primer-Seler LX02W0050: Applied at a dry film thickness of not less than 3.0 mils.
- B. Interior Gypsum Board/Plaster Primer: Factory-formulated latex-based primer for interior application.
  - 1. Benjamin Moore; Ultra Spec 500 Interior Latex Primer N534: Applied at a dry film thickness of not less than 1.0 mil.
  - 2. PPG Paints; SpeedHide Zero Interior 0 VOC Latex Seale Series 6-4900XI: Applied at a dry film thickness of not less than 1.4 mil.

- 3. Sherwin-Williams; ProMar 200 Zero VOC Interior Latex Primer B28W02600 Series: Applied at a dry film thickness of not less than 1.6 mils.
- C. Interior Ferrous-Metal Primer: Factory-formulated quick-drying rust-inhibitive alkyd-based metal primer.
  - 1. Benjamin Moore; Ultra Spec HP Acrylic Metal Primer No. HP04: Applied at a dry film thickness of not less than 1.7 mils.
  - 2. PPG Paints; 4020 PF Pitt-Tech Plus Waterborne Acrylic Primer/Finish: Applied at a dry film thickness of not less than 2.5 mils.
  - 3. Sherwin-Williams; Pro Industrial ProCryl Universal Acrylic Primer B66-1310: Applied at a dry film thickness of not less than 3.0 mils.

### 2.5 INTERIOR FINISH COATS

- A. Interior Flat Acrylic Paint: Factory-formulated flat acrylic-emulsion latex paint for interior application.
  - 1. Benjamin Moore; Ultra Spec 500 Interior Latex Flat No. T535: Applied at a dry film thickness of not less than 1.8 mils.
  - 2. PPG Paints; 6-4110XI Speedhide Zero Interior Latex Paint Flat: Applied at a dry film thickness of not less than 1.4 mils.
  - 3. Sherwin-Williams; Pro Mar200 Zero VOC Latex Flat Wall Paint: Applied at a dry film thickness of not less than 1.5 mils.
- B. Interior Low-Luster Acrylic Enamel: Factory-formulated eggshell acrylic-latex interior enamel.
  - 1. Benjamin Moore; Ultra Spec 500 Interior Latex Eggshell No. N538: Applied at a dry film thickness of not less than 1.8 mils.
  - 2. PPG Paints; 6-4310XI Speedhide Zero Interior Latex Paint Eggshell: Applied at a dry film thickness of not less than 1.5 mils.
  - 3. Sherwin-Williams; Pro Mar200 Zero VOC Latex Interior Eggshell Wall Paint: Applied at a dry film thickness of not less than 1.6 mils.

# PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
- B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
  - 1. Concrete: 12 percent.
  - 2. Fiber-Cement Board: 12 percent.
  - 3. Masonry (Clay and CMUs): 12 percent.
  - 4. Wood: 15 percent.

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- 5. Gypsum Board: 12 percent.
- 6. Plaster: 12 percent.
- C. Gypsum Board Substrates: Verify that finishing compound is sanded smooth.
- D. Verify suitability of substrates, including surface conditions and compatibility, with existing finishes and primers.
- E. Proceed with coating application only after unsatisfactory conditions have been corrected.
  - 1. Application of coating indicates acceptance of surfaces and conditions.

### 3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates and paint systems indicated.
- B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
  - 1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
- C. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.
- D. Concrete Substrates: Remove release agents, curing compounds, efflorescence, and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces to be painted exceeds that permitted in manufacturer's written instructions.
- E. Masonry Substrates: Remove efflorescence and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces or mortar joints exceeds that permitted in manufacturer's written instructions.
- F. Steel Substrates: Remove rust, loose mill scale, and shop primer, if any. Clean using methods recommended in writing by paint manufacturer but not less than the following:
  - 1. SSPC-SP 2.
  - 2. SSPC-SP 3.
  - 3. SSPC-SP7/NACE No. 4.
  - 4. SSPC-SP 11.
- G. Shop-Primed Steel Substrates: Clean field welds, bolted connections, and areas where shop paint is abraded. Paint exposed areas with the same material as used for shop priming to comply with SSPC-PA 1 for touching up shop-primed surfaces.
- H. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.

I. Aluminum Substrates: Remove loose surface oxidation.

### 3.3 APPLICATION

1.

- A. Apply paints according to manufacturer's written instructions and to recommendations in "MPI Manual."
  - 1. Use applicators and techniques suited for paint and substrate indicated.
  - 2. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
  - 3. Paint front and backsides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces.
  - 4. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
  - 5. Primers specified in painting schedules may be omitted on items that are factory primed or factory finished if acceptable to topcoat manufacturers.
- B. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Tint undercoats to match color of topcoat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.
- C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.
- D. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.
- E. Painting Fire Suppression, Plumbing, HVAC, Electrical, Communication, and Electronic Safety and Security Work:
  - Paint the following work where exposed in equipment rooms:
    - a. Equipment, including panelboards.
    - b. Uninsulated metal piping.
    - c. Uninsulated plastic piping.
    - d. Pipe hangers and supports.
    - e. Metal conduit.
    - f. Plastic conduit.
    - g. Tanks that do not have factory-applied final finishes.
    - h. Duct, equipment, and pipe insulation having cotton or canvas insulation covering or other paintable jacket material.
  - 2. Paint the following work where exposed in occupied spaces:
    - a. Equipment, including panelboards.
    - b. Uninsulated metal piping.
    - c. Uninsulated plastic piping.
    - d. Pipe hangers and supports.
    - e. Metal conduit.

- f. Plastic conduit.
- g. Duct, equipment, and pipe insulation having cotton or canvas insulation covering or other paintable jacket material.
- h. Other items as directed by Architect.
- 3. Paint portions of internal surfaces of metal ducts, without liner, behind air inlets and outlets that are visible from occupied spaces.

### 3.4 FIELD QUALITY CONTROL

- A. Dry Film Thickness Testing: Owner may engage the services of a qualified testing and inspecting agency to inspect and test paint for dry film thickness.
  - 1. Contractor shall touch up and restore painted surfaces damaged by testing.
  - 2. If test results show that dry film thickness of applied paint does not comply with paint manufacturer's written recommendations, Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with paint manufacturer's written recommendations.

#### 3.5 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
- B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

### 3.6 INTERIOR PAINT SCHEDULE

- A. Concrete and Masonry (Other Than Concrete Unit Masonry): Provide the following paint systems over interior concrete and brick masonry substrates:
  - 1. Flat Acrylic Finish: **Two (2) coats** over a primer.
    - a. Primer: Interior concrete and masonry primer.
    - b. Finish Coats: Interior flat acrylic paint.
  - 2. Low-Luster Acrylic-Enamel Finish: **Two (2) coats** over a primer.
    - a. Primer: Interior concrete and masonry primer.
    - b. Finish Coats: Interior low-luster acrylic enamel.

- B. Gypsum Board: Provide the following finish systems over interior gypsum board surfaces:
  - 1. Flat Acrylic Finish: **Two (2) coats** over a primer.
    - a. Primer: Interior gypsum board primer.
    - b. Finish Coats: Interior flat acrylic paint.
  - 2. Low-Luster Acrylic-Enamel Finish: **Two (2) coats** over a primer.
    - a. Primer: Interior gypsum board primer.
    - b. Finish Coats: Interior low-luster acrylic enamel.
- C. Ferrous Metal: Provide the following finish systems over ferrous metal:
  - 1. Low-Luster Acrylic-Enamel Finish: two (2) coats over a primer.
    - a. Primer: Interior ferrous-metal primer.
    - b. Finish Coats: Interior low-luster acrylic enamel.

# **END OF SECTION 09 91 23**

### **SECTION 10 14 00: SIGNAGE**

# **PART 1 GENERAL**

#### 1.1 SUMMARY

- A. This Section Includes the Following
  - 1. Interior Panel Signage

#### 1.2 RELATED DOCUMENTS

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

#### 1.3 REFERENCES

- A. ICC/ANSI A117.1 Accessible and Useable Buildings and Facilities.
- B. USATBCB Americans with Disabilities Act (ADA), Accessibility Guidelines for Buildings and Facilities (ADAAG).

### 1.4 SUBMITTALS

- A. Shop Drawings: Include plans, elevations, and large-scale sections of typical members and other components. Show mounting methods, grounds, mounting heights, layout, spacing, reinforcement, accessories, and installation details.
  - 1. Provide message list for each sign, including large-scale details of wording, lettering, artwork, and Braille layout.
- B. Product Data
  - 1. For each signage type used
  - 2. For signage adhesive
- C. Samples for Verification: For each type of sign, include the following Samples to verify color selected:
  - 1. Panel Signs: Full-size Samples of each type of sign required.
  - 2. Approved samples will not be returned for installation into Project.
  - 3. Color Samples for selection

### 1.5 QUALITY ASSURANCE

- A. Installer Qualifications: An employer of workers trained and approved by signage manufacturer.
- B. Source Limitations: Obtain each sign type through one source from a single manufacturer.
- C. Regulatory Requirements: Comply with requirements of ICC/ANSI A117.1 and ADAAG.
  - 1. Comply with the Americans with Disabilities Act (ADA) and with code provisions as adopted by authorities having jurisdiction

# 1.6 DELIVERY, STORAGE, AND HANDLING

A. Inspect products upon receipt. Store products in manufacturer's packaging until ready for installation.

### 1.7 DESIGN CRITERIA

- A. Requirements: The sign list and specifications indicate sizes, profiles and dimensional requirements of signs.

  Other signs with deviations from indicated dimensions and profiles may be considered, provided deviations do not change the design concept. All informational signs shall comply with the ADA and CABO/ANSI A117.1-92 as follows:
  - 1. Letters and numbers on sign system shall:
    - a. Have a width-to-height ratio of between 3:5 and 1:1.
    - b. Have a stroke width-to-height ratio of between 1:5 and 1:10.
    - c. Contrast in value with the sign background utilizing light letters on a dark background or dark letters on a light background.
  - 2. Characters on signs shall be:
    - a. Raised from the sign face at least 1/32".
    - b. Be between 5/8" and 2" high.
    - c. Be block type or Sans Serif
    - d. Be all capital letters.
    - Be accompanied by grade II Braille produced using embedded optically correct acrylic beads.

### 1.8 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results.
- B. Field Measurements: Where sizes of signs are determined by dimensions of surfaces on which they are installed, verify dimensions by field measurement before fabrication and indicate measurements on Shop Drawings.

### **PART 2 PRODUCTS**

# 2.1 MANUFACTURERS

- A. **BASIS OF DESIGN**: Best Sign Systems
- B. Intelligent Signage, Inc.
- C. Modulex
- D. Spanier Borthers, Inc
- E. Andco Insustries Corp
- F. Alternate product meeting performance specifications

# 2.2 PANEL SIGNS: GENERAL

- A. General: Provide panel signs that comply with requirements indicated for materials, thicknesses, finishes, colors, designs, shapes, sizes, and details of construction.
- B. Manufacturer's standard monolithic tactile plaque constructed utilizing a thermoforming process, which provides a fully homogeneous plaque sign. The sign body, face, raised text and Braille are compression molded to form a single dimensional component that results in a sign surface that exhibits a toughness that resists scratching, cracking, gouging and graffiti.

- 1. Material: Extruded Clear Acrylic
- 2. Thickness: ¼-inch thick
- 3. Tactile Characters and Symbols: Raised 1/32-inch from sign plate face
- 4. Construction: 1-piece (added on or engraved characters are not acceptable
- 5. Lettering Style: Helvetica; min text height 5/8"; max text height 2"
- 6. Braille: Grade II Braille placed directly below signage text
- 7. Edge Condition: Bevel 45deg finished edge (frameless).
- 8. Profile: Radiused Corner
- 9. Size: as indicated on drawings
- 10. Color of Background: as selected by architect from manufacturer's standard range
- 11. Color of Text and raised characters: as selected by architect from manufacturer's full range
- 12. Surface Texture: Matte
- C. Mounting: Secure signage to wall with manufacturer's standard concealed anchor mounting method.
  - 1. Provide blocking in wall as required to properly support anchor.
- D. Graphic Content and Style: Provide sign copy that complies with CABO/ANSI A17.1-92 Section 4.2.8 requirements and the requirements within ADAAG (4.30.1-7), Americans With Disabilities Act (ADA) Accessibility Guidelines For Buildings and Facilities for size, style, spacing, content, mounting height and location, material, finishes, and colors of signage.
- E. Textures: Exposed sign surfaces to be matte or non-glare finish as required by ADA.

#### 2.3 PANEL SIGNS

- A. Room Signs:
  - 1. Material: Cast-acrylic sheet.
  - 2. Perimeter: Unframed.
  - 3. Copy: Tactile and Braille Surface.
  - 4. Character Style: Helvetica.
  - 5. Text: As indicated in the Sign Schedule.
  - 6. Message: Changeable at Classrooms and as indicated, all else fixed.
  - 7. Mounting: With Screws
  - 8. Sizes:
    - a. Sign: As Scheduled.
    - b. Character: Minimum 5/8", maximum 2" high characters.
  - B. Toilet Room Signs:
    - 1. Material: Cast-acrylic sheet.
    - 2. Perimeter: Unframed.
    - 3. Copy: Raised.
    - 4. Character Style: Helvetica.
    - Text: According to requirements in the ADA or of authorities having jurisdiction, whichever are more stringent.
    - 6. Message: Fixed.
    - 7. Mounting: With Screws
    - 8. Sizes:
      - a. Sign: As Scheduled
      - b. Character: Minimum 1-inch- (25-mm-) high characters.
  - D. Symbols of Accessibility: Provide 6-inch- (150-mm-) high symbol fabricated from opaque nonreflective vinyl film, 0.0035-inch (0.089-mm) nominal thickness, with pressure-sensitive adhesive backing suitable for both exterior and interior applications.

# 2.05 ACCESSORIES

- A. Mounting Methods: Use concealed fasteners or double-sided vinyl tape in conjunction with silicone adhesive fabricated from materials that are not corrosive to sign material and mounting surface.
- B. Anchors and Inserts: Provide nonferrous-metal or hot-dip 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.
- C. Adhesives: As recommended by sign manufacturer and that comply with the testing and product requirements of the California Department of Health Services' "Standard Practice of the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

### 2.06 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical finishes on exposed surfaces from damage by applying strippable, temporary protective covering before shipping.
- C. For exposed signs 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.
- D. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of range of approved Samples. Noticeable variations in same piece are not acceptable. Variations in appearance of other components are acceptable if they are within range of approved Samples and are assembled or installed to minimize contrast.

# PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.
- B. Examine supporting members to ensure that surfaces are at elevations indicated or required to comply with authorities having jurisdiction and are free from dirt and other deleterious matter.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

# 3.2 PREPARATION

- A. Verify mounting heights and locations for interior signage will comply with referenced standards.
- B. Clean mounting locations of dirt, dust, grease or similar conditions that would prevent proper installation.

# 3.3 INSTALLATION

- A. Install signs level, plumb, without distortion, and in proper relationship with adjacent surfaces using manufacturer's recommended standard mounting system.
  - 1. Mount with screws.

- B. Remove adhesive from exposed sign surfaces as recommended by manufacturer.
- C. Clean signs after installation as recommended by manufacturer.
- D. Replace damaged products before Substantial Completion.

# 3.4 CLEANING AND PROTECTION

A. After installation, clean soiled sign surfaces according to manufacturer's written instructions. Protect signs from damage until acceptance by Owner.

# 3.5 INTERIOR SIGNAGE SCHEDULE

A. Refer to drawings for signage schedule.

**END OF SECTION 101400** 

#### **SECTION 102113 - PLASTIC TOILET COMPARTMENTS**

### 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. Section Includes:
  - 1. Floor mounted, overhead braced solid-plastic toilet partitions.
  - 2. Partitions configured as a privacy screen at urinals.
- B. Related Requirements:
  - 1. Section 093013 "Ceramic Tiling" for ceramic mosaic, porcelain, and glazed wall tile.
  - 2. Section 102800 "Toilet Accessories" for accessories mounted on toilet compartments.

# 1.3 COORDINATION

A. Coordinate requirements for blocking, reinforcing, and other supports concealed within wall[to ensure that toilet compartments can be supported and installed as indicated.

# 1.4 ACTION SUBMITTALS

- A. Product Data:
  - 1. Solid-plastic toilet compartments:
    - a. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for toilet compartments.
- B. Shop Drawings:
  - 1. Include plans, elevations, sections, details, and attachment details.
  - 2. Show locations of cutouts for compartment-mounted toilet accessories.
  - 3. Show locations of centerlines of toilet fixtures.
- C. Samples for Initial Selection: Manufacturer's standard color sheets, showing full range of available colors for each type of toilet compartment.
  - 1. Include Samples of hardware and accessories involving material and color selection.

- D. Product Schedule: For toilet compartments, prepared by or under the supervision of supplier, detailing location and selected colors for toilet compartment material.
- E. Delegated Design Submittals: For grab bars mounted on toilet compartment panels, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
  - Include structural design calculations indicating compliance with specified structuralperformance requirements.

#### 1.5 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For toilet compartments.
- B. Warranty Documentation:
  - 1. Executed copy of manufacturer's standard warranty.

#### 1.6 MAINTENANCE MATERIAL SUBMITTALS

- A. Extra Stock Materials: Furnish extra materials to Owner that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  - 1. Door Hinges: Three (3) hinge(s) with associated fasteners.
  - 2. Latch and Keeper: Three (3) latch(es) and keeper(s) with associated fasteners.
  - 3. Door Bumper: Three (3) bumper(s) with associated fasteners.
  - 4. Door Pull: Three (3) door pull(s) with associated fasteners.
  - 5. Fasteners: Twenty (20) fasteners of each size and type.

#### 1.7 FIELD CONDITIONS

A. Field Measurements: Verify actual locations of toilet fixtures, walls, columns, ceilings, and other construction contiguous with toilet compartments by field measurements, and coordinate before fabrication.

#### 1.8 WARRANTY

A. Manufacturer guarantees its plastic against breakage, corrosion, and delamination under normal conditions for 25 years from the date of receipt by the customer. If materials are found to be defective during that period for reasons listed above, the materials will be replaced free of charge. Labor not included in warranty.

#### PART 2 - PRODUCTS

#### 2.1 SOURCE LIMITATIONS

A. Obtain plastic toilet compartments from single source from single manufacturer.

#### 2.2 PERFORMANCE REQUIREMENTS

- A. Recycled Content: Post-consumer recycled content plus one-half of pre-consumer recycled content not less than 50 percent.
- B. Fire Performance: Tested in accordance with, and pass the acceptance criteria of, NFPA 286.
- C. Structural Performance: Where grab bars are mounted on toilet compartments, design panels to comply with the following requirements:
  - 1. Panels are able to withstand a concentrated load on grab bar of at least 250 lbf applied at any direction and at any point, without deformation of panel.
- D. Regulatory Requirements: Comply with applicable provisions in the USDOJ's "2010 ADA Standards for Accessible Design", and, ICC A117.1 for toilet compartments designated as accessible.

#### 2.3 SOLID-PLASTIC TOILET COMPARTMENTS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide Scranton Products Hiny Hiders: or comparable product by one of the following:
  - 1. AJW Architectural Products.
  - 2. ASI Accurate Partitions.
  - 3. Comparable Products by other manufacturers approved by the Architect in accord with the provisions of 'Section 01 60 00 Product Requirements', and the General Conditions of the Contract.
- B. Toilet-Enclosure Style: Overhead braced.
- C. Urinal-Screen Style: Wall hung.
- D. Door, Panel, and Pilaster Construction: Solid, high-density polyethylene (HDPE) material, not less than 1 inch thick, seamless, with eased edges, and with homogenous color throughout thickness of material.
  - 1. Integral Hinges: Configure doors and pilasters to receive integral hinges.
  - 2. Heat-Sink Strip: Manufacturer's continuous, extruded-aluminum strip fastened to exposed bottom edges of solid-plastic components to hinder malicious combustion.
  - 3. Color: One Color in each room as selected by Architect from manufacturer's full range (Color to be Shale Orange Peel).
- E. Urinal-Screen Construction: Matching panel construction.
- F. Pilaster Shoes: Manufacturer's standard design; stainless steel.
  - 1. Plastic Color: Matching pilaster, contrasting with pilaster, as selected by Architect from manufacturer's full range.
- G. Pilaster Sleeves (Caps): Manufacturer's standard design; stainless steel.
- H. Brackets (Fittings):
  - 1. Stirrup Type: Ear or U-brackets, stainless steel.

2. Full-Height (Continuous) Type: Manufacturer's standard design; stainless steel.

#### 2.4 HARDWARE AND ACCESSORIES

- A. Door Hardware and Accessories, Heavy Duty: Manufacturer's heavy-duty institutional operating hardware and accessories.
  - 1. Hinges: Manufacturer's minimum 0.062-inch- thick, stainless steel continuous, cam type that swings to a closed or partially open position, allowing emergency access by lifting door. Mount with through bolts.
  - Latch and Keeper: Manufacturer's heavy-duty, surface-mounted, cast stainless steel latch unit, designed to resist damage due to slamming, with combination rubber-faced door strike and keeper, and with provision for emergency access. Provide units that comply with regulatory requirements for accessibility at toilet enclosures designated as accessible. Mount with through bolts.
  - 3. Coat Hook: Manufacturer's heavy-duty, combination cast stainless steel hook and rubber-tipped bumper, sized to prevent in-swinging door from hitting compartment-mounted accessories. Mount with through bolts.
  - 4. Door Bumper: Manufacturer's heavy-duty, rubber-tipped, cast stainless steel bumper at outswinging doors. Mount with through bolts.
  - 5. Door Pull: Manufacturer's heavy-duty, cast stainless steel pull at out-swinging doors that complies with regulatory requirements for accessibility. Provide units on both sides of doors at toilet enclosures designated as accessible. Mount with through bolts.
- B. Overhead Bracing: Manufacturer's standard continuous, extruded-aluminum head rail with anti-grip profile and in manufacturer's standard finish.
- C. Anchorages and Fasteners: Manufacturer's standard exposed fasteners of stainless steel, finished to match items they are securing, with theft-resistant-type heads. Provide sex-type bolts for through-bolt applications. For concealed anchors, use stainless steel, hot-dip galvanized steel, or other rust-resistant, protective-coated steel compatible with related materials.

#### 2.5 MATERIALS

- A. Aluminum Castings: ASTM B26/B26M.
- B. Aluminum Extrusions: ASTM B221.
- C. Stainless Steel Sheet: ASTM A240/A240M or ASTM A666, Type 304, stretcher-leveled standard of flatness.
- D. Stainless Steel Castings: ASTM A743/A743M.
- E. Zamac: ASTM B86, commercial zinc-alloy die castings.

#### 2.6 FABRICATION

A. Fabricate toilet compartment components to sizes indicated. Coordinate requirements and provide cutouts for through-partition toilet accessories where required for attachment of toilet accessories.

- B. Overhead-Braced Units: Manufacturer's standard corrosion-resistant supports, leveling mechanism, and anchors at pilasters and walls to suit floor and wall conditions. Provide shoes at pilasters to conceal supports and leveling mechanism.
- C. Floor-Anchored Units: Manufacturer's standard corrosion-resistant anchoring assemblies at pilasters and walls, with leveling adjustment nuts at pilasters for structural connection to floor. Provide shoes at pilasters to conceal anchorage.
- D. Ceiling-Hung Units: Manufacturer's standard corrosion-resistant anchoring assemblies at pilasters and walls, with leveling adjustment nuts at pilasters for connection to structural support above finished ceiling. Provide assemblies that support pilasters from structure without transmitting load to finished ceiling. Provide sleeves (caps) at tops of pilasters to conceal anchorage.
- E. Floor-and-Ceiling-Anchored Units: Manufacturer's standard corrosion-resistant anchoring assemblies at pilasters and walls, with leveling adjustment nuts at tops and bottoms of pilasters. Provide shoes and sleeves (caps) at pilasters to conceal anchorage.
- F. Urinal-Screen Posts: Manufacturer's standard corrosion-resistant anchoring assemblies at posts and walls, with leveling adjustment nuts at bottoms of posts. Provide shoes at posts to conceal anchorage.
- G. Door Size and Swings: Unless otherwise indicated, provide 24-inch- wide, in-swinging doors for standard toilet enclosures and 36-inch- wide, out-swinging doors with a minimum 32-inch- wide, clear opening for toilet enclosures designated as accessible.

#### **PART 3 - EXECUTION**

#### 3.1 EXAMINATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for fastening, support, alignment, operating clearances, and other conditions affecting performance of the Work.
  - 1. Confirm location and adequacy of blocking and supports required for installation.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 INSTALLATION

- A. General: Comply with manufacturer's written installation instructions. Install units rigid, straight, level, and plumb. Secure units in position with manufacturer's recommended anchoring devices.
  - 1. Maximum Clearances:
    - a. Pilasters and Panels or Screens: 1/2 inch.
    - b. Panels or Screens and Walls: 1 inch.
  - 2. Stirrup Brackets: Secure panels or screens to walls and to pilasters with no fewer than three brackets attached at midpoint and near top and bottom of panel or screen.
    - a. Locate wall brackets, so holes for wall anchors occur in masonry or tile joints.
    - b. Align brackets at pilasters with brackets at walls.

- 3. Full-Height (Continuous) Brackets: Secure panels or screens to walls and to pilasters with full-height brackets.
  - a. Locate bracket fasteners, so holes for wall anchors occur in masonry or tile joints.
  - b. Align brackets at pilasters with brackets at walls.
- B. Overhead-Braced Units: Secure pilasters to floor and level, plumb, and tighten. Set pilasters with anchors penetrating not less than 1-3/4 inches into structural floor unless otherwise indicated in manufacturer's written instructions. Secure continuous head rail to each pilaster with no fewer than two fasteners. Hang doors to align tops of doors with tops of panels and adjust, so tops of doors are parallel with overhead brace when doors are in closed position.
- C. Floor-Anchored Units: Set pilasters with anchors penetrating not less than 2 inches into structural floor unless otherwise indicated in manufacturer's written instructions. Level, plumb, and tighten pilasters. Hang doors and adjust, so tops of doors are level with tops of pilasters when doors are in closed position.
- D. Ceiling-Hung Units: Secure pilasters to supporting structure and level, plumb, and tighten. Hang doors and adjust, so bottoms of doors are level with bottoms of pilasters when doors are in closed position.
- E. Floor-and-Ceiling-Anchored Units: Secure pilasters to supporting construction and level, plumb, and tighten. Hang doors and adjust, so doors are level and aligned with panels, when doors are in closed position.
- F. Urinal Screens: Attach with anchoring devices to suit supporting structure. Set units level and plumb, rigid, and secured to resist lateral impact.

#### 3.3 ADJUSTING

A. Hardware Adjustment: Adjust and lubricate hardware in accordance with hardware manufacturer's written instructions for proper operation. Set hinges on in-swinging doors to hold doors open approximately 30 degrees from closed position when unlatched. Set hinges on out-swinging doors [and doors in entrance screens] to return doors to fully closed position.

#### **END OF SECTION 102113**

#### **SECTION 102800 - TOILET ACCESSORIES**

PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section Includes:
  - Public-use washroom accessories.
  - 2. Hand dryers.
  - 3. Childcare accessories.
  - 4. Under-lavatory guards.

#### 1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Samples: For each exposed product and for each finish specified, full size.

#### 1.3 INFORMATIONAL SUBMITTALS

A. Sample warranties.

#### 1.4 CLOSEOUT SUBMITTALS

- A. Maintenance data.
- B. Warranty Documentation:
  - 1. Executed copy of manufacturer's standard warranty.

#### 1.5 WARRANTY

- A. Manufacturer's Warranty for Washroom Accessories: Manufacturer's standard 1 year warranty for materials and workmanship.
- B. Manufacturer's Special Warranty for Mirrors: Manufacturer agrees to repair or replace mirrors that fail in materials or workmanship within specified warranty period.
  - 1. Warranty Period: 15 years from date of Substantial Completion.
- C. Manufacturer's Special Warranty for Hand Dryers: Manufacturer agrees to repair or replace hand dryers that fail in materials or workmanship within specified warranty period.
  - 1. Warranty Period: Ten (10) years from date of Substantial Completion.

PART 2 - PRODUCTS

#### 2.1 OWNER-FURNISHED MATERIALS

- A. Owner-Furnished Materials:
  - 1. Soap Dispensers
  - 2. Toilet Paper Dispensers
  - 3. Sanitary Napkin Dispenser
- B. GC to install Owner-Furnished Materials

#### 2.2 ACCEPTABLE MANUFACTURERS

- A. Basis of Design: Bobrick Washroom Equipment Inc., Clifton Park, New York, 12065,:
- B. American Specialties, Inc.
- C. Bradley Corporation.
- D. Comparable Products by other manufacturers approved by the Architect in accord with the provisions of 'Section 016000 Product Requirements', and the General Conditions of the Contract.

#### 2.3 PERFORMANCE REQUIREMENTS

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Structural Performance: Design accessories and fasteners to comply with the following requirements:
  - 1. Grab Bars: Installed units are able to resist 250 lbf concentrated load applied in any direction and at any point.
  - 2. Shower Seats: Installed units are able to resist 360 lbf applied in any direction and at any point.

#### 2.4 PUBLIC-USE WASHROOM ACCESSORIES

- A. Toilet Tissue (Roll) Dispenser TP-1:
  - 1. <u>Provided by Owner</u>
  - 2. Description: Jumbo double roll-in-reserve dispenser with hinged front secured with tumbler lockset.
  - 3. Mounting: Surface mounted.
  - 4. Operation: Non-control delivery with standard spindle.
  - 5. Capacity: Designed for 10" diameter tissue rolls.
  - 6. Material and Finish: Plastic.

#### Park Restroom Facilities Upgrades

- B. Automatic Soap Dispenser SD-1:
  - 1. Provided by Owner
  - 2. Description: Automatic dispenser with infrared sensor to detect presence of hands; battery powered.
  - 3. Mounting: Surface mounted.
  - 4. Capacity: per Owner.
  - 5. Materials: Plastic.
- C. Grab Bar GB-1, GB-2, GB-3:
  - 1. Bobrick: B6806 Series (Basis of Design)
  - 2. Mounting: Flanges with concealed fasteners.
  - 3. Material: Stainless steel, 0.05 inch thick.
  - 4. Finish: Smooth, ASTM A480/A480M No. 4 finish (satin) on ends and slip-resistant texture in grip area.
  - 5. Outside Diameter: 1-1/2 inches.
  - 6. Configuration and Length: As indicated on Drawings.
- D. Sanitary Napkin Vending Unit SV-1
  - 1. Product: Bobrick B47069C Contura Series (Basis of Design)
  - 2. Mounting: Surface mounted.
  - 3. Capacity: 30 tampons, 20 napkins.
  - 4. Operation: 25cent operation
  - 5. Exposed Material and Finish: Stainless steel, ASTM A480/A480M No. 4 finish (satin).
  - 6. Lockset: Tumbler type with separate lock and key for coin box.
- E. Sanitary-Napkin Disposal Unit: SD-1
  - 1. Provided by Owner
  - 2. Mounting: Surface mounted.
  - 3. Door or Cover: Self-closing, disposal-opening cover and hinged face panel with tumbler lockset.
  - 4. Receptacle: Removable.
  - 5. Material and Finish: Plastic.
- F. Mirror Unit M1:
  - 1. Product: Bobrick **B2908 Series** (Basis of Design)
  - 2. Frame: Stainless steel angle, 0.05 inch thick.
  - 3. Corners: Welded and ground smooth.
  - 4. Size: [As indicated on Drawings].
  - 5. Hangers: Manufacturer's standard rigid, tamper and theft resistant.
- G. Hook RH-1 and RH-2:
  - 1. Product: Bobrick B6827 (Basis of Design)
  - 2. Description: Combination hat and coat hook.
  - 3. Mounting: Concealed.
  - 4. Material and Finish: Stainless steel, ASTM A480/A480M No. 4 finish (satin).

#### 2.5 HAND DRYERS

#### A. High Speed Air Dryer HD-1:

- 1. <u>Basis-of –Design Manufacturer/Product: Subject to compliance with this specification, provide</u> 'VerdeDri' hand dryer as manufactured by World Dryer Corp. Bensenville II. 60106, or a comparable product by one of the following:
  - a. Bradley Corp. Aerix-Plus Model 2923.
  - b. Comparable Products by other manufacturers approved by the Architect in accord with the provisions of 'Section 016000 Product Requirements', and the General Conditions of the Contract.
- 2. Description: Multi-speed, warm-air hand dryer.
- 3. Mounting: Surface mounted ADA compliant.
- 4. Operation: Infrared-sensor activated with timed power cut-off switch.
  - a. Average Dry Time: 12 seconds.
  - b. Automatic Shutoff: At 30 seconds minimum.
- 5. Maximum Sound Level: 69 dB.
- Air Flow: 64 CFM @ 225MPH (19,800 LFM)
- 7. Nozzle Type: Single port high intensity.
- 8. Intake Air Filter: HEPA type, replaceable.
- 9. Cover Material and Finish: [Aluminum with painted finish] [Stainless steel, ASTM A480/A480M No. 4 finish (satin)].
- 10. Electrical rating: 110-120/208/220-240 VAC input, 950 watts; 277 VAC, 1150 watts.

#### 2.6 CHILDCARE ACCESSORIES

#### A. Baby Changing Station CS-1:

- 1. Product: Koala Kare Products by Bobrick **KB310SSWM** (Basis of Design)
- Description: Horizontal unit that opens by folding down from stored position and with child-protection strap. Engineered to support minimum of 250lb static load when opened.
- Mounting: [Surface mounted, with unit projecting not more than 4 inches from wall when closed] [Semi-recessed, with unit projecting not more than 1 inch (25 mm) from wall when closed].
- 4. Operation: By pneumatic shock-absorbing mechanism.
- 5. Material and Finish: Stainless steel, ASTM A480/A480M No. 4 finish (satin), exterior shell with rounded plastic corners; HDPE interior in manufacturer's standard color.
- 6. Liner Dispenser: Provide built-in dispenser for disposable sanitary liners.

#### 2.7 UNDERLAVATORY GUARDS

#### A. Underlavatory Guard:

- 1. <u>Manufacturers:</u> Subject to compliance with requirements, provide products by one of the following:
  - a. <u>Buckaroos, Inc</u>.
  - b. <u>Plumberex Specialty Products, Inc.</u>

- c. <u>Truebro by IPS Corporation</u>.
- d. Comparable Products by other manufacturers approved by the Architect in accord with the provisions of 'Section 016000 Product Requirements', and the General Conditions of the Contract.
- 2. Description: Insulating pipe covering for supply and drain piping assemblies that prevents direct contact with and burns from piping; allow service access without removing coverings.
- 3. Material and Finish: Antimicrobial, molded plastic, white.
- 4. Refill Indicator: Window type.

#### 2.8 FABRICATION

- A. General: Fabricate units with tight seams and joints, and exposed edges rolled. Hang doors and access panels with full-length, continuous hinges. Equip units for concealed anchorage and with corrosion-resistant backing plates.
- B. Keys: Provide universal keys for internal access to accessories for servicing and resupplying. Provide minimum of six keys to Owner's representative.

#### **PART 3 - EXECUTION**

#### 3.1 INSTALLATION

- A. Install accessories according to manufacturers' written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and at heights indicated.
  - 1. Remove temporary labels and protective coatings.
- B. Grab Bars: Install to comply with specified structural-performance requirements.
- C. Shower Seats: Install to comply with specified structural-performance requirements.

#### 3.2 ADJUSTING AND CLEANING

- A. Adjust accessories for unencumbered, smooth operation. Replace damaged or defective items.
- B. Clean and polish exposed surfaces according to manufacturer's written instructions.

#### **END OF SECTION 10 28 00**



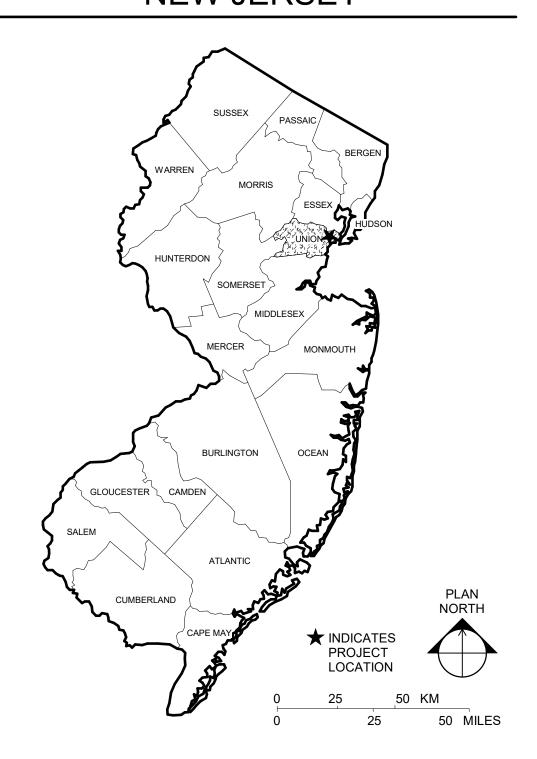
# THE COUNTY OF UNION

2325 SOUTH AVENUE, SCOTCH PLAINS, NEW JERSEY 07076

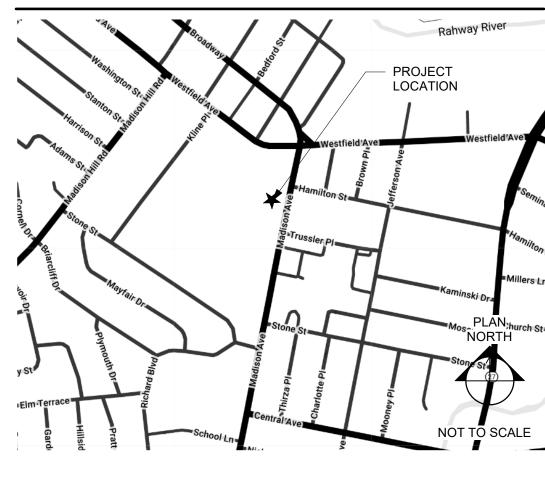
# INTERIOR RESTROOM FACILITIES RENOVATIONS AT: UNION COUNTY PARKS: MADISON AVENUE PARK

1333 MADISON AVE RAHWAY, NJ 07065 CITY OF RAHWAY - UNION COUNTY - NEW JERSEY

# **NEW JERSEY**



# PROJECT LOCATION



# 1. GENERAL

- A. PERFORM WORK IN STRICT ACCORDANCE WITH CONTRACT REQUIREMENTS. B. PERFORM WORK IN COMPLIANCE WITH GOVERNING LAWS, CODES, SUB-
- C. PERFORM WORK IN A FIRST CLASS WORKMANLIKE MANNER.

CODES, ORDINANCES, AND REGULATIONS.

- D. PROVIDE WORK PER REFERENCE, NOTE, DETAIL, ITEMIZATION, AND IMPLICATION.
- E. PROVIDE WORK FOR COMPLETE, OPERATIONAL, AND FULLY FUNCTIONING SYSTEMS AND ASSEMBLIES. THIS INCLUDES, BUT IS NOT LIMITED TO, LABOR, MATERIALS, EQUIPMENT, TRANSPORTATION, AND CONNECTIONS.

F. FOLLOW MANUFACTURER'S LATEST PRESCRIBED WRITTEN INSTRUCTIONS

- G. DRAWINGS AND SPECIFICATIONS ARE COMPLIMENTARY AND INTEGRAL
- PARTS OF THE CONTRACT DOCUMENTS.
- H. IN THE CASE OF A CONFLICT WITHIN THE CONTRACT DOCUMENTS, THE GREATER COST SHALL TAKE PRECEDENCE. I. NOTIFY ARCHITECT IN WRITING OF DISCREPANCIES, OMISSIONS, AND
- CONFLICTS FOR CLARIFICATION PRIOR TO COMMENCEMENT OF WORK. J. DO NOT PROCEED WITH WORK UNDER CLARIFICATION REVIEW UNTIL WRITTEN DETERMINATION IS ISSUED BY THE ARCHITECT. WORK THAT PROCEEDS WITHOUT CLARIFICATION MAY BE DEEMED NON-CONFORMING
- K. REMOVE, REPAIR, AND REPLACE NON-CONFORMING WORK TO THE ARCHITECT'S APPROVAL AT THE CONTRACTOR'S EXPENSE. L. ARRANGE WORK TO AGREE WITH ACCOMPLISHMENT OF WORK IN
- COORDINATION WITH OTHER TRADES AND OWNER'S OPERATIONS. M. NOTES AND KEYNOTES ARE TYPICAL FOR SIMILAR AND LIKE CONDITIONS. N. ABBREVIATIONS ARE THOSE IN COMMON USE UNLESS NOTED OTHERWISE.
- 2. FIELD VERIFICATION
- A. VISIT SITE PRIOR TO BIDDING TO REVIEW AND CONFIRM SCOPE OF WORK AND SITE LOGISTICS.
- B. FIELD VERIFY EXISTING CONDITIONS, DIMENSIONS, AND EXTENT OF WORK PRIOR TO COMMENCEMENT OF SAID WORK. 3. PERMITS AND INSPECTIONS

# A. OBTAIN BUILDING PERMITS AND APPROVALS.

- B. PROVIDE COPY OF BUILDING PERMIT TO ARCHITECT AND OWNER PRIOR TO COMMENCEMENT OF WORK.
- C. COORDINATE INSPECTIONS IN A TIMELY MANNER.

# . PROTECTION OF WORK

- A. PROTECT IN-PLACE CONSTRUCTION DURING THE COURSE OF THE WORK. IN-PLACE MATERIALS AND SURFACES SHALL BE LEFT AS THEY APPEARED PRIOR TO COMMENCEMENT OF THE WORK.
- B. PERFORM WORK SO THAT MINIMAL DAMAGE TO IN-PLACE CONSTRUCTION IS
- C. REPAIR DAMAGES CAUSED DURING THE COURSE OF THE WORK TO THE ARCHITECT'S APPROVAL AT THE CONTRACTOR'S EXPENSE.

- A. SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- B. INITIATE, MAINTAIN, SUPERVISE, AND ENFORCE A REASONABLE AND PRUDENT SAFETY PROGRAM INCLUDING, BUT NOT BE LIMITED TO, ISOLATION OF WORK AREAS, PEDESTRIAN PROTECTION, PROMPT REMOVAL OF DEBRIS, AND RESOLUTION OF ENDANGERING CONDITIONS.
- C. PROVIDE AND MAINTAIN TEMPORARY PARTITIONS, ENCLOSURES, AND BARRIERS THROUGHOUT THE COURSE OF CONSTRUCTION. D. MAINTAIN EGRESS ACCESS AT ALL TIMES.
- E. PROTECT AND MAINTAIN EXISTING FIRE PROTECTION, FIRE ALARM, AND SMOKE DETECTION SYSTEMS SO THAT THEY REMAIN FULLY OPERATIONAL DURING THE COURSE OF THE WORK.
- F. PROTECT AND MAINTAIN EXISTING FIRE RATED ASSEMBLIES.
- G. REPAIR AND RE-ESTABLISH DAMAGED FIRE RATED ASSEMBLIES.

# 6. CUTTING AND PENETRATIONS

- A. COORDINATE LOCATION AND SIZE OF PENETRATIONS, HOLES, AND
- PROVIDE CHASES, HOLES, AND OPENINGS CONSTRUCTED AND CUT TRUE, SQUARE AND OF A PROPER SIZE FOR PROPER INSTALLATION OF THE WORK,

# **GENERAL PROJECT NOTES**

- 6. CUTTING AND PENETRATIONS (CONTINUED)
- C. IN CASE OF FAILURE TO LEAVE OR CUT SAME IN PROPER PLACE, CUT THEM AFTERWARDS AT CONTRACTOR'S EXPENSE.
- D. LIMIT CUTTING TO THE LEAST EXTENT NECESSARY TO COMPLETE THE WORK. NO EXCESSIVE CUTTING WILL BE PERMITTED.
- E. PROVIDE FRAMES AND BRACING AT DUCT PENETRATIONS IN WALL, CEILING ROOF, AND FLOOR ASSEMBLIES.
- F. PROVIDE AUTOMATIC FIRE DAMPERS AND FIRESTOP ASSEMBLIES AT PENETRATIONS IN FIRE AND SMOKE RATED ASSEMBLIES.
- A. PATCHING INCLUDES, BUT IS NOT LIMITED TO, FILLING, MENDING, REPAIRING, AND REFINISHING MATERIALS, COMPONENTS, AND SURFACES TO MATCH ADJACENT CONSTRUCTION OR PREPARE TO RECEIVE NEW FINISHES.
- B. PATCHING INCLUDES, BUT IS NOT LIMITED TO, MATCHING EXISTING ADJACENT MATERIAL, COLOR, TEXTURE, APPEARANCE, FINISH, COURSING, FIRE RATING, DURABILITY, AND ACOUSTICAL CRITERIA.
- C. PATCH TO MATCH AND ALIGN SURFACES TO AFFORD A FINISHED NEAT APPEARANCE SO THAT THERE IS NO VISUAL EVIDENCE OF PATCHING.
- D. PATCH MATERIALS AND SURFACES IMPACTED BY THE WORK.
- E. PROVIDE RECOMMENDED LEVELING EMULSION TO CORRECT VARIANCE IN ADJACENT FLOOR SURFACES WHERE WALLS ARE REMOVED TO CREATE
- F. REMOVE EXCESSIVE HIGH FINISH OR PROVIDE FILL IN LOW AREA FOR SMOOTH FINISHED SURFACE.
- G. PATCH MATERIALS, COMPONENTS, AND SURFACES TO RESTORE AND MAINTAIN A WEATHER TIGHT BUILDING ENCLOSURE.
- H. CUT AND CAP EXISTING PIPING BELOW GRADE AND BEHIND FINISHED I. INFILL DOOR FRAME HINGE MORTISES AND PREPARE FRAMES FOR NEW
- DOORS AND FINISHES. 8. STRUCTURAL MODIFICATIONS
- A. DO NOT MODIFY STRUCTURAL MEMBERS WITHOUT ARCHITECT'S WRITTEN
- B. CONDUCT OPERATIONS IN A MANNER TO PREVENT DAMAGE TO POSSIBLE
- HIDDEN STRUCTURAL ELEMENTS. C. VERIFY EXTENT AND LOCATION OF STRUCTURAL MEMBERS PRIOR TO
- D. IF UNCOVERED, PREVIOUSLY HIDDEN STRUCTURAL ELEMENTS ARE TO REMAIN INTACT. CONTACT ARCHITECT IMMEDIATELY FOR CLARIFICATION.

DEMOLITION. NOTIFY ARCHITECT IMMEDIATELY IF POTENTIAL QUESTION IS

- E. TEMPORARY BRACING AND SHORING IS THE SOLE RESPONSIBILITY OF THE F. PROVIDE TEMPORARY BRACING AND SHORING NECESSARY TO COMPLETE
- CONTRACTUAL SCOPE OF WORK. EACH PRIME CONTRACTOR IS RESPONSIBLE FOR TEMPORARY BRACING AND SHORING NECESSARY TO ACCOMPLISH THEIR WORK 9. UTILITIES AND SANITARY FACILITIES
- A. VERIFY AND COORDINATE AVAILABLE FACILITIES, LOCATIONS, AND SERVICE CONNECTIONS WITH UTILITY COMPANIES. ESTABLISH TEMPORARY FACILITIES WHEN APPLICABLE.
- B. PROVIDE TEMPORARY UTILITIES NECESSARY TO PERFORM THE WORK. C. NOTIFY ARCHITECT AND OWNER OF PROPOSED SERVICE INTERRUPTIONS A
- MINIMUM OF 72 HOURS IN ADVANCE OF INTERRUPTION. D. LIMIT SERVICE INTERRUPTIONS TO THE SHORTEST DURATION POSSIBLE E. PROVIDE SANITARY FACILITIES FOR CONTRACTOR'S USE. CONTRACTOR'S

# 10. LAYOUT

- A. PROVIDE WORK PER WRITTEN DIMENSIONS. DO NOT SCALE THE DRAWINGS. B. EXISTING CONSTRUCTION DIMENSIONS ARE GIVEN FROM FINISHED SURFACES UNLESS NOTED OTHERWISE.
- C. NEW CONSTRUCTION DIMENSIONS ARE GIVEN FROM FACE OF STUD, MASONRY, AND CONCRETE UNLESS NOTED OTHERWISE.

USE OF BUILDING SANITARY FACILITIES IS NOT PERMITTED.

- D. CLEAR DIMENSIONS ARE GIVEN FROM FINISHED SURFACES.
- E. PLANS ARE DIAGRAMMATIC AND SHOW GENERAL ARRANGEMENT AND EXTENT OF WORK.

F. MODIFICATIONS TO ACTUAL ARRANGEMENT OF WORK TO ADDRESS FIELD

- AND UNFORESEEN CONDITIONS MAY BE NECESSARY.
- G. EQUIPMENT PAD SIZES INDICATED ARE APPROXIMATE. COORDINATE ACTUAL DIMENSIONS WITH RESPECTIVE EQUIPMENT MANUFACTURER.

# 10. LAYOUT (CONTINUED)

- H. PROVIDE BLOCKING FOR WALL MOUNTED ITEMS, INCLUDING, BUT NOT LIMITED TO, DOOR HARDWARE, VISUAL DISPLAY BOARDS, TOILET COMPARTMENTS, LAVATORY SUPPORTS, GRAB BARS, AND TOILET
- I. PARTITION TYPES ARE CONTINUOUS ABOVE AND BELOW OPENINGS UNLESS NOTED OTHERWISE.
- J. EXTEND NEW WALLS AND PARTITIONS TO THE UNDERSIDE OF THE DECK
- ABOVE UNLESS NOTED OTHERWISE. K. PROVIDE FIRE RESISTANCE RATED (FLAME SPREAD) INTERIOR MATERIALS AND FINISHES IN COMPLIANCE WITH THE CURRENT BUILDING CODE.
- L. PROVIDE ACCESS DOORS AND PANELS FOR EQUIPMENT ACCESS. COORDINATE SIZES, LOCATIONS, AND TYPES WITH TRADES AND ARCHITECT.
- M. PROVIDE ACCESS DOORS AND PANELS FOR FIRE DAMPER ACCESS. COORDINATE SIZES, LOCATIONS, AND TYPES WITH TRADES AND ARCHITECT

# 11. DEMOLITION

- A. PERFORM DEMOLITION WORK NECESSARY TO COMPLETE CONTRACTUAL SCOPE OF WORK. EACH PRIME CONTRACTOR IS RESPONSIBLE FOR DEMOLITION NECESSARY TO ACCOMPLISH THEIR WORK.
- B. REMOVE COMPONENTS IN THEIR ENTIRETY INCLUDING, BUT NOT LIMITED TO ASSOCIATED SUPPORTS, HARDWARE, FASTENERS, MASTIC, AND SEALANT UNLESS NOTED OTHERWISE.
- C. REMOVE ITEMS AND PREPARE AREA TO RECEIVE NEW WORK UNLESS NOTED
- D. REMOVE ITEMS AND PATCH AREA TO MATCH ADJACENT CONSTRUCTION
- UNLESS NOTED OTHERWISE. E. REMOVE FINISHES AND SUBFLOORS DOWN TO SUBSTRATE UNLESS NOTED
- F. REMOVE FLOORING DOWN TO SUBSTRATE. WHERE MULTIPLE FLOORING ASSEMBLIES ARE ENCOUNTERED, CONTACT ARCHITECT FOR CLARIFICATION.
- G. REMOVE CEILINGS TO EXPOSE STRUCTURE ABOVE. WHERE MULTIPLE
- H. WHERE CONCRETE SLAB IS TO BE REMOVED, REMOVE FLOOR FINISH, BASE AND CONCRETE SLAB.
- I. WALL REMOVAL INCLUDES WAINSCOT, CHAIR RAIL, TRIM, AND OTHER WALL FINISHES AND OTHER WALL MOUNTED ITEMS.

# 12. SALVAGE AND DISPOSAL A. PROVIDE WASTE AND RECYCLING CONTAINERS UNLESS NOTED OTHERWISE.

- B. RECYCLE CONSTRUCTION DEBRIS TO THE GREATEST EXTENT POSSIBLE. C. REMOVE CONSTRUCTION DEBRIS, RUBBISH, AND WASTE MATERIAL TO A LAWFUL OFF-SITE DISPOSAL OR RECYCLING FACILITY UNLESS NOTED
- D. COORDINATE EXTENT, STORAGE, AND REINSTALLATION OF SALVAGED MATERIAL EXTENT WITH OWNER.
- E. REMOVE EXCESS SALVAGED MATERIAL AT THE COMPLETION OF THE PROJECT UNLESS NOTED OTHERWISE.
- A. CLEAN IMPACTED AREAS FREE OF DUST AND DEBRIS ON A REGULAR BASIS DURING THE COURSE OF THE WORK.
- B. CLEAN IMPACTED AREAS FREE OF DUST AND DEBRIS UPON COMPLETION OF WORK. IN-PLACE MATERIALS AND SURFACES SHALL BE LEFT AS THEY APPEARED PRIOR TO COMMENCEMENT OF THE WORK.

# APPLICABLE CODES

APPLICABLE CONSTRUCTION CODES AND SUBCODES: - INTERNATIONAL BUILDING CODE 2021 (NEW JERSEY EDITION)

- INTERNATIONAL FIRE CODE 2018 REHABILITATION - NEW JERSEY ADMINISTRATIVE CODE 5:23-6 (2021) - NATIONAL STANDARD PLUMBING CODE 2021

- NATIONAL ELECTRICAL CODE (NFPA 70) 2020 - ASHRAE 90.1-2021(COMMERCIAL)

- INTERNATIONAL MECHANICAL CODE 2021 INTERNATIONAL FUEL GAS CODE 2021

BARRIER FREE - ICC/ANSI A117.1-2017

AND HAS BEEN DESIGNED FOR AND SHOULD BE REVIEWED UNDER THE

# **CODE SUMMARY**

NOTE: THIS PROJECT CONSTITUTES AN ALTERATION TO THE EXISTING BUILDING

UNIFORM CONSTUCTION CODE REHABILITATION SUBCODE 5:23 SUB CHAPTER 6.

**BUILDING CLASSIFICATION:** 

CONCESSIONS FACILITIES (*TO REMAIN*) = 304.1 BUSINESS GROUP B

EXISTING BUILDING IS MIXED USE / NON SEPARATED. THE MORE STRINGENT

RESTROOM FACILITIES (TO BE RENOVATED) = 312: UTILITY & MISC GROUP U STORAGE FACILITIES (TO REMAIN) = 311.3 LOW HAZARD STORAGE GOUP S1

# OCCUPANCY REQUIREMENT WILL BE USED PER CHAPTER 5.

- 601 TYPE 2B (NON-COMBUSTABLE / UNPROTECTED)
- NFPA13
   EXISTING BUILDING IS UNSPRINKLERED AS ALLOWED BY AREA REQUIREMENTS
- 508.2.4 SEPARATION OF OCCUPANCIES
   NO SEPARATION IS REQUIRED BETEWEN ACCESSORY OCCUPANCIES AND THE CEILING ARE ENCOUNTERED, CONTACT ARCHITECT FOR CLARIFICATION. MAIN OCCUPANCY.

OCCUPANCY GROUPS.

BUILDINGS OR PORTIONS OF BUILDINGS THAT COMPLYT WITH THE PROVISIONS OF THIS SECTION SHALL BE CONSIDERED NONSEPARATED OCCUPANCIES. 508.3.2: THE ALLOWABLE BUILDING AREA, HEIGHT, AND NUMBER OF STORIES OF THE BUILDING SHALL BE BASED ON THE MOST RESTRICTIVE ALLOWANCES FOR

# **BUILDING DATA:**

504.3 - ALLOWABLE BUILDING HEIGHT IN FEET
• ALLOWED:

504.4 - ALLOWABLE BUILDING HEIGHT IN STORIES

- 1. S2 = 55'-0" 2. B = 55'-0"
- 3. U = not applicableACTUAL = < 25'-0"

#### 1. S2 = 3 STORIES 2. B = 3 STORIES

- 3. U = not applicable ACTUAL = 1 STORY
- <u>506.2 ALLOWABLE BUILDING AREA</u>
- 1. S2 = 26,000 SF 2. B = 23,000 SF
- 3. U = 9,000 SF PER COMMENT iACTUAL = 2,000 SF
- \*\* FRONTAGE INCREASE NOT INCLUDED / REQUIRED AREA OF RESTROOM RENOVATIONS

  • 375 SF
- FIRE RESISTANCE RATING REQUIREMENTS:

# TABLES 601 & 602 - CONSTRUCTION TYPE FIRE-RESISTANCE RATING

BUILDING ELEMENT	FIRE RESISTANCE
STRUCTURAL FRAME: INCLUDING COLUMNS, GIRDERS, BEAMS &TRUSSES	N/A
NONBEARING PARTITIONS & BEARING WALLS (EXT):  X* < 10  10 < X* < 30  X* > 30	1 HOURS 0 HOURS 0 HOURS
NONBEARING PARTITIONS & BEARING WALLS (INT):	N/A
ROOF CONSTRUCTION: INCLUDING SUPPORTING BEAMS AND JOISTS	N/A

# \* X = FIRE SEPARATION DISTANCE IN FEET

# PROJECT TEAM

# OWNER:

UNION COUNTY PARK MAINTENANCE 2325 SOUTH AVE SCOTCH PLAINS, NEW JERSEY 07076 (908) 654-9890

WWW.UCNJ.ORG

**ARCHITECTS** 



WWW.SSPARCHITECTS.COM

SSP ARCHITECTURAL GROUP

SOMERVILLE, NJ 08876

PHONE: (908) 725-7800

FAX: (908) 725-7957

50 DIVISION STREET, SUITE 503



WWW.ENGINEERDRIVEN.COM

SHEET NAME

(888) 422-7830

# DRAWING LIST

ARCHITECTURAL MADISON AVE PARK COVER SHEET DEMO & PROPOSED PLANS DETAILS

PLUMBING PLUMBING SPECIFICATIONS AND SYMBOLS PLUMBING PLANS - MADISON AVE PARK **MECHANICAL** MECHANICAL SPECIFICATIONS, SCHEDULES, AND LEGENDS

MECHANICAL PLANS - MADISON AVE PARK

**ELECTRICAL** ELECTRICAL SPECIFICATIONS AND GENERAL NOTES ELECTRICAL PLANS - MADISON AVE PARK TOTAL: 9

# **EGRESS SUMMARY**

# **MEANS OF EGRESS**

- TOILET ROOM FACILITIES DO NOT CARRY AN OCCUPANCY LOAD PER NJIBC THERE ARE NO CHANGES TO THE EGRESS COMPONENTS. THERE ARE NO CHANGES TO THE EGRESS OF THE GROUP B AND S1 SECTIONS OF THE BUILDING. THE EXISTING EGRESS PATH FROM THE TOILET FACILITIES WILL REMAIN UNCHANGED.
- OCCUPANCY A, E F-1, M, R, S-1: WITH SPRINKLER SYSTEM 250' • OCCUPANCY B: WITH SPRINKLER SYSTEM - 300'
- IBC 1010 DOORS, GATES AND TURNSTILES MINIMUM CLEAR DOOR WIDTH SHALL BE 32" (2'-8") HEIGHT OF DOOR OPENINGS SHALL NOT BE LESS THAN 80" (6'-8") • EGRESS WIDTH MODIFIER = 0.2"

# PLUMBING FIXTURE SUMMARY

**GENERAL USE - PARK RESTROOM FACILITIES** 

- THIS RESTROOM FACILITY IS PROVIDED FOR PUBLIC USE SERVING THE
- UNION COUNTY PARKS SYSTEM. THE EXISTING NUMBER OF PLUMBING FIXTURES IS REMAINING **UNCHANGED** THIS PROJECT CONSTITUTES A RENOVATION AND SHOULD BE REVIEWED AS

SUCH. UPGRADES WILL BE MADE FOR BARRIER FREE ACCESSIBILITY.

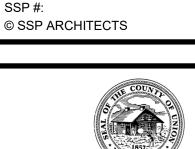
PHASE / SUBMISSION

ISSUED FOR BID

AUGUST 31, 2023 DESCRIPTION

NJ SDA PACKAGE# NJ SDA #:

NJ DOE #:



THE COUNTY OF UNION

SCOTCH PLAINS, NEW JERSEY 07076 INTERIOR RESTROOM FACILITIES **RENOVATIONS AT:** 

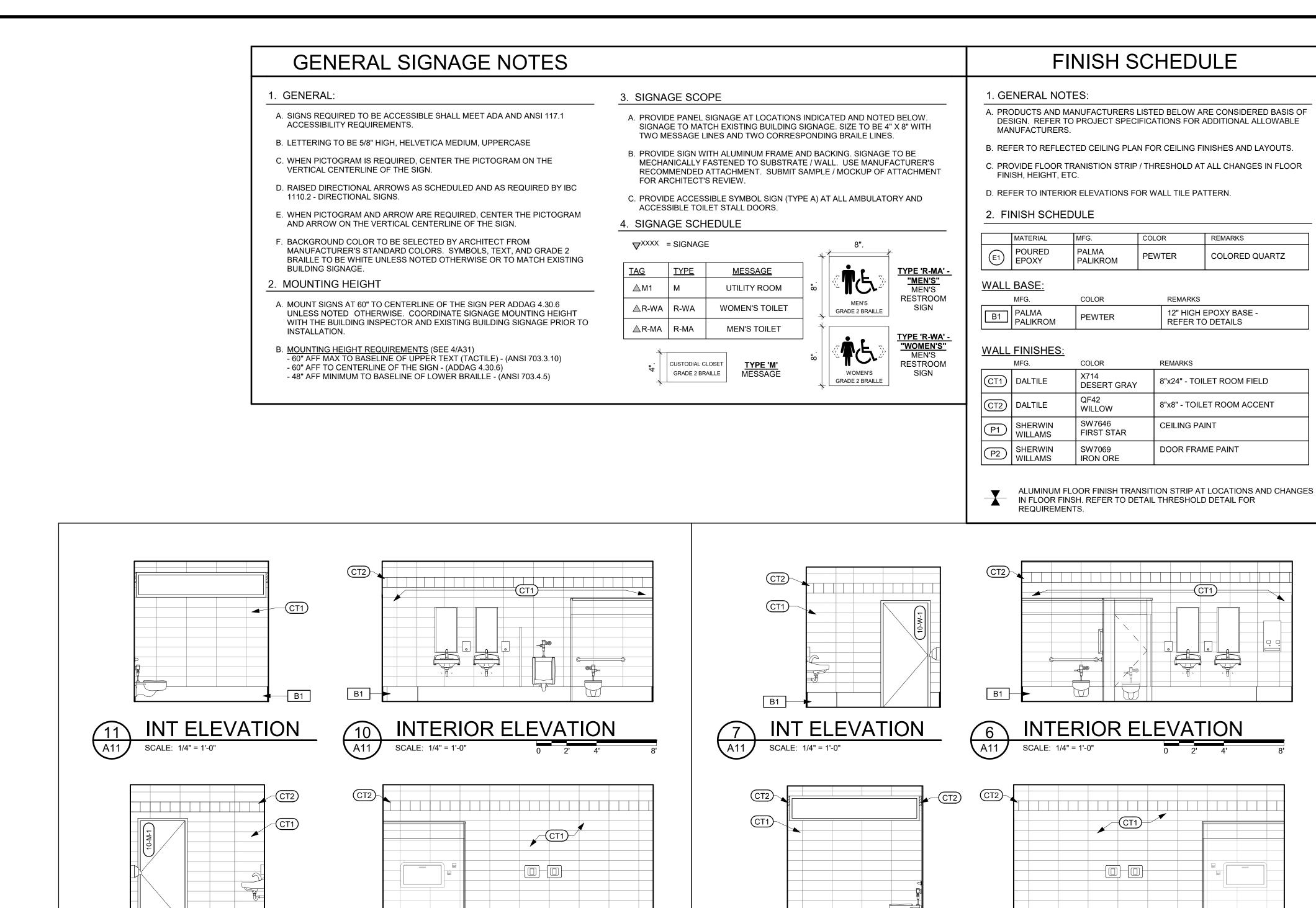
2325 SOUTH AVENUE

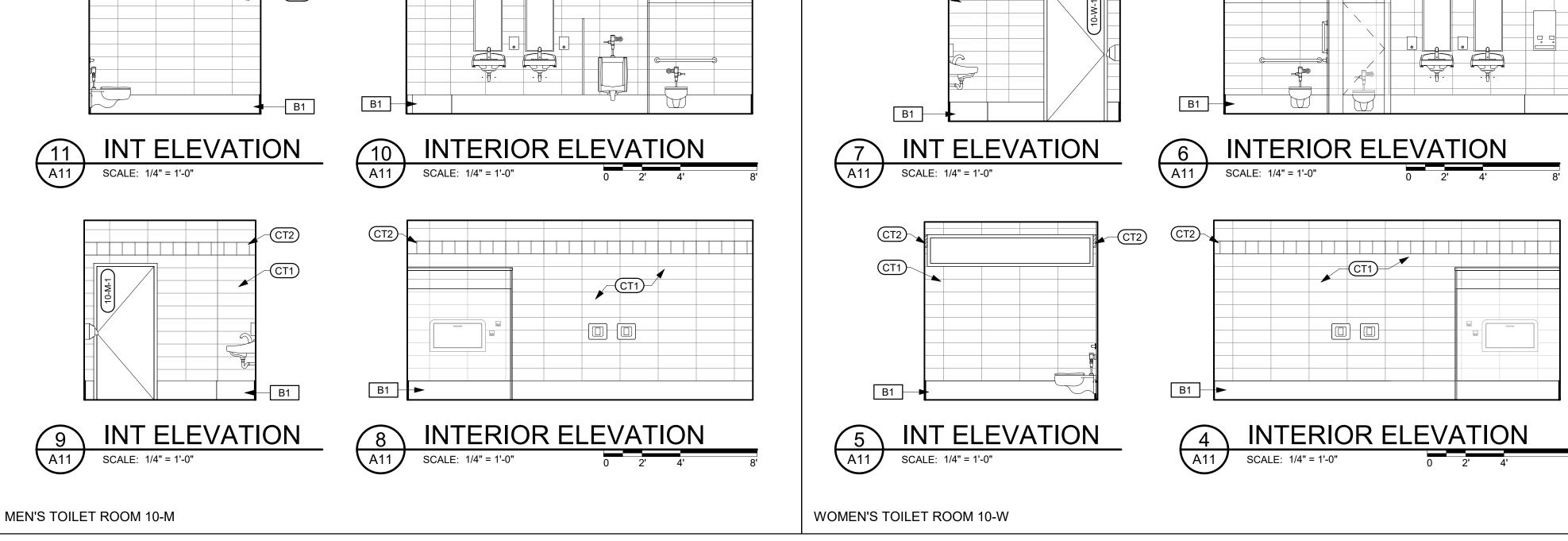
1333 MADISON AVE RAHWAY, NJ 07065

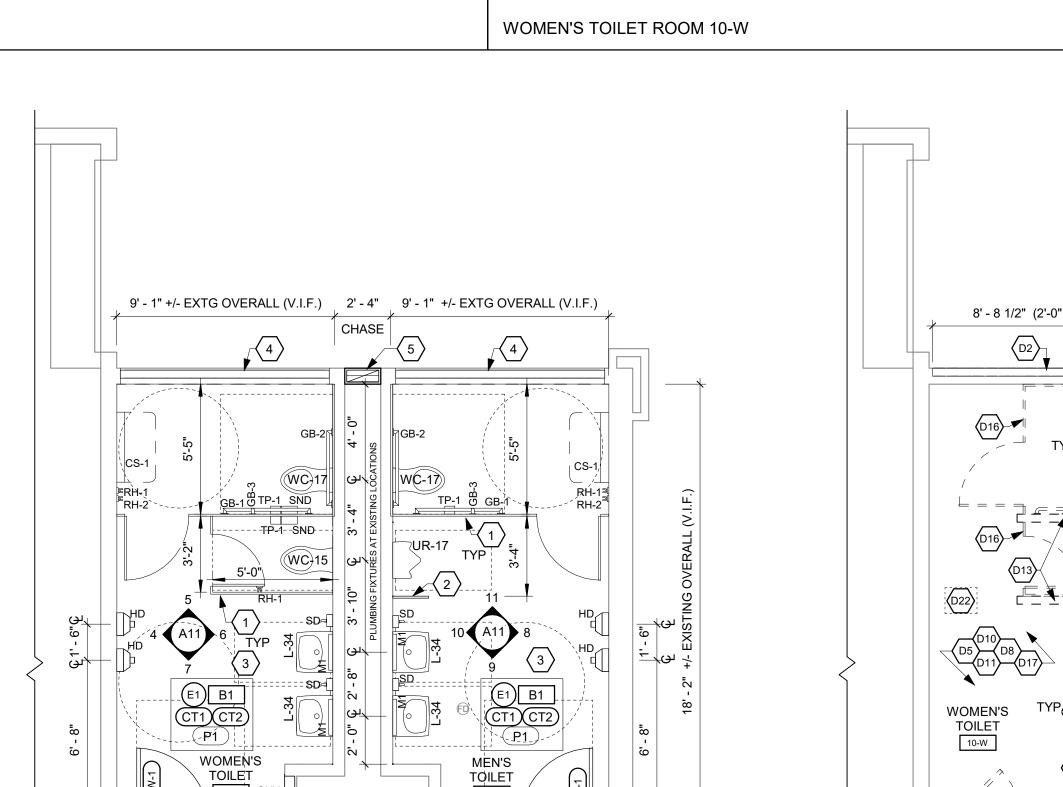
ITY OF RAHWAY

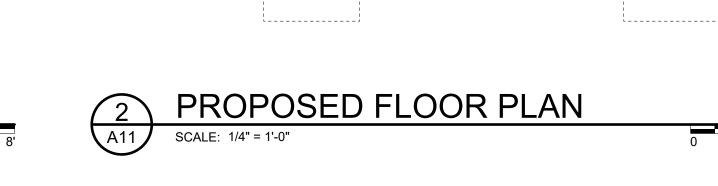
MADISON AVE PARK **COVER SHEET** 

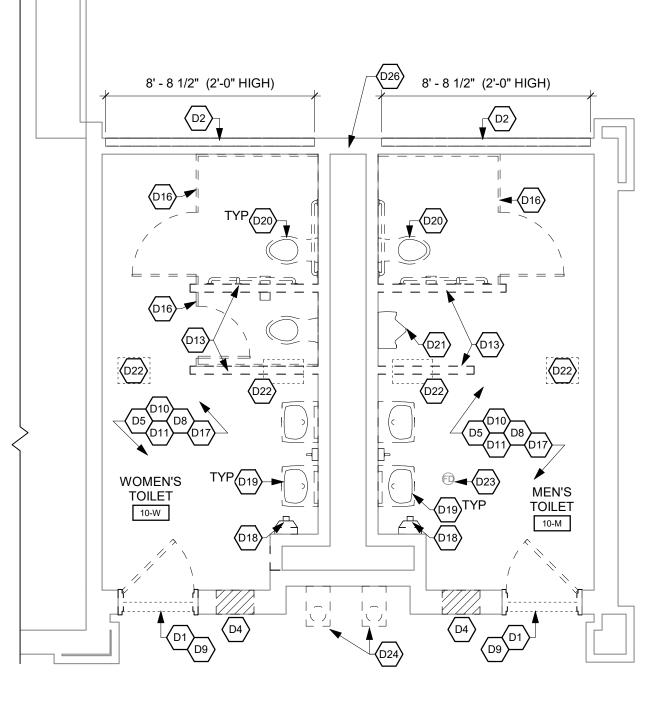
UNION COUNT











# DEMOLITION PLAN KEYNOTES

- NOT ALL KEYNOTES USED ON THIS SHEET
- **OPENINGS**

FLOOR AND BASE

- P1 REMOVE HOLLOW METAL OR FRP DOOR, HOLLOW METAL FRAME, AND ASSOCIATED COMPONENTS. COORDINATE DISCONNECT OF BURGLAR
- ALARM WITH OWNER.  $\langle D2 \rangle$  EXISTING STRUCTURAL GLAZED BLOCK TO REMAIN. CLEAN AND PREPARE FOR FILM COVER
- (D3) REMOVE HOLLOW METAL FRAMED EXTERIOR WINDOW ASSEMBLIES. PREPARE OPENING FOR NEW.
- (D4) SAW CUT NEW HOLE IN MASONRY WALL TO FACILITATE NEW MECHANICAL LOUVER, DUCT, ETC. PROVIDE NEW LINTEL PER NEW WORK PLANS. REFER TO MECHANICAL DRAWINGS.
- $\langle extstyle e$ (D6) STRIP CONCRETE FLOOR OF PAINT DOWN TO CONCRETE SLAB. PREPARE
- FLOOR TO RECIEVE NEW FLOORING.  $\langle extstyle ag{D7} 
  angle$  STRIP ALL COATINGS / FINISHES AND PREPARE CONCRETE FLOOR TO RECIEVE NEW FLOORING.
- D8 REMOVE TILE BASE
- $\langle$  D9 angle REMOVE MARBLE THRESHOLD AT EXISTING DOOR OPENING. CEILING

DRAWINGS FOR ADDITIONAL INFORMATION.

- P10 REMOVE LIGHTS, MECHANICAL DIFFUSERS / REGISTERS, CEILING TRIM, DETECTORS, AND ANY OTHER ASSOCIATED COMPONENTS. REFER TO MEP
- (D11) REMOVE GYPSUM CEILING AND ANY INSULATION ABOVE THE CEILING. (D12) PREPARE EXISTING CAST CONCRETE CEILING PANELS FOR NEW FINISH WALLS
- P13 REMOVE CAST CONCRETE OR MASONRY CMU PARTITION WALL IN ITS ENTIRETY.
- D14 PREPARE CERAMIC TILE WALL TO RECEIVE NEW FINISH.
- 215 PREP EXISTING CAST CONCRETE WALL OR CMU WALL FOR NEW CERAMIC TILE WALL FINISH **SPECIALTIES**
- D16 REMOVE PLASTIC / METAL / WOOD FLOOR-MOUNTED / WALL BRACED TOILET PARTITIONS AND URINAL SCREENS.
- D17 REMOVE WALL / PARTITION MOUNT TOILET ACCESSORIES AND MIRRORS (SOAP DISPENSORS, CHANGING TABLE, TOILET PAPER DISPENSORS, ECT). PLUMBING, HVAC, AND ELECTRICAL
- P18 REMOVE ELECTRIC HAND DRYER AND ASSOCIATED WIRING. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION. REMOVE WALL MOUNT LAVATORY AND ASSOCIATED COMPONENTS, REFER TO PLUMBING DRAWINGS.
- (D20) REMOVE WALL MOUNT WATER CLOSET AND ASSOCIATED COMPONENTS. REFER TO PLUMBING DRAWINGS.  $\langle D21 \rangle$  REMOVE WALL MOUNT URINAL AND ASSOCIATED COMPONENTS. REFER TO
- PLUMBING DRAWINGS. (D22) REMOVE CEILING MOUNTED MECHANICAL EQUIPMENT. REFER TO MECHANICAL DRAWINGS
- D23 EXISTING FLOOR DRAIN TO REMAIN. REFER TO PLUMBING DRAWINGS.
- (D24) REMOVE DRINKING FOUNTAINS. REFER TO PLUMBING DRAWINGS.
- (D25) EXISTING WALL LOUVER TO REMAIN 26 REMOVE EXISTING WALL LOUVER - PREP FOR REPLACEMENT ACCORDING TO MECHANICAL PLANS D27 CORE DRILL HOLE IN PRECAST ROOF ASSEMBLY TO FACILITY EXHAUST DUCT
- 28) REMOVE EXISTING MECHANICAL LOUVER. INSTALL 18 GUAGE STEEL PLATE @ INTERIOR & EXTERIOR FASTENED @ 8" O.C. (TYP). INFILL WITH SPRAY

# ○ FLOOR PLAN KEYNOTES

- NOT ALL KEYNOTES USED ON THIS SHEET
- (1) INTERIOR SPECIALTIES SOLID SURFACE TOILET ROOM COMPARTMENTS
- (2) INTERIOR SPECIALTIES SOLID SURFACE URINAL SCREENS
- (3) INSTALL CONTINUOUS SELF LEVELING CONCRETE UNDERLAYMENT AT EXISTING TILE FLOOR. FEATHER FINISH AROUND FLOOR DRAINS. INSTALL CONTINUOUS RESIN VAPOR RETARDER AND SURFACE HARDENING PRIMER
- 4 NINSTALL FILM AT EXISTING GLAZED BLOCK

WITH SAND BROADCASTING.

(5) MECHANICAL LOUVER PROVIDE LOOSE LINTEL (2: < 5-1/2" x 3-1/2" x 1/2") AT NEW OPENINGS GREATER THAN 12". REFER TO MECH DRAWINGS

# CEILING PLAN KEYNOTES

- NOT ALL NOTES USED ON THIS SHEET
- (C0) EXISTING EXPOSED STRUCTURE TO REMAIN
- $\langle$ C1angle CEILING TYPE C1: 1/2" TYPE X MOISTURE RESISTANT GYPSUM BOARD OVER
- NEW STEEL SUSPENSION SYSTEM. C2 MECHANICAL EQUIPMENT - ABOVE CEILING MECHANICAL UNIT - REFER TO
- MECHANICAL DRAWINGS C3) MECHANICAL EQUIPMENT - CEILING MOUNTED MECHANICAL UNIT HEATER -REFER TO MECHANICAL DRAWINGS
- C4 MECHANICAL EQUIPMENT ROOFTOP MOUNTED EXHAUST FAN @ EXISTING CURB - PROVIDE FLASHING ASSEMBLY. REFER TO MECH DRAWINGS (C5) MECHANICAL EQUIPMENT - CEILING MOUNTED FURNACE. SEE MECH DWGS

# FLOOR PLAN LEGEND

SND = SANITARY NAPKIN DISPOSAL

SNV = SANITARY NAPKIN VENDOR

SYMBOL AND GRAPHICS LEGEND:

 $(A \times X \times A) = DOOR TAG (SEE DETAILS)$ = SPOT ELEVATION

w# = WINDOW TYPE (SEE DETAILS)

- **TOILET ACCESSORIES:**
- GB1 = GRAB BAR 42" HORIZONTAL SD = SOAP DISPENSER WALL MOUNT GB2 = GRAB BAR - 36" HORIZONTAL GB3 = GRAB BAR - 18" VERTICAL M1 = MIRROR TYPE 1 - 1'-8" W X 2'-6"
- HD = HAND DRYER SURFACE -
- CS1 = BABY CHANGING STATION
- PLUMBING FIXTURES AND MOUNTING HEIGHTS
- DF-A = BI-LEVEL ADA WATER COOLOR / DRINKING FOUNTAIN WALL MOUNT (ADULT STANDARD = 42" AFF & ADULT ACCESSIBLE 36" AFF)
- L-34 = LAVATORY WALL MOUNT 34" AFF (STANDARD / ADULT AND CHILD ACCESSIBLE)
- U-17 = URINAL 17" AFF (ADULT AND CHILD ACCESSIBLE) U-24 = URINAL - 24" AFF (STANDARD)
- WC-15 = WATER CLOSET WALL MOUNT 15" AFF (STANDARD) WC-17 = WATER CLOSET - WALL MOUNT - 17" AFF (ADULT AND CHILD ACCESSIBLE'

# REFLECTED CEILING PLAN LEGEND

# SYMBOL LEGEND:

RECESSED OR SURFACE MOUNT LIGHT FIXTURE USPENDED UTILITY LIGHT - ATTACH TO SUSPENSION GRID

EXIT SIGN

CEILING DIFFUSER SEE MECH DRAWINGS CEILING REGISTER / GRILL SEE MECH DRAWINGS EXHAUST FAN

SEE MECH DRAWINGS EMERGENCY LIGHT

# GENERAL DEMOLITION NOTES

- 1. REFERENCE:
- TO SPECIFICATIONS FOR TEMPORARY FACILITIES NOTES. B. OVERHEAD LINES ARE HIDDEN FOR CLARITY. REFER TO REFLECTED CEILING

A. REFER TO COVER SHEET FOR CODE SUMMARY AND INFORMATION. REFER

- PLANS FOR ADDITIONAL INFORMATION. C. REFER TO ARCHITECTURAL, PLUMBING, MECHANICAL, AND ELECTRICAL
- DRAWINGS FOR FULL EXTENT OF DEMOLITION SCOPE. D. COORDINATE SIZE AND LOCATION OF DEMOLITION WORK WITH
- ARCHITECTURAL AND PLUMBING/MECHANICAL/ELECTRICAL DRAWINGS. 2. GENERAL
- A. VERIFY EXISTING CONDITIONS PRIOR TO DEMOLITION.
- B. PROTECT IN-PLACE ASSEMBLIES FOR DURATION OF CONSTRUCTION.
- C. PERFORM DEMOLITION WORK NECESSARY TO COMPLETE CONTRACTUAL SCOPE OF WORK.
- D. DASHED LINES GENERALLY INDICATE EXTENTS OF DEMOLITION, BUT ARE NOT INTENDED TO BE ALL-INCLUSIVE OF EVERY DEMOLITION INSTANCE.
- E. NOTES ARE TYPICAL FOR SIMILAR AND LIKE CONDITIONS.
- F. NOT ALL DEMOLITION PLAN KEYNOTES MAY BE USED ON EACH SHEET
- G. REMOVE ITEMS IN THEIR ENTIRETY INCLUDING. BUT NOT LIMITED TO. ASSOCIATED SUPPORTS, HARDWARE, FASTENERS, MASTIC, AND SEALANT UNLESS NOTED OTHERWISE.
- H. VERIFY EXTENT AND LOCATION OF BEARING MEMBERS AND WALLS BEFORE DEMOLITION. NOTIFY ARCHITECT IMMEDIATELY IF POTENTIAL QUESTION IS
- TEMPORARY BRACING AND SHORING IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. PROVIDE TEMPORARY BRACING AND SHORING NECESSARY TO COMPLETE CONTRACTUAL SCOPE OF WORK.
- I. PRIOR TO SAW CUTTING CONCRETE SLAB (IF INDICATED ON DRAWING OR REQUIRED BY SCOPE OF WORK) PERFORM A GROUND PENETRATING RADAR (GPR) SCAN OF THE SLAB TO LOCATE ANY UNDERGROUND UTILITIES (PLUMBING LINES, ELECTRICAL CONDUIT, ETC). PROVIDE SKETCH / REPORT TO ARCHITECT AND OWNER.
- 3. ASBESTOS:
- A. THERE ARE NO KNOWN ASBESTOS CONTAINING MATERIALS (ACM) PRESENT IN THE SPACE. IF ANY PRESUMED ASBESTOS CONTAINING MATERIALS (PACM) ARE ENCOUNTERED DURING THE COURSE OF THE PROJECT, NOTIFY THE ARCHITECT AND THE OWNER IMMEDIATELY. DO NOT DISTURBED MATERIAL. THE OWNER WILL RETAIN AN ENVIRONMENTAL ENGINER / TESTING COMPANY TO PERFORM SAMPLING AND TESTING.
- 4. PATCHING:
- A. PERFORM WORK SO THAT MINIMAL DAMAGE TO ADJACENT CONSTRUCTION IS INCURRED.
- B. CLEAN AND PATCH DISTURBED MATERIALS AND SURFACES.
- C. PATCH MATERIALS AND SURFACES TO MATCH ADJACENT CONSTRUCTION.
- D. PATCH COMPONENTS AND ASSEMBLIES TO REESTABLISH A WEATHER TIGHT BUILDING ENCLOSURE.

# GENERAL FLOOR PLAN NOTES

# 1. REFERENCE:

- A. REFER TO COVERSHEET FOR CODE INFORMATION. TOILET FIXTURE CALCULATIONS, AND CONSTRUCTION REQUIREMENTS.
- B. REFER TO ARCHITECTURAL, PLUMBING, MECHANICAL, AND ELECTRICAL, DRAWINGS FOR FULL SCOPE AND EXTENT OF WORK.
- C. PATCH MASONRY WALLS. FILL ABANDONED PENETRATIONS TO MATCH ADJACENT CONSTRUCTION AND PREPARE FOR FINISHES AS INDICATED ON
- D. PROTECT IN-PLACE ASSEMBLIES TO REMAIN AND ITEMS DESIGNATED AS
- SALVAGE ON DEMOLITION DRAWINGS. 2. GENERAL
- A. KEY NOTES MAY NOT BE INDICATED AT ALL LOCATIONS BUT ARE TYPICAL FOR SIMILAR CONDITIONS
- B. DIMENSIONS OF CMU ARE NOMINAL AND ARE GIVEN TO THE FACE OF WALL UNLESS NOTED OTHERWISE.
- C. DIMENSIONS OF STUD PARTITIONS ARE GIVEN TO FACE OF STUD UNLESS NOTED OTHERWISE.
- 3. TOILET ROOM NOTES:
- A. ALL ACCESSIBLE TOILET ACCESSORIES AND PLUMBING FIXTURES SHALL MEET ANSI A117.1 - 2009 STANDARDS
- B. ACCESSORIES ASSOCIATED WITH PLUMBING FIXTURES SHALL BE MOUNTED TO THE SAME ACCESSIBLE HEIGHT ASSOCIATED WITH THAT FIXTURE.
- C. ACCESSORIES NOT ASSOCIATED WITH A PLUMBING FIXTURE SHALL BE MOUNTED AT STANDARD HEIGHT UNLESS NOTED OTHERWISE.
- D. ACCESSORIES THAT ARE OPERATED BY SENSORS AND THAT ARE 'HANDS FREE' SHALL BE MOUNTED TO CENTERLINE OF DISPENSOR OR NOZZLE.
- E. FLUSH HANDLES SHALL BE LOCATED TO THE OPEN SIDE OF WATER CLOSET

# GENERAL CEILING PLAN NOTES

# . REFERENCE:

- A. REFER TO FINISH PLAN AND INTERIOR ELEVATIONS FOR ROOM FINISH
- 2. GENERAL
- A. FIELD VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION. B. NOTES ARE TYPICAL FOR SIMILAR AND LIKE CONDITIONS.
- C. PLAN KEYNOTES MAY NOT BE INDICATED AT ALL LOCATIONS BUT ARE
- TYPICAL FOR SIMILAR AND LIKE INSTANCES.
- D. NOT ALL PLAN KEYNOTES OR GRAPHICS MAYBE USED ON THIS SHEET. E. NOT ALL CEILING MOUNTED ITEMS MAY BE SHOWN.
- F. COORDINATE ACTUAL DUCTWORK CONFIGURATION TO MINIMIZE EXPOSED
- G. INDICATE SUPPLY GRILLES. RETURN GRILLES. SPRINKLER HEADS. SMOKE DETECTORS, LIGHTS, SPEAKERS, VIDEO, WIRELESS ACCESS POINTS. AND EXIT SIGNS ON COORDINATION DRAWINGS. FINAL PLACEMENT TO BE

#### APPROVED BY ARCHITECT PRIOR TO INSTALLATION. GENERAL CEILING SCOPE:

- A. PROVIDE ACCESS DOORS AND PANELS FOR EQUIPMENT ACCESS. COORDINATE LOCATIONS WITH ARCHITECT PRIOR TO INSTALLATION.
- B. DO NOT ATTACH NEW CEILING GRID TO RECESSED AND SEMI-RECESSED CEILING MECHANICAL UNITS.
- C. PAINT EXPOSED METAL DECK, STRUCTURAL STEEL, STRUCTURE, DUCTWORK, PIPING, SPRINKLER PIPING, CONDUIT, ETC. EXPOSED TO VIEW ABOVE ACT CEILINGS ARE TO BE PAINTED WITH DRY FALL PAINTED FINISH( TYPICAL FOR ALL LOCATIONS WITH EXPOSED OR PARTIALLY EXPOSED STRUCTURE) INCLUDING ABOVE CEILINGS IN CORRIDORS.
- D. PROVIDE FLUSH SEALANT AT CONTROL JOINTS AND PAINT.

# E. PROVIDE EXPANSION / JOINT LINES AT GYPSUM BOARD CEILINGS.

# 4. LAYOUT:

- A. DIMENSIONS ARE TO FINISHED SURFACE UNLESS NOTED OTHERWISE.
- B. INSTALL LIGHT FIXTURES CENTERED ABOVE PLUMBING FIXTURES OR GROUP OF PLUMBING FIXTURES UNLESS NOTED OTHERWISE.
- C. CEILING HEIGHTS ARE FROM FINISH FLOOR UNLESS NOTED OTHERWISE

RAHWAY, NJ 07065 ITY OF RAHWAY UNION COUNT **DEMO & PROPOSED** PLANS

50 DIVISION STREET, SUITE 503

WWW.SSPARCHITECTS.COM

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SCOTT E. MIHALICK, AIA NJ: 21AI0166160

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CONSULTANT:

PHASE / SUBMISSION:

ISSUE DATE:

**REVISIONS:** 

NJ SDA PACKAGE#

© SSP ARCHITECTS

NJ SDA #:

NJ DOE #:

SSP #:

ISSUED FOR BID

AUGUST 31, 2023

THE COUNTY OF UNION

2325 SOUTH AVENUE

SCOTCH PLAINS, NEW JERSEY 07076

INTERIOR RESTROOM

FACILITIES **RENOVATIONS AT:** 

UNION COUNTY

PARKS:

**MADISON** 

**AVENUE PARK** 

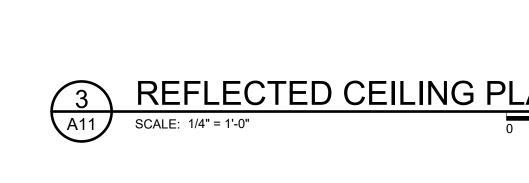
1333 MADISON AVE

DESCRIPTION

SOMERVILLE, NJ 08876

PHONE: 908-725-7800

SHEET NUMBER:



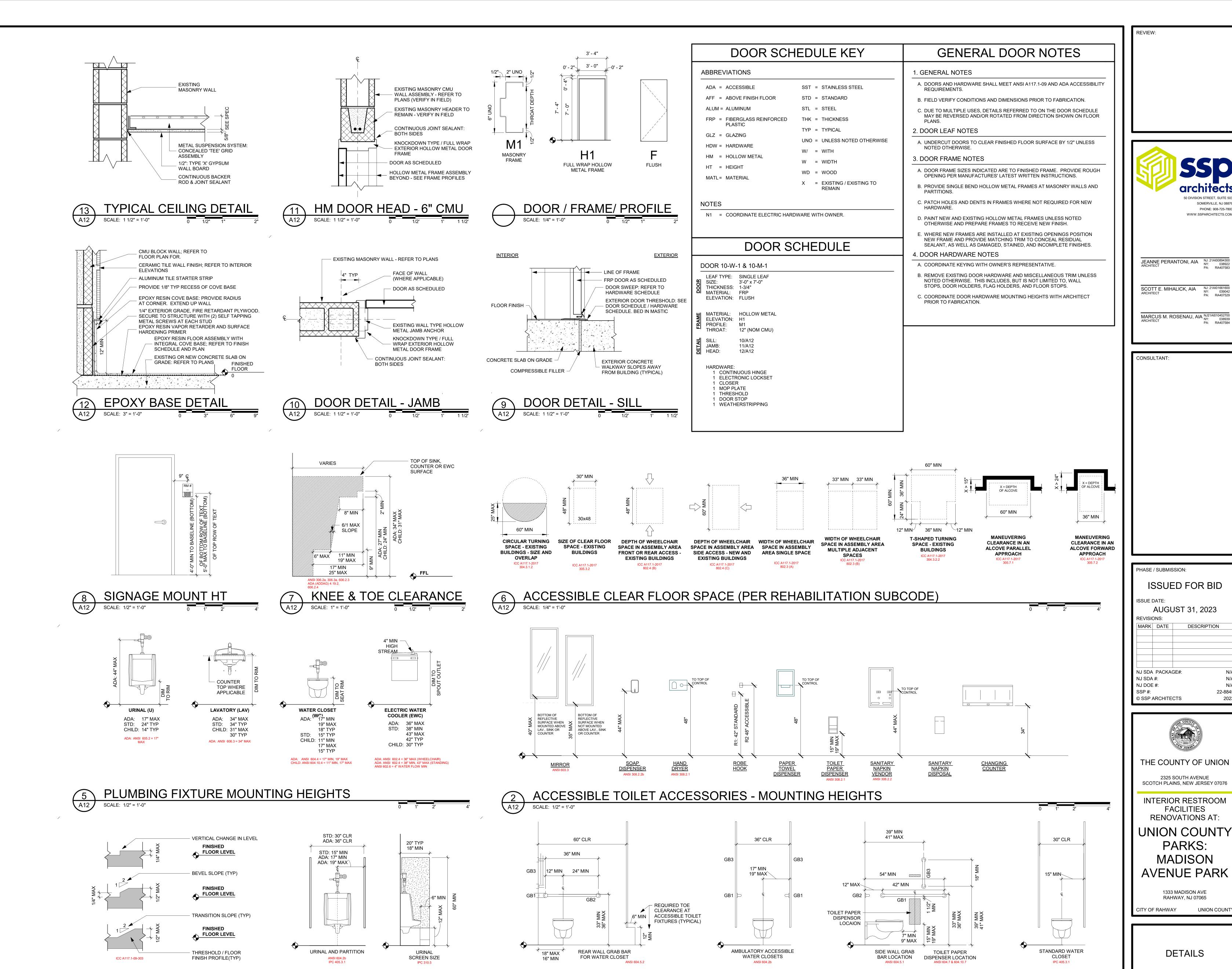
 $\rightarrow$ 

EQ

TOILET

EQ

(C1) TOILET



SCALE: 1/2" = 1'-0"

ADULT WATER CLOSET STALL, GRAB BARS, & ACCESSORY LOCATION DETAIL

FLOOR TRANSITION

NOT TO SCALE

SHEET NUMBER:

UNION COUNT

DESCRIPTION

architects

50 DIVISION STREET, SUITE 503

WWW.SSPARCHITECTS.COM

SOMERVILLE, NJ 08876

PHONE: 908-725-7800

#### SUMMARY

- 1.1. THE SCOPE OF THIS PROJECT IS TO UPGRADE ALL MECHANICAL AND PLUMBING SYSTEMS, EQUIPMENT, AND FIXTURES AS WELL AS TO PROVIDE UPGRADES AND MODIFICATIONS TO THE EXISTING ELECTRICAL SYSTEMS FOR RESTROOMS IN UNION COUNTY PUBLIC PARKS.
- 1.2. THE BUILDING IS A SEISMIC DESIGN CATEGORY OF B, WHICH MEANS THAT PLUMBING SYSTEMS DO NOT REQUIRE SEISMIC BRACING.

#### 2. DEFINITIONS

- 2.1. FURNISH: TO PURCHASE AND DELIVER AN ITEM TO THE STAGING AREA COMPLETE WITH ALL REQUIRED APPURTENANCES.
- 2.2. INSTALL: TO MOVE THE ITEM FROM THE STAGING AREA AND FASTEN TO THE STRUCTURE. 2.3. PROVIDE: TO FURNISH AND INSTALL.

#### 3. QUALITY ASSURANCE

- 3.1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH INDUSTRY STANDARDS AND SHALL CONFORM TO THE NEW JERSEY UNIFORM CONSTRUCTION CODE. THE CURRENTLY ADOPTED SUBCODES WITH AMENDMENTS ARE AS FOLLOWS:
- 3.1.1. INTERNATIONAL BUILDING CODE 2021 3.1.2. NATIONAL STANDARD PLUMBING CODE 2021
- 3.1.3. INTERNATIONAL MECHANICAL CODE 2021
- 3.1.4. INTERNATIONAL FUEL GAS CODE 2021 3.1.5. NATIONAL ELECTRIC CODE 2020
- 3.1.6. ASHRAE 90.1-2019 3.1.7. ICC A117.1-2017
- 3.1.8. NFPA 13-2019 (ADOPTED THROUGH IBC 2021) 3.2. WHERE THE CONTRACT DOCUMENTS INDICATE MORE STRINGENT REQUIREMENTS THAN THE PRECEDING CODES AND ORDINANCES, THE CONTRACT DOCUMENTS SHALL TAKE PRECEDENCE. PRIOR TO ORDERING AND/OR INSTALLING ANY PORTION OF THE WORK WHICH APPEARS TO BE IN CONFLICT THE WORK SHALL BE BROUGHT TO THE ARCHITECT/ENGINEER'S ATTENTION
- FOR DIRECTIONS AS TO WHAT IS PROVIDED. 3.3. IN THE EVENT OF A CONFLICT WITH CODES, THE MORE STRINGENT REQUIREMENTS SHALL APPLY.

### 4. FIRESTOPPING

4.1. ALL PENETRATIONS THROUGH FIRE-RATED ASSEMBLIES SHALL HAVE APPROPRIATE INTUMESCENT MATERIAL FIRE STOPPING INSTALLED. ALL OPENINGS SHALL BE CAULKED AND SEALED WITH SSS INTUMESCENT FIRESTOP SEALANT AS MANUFACTURED BY SPECIFIED TECHNOLOGIES, INC.

5.1. ALL ROOF PENETRATIONS SHALL BE WEATHERPROOF IN ALL RESPECTS. ANY WORK DONE ON THE ROOF SHALL BE PERFORMED BY A CONTRACTOR CERTIFIED BY THE ROOF MANUFACTURER TO MAINTAIN THE EXISTING ROOF

#### 6. CONTRACT DRAWINGS AND SPECIFICATIONS:

- 6.1. CONTRACT DRAWINGS ARE GENERALLY DIAGRAMMATI AND CONVEY THE SCOPE OF WORK AND GENERAL ARRANGEMENT OF APPARATUS AND EQUIPMENT. TH DRAWINGS DO NOT INTEND TO SHOW EVERY OFFSET AND ACCESSORY REQUIRED, NOR EVERY STRUCTURAL DIFFICULTY THAT MAY BE ENCOUNTERED. 6.2. THE LOCATIONS OF ALL ITEMS SHOWN ON THE
- DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS THAT RE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE ONLY. THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS MUST BE DETERMINED AT THE PROJECT SITE AND SHALL FOLLOW DRAWINGS IN LAYING OUT WORK AND SHALL CHECK DRAWINGS OF THE OTHER TRADES TO VERIFY SPACES IN WHICH WORK WILL BE INSTALLED. 6.3. MAINTAIN MAXIMUM HEADROOM AND SPACE CONDITIONS
- AT ALL POINTS. 6.4. IF DIRECTED BY THE GENERAL CONTRACTOR, ENGINEER, AND/OR ARCHITECT, THE SUBCONTRACTOR SHALL, WITHOUT EXTRA CHARGE, MAKE REASONABLE MODIFICATIONS IN THE LAYOUT AS NEEDED TO PREVENT CONFLICT WITH OTHER OF OTHER TRADES OR BEFORE
- PROPER EXECUTION OF THE WORK. 6.5. THE SPECIFICATIONS ARE INTENDED ONLY TO COMPLEMENT THE DRAWINGS; HOWEVER, WORK DETAILED AND/OR NOTED ONLY ON THE DRAWINGS OR WORK DESCRIBED ONLY IN THE SPECIFICATIONS SHALL ALL BE CONSIDERED AS PART OF THE SCOPE OF WORK.

# 7. OBTAINING INFORMATION

7.1. OBTAIN FROM THE MANUFACTURER THE PROPER METHOD OF INSTALLATION AND CONNECTION OF THE EQUIPMENT THAT IS TO BE FURNISHED AND INSTALLED OBTAIN ALL INFORMATION THAT IS NECESSARY TO FACILITATE THE WORK AND TO COMPLETE THE PROJECT.

# 8. ELECTRICAL EQUIPMENT

- 8.1. ELECTRICAL COMPONENTS OF PLUMBING EQUIPMENT AND SYSTEMS. SHALL BE PROVIDED UNDER THE RELATED SECTION OF DIVISION 22.
- 8.2. ALL ELECTRICAL EQUIPMENT INSTALLED IN CONCEALED SPACES SHALL BE PROVIDED WITH A HARD-WIRED ELECTRICAL CONNECTION. PLUG-TYPE DISCONNECTS SHALL NOT BE ALLOWED IN CONCEALED SPACES. EQUIPMENT PROVIDED WITH PLUG-IN CORDS SHALL NOT HAVE THEIR CORDS MODIFIED.

# 9. OPENINGS IN EXTERIOR WALLS OR ROOF

9.1. OPENINGS IN EXTERIOR WALLS OR ROOF SHALL BE KEPT PROPERLY PLUGGED AND CAULKED AT ALL TIMES, EXCEPT WHEN BEING WORKED ON TO PRECLUDE THE POSSIBILITY OF FLOODING DUE TO STORM OR OTHER AFTER COMPLETION OF WORK, OPENINGS SHALL BE PERMANENTLY SEALED AND CAULKED IN A MANNER APPROVED BY THE ARCHITECT.

# 10. COOPERATION WITH OTHER TRADES

- 10.1. GIVE FULL COOPERATION TO OTHER TRADES AND FURNISH IN WRITING TO THE ARCHITECT ANY INFORMATION NECESSARY TO PERMIT THE WORK OF ALL TRADES TO BE INSTALLED SATISFACTORILY AND WITH THE LEAST POSSIBLE INTERFERENCE OR DELAY
- 10.2. FINAL LOCATION OF PLUMBING FIXTURES AND OTHER PIECES OF EQUIPMENT, WHETHER OR NOT FURNISHED BY THE PLUMBING SUBCONTRACTOR, REQUIRING PLUMBING SERVICES SHALL BE COORDINATED WITH THE ARCHITECTURAL PLANS. ADDITIONAL OFFSETS, FITTINGS, ETC., SHALL BE PROVIDED AS NEEDED TO MEET THIS REQUIREMENT AT NO EXTRA COST TO THE OWNER.
- 10.3. IF DISCREPANCIES EXIST IN THE SCOPE OF WORK AS TO WHAT TRADE PROVIDES ITEMS THEY SHALL BE REPORTED TO THE ARCHITECT/ENGINEER PRIOR TO SIGNING CONTRACT. IF DISCREPANCIES ARE NOT REPORTED, THE PLUMBING SUBCONTRACTOR SHALL FURNISH SUCH ITEMS AS NEEDED FOR A COMPLETE AND OPERABLE SYSTEM.
- 10.4. DISTRIBUTION SYSTEMS WHICH REQUIRE PITCH OR SLOPE SUCH AS PLUMBING DRAINS, STEAM AND CONDENSATE PIPING SHALL HAVE THE RIGHT OF WAY OVER THOSE WHICH DO NOT.
- 10.5. IN ALL SPACES, PRIOR TO INSTALLATION OF VISIBLE MATERIAL AND EQUIPMENT, INCLUDING ACCESS PANELS. REVIEW ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND WHERE NOT DEFINITELY INDICATED. REQUEST INFORMATION FROM ARCHITECT.
- 10.6. WHERE PLUMBING WORK SHALL INTERFERE WITH THE WORK OF OTHER TRADES, ASSIST IN WORKING OUT THE SPACE CONDITIONS TO MAKE SATISFACTORY ADJUSTMENTS BEFORE INSTALLATION. WITHOUT EXTRA COST TO OWNERS, MAKE REASONABLE MODIFICATIONS TO THE WORK AS REQUIRED BY NORMAL STRUCTURAL INTERFERENCES. PAY THE GENERAL CONTRACTOR FOR ADDITIONAL OPENINGS, OR RELOCATING AND/OR ENLARGING EXISTING OPENING THROUGH CONCRETE FLOORS, WALLS, BEAMS AND ROOF REQUIRED FOR ANY

WORK WHICH WAS NOT PROPERLY COORDINATED. ALI PIPING AND ASSOCIATED COMPONENTS TO BE AS TIGHT TO UNDERSIDE OF STRUCTURE AS POSSIBLE. 10.7. WHERE CONFLICTS OR POTENTIAL CONFLICTS EXIST AND ENGINEERING GUIDANCE IS DESIRED, SUBMIT SKETCH OF PROPOSED RESOLUTION TO ARCHITECT AND ENGINEER

# 11. EXISTING CONDITIONS:

11.1. EXISTING PIPING, EQUIPMENT, ETC. AS SHOWN ON PLAN, IS GENERALLY DIAGRAMMATIC 11.2. EXISTING LAYOUT SHOWN IS BASED ON A COMBINATION

FOR REVIEW AND APPROVAL.

EXISTING DRAWINGS. 11.3. CONTRACTOR IS TO VERIFY EXISTING CONDITIONS PRIOR TO BEGINNING WORK

OF FIELD OBSERVATION AND, WHERE AVAILABLE,

11.4. CONTRACT DRAWINGS MAKE THE ASSUMPTION THAT ALL

- EXISTING PIPING, EQUIPMENT, WET COLUMNS, ETC. ARE FULLY FUNCTIONAL AND CAN BE REUSED FOR THIS PROJECT, WHERE REQUIRED. 11.4.1. WHERE EXISTING PIPING EQUIPMENT, ETC. IS TO BE
- REUSED, CONTRACTOR IS TO VERIFY ITS FUNCTIONALITY PRIOR TO MAKING FINAL CONNECTIONS. 11.4.2. NOTIFY ENGINEER AND ARCHITECT IF EXISTING
- PIPING, EQUIPMENT, ETC. CAN NOT BE USED AS PART OF THIS PROJECT. 11.5. EXISTING SANITARY PIPING
- 11.5.1. CONTRACTOR IS TO CLEAN, JET FLUSH, AND SCOPE EXISTING TO REMAIN SANITARY PIPING WITHIN THE AREA OF WORK. PROVIDE REPORT TO ENGINEER AND ARCHITECT WITH PIPING CONDITION.
- 11.5.2. CONTRACTOR TO VERIFY EXISTING LOCATION. INVERT, DIRECTION OF FLOW, ETC. PRIOR TO INSTALLATION OF NEW SANITARY PIPING. 11.6. IF NOT ALREADY INDICATED ON THE CONTRACT
- DRAWINGS, EXISTING ABOVE GRADE PVC/ABS SANITARY VENT, OR STORM WATER PIPING LOCATED IN A RETURN AIR PLENUM WITHIN THE SCOPE OF WORK IS TO BE FIRE WRAPPED OR REPLACED WITH CAST IRON OR COPPER DWV PIPING. 11.3. NOTIFY ENGINEER AND ARCHITECT IF EXISTING
- CONDITIONS DIFFER SIGNIFICANTLY FROM THOSE SHOWN ON PLAN, OR IF EXISTING CONDITIONS DO NOT PERMIT PROPOSED PLUMBING PLAN.

#### 12. BIDDER'S REPRESENTATION:

- 12.1. BY THE ACT OF SUBMITTING A BID FOR THE PROPOSED CONTRACT, THE BIDDER REPRESENTS THAT: 12.1.1. THE BIDDER AND ALL SUBCONTRACTORS HAVE CAREFULLY AND THOROUGHLY REVIEWED THE DRAWINGS, SPECIFICATIONS, AND OTHER
- CONSTRUCTION CONTRACT DOCUMENTS. 12.1.2. THE BIDDER INTENDS TO USE CONTRACTORS WHO ARE LICENSED, SKILLED AND EXPERIENCED IN THE TYPE OF CONSTRUCTION REPRESENTED BY THE CONSTRUCTION CONTRACT DOCUMENTS BID UPON. 12.1.3. NEITHER THE BIDDER NOR ANY OF THE BIDDER'S EMPLOYEES, AGENTS, INTENDED SUPPLIERS, OR
- SUBCONTRACTORS HAVE RELIED UPON ANY VERBAL REPRESENTATIONS 12.1.4. THE BID FIGURE IS BASED SOLELY UPON THE CONSTRUCTION CONTRACT DOCUMENTS AND PROPERLY ISSUED WRITTEN ADDENDA AND NO UPON OTHER WRITTEN REPRESENTATION.

#### 13. PROTECTION

13.1. PROTECT ALL WORK AND MATERIAL FROM DAMAGE BY WORK AND WORKMEN, AND ACCEPT LIABILITY FOR ALL DAMAGE THUS CAUSED.

13.2. BE RESPONSIBLE FOR WORK AND EQUIPMENT UNTIL

- FINALLY INSPECTED, TESTED, AND ACCEPTED. PROTECT WORK AGAINST THEFT, INJURY OR DAMAGE: AND CAREFULLY STORE MATERIAL AND EQUIPMENT RECEIVED ON SITE, WHICH IS NOT IMMEDIATELY INSTALLED. 13.3. CLOSE OPEN ENDS OF WORK WITH TEMPORARY COVERS
- OR PLUGS DURING STORAGE AND CONSTRUCTION TO PREVENT ENTRY OF OBSTRUCTING MATERIAL. 13.4. ALL OPENINGS IN STORED & INSTALLED PIPING SHALL BE COVERED & SEALED WHEN NOT IN USE TO PREVENT CONTAMINATION FROM DUST & DEBRIS.

# 14. MATERIALS AND WORKMANSHIP

- 14.1. ALL MATERIALS AND APPARATUS REQUIRED FOR THE WORK, EXCEPT AS SPECIFICALLY SPECIFIED OTHERWISE, SHALL BE NEW, OF FIRST-CLASS QUALITY, AND SHALL BE FURNISHED, DELIVERED, ERECTED, CONNECTED AND FINISHED IN EVERY DETAIL, AND SHALL BE SO SELECTED AND ARRANGED AS TO FIT PROPERLY INTO THE BUILDING SPACES. WHERE NO SPECIFIC KIND OR QUALITY OF MATERIAL IS GIVEN, A FIRST-CLASS STANDARD ARTICLE AS APPROVED BY THE ARCHITECT SHALL BE FURNISHED
- 14.2. FURNISH THE SERVICES OF AN EXPERIENCED FOREMAN WHO SHALL BE CONSTANTLY IN CHARGE OF THE INSTALLATION OF THE WORK, TOGETHER WITH ALL SKILLED WORKMEN, FITTERS, METAL WORKERS, WELDER, HELPERS, AND LABOR REQUIRED TO UNLOAD, TRANSFER ERECT, CONNECT, ADJUST, START, OPERATE, AND TEST EACH SYSTEM.
- 14.3. ALL EQUIPMENT AND MATERIALS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED INSTALLATION INSTRUCTIONS AS WELL AS UL LISTING INSTRUCTIONS AND ALL LOCAL, STATE AND NATIONAL CODES.

# 15. ACCESSIBILITY

- 15.1. ASSURE AND BE RESPONSIBLE FOR THE ADEQUACY OF SHAFTS AND CHASES, THE ADEQUATE CLEARANCE IN DOUBLE PARTITIONS AND HUNG CEILINGS FOR THE PROPER INSTALLATION OF THE WORK.
- 15.2. COOPERATE WITH ALL OTHER TRADES WHOSE WORK IS IN THE SAME SPACE. SUCH SPACES AND CLEARANCES SHALL, HOWEVER, BE KEPT TO THE MINIMUM SIZE
- 15.3. LOCATE ALL EQUIPMENT, WHICH MUST BE SERVICED, OPERATED. ADJUSTED OR MAINTAINED IN FULLY ACCESSIBLE POSITIONS. EQUIPMENT SHALL INCLUDE. BUT NOT BE LIMITED TO. VALVES, TRAPS, CLEANOUTS MOTORS, CONTROLLERS, STRAINERS, RPZS, TRAP PRIMERS, WATER HAMMER ARRESTORS, AND DRAINS, REQUIRED FOR BETTER ACCESSIBILITY, FURNISH ACCESS DOORS FOR THIS PURPOSE, MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE TO ALLOW FOR BETTER ACCESSIBILITY, AND THE ENGINEER SHALL APPROVE ANY CHANGE.
- 15.4. ACCESS PANELS: 15.4.1. PROVIDE ACCESS PANELS FOR INSTALLATION IN CONCRETE BLOCK WALLS OR GYPSUM WALLBOARD CEILINGS AND PARTITIONS IN LOCATIONS, WHICH REQUIRE ACCESS FOR SERVICE TO THE ITEMS LOCATED BEHIND THE PERMANENT GYPSUM
- REQUIRED TO GAIN ACCESS TO VALVES, TRAP PRIMERS, WATER HAMMER ARRESTORS, CLEANOUTS, 15.4.3. PANELS SHALL BE FLUSH, INSULATED, CONTAIN

CONTINUOUS STEEL HINGE AND SCREWDRIVER

15.4.2. ACCESS PANELS SHALL BE INSTALLED WHERE

WALLBOARD OR CONCRETE BLOCK FINISH.

- OPFRATED. 15.4.4. PANELS SHALL BE RATED EQUAL TO THE ASSEMBLY THAT THEY ARE BEING INSTALLED IN. 15.4.5. PANELS SHALL BE UL LISTED.
- 15.4.6. ACCESS PANELS LOCATED IN FIRE RATED PARTITIONS SHALL BE FIRE PANELS. THE FRAME AND PANEL ASSEMBLY OF THESE FIRE PANELS SHALL BE MANUFACTURED UNDER THE FACTORY INSPECTION SERVICE OF THE UNDERWRITERS' LABORATORIES, INC., AND SHALL BEAR A LABEL READING: "FRAME AND FIRE PANEL ASSEMBLY, RATING 2 HOURS. (B) TEMPERATURE RISE 30 MINUTES, 250° F. MAXIMUM." RATED PANELS SHALL BE EQUIPPED WITH AUTOMATIC CLOSING
- MECHANISM AND BE SELF-LATCHING. 15.4.7. PANELS SHALL BE PROVIDED WITH SCREWDRIVER OPERATED FLUSH CAM LOCKS. 15.4.8. PANEL SIZE SHALL BE 12 INCHES X 12 INCHES
- EXCEPT FURNISH A LARGER SIZE IF REQUIRED TO SERVICE A PARTICULAR ITEM. 15.4.9. THE EXACT LOCATION AND SIZE OF EACH ACCESS

PANEL SHALL BE REVIEWED WITH, AND APPROVED BY, THE ENGINEER.

### 16. CUTTING AND PATCHING

- 16.1. PROVIDE ALL CUTTING AND PATCHING NECESSARY TO INSTALL THE WORK SPECIFIED IN THIS DIVISION. PATCHING SHALL MATCH ADJACENT SURFACES. AT FLOOR SLABS & WALL OPENINGS TO BE CORED DRILLED OR CUT, CONTRACTOR SHALL FIND AND MARK ON BOTH FACES ALL REINFORCING, REBAR, CONDUITS, UTILITIES, ETC. BY MEANS OF X-RAY, PACH-OMETER OR PROF-OMETER. SUBMIT SKETCH SHOWING LOCATIONS OF ALL FINDINGS AND PROPOSED CUTS OR CORES.
- 16.2. NO STRUCTURAL MEMBERS SHALL BE CUT WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER, AND ALL SUCH CUTTING SHALL BE ACCOMPLISHED IN A MANNER DIRECTED BY THE STRUCTURAL ENGINEER. 17. GROUNDING

17.1. ALL COMPONENTS OF PLUMBING PIPING SYSTEMS SHALL BE PROPERLY GROUNDED TO BUILDING GROUND. WHERE GROUND PATH IS INTERRUPTED BY NON-CONDUCTIVE MATERIALS, APPROPRIATE BONDING OR GROUNDING TO BUILDING GROUND SHALL BE PROVIDED.

### 18. DEMOLITION

- 18.1. PRIOR TO SUBMITTING BID. VISIT SITE AND IDENTIFY EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT WORK OF THIS SECTION. DEMOLITION WORK WILL REQUIRE CAREFUL SITE EXAMINATION PRIOR TO
- 18.2. NO COMPENSATION WILL BE GRANTED FOR ADDITIONAL WORK CAUSED BY UNFAMILIARITY WITH SITE CONDITIONS THAT ARE VISIBLE OR READILY CONSTRUED BY EXPERIENCED OBSERVERS.
- 18.3. PRIOR TO COMMENCING DEMOLITION, CONTRACTOR SHALL IDENTIFY WITH OWNER ANY EQUIPMENT TO BE RETURNED TO THE OWNER AFTER DEMOLITION. ALL OTHER DEBRIS SHALL BE DISPOSED OF BY THIS CONTRACTOR IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.
- 18.4. ANY SHUTDOWNS REQUIRED FOR DEMOLITION SHALL BE COORDINATED WITH BUILDING OWNER TO AVOID IMPACT TO OPERATIONS. 18.5. DURING DEMOLITION, ANY EQUIPMENT, DUCTWORK,
- PIPING, ETC. FOUND TO BE ABANDONED SHALL BE DEMOLISHED. EXISTING UNUSED CONNECTIONS TO EXISTING PIPING SHALL BE CUT BACK TO THE MAINS AND CAPPED ACCORDINGLY 18.6. UNDER DEMOLITION, THE FOLLOWING IS, IN BRIEF, THE

EXTENT OF THE WORK TO BE PERFORMED BY THE

- PLUMBING CONTRACTOR UNDER THIS CONTRACT. 18.6.1. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISCONNECTION AND REMOVAL OF THE EXISTING PLUMBING EQUIPMENT PIPING, VALVES, ETC., IN DESIGNATED CUT & CAP PIPING BACK TO MAINS.
- 18.6.2. PATCH ALL ROOF AND WALL PENETRATIONS TO MATCH EXISTING. 18.6.3. THIS CONTRACTOR SHALL PROTECT WORK AGAINST INJURY OR DAMAGE; AND CAREFULLY STORE MATERIAL AND EQUIPMENT TO BE RELOCATED.
- 18.6.4. OPEN ENDS OF WORK SHALL BE CLOSED WITH TEMPORARY COVERS OR PLUGS DURING STORAGE AND CONSTRUCTION TO PREVENT ENTRY OF OBSTRUCTING MATERIAL.

# 19. EXCAVATION AND BACKFILL

- 19.1. WORK UNDER THIS SECTION SHALL COMMENCE ONLY AFTER PROPER BEDDING MATERIAL HAS BEEN PROVIDED, GRADED AND PROPERLY COMPACTED. EXCAVATION SHALL BE KEPT OPEN UNTIL SYSTEM HAS BEEN INSPECTED, TESTED AND APPROVED.
- 19.2. THE PLUMBING CONTRACTOR SHALL OBSERVE ALL EXCAVATION, BACKFILLING AND COMPACTION OF ALL UNDERGROUND PIPING ASSOCIATED WITH WORK UNDER THIS SECTION.

# 20. EQUIPMENT CONNECTIONS:

- 20.1. MAKE ALL FINAL PLUMBING CONNECTIONS TO ALL NEW AS WELL AS EXISTING TO BE RELOCATED FOUIPMENT INCLUDING, BUT NOT LIMITED TO, SUCH EQUIPMENT: 20.1.1. KITCHEN EQUIPMENT 20.1.2. WATER HEATERS
- 20.1.3. TOILET ROOM FIXTURES. 20.2. PROVIDE ALL ROUGH PLUMBING SYSTEMS TO THESE SAME ITEMS OF EQUIPMENT 20.3. REFER TO EQUIPMENT SHOP DRAWINGS AND

# 21. TESTING PIPING SYSTEMS

ANY WORK.

21.1. TEST ALL WORK IN THE PRESENCE OF THE ARCHITECT/ENGINEER AND/OR OWNER, OWNER'S REPRESENTATIVE, AND PLUMBING INSPECTOR AS CALLED FOR IN LOCAL CODES.

21.2. AFTER SOIL, WASTE AND VENT PIPING IS IN PLACE AND

MANUFACTURES REQUIREMENTS FOR FINAL LOCATIONS

OF CONNECTION PRIOR TO LAYING OUT OR INSTALLING

- BEFORE BEING FURRED IN, PLUG LOWER ENDS AND FILL THE SYSTEM SHALL BE LEFT UNDER THESE CONDITIONS AND WATER LEVEL SHALL BE MAINTAINED INTACT FOR A PERIOD OF AT LEAST FOUR HOURS. 21.3. TEST DOMESTIC WATER PIPING AND SERVICE BY APPLYING A HYDROSTATIC PRESSURE OF 125 PSI USING A PUMP FOR THIS PURPOSE. MAKE SURE THAT ALL
- LINES ARE PROPERLY PLUGGED OR CAPPED AND THAT AIR HAS BEEN VENTED BEFORE APPLYING PRESSURE WHICH SHALL REMAIN CONSTANT WITHOUT PUMPING FOR AT LEAST ONE HOUR. 21.4. GAS SYSTEM PIPING SHALL BE TESTED AT A PRESSURE
- OF 50 PSIG AND PRESSURE SHALL BE HELD FOR TWO HOURS MINIMUM.
- 21.5. THIS CONTRACTOR SHALL FURNISH ALL EQUIPMENT, LABOR AND MATERIALS, REQUIRED FOR THESE TESTS 21.6. ANY LEAKS IN JOINTS OR EVIDENCE OF DEFECTIVE PIPE OR FITTINGS DISCLOSED BY TEST SHALL BE IMMEDIATELY CORRECTED BY REPLACING DEFECTIVE PARTS WITH NEW JOINTS OR CORRECTED MATERIALS NO MAKESHIFT REPAIRS EFFECTED BY CAULKING THREADED PIPE WITH LEAD WOOL, APPLICATION OF WICKING OR PATENTED COMPOUNDS BEING PERMITTED. PERFORM SMOKE TEST AS REQUIRED BY LOCAL CODE OR BY THE ARCHITECT/ENGINEER.

# 22.PROTECTION AND CLEANING

- 22.1. EACH SUBCONTRACTOR SHALL BE RESPONSIBLE FOR HIS WORK AND FOUIPMENT UNTIL FINALLY INSPECTED. TEST AND ACCEPTED. CAREFULLY STORE MATERIALS WHICH ARE NOT IMMEDIATELY INSTALLED AFTER DELIVERY ON SITE. CLOSE OPEN ENDS OR WORK WITH TEMPORARY COVERS OR PLUG DURING CONSTRUCTION TO PREVENT ENTRY OF OBSTRUCTING MATERIAL.
- 22.2. EACH SUBCONTRACTOR SHALL PROTECT WORK AND MATERIALS OF OTHER TRADES FROM DAMAGE THAT MIGHT BE CAUSED BY THIS WORK OR WORKMAN AND MAKE GOOD DAMAGE THUS CAUSED. 22.3. THE PREMISES SHALL BE KEPT REASONABLY CLEAN AT

ALL TIMES, AND RUBBISH SHALL BE REMOVED AS

DIRECTED BY THE GENERAL CONTRACTOR. 22.4. UPON COMPLETION OF THIS WORK, THE CONTRACTOR SHALL CLEAN ALL FIXTURES AND EQUIPMENT AND REPLACE DAMAGED PARTS. UPON FAILURE OF THIS CONTRACTOR TO FULFILL THEIR OBLIGATION, THIS WORK WILL BE TAKEN CARE OF AT THEIR EXPENSE.

# 23. CHLORINATION

- 23.1. EACH WATER PIPING SYSTEM (COLD, HOT, RECIRCULATION, TEPID, ETC.) SHALL BE CLEANED AND DISINFECTED BY THIS CONTRACTOR. CLEANING AND DISINFECTION SHALL BE PERFORMED AFTER ALL PIPES, VALVES, FIXTURES, AND OTHER COMPONENTS OF THE SYSTEM ARE INSTALLED, TESTED AND READY FOR OPERATION.
- 23.2. ALL WATER PIPING SYSTEMS SHALL BE THOROUGHLY FLUSHED WITH CLEAN POTABLE WATER PRIOR TO DISINFECTION TO REMOVE DIRT AND OTHER

CONTAMINANTS. 23.3. DISINFECTION SHALL BE DONE USING SODIUM

HYPOCHLORITE IN THE FOLLOWING MANNER.

- 23.3.1. A SERVICE COCK SHALL BE PROVIDED AND LOCATED AT THE WATER SERVICE ENTRANCE 23.3.2. THE DISINFECTING AGENT SHALL BE INJECTED BY A PROPORTIONING PUMP OR DEVICE THROUGH THE SERVICE COCK SLOWLY AND CONTINUOUSLY AT AN EVEN RATE. DURING DISINFECTION, FLOW OF DISINFECTING AGENT INTO MAIN WATER SUPPLY IS NOT PERMITTED. 23.3.3. ALL SECTIONAL VALVES SHALL BE OPENED DURING
  - DISINFECTION. ALL OUTLETS SHALL BE FULLY OPENED DURING INJECTION AND THE RESIDUAL CHECKED WITH ORTHOTOLIDIN SOLUTION. 23.3.4. WHEN THE CHLORINE RESIDUAL CONCENTRATION. CALCULATED ON THE VOLUME OF WATER THE PIPING WILL CONTAIN INDICATED NOT LESS THE 50 PPM (PARTS PER MILLION) AT ALL OUTLETS THEN
  - ALL VALVES SHALL BE CLOSED AND SECURED. 23.3.5. THE RESIDUAL CHLORINE SHALL BE RETAINED IN THE PIPING SYSTEM FOR A PERIOD OF NOT LESS THAN 24 HOURS.

23.3.6. AFTER THE RETENTION, THE RESIDUAL SHALL BE

NOT LESS THEN 5 PPM. IF LESS THEN THE

- PROCESS SHALL BE REPEATED AS DESCRIBED 23.3.7. IF SATISFACTORY, THEN ALL FIXTURES SHALL BE FLUSHED WITH CLEAN POTABLE WATER UNTIL RESIDUAL CHLORINE BY ORTHOTOLIDIN TEST SHALL BE NOT GREATER THAN THE INCOMING WATER
- 23.4. ALL WORK AND CERTIFICATION OF PERFORMANCE SHALL BE PERFORMED BY APPROVED APPLICATORS OR QUALIFIED PERSONNEL WITH CHEMICAL AND LABORATORY EXPERIENCE. CERTIFICATION OF PERFORMANCE SHALL INDICATE:
- 23.4.1. NAME AND LOCATION OF THE JOB AND DATE WHEN DISINFECTION WAS PERFORMED. 23.4.2. MATERIAL USED FOR DISINFECTION.
- 23.4.3. RETENTION PERIOD OF DISINFECTANT IN PIPING MATFRIAL 23.4.4. PPM CHLORINE DURING RETENTION.
- 23.4.5. PPM CHLORINE AFTER FLUSHING. 23.4.6. STATEMENT THAT DISINFECTION WAS PERFORMED AS SPECIFIED. 23.4.7. SIGNATURE AND ADDRESS OF COMPANY OR
- PERSON PERFORMING DISINFECTION. 23.5. UPON COMPLETION OF FINAL FLUSHING THE PLUMBING SUBCONTRACTOR SHALL OBTAIN A MINIMUM OF ONE WATER SAMPLE FROM EACH WATER PIPING SYSTEM AND SUBMIT SAMPLES TO A STATE APPROVED LABORATORY. SAMPLES SHALL BE TAKEN FROM FAUCETS LOCATED AT HIGHEST FLOOR AND FURTHEST FROM METER OR MAIN
- WATER SUPPLY. 23.6. IF ANALYSIS DOES NOT SATISFY THE ABOVE MINIMUM REQUIREMENTS, THE DISINFECTION PROCEDURE SHALL BE REPEATED.
- AND CLERK OF WORKS FOR HIS/HER REVIEW, THREE (3) COPIES OF CERTIFICATION OF PERFORMANCE AS SPECIFIED ABOVE. 23.8. UNDER NO CIRCUMSTANCES SHALL THIS CONTRACTOR PERMIT THE USE OF ANY PORTION OF DOMESTIC WATER SYSTEM UNTIL PROPERLY DISINFECTED FLUSHED AND

ABBRV ABBREVIATION

23.7. BEFORE ACCEPTANCE OF THE SYSTEMS, THIS

# **ABBREVIATIONS**

CONTRACTOR SHALL SUBMIT TO THE PROJECT MANAGER

1 /155111	1
,	FOOT (FEET) (0.3048 METERS)
"	INCH(S) (25.4 MILLIMETERS)
DFU	DRAINAGE FIXTURE UNIT
(X)DCW	(EXISTING) DOMESTIC COLD WATER
(X)DHW	(EXISTING) DOMESTIC HOT WATER
(X)DW	(EXISTING) DISHWASHER
DP	DOWN PIPE
EST.	ESTIMATE
(X)FCO	(EXISTING) FLOOR CLEAN OUT
(X)FD	(EXISTING) FLOOR DRAIN
(X)GWH	(EXISTING) GAS WATER HEATER
GPM	GALLONS PER MINUTE
(X)(H)WC	(EXISTING) (ADA) WATER CLOSET
(X)(H)SH	(EXISTING) (ADA) SHOWER
(X)IWH	(EXISTING) INSTANTANEOUS WATER HEATER
(X)(H)LAV	(EXISTING) (ADA) LAVATORY
(X)PS	(EXISTING) PANTRY SINK
PSI	POUNDS PER SQUARE INCH. (6.89 KILOPASCAL)
(X)REF	(EXISTING) REFRIGERATOR
(X)SS	(EXISTING) SERVICE SINK
(X)(E)TP	(EXISTING) (ELECTRONIC) TRAP PRIMER
(X)(H)U	(EXISTING) (ADA) URINAL
USG	U.S. GALLON (3.785 LITERS)
(X)VTR	(EXISTING) VENT THROUGH ROOF
(x)wco	(EXISTING) WALL CLEAN OUT

(X)WHA (EXISTING) WATER HAMMER ARRESTOR

X)WSOB (EXISTING) WALL RECESSED WATER SUPPLY OUTLET BOX

# **PLUMBING SPECIFICATIONS:**

1. ALL SUBSTITUTIONS MUST BE APPROVED PRIOR TO BIDDING PROVIDE SUBSTITUTION INFORMATION DURING THE BID-PHASE QUESTION AND ANSWER PERIOD. INCLUDE DETAILED DATA ON THE PROPOSED SUBSTITUTION INCLUDING DOLLAR AMOUNT OF PROPOSED SAVINGS. ENGINEER SHALL REVIEW THE INFORMATION AND DETERMINE WHETHER THE SUBSTITUTION WILL BE ALLOWED. 2. ANY CHANGES TO THE CONTRACT DOCUMENTS DUE TO THE SUBSTITUTION SHALL BE COORDINATED BY THE GENERAL CONTRACTOR AND ANY ADDITIONAL COST TO MODIFY THE DESIGN OR MODIFY THE SCOPE OF OTHER TRADES SHALL BE INCLUDED IN THE PROPOSED SAVINGS. THIS SHALL INCLUDE MODIFICATIONS TO THE STRUCTURAL SCOPE FOR

EQUIPMENT SUPPORT AS WELL AS MODIFICATIONS TO

ELECTRICAL BRANCH CIRCUITRY OR FEEDERS FOR

### 220050 SUBMITTALS

EQUIPMENT.

220040 SUBSTITUTIONS

- 1. ALL SUBMITTALS SHALL BE ROUTED TO THE ARCHITECT FOR DISTRIBUTION TO ALL DESIGN PROFESSIONALS. 2. ALL SUBMITTALS SHALL BEAR A COVER-SHEET FROM THE GENERAL CONTRACTOR INDICATING THEY HAVE REVIEWED
- CONTRACT DOCUMENTS. 3. SHOP DRAWING SUBMISSIONS CONSISTING OF PRODUCT DATA CUT-SHEETS MAY BE SUBMITTED ELECTRONICALLY. 4. SHOP DRAWING SUBMISSIONS CONSISTING OF COORDINATION PLANS, LAYOUT DRAWINGS, FIRE PROTECTION SHOP DRAWINGS, FIRE ALARM SHOP DRAWINGS, SHEET METAL

THE SUBMITTAL AND FIND IT TO CONFORM TO THE

- SHOP DRAWINGS, ETC. SHALL BE SUBMITTED IN LARGE FORMAT. ORIGINAL SIZE ON PAPER. PROVIDE FIVE COPIES OF THE SHOP DRAWINGS. THE ENGINEER SHALL KEEP A COPY. THE ARCHITECT SHALL KEEP A COPY. THE REMAINING THREE COPIES WILL BE RETURNED TO THE GENERAL CONTRACTOR.
- 5. REQUESTS FOR INFORMATION (RFIS) SHALL INCLUDE THE QUESTION, THE REFERENCED PORTION OF THE CONTRACT DOCUMENTS, AND THE CONTRACTOR'S RECOMMENDED SUGGESTION FOR REMEDY
- 6. DELEGATED-DESIGN SUBMISSIONS SHALL BE PROVIDED WITH A COVER-SHEET INDICATING THE PROFESSIONAL OF RECORD THAT WILL SIGN AND SEAL THE DOCUMENT. ORIGINAL SIGNED AND SEALED DOCUMENTS DO NOT NEED TO BE SUBMITTED UNTIL THE DOCUMENTS ARE APPROVED BY THE ARCHITECT AND ENGINEER.
- 7. REFER TO THE INDIVIDUAL SPECIFICATION SECTIONS FOR THE REQUIRED SUBMITTALS. 8. COMPILE OPERATION AND MAINTENANCE (O&M) MANUALS AND SUBMIT ELECTRONICALLY FOR APPROVAL. AFTER APPROVAL OF ALL MANUALS, PROVIDE TWO COPIES OF A PRINTED, BOUND SET TO THE OWNER AND A COMPACT DISC

### 220100 EXECUTION

WITH THE DATA AS .PDFS.

- 1. ALL CUTTING AND PATCHING OF THE BUILDING SHALL BE PERFORMED BY THE CONTRACTOR. REMOVAL OF EXISTING SYSTEMS, COMPONENTS, SUPPORTS, ETC. SHALL HAVE ALL EXISTING HOLES OR PENETRATIONS PATCHED TO MATCH THE FXISTING ADJACENT CONSTRUCTION.
- 2. REMOVE AND DISPOSE OF IN A LEGAL MANNER ALL CONSTRUCTION DEBRIS IDENTIFIED TO BE REMOVED. THE CONSTRUCTION AREA SHALL BE BROOM SWEPT EACH NIGHT. DO NOT LET RUBBISH ACCUMULATE 3. ALL CONSTRUCTION MATERIAL THAT CAN BE RECYCLED

# THE QUANTITIES OF THE RECYCLED MATERIAL.

220110 O&M DATA 1. PROVIDE OPERATION AND MAINTENANCE MANUALS. REFER TO THE INDIVIDUAL SPECIFICATION SECTIONS FOR

SHALL BE RECYCLED. MAINTAIN ALL RECEIPTS AND SUBMIT

COPIES OF THE RECEIPT TO THE ARCHITECT TO DOCUMENT

REQUIREMENTS. B16.22 WROUGHT COPPER PRESSURE FITTINGS. 2. THE O&M MANUALS SHALL INCLUDE AS-BUILT 4.1.2. COPPER UNIONS - MSS SP-123 DOCUMENTATION. AS-BUILT DOCUMENTATION SHALL CONSIST OF CONTRACTOR RED-LINED CONTRACT MANUFACTURED BY ELKHART, NIBCO, OR VIEGA. DOCUMENTS. INCLUDE THE AS-BUILT DOCUMENTATION WITH

# THE O&M SUBMITTALS

220400 PLUMBING COMMON REQUIREMENTS 1. SCOPE 1.1. SLEEVES

ALL PENETRATIONS.

- 1.2. ESCUTCHEONS 1.3. IDENTIFICATION SUBMITTALS
- 2.1. SUBMIT SHOP DRAWINGS FOR ALL PRODUCTS INCLUDING PRODUCT DATA. 2.2. VALVE TAG CHART LISTING ALL OF THE VALVES KEYED TO THE TAG NUMBER.
- KEYED TO THE VALVE TAG CHART. SLEEVES 3.1. GALVANIZED STEEL-PIPE SLEEVES: ASTM A 53, TYPE

2.3. A FLOOR PLAN SHOWING THE LOCATION OF ALL VALVES

E, GRADE B, SCHEDULE 40 ZINC COATED WITH PLAIN 3.2. INSTALL SLEEVES FOR PIPING PENETRATING PARTITIONS OR WALLS.

3.3. PROVIDE APPROPRIATE FIRESTOPPING/JOINT SEALANT IN

- 4. ESCUTCHEONS 4.1. SPLIT-CASTING BRASS TYPE WITH POLISHED CHROME-PLATED FINISH AND CONCEALED HINGE AND
- AND CEILINGS. INSTALL TO CLOSELY FIT AROUND PIPING AND INSULATION WITH AN OUTER DIAMETER TO COMPLETELY COVER THE OPENING. 5. IDENTIFICATION 5.1. PROVIDE SELF-ADHESIVE PIPE LABELS THAT INCLUDES

4.2. INSTALL ESCUTCHEONS FOR PIPES PENETRATING WALLS

- COLOR-CODING FOR EACH SYSTEM, FLOW DIRECTION ARROWS, AND LETTERING AT LEAST 1/2" HIGH. 5.2. PROVIDE VALVE TAGS THAT ARE STAMPED BRASS. 5.3. PROVIDE VALVE TAG CHART LISTING EACH VALVE AND CORRESPONDING TAG NUMBER. ALSO PROVIDE A FULL SCALE SET OF PLANS IDENTIFYING THE LOCATION OF
- THE VALVE TAG CHART. 5.4. PROVIDE SELF-ADHESIVE PIPE LABELS EVERY 50 FEET NEAR EACH VALVE, BRANCH CONNECTION, AND PENETRATIONS OF WALLS OR FLOORS. PROVIDE LABELS WHERE VISIBLE FROM ACCESS PANELS THAT PROVIDE

EACH VALVE AND KEYING THE VALVE TAG NUMBER TO

ACCESS TO SPACES ABOVE CEILINGS OR WITHIN WALLS.

# 220500 PLUMBING VALVES

1. SCOPE

OR PRESS ENDS.

WITH INSULATION.

1.1. BALL VALVES 2. SUBMITTALS 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA. 2.2. SUBMIT OPERATION AN MAINTENANCE DATA.

3. VALVES SHALL BE MANUFACTURED BY MILWAUKEE VALVE,

- NIBCO, OR WATTS REGULATOR. BALL VALVES 4.1. PROVIDE TWO PIECE STANDARD-PORT, BRONZE BALL VALVES WITH STAINLESS STEEL TRIM. FOR VALVES USED IN POTABLE WATER SYSTEMS, PROVIDE LOW LEAD VALVES FOR POTABLE WATER. 600 WOG WITH SOLDER
- 4.2. CONFORM TO MSS SP-110. 4.3. CONFORM TO NSF/ANSI 372 FOR POTABLE WATER APPLICATIONS. 4.4. PROVIDE EXTENSION STEM WHEN INSTALLED IN PIPING
- 6. INSTALL VALVES IN HORIZONTAL PIPING WITH STEM AT OR ABOVE CENTER OF PIPE. 7. INSTALL VALVES IN POSITIONS TO ALLOW FULL STEM MOVEMENT.

MANUFACTURER'S INSTALLATION INSTRUCTIONS.

5. INSTALL VALVES IN ACCORDANCE WITH THE

### 8. PROVIDE BALL VALVES FOR SHUT-OFF DUTY ON PIPING 220700 PLUMBING INSULATION

1.1. PIPING INSULATION SUBMITTALS

1. SCOPE

- 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA. 3. PIPING INSULATION 3.1. INSULATION SHALL BE MANUFACTURED BY JOHNS MANVILLE, KNAUF, OR OWENS CORNING.
- 3.2. INSULATION SHALL BE MINERAL-FIBER, PREFORMED PIPE INSULATION. TYPE I, RATED UP TO 850°F. COMPLY WITH ASTM C 547, TYPE I, GRADE A WITH FACTORY-APPLIED ASJ-SSL. ASJ-SSL SHALL BE FACTORY APPLIED, SELF-SEALING, PRESSURE SENSITIVE ACRYLIC BASED ADHESIVE COVERED BY A REMOVABLE
- PROTECTIVE STRIP COMPLYING WITH ASTM C1136, TYPE 3.3. INSULATION SURFACE SHALL MEET ASTM E 84 FLAME SPREAD AND SMOKE DEVELOPED RATINGS OF 25/50.
- 3.4. FLEXIBLE ELASTOMERIC INSULATION SHALL COMPLY WITH ASTM C 534. 3.5. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- 3.6. INSTALL LONGITUDINAL SEAMS FACING UP. 3.7. INSTALL INSULATION ON ALL PIPING LISTED AND OVER ALL FITTINGS, VALVES, AND SPECIALTIES. FOR SPECIALTIES THAT REQUIRE REGULAR MAINTENANCE SUCH AS DRAIN VALVES, STRAINERS, AND BALANCING VALVES PROVIDE PRE-FORMED INSULATION COMPONENTS THAT PERMIT MAINTENANCE WITHOUT
- DAMAGING THE INSULATION. 3.8. REFER TO PIPING MATERIALS AND INSULATION SCHEDULE

# PLUMBING PIPING

- 1. SCOPE 1.1. DOMESTIC WATER PIPING 1.2. SANITARY AND VENT PIPING
- 1.3. PIPE FITTINGS 1.4. PIPING SUPPORTS
- SUBMITTALS 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA.
- 2.2. SUBMIT FIELD QUALITY CONTROL REPORTS. 2.2.1. HYDROSTATIC TEST REPORTS 2.2.2. DISINFECTING ACTIVITIES REPORTS
- 3.1. HARD COPPER TUBE: ASTM B 88, TYPE L WATER TUBE.
- 3.2. SOFT COPPER TUBE: ASTM B 88, TYPE K WATER TUBE. 3.3. SCHEDULE 40 PVC PIPE, ASTM D2665, DRAIN, WASTE, 3.3. PROVIDE DIELECTRIC FITTINGS ON ALL PIPING JOINING
- DISSIMILAR METALS. 3.3.1. TRANSITION FROM PVC SCHEDULE 40 SOLID WALL PIPE TO CAST IRON SHALL UTILIZE HUSKY SD4000 (ORANGE) (BASIS OF DESIGN). A STANDARD TWO

BAND RUBBER "FERNCO" FITTING WILL NOT BE

- APPROVED AS AN EQUAL. 3.4. INSTALL PIPING WITH APPROPRIATE PITCH AND PARALLEL TO BUILDING WALLS. 3.5. INSTALL PIPING TO CONSERVE SPACE IN THE BUILDING.
- ENSURE PIPING IS LOCATED TO ALLOW FOR OPENING OF CEILINGS OR ACCESS PANELS 3.6. INSTALL PIPING TO ALLOW FOR SERVICING OF EQUIPMENT AND MAINTAIN REQUIRED CLEARANCES. IF PIPING NEEDS TO IMPEDE SERVICE CLEARANCE NOTIFY
- 3.7. DO NOT INSTALL PIPING ABOVE ELECTRICAL PANELS OR EQUIPMENT WITHOUT APPROVAL FROM ARCHITECT/ENGINEER.
- CONNECTING TO EQUIPMENT 3.9. PROVIDE IDENTIFICATION ON ALL PIPING AS SPECIFIED.

3.8. INSTALL UNIONS OR FLANGES ON ALL PIPING

3.11. INSTALL SLEEVES AS SPECIFIED 3.12. INSULATE PIPING AS SPECIFIED

ARCHITECT/ENGINEER.

CONCEALING PIPING.

4. PIPE FITTINGS 4.1. DOMESTIC WATER: 4.1.1. WROUGHT-COPPER, SOLDER JOINT FITTINGS ASME

3.10. ARRANGE FOR ALL REQUIRED INSPECTIONS PRIOR TO

- 4.1.3. COPPER PRESSURE SEAL JOINT FITTINGS AS
- 4.2. SANITARY, VENT 4.2.1. PVC SOCKET FITTINGS ASTM D2665 MADE TO ASTM D3311 DRAIN, WASTE, AND VENT PATTERNS AND TO FIT SCHEDULE 40 PVC.
- COPPER OR ASME B16.29. WROUGHT COPPER. SOLDER-JOINT FITTINGS 4.2.3. HEAVY-DUTY, HUBLESS-PIPING COUPLINGS AS MANUFACTURED BY MIFAB, TYLER, OR DALLAS.

4.2.2. COPPER DRAINAGE FITTINGS: ASME B16.23. CAST

- 5. SUPPORTS 5.1. REFER TO SCHEDULE ON PO2 — PLUMBING SCHEDULES. 6. REFER TO PLUMBING PIPING MATERIAL/INSULATION
- SCHEDULE FOR APPLICATION DETAILS. 7. DOMESTIC WATER PIPING 7.1. TEST FOR LEAKS AND DEFECTS OF THE PIPING SYSTEM. 7.1.1. PROVIDE HYDROSTATIC PRESSURE TEST 50 PSIG IN
- EXCESS OF OPERATING PRESSURE 7.1.2. PREPARE TEST REPORTS 7.1.3. CLEAN AND DISINFECT POTABLE PIPING SYSTEMS AND PROVIDE REPORTS OF DISINFECTING ACTIVITIES.

7.1.4. PROVIDE TESTS AND CLEANING PRIOR TO TURNING

- OVER EACH PHASE OF CONSTRUCTION. 8. SANITARY PIPING 8.1. INSTALL ALL PIPING 3" AND UP WITH A 1/8" PER FOOT SLOPE IN DIRECTION OF FLOW.
- 8.3. TEST PIPING FOR LEAKS WITH HYDROSTATIC TESTS. PROVIDE TEST REPORTS. VENT PIPING

#### 9.2. TEST PIPING FOR LEAKS WITH HYDROSTATIC TESTS. PROVIDE TEST REPORTS.

DRAIN TO SANITARY PIPING

- 221119 DOMESTIC WATER PIPING SPECIALTIES 1. SCOPE
- 1.1. TRAP PRIMER 1.2. WATER HAMMER ARRESTOR
- 2. SUBMITTALS 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA. 3. TRAP PRIMER

3.1. TRAP PRIMERS SHALL BE MANUFACTURED BY MIFAB,

- JAY R. SMITH, PRECISION PLUMBING PRODUCTS, OR 3.2. SUPPLY-TYPE TRAP PRIMER STANDARD: ASSE 1018. 3.3. DRAINAGE-TYPE AND ELECTRIC TRAP PRIMER
- INSTALLATION INSTRUCTIONS. 4. WATER HAMMER ARRESTORS 4.1. WATER HAMMER ARRESTORS SHALL BE MANUFACTURED BY MIFAB, JAY R. SMITH, OR WATTS

4.2. REFER TO SCHEDULE AND DETAIL FOR DETAILS

4.3. INSTALL IN ACCORDANCE WITH MANUFACTURER'S

#### INSTALLATION INSTRUCTIONS. 4.4. STANDARD ASSE 1010 OR PDI-WH 201.

221319 SANITARY WASTE PIPING SPECIALTIES

STANDARD: ASSE 1044.

- 1. SCOPE 1.1. FLOOR DRAINS
- SUBMITTALS 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA. FLOOR DRAINS

3.4. INSTALL IN ACCORDANCE WITH MANUFACTURER'S

3.1. DRAINS SHALL BE MANUFACTURED BY MIFAB, JAY R.

- SMITH OR WATTS. 3.2. STANDARD: ASME A112.6.3. 3.3. REFER TO SCHEDULE FOR DETAILS.
- 1. SCOPE 1.1. COMMERCIAL, ELECTRIC, STORAGE DOMESTIC-WATER

HEATER, EWH.

INSTALLATION INSTRUCTIONS.

223300 ELECTRIC, DOMESTIC-WATER HEATERS

- 1.2. EXPANSION TANK, EXP. 1.3. COMMERCIAL, ELECTRIC, INSTANTANEOUS WATER HEATER,
- SUBMITTALS 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA
- 3.1. PROVIDE A WATER HEATER MANUFACTURED BY AO SMITH, LOCHINVAR, OR BRADFORD WHITE.
- 3.2. REFER TO THE SCHEDULE FOR PERFORMANCE REQUIREMENTS. 3.3. WATER HEATER SHALL BE LISTED BY UL AND APPROVED
- TO NSF STANDARD 5. 3.4. TANKS SHALL HAVE 150 PSI WORKING PRESSURE AND
- SHALL BE EQUIPPED WITH HIGH DENSITY ANODE. 3.5. ALL INTERNAL SURFACES OF THE HEATER EXPOSED TO WATER SHALL BE GLASSLINED WITH AN ALKALINE BOROSILICATE COMPOSITION THAT HAS BEEN
- FUSED-TO-STEEL. 3.6. PROVIDE THREE YEAR WARRANTY.
- 3.7. INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. 3.8. SUPPORT WATER HEATER FROM ABOVE AND MOUNT HIGH IN ROOM.

3.9. PIPE P&T RELIEF TO THE JANITOR'S SERVICE SINK.

- 3.10. PROVIDE A WELDED SEAM DRAIN PAN BELOW THE WATER HEATER AND PIPE THE PAN TO THE JANITOR'S SERVICE SINK SEPARATE FROM THE RELIEF PIPING. 3.11. PROVIDE A LEAK DETECTOR IN THE WELDED SEAM DRAIN PAN THAT WILL DETECT WATER IN THE DRAIN PAN. IN THE EVENT OF WATER IN THE DRAIN PAN, THE LEAK DETECTOR SHALL HAVE AN AUDIBLE ALERT
- THE WATER HEATER FROM FLOODING THE ROOM. 4. EXP

AND THREE SOLENOID VALVES SHALL CLOSE TO ISOLATE

THE WATER HEATER AND PREVENT WATER OUTSIDE OF

4.1. PROVIDE EXPANSION TANK MANUFACTURED BY AMTROL, AO SMITH, OR TACO. 4.2. REFER TO SCHEDULE FOR PRODUCT BASIS FOR DESIGN. 4.3. TAPPINGS: FACTORY-FABRICATED STEEL, WELDED TO

TANK BEFORE TESTING AND LABELING. INCLUDE

ASME B1.20.1 PIPE THREAD. 4.4. INTERIOR FINISH: COMPLY WITH NSF 61 BARRIER MATERIALS FOR POTABLE-WATER TANK LININGS, INCLUDING EXTENDING FINISH INTO AND THROUGH TANK

4.5. AIR-CHARGING VALVE: FACTORY INSTALLED

# 224000 PLUMBING FIXTURES

FITTINGS AND OUTLETS.

- 1. SCOPE
- 1.1. (H)WC 1.2. (H)U 1.3. (H)LAV 1.4. PS

1.5. SS

- SUBMITTALS 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA. FIXTURES
- 3.1. REFER TO SCHEDULE FOR BASIS OF DESIGN AND SPECIFICATION INFORMATION. 3.2. ALL FIXTURES SHALL BE INSTALLED IN ACCORDANCE WITH ALL STATE BARRIER FREE REQUIREMENTS.

3.3. INSTALL ALL FIXTURES IN ACCORDANCE WITH

MANUFACTURER'S RECOMMENDATIONS

\_\_\_\_\_

# SYMBOL LEGEND DESCRIPTION SYMBOL \_\_\_\_\_ OMESTIC COLD WATER PIPING

DOMESTIC HOT WATER PIPING (120°F) LUMBING EQUIPMENT \_\_\_\_\_ss\_\_\_\_ ANITARY PIPING ABOVE VISIBLE FLOOR.

DOMESTIC COLD WATER PIPING (BELOW GRADE)

SANITARY PIPING BELOW VISIBLE FLOOR. VENT PIPING. \_\_\_\_\_ \_\_\_\_\_ QUIPMENT OR PIPING TO BE REMOVED. EXISTING DOMESTIC COLD WATER PIPING. \_\_\_\_\_\_ PIPING TURNING DOWN.

DRAIN AND TRAP ASSEMBLY.

FLOOR CLEAN OUT

WALL CLEANOUT

SHUT OFF VALVE.

LECTRONIC TRAP PRIMER

8.2. INSTALL ALL PIPING LESS THAN 3" WITH A ¼" PER FOOT SLOPE IN DIRECTION OF FLOW. PIPING TEE. 9.1. INSTALL ALL PIPING WITH A 1/16" PER FOOT SLOPE TO PIPING TURNING UP. FLOOR DRAIN  $\infty$ 

 $\odot$ 

 $\bowtie$ 

POINT OF CONNECTION TO EXISTING. 3.4. REFER TO SCHEDULE FOR DETAILS. 3.5. INSTALL IN ACCORDANCE WITH MANUFACTURER'S  $\sim$ (#) $\sim$ EYNOTE TAG

# **PLUMBING DRAWING LIST** SHEET NUMBER SHEET TITLE PLUMBING SPECIFCATIONS AND SYMBOLS PLUMBING PLANS - MADISON AVE. PARK

ENGINEERING DRIVEN DESIGN PC 555 Route One South Suite 100 Iselin, New Jersey 08830 (848) 247-6150 www.engineerdriven.com Project # 22-0080 Jeffrey N. Beeden Professional Engineer NJ License 24GE04746800

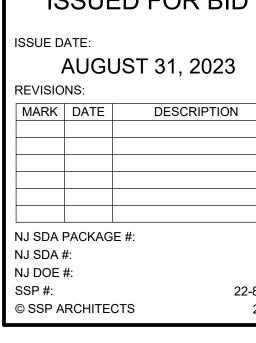
REVIEW:



JEANNE PERANTONI, AIA NJ: 21AI0089430

MARCUS M. ROSENAU, AIA NJ:21AI01045270





2325 SOUTH AVENUE

THE COUNTY OF UNION

PARKS -

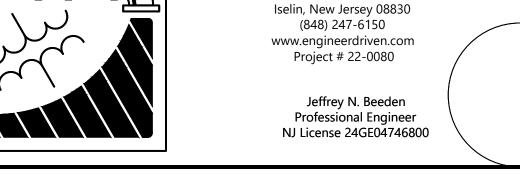
**AVENUE PARK** 

1333 MADISON AVE

RAHWAY, NJ 07065

UNION COUNTY

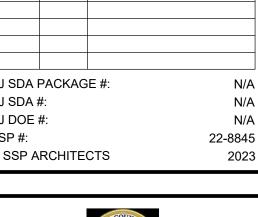
SHEET NAME: **PLUMBING** SPECIFCATIONS AND



SCOTT E. MIHALICK, AIA

CONSULTANT:

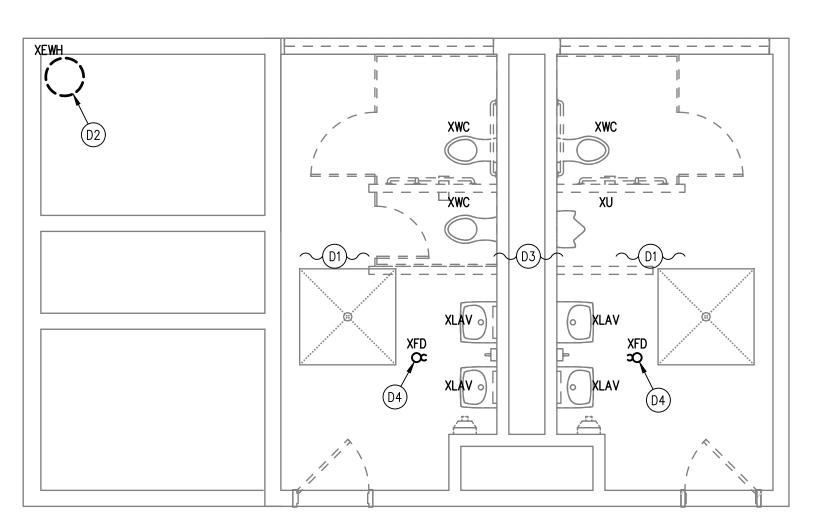
PHASE / SUBMISSION: ISSUED FOR BID



INTERIOR RESTROOM FACILITIES **RENOVATIONS AT: UNION COUNTY** 

CITY OF RAHWAY

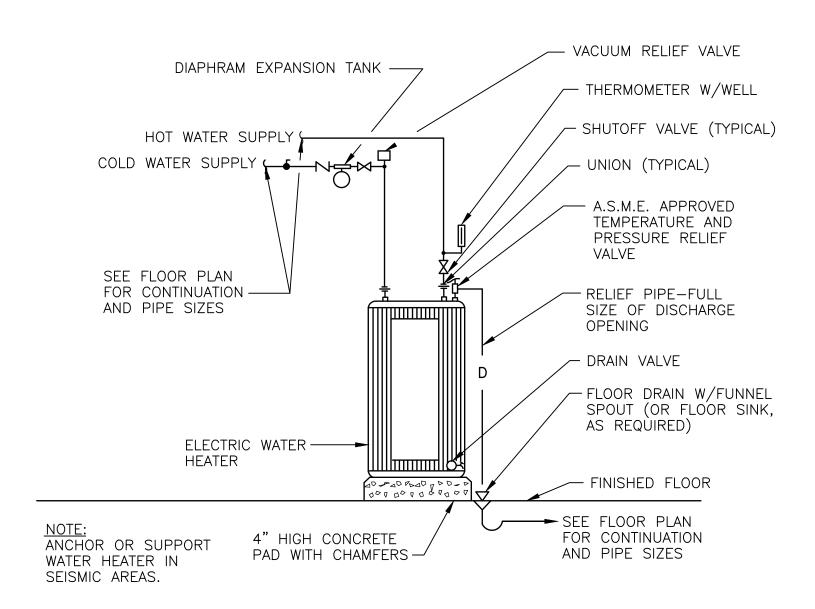
**SYMBOLS** 



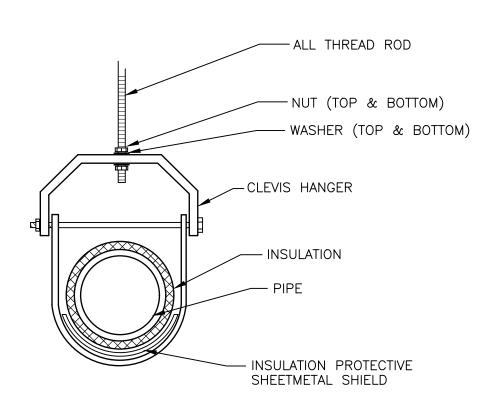
# PLUMBING DEMOLITION PLAN - MADISON AVE PARK 1 1/4"=1'-0"

# **DRAWING KEYED NOTES:**

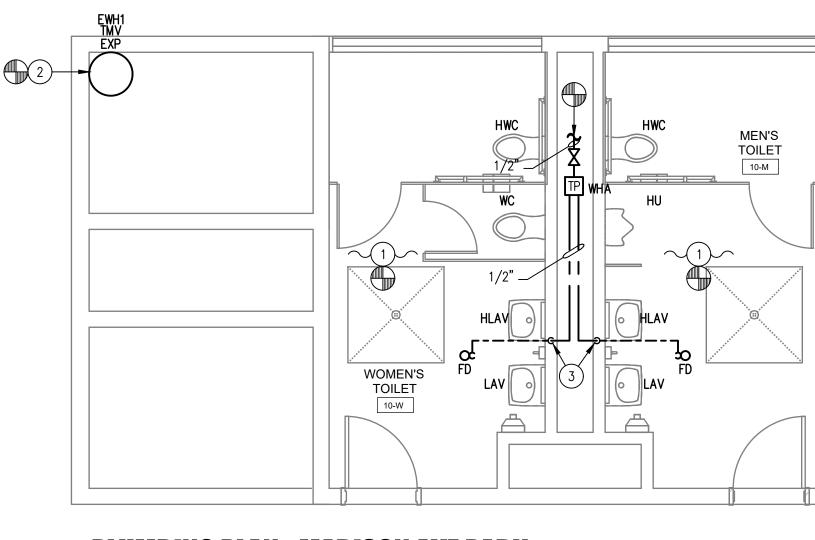
- D1) REMOVE EXISTING PLUMBING FIXTURES. MAINTAIN ROUTING FOR USE WITH NEW FIXTURES.
- (D2) REMOVE EXISTING ELECTRIC WATER HEATER. MAINTAIN PIPING FOR NEW WATER HEATER.
- (D3) REMOVE EXISTING WATER HAMMER ARRESTORS AND TRAP PRIMERS, AS REQUIRED.
- (D4) REMOVE EXISTING FLOOR DRAIN. MAINTAIN PIPING FOR USE WITH NEW FLOOR DRAIN.



# BLECTRIC WATER HEATER DETAIL NOT TO SCALE



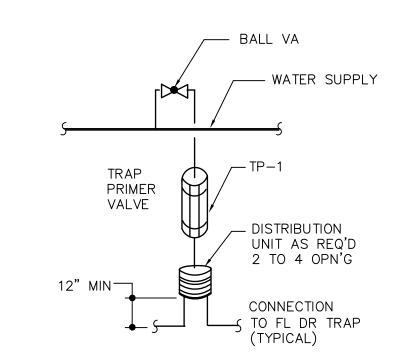
PIPING SUPPORT CRITERIA										
COPPER PIPE SIZE	MAX. HORIZ. SPACING	MIN. ROD SIZE	PVC PIPE SIZE	MAX. HORIZ. SPACING	MIN. ROD SIZE					
3/4" AND SMALLER	5-FEET	3/8"	1-1/2" TO 2"	4-FEET	3/8"					
1" TO 1-1/4"	6-FEET	3/8"	3"	4-FEET	1/2"					
1-1/2" TO 2"	8-FEET	3/8"	4" TO 5"	4-FEET	5/8"					
2-1/2"	9-FEET	1/2"	6" TO 8"	4-FEET	3/4"					
3" TO 5"	10-FEET	1/2"	10" TO 12"	4-FEET	7/8"					
6"	10-FEET	5/8"		•	•					
8"	10-FEET	3/4"								
SUPPORT VERTICAL PIP	ing every 10-fe	EET.	SUPPORT VERTICAL	PIPING EVERY 4-FE	ET.					



# PLUMBING PLAN - MADISON AVE PARK 1/4"=1'-0"

# **DRAWING KEYED NOTES:**

- (1) MODIFY EXISTING ROUGHING, AS REQUIRED, FOR USE WITH NEW FIXTURE/FLOOR DRAIN.
- (2) MODIFY EXISTING PIPING, AS REQUIRED FOR NEW WATER HEATER AND EXPANSION TANK.
- (3) 1/2" PIPE DROPS BELOW FLOOR TO SERVE FLOOR DRAIN.



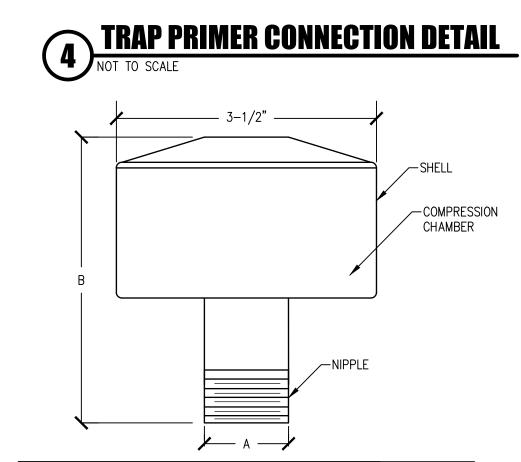
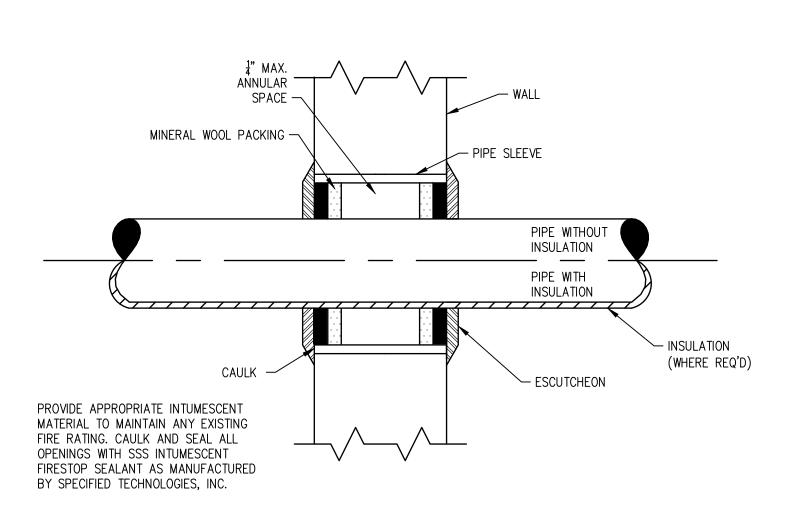


FIGURE NO.	P.D.I. SYMBOL	FIXTURE UNIT RATINGS	A SIZE	B SIZE
5005	Α	1 - 11	3/4"	3.18"
5010	В	12 - 32	1"	3.93"
5020	С	33 - 60	1"	4.30"
5030	D	61 - 113	1"	5.25"
5040	Е	114 - 154	1"	5.57"
5050	F	155 – 330	1"	6.53"
		JAY R. SMITH PR ACTURER'S SPEC		



# PIPE THROUGH INTERIOR WALL PARTITION NOT TO SCALE

# **GENERAL NOTES:**

- 1. PATCH EXISTING PIPING WHERE DEMO PIPING IS REMOVED. 2. PATCH ALL OPENINGS FROM REMOVED PIPING TO MATCH EXISTING ADJACENT
- REMOVE ALL INSULATION, SUPPORTS, ETC. FROM PIPING TO BE REMOVED. 4. TAKE DOWN AND REINSTALL ALL CEILING AND CEILING-MOUNTED DEVICES REQUIRED
- TO CONSTRUCT THIS SCOPE. CONTRACTOR TO TRENCH, AS REQUIRED, TO ACCOMMODATE SCOPE OF WORK.
- INSULATE ALL DOMESTIC HOT AND COLD WATER PIPING. PROVIDE ALL PIPE LABELS AND VALVE TAGS, REFER TO SPECIFICATIONS. PROVIDE ACCESS PANELS FOR ALL WATER HAMMER ARRESTORS.

2. PROVIDE DI-ELECTRIC FITTINGS, AS NEEDED.

CONTRACTOR TO CONFIRM FUNCTIONALITY OF EXISTING PIPING, EQUIPMENT, WET COLUMNS, ETC. PRIOR TO MAKING CONNECTIONS. NOTIFY ENGINEER AND ARCHITECT IF ANY EXISTING PIPING, EQUIPMENT, WET COLUMNS, ETC. SPECIFIED TO BE USED AS PART OF THIS PROJECT ARE NO LONGER FUNCTIONAL.

. PROVIDE EXPANSION TANK. REFER TO EXPANSION TANK SCHEDULE FOR MORE INFORMATION.

3. PROVIDE HOUSE KEEPING PAD, DRIP PAN, AND ALL REQUIRED COMPONENTS FOR COMPLETE INSTALLATION.

PROVIDE DISTRIBUTION UNIT, AS NEEDED.

10. PROVIDE HEAVY DUTY FOR ELONGATED BOWL TOILET SEAT.

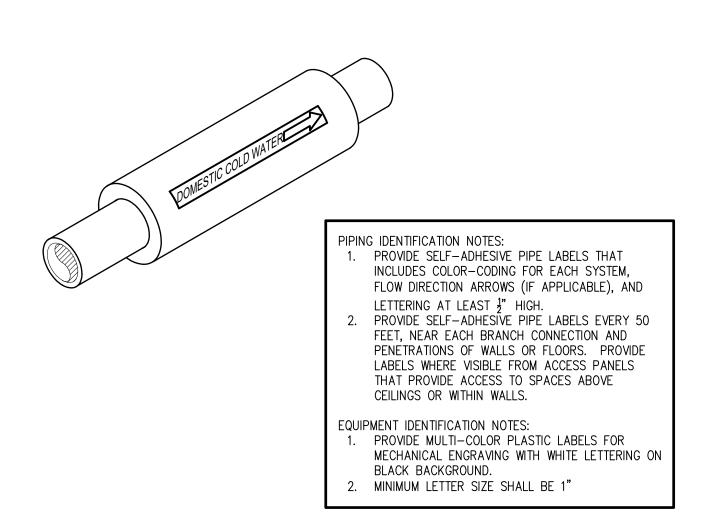
				ELECT	RIC W	ATER HEAT	TER SCHE	DULE							
TAG	DESCRIPTION	CAPACITY	TEMP. RISE	SET TEMP.	MFG.	MODEL	LOCATION	ELECTF	RICAL REQ	UIREMENTS	CONN	ECTION S	SIZE (")	ACCESSOREIS	NOTES
IAG	DESCRIPTION	(GALLONS)	(GPH @ 100°F)	(*)	MFG.	MODEL	LOCATION	VOLTAGE	PHASE	POWER (KW)	S	CW	HW	ACCESSOREIS	NUIES
	STORAGE TYPE ELECTRIC WATER HEATER WITH GLASS LINED TANK. TANK RATED FOR 150 PSI WORKING PRESSURE	30	18	140	A.O. SMITH	DEL-30	MADISON AVE. PARK	240	1ø	4	3/4	3/4	3/4	1,2,3	а
ACCESSOF	RIES:							NOTES:							

TAG	DECODIDATION	MAKE	MODEL	MODEL ELEC. REQ.	ACCESSORIES		NOTES				
IAG	DESCRIPTION	MANE			ACCESSORIES	S	٧	CW	HW	NG	NOIES
EXP	ASME RATED DIAPHRAGM EXPANSION TANK. 2.1 GALLONS WITH 0.9 GALLON ACCEPTANCE.	AMTROL	ST-5C	-	_			3/4"			_
FD	CAST IRON BODY FLOOR DRAIN. 8" SQUARE STRAINER. NICKEL-BRONZE FINISH. 3" OUTLET. SUPPLY WITH P-TRAP.	JAY R. SMITH	FIG. 2005Y	-	1,2	3"	2"	1/2"			_
TP	PRESSURE DROP ACTIVATED TRAP PRIMER. BRASS BODY, 3 PSI PRESSURE DROP REQUIRED.	PRECISION PLUMBING PRODUCTS	PR-500	-	3			1/2"			_
TMV	THERMOSTATIC MIXING VALVE. MIN 1.0 GPM, 10 PSI PRESSURE DROP AT 18 GPM. SET TO 110°F	LEONARD	TM-26-LF	-	_						_
WHA	ENGINEERED WATER HAMMER ARRESTOR. ALL STAINLESS STEEL CONSTRUCTION.	JAY R. SMITH	FIG. 5010	-	_			NOTE a			а

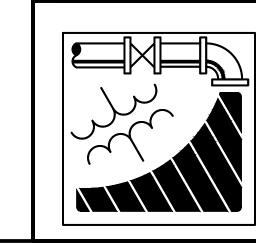
a. REFER TO INSTALLATION DETAIL.

TAG	DESCRIPTION	MAKE	MODEL	FLOW RATE	ACCESSORIES		CONNECT	ION SIZE		NOTES
IAG	DESCRIPTION	MARE	MODEL	FLOW RATE	ACCESSORIES	S	٧	CW	HW	NUIES
(H)U	BARRIER FREE WALL-HUNG VITREOUS CHINA URINAL.	AMERICAN STANDARD	6590.001.020	0.5 GPF	8	2"	1-1/2"	1-1/2"		b,c
(H)WC	BARRIER FREE WALL-HUNG FLUSHOMETER TOILET WITH ELONGATED OPEN FRONT SEAT.	AMERICAN STANDARD	2634.101	1.28 GPF	9,10	4"	2"	1-1/2"		b,c
H)LAV	WALL-HUNG VITREOUS CHINA LAVATORY.	AMERICAN STANDARD	0355.012	0.5 GPM	1,2,3,4,5,6,7	1-1/2"	1-1/2"	1/2"	1/2"	a,b,c
1. 2. 3. 4. 5. 6. 7. 8. 9.	SORIES:  PROVIDE P-TRAP.  PROVIDE SLOAN FAUCET MODEL: EAF-350.  PROVIDE BELOW-DECK MECHANICAL WATER MIXING VALVE, POWERS LFE- PROVIDE MCGUIRE 155WC OPEN GRID DRAIN.  PROVIDE FAUCET SUPPLIES CHROME PLATED ANGLE VALVE.  PROVIDE WATTS WCA-411 BASIN CARRIER.  PROVIDE TRUBRO LAVGUARD2 INSULATION PRODUCT ON ALL EXPOSED F PROVIDE SLOAN ROYAL 195 ESS-0.5 -HW CONCEALED SENSOR FLUSHC  PROVIDE SLOAN ROYAL 152 ESS-1.28-TMO-SWB-2-10-3/4-LDIM-HW  HARDWIRED FLUSHVALVE WITH MECHANICAL OVER RIDE.	PIPING BELOW BASIN. METER.	b. PROVIDE WHI	, ADAPTERS, ANE TE COLOR FIXTUR TURE WILL WORK	E, CONFIRM WITH	ARCHITE	CT DURIN	NG SHOP	DRAWING	

PIPING MATERIALS/INSULATION SCHEDULE												
SERVICE	SIZES	LOCATION	MATERIAL	FITTINGS	INSULATION	JACKET	THICKNESS	NOTES				
DOMESTIC WATER	ALL	ABOVE GROUND	TYPE L COPPER	SOLDER OR PRESSURE SEAL	MINERAL-FIBER	ASJ	1"	_				
DOMESTIC WATER	ALL	BELOW GROUND	TYPE K COPPER	NONE	ELASTOMERIC	_	1/2"	-				
SANITARY WASTE	ALL	ALL	PVC	SOLVENT WELD	_	_	-	_				
SANITARY VENT	ALL	ALL	PVC	SOLVENT WELD	_	_	_	_				







# ENGINEERING DRIVEN DESIGN PC

555 Route One South Suite 100 Iselin, New Jersey 08830 (848) 247-6150 www.engineerdriven.com

Project # 22-0080 Jeffrey N. Beeden Professional Engineer NJ License 24GE04746800



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CONSULTANT:

PHASE / SUBMISSION: ISSUED FOR BID ISSUE DATE: AUGUST 31, 2023 MARK DATE DESCRIPTION

NJ SDA PACKAGE #:

NJ SDA #: NJ DOE #:



THE COUNTY OF UNION

2325 SOUTH AVENUE

INTERIOR RESTROOM

**FACILITIES RENOVATIONS AT:** UNION COUNTY

PARKS -**AVENUE PARK** 

> 1333 MADISON AVE. RAHWAY, NJ 07065

CITY OF RAHWAY UNION COUNTY

SHEET NAME:

PLUMBING PLANS MADISON AVE. PARK

# **MECHANICAL SPECIFICATIONS:**

#### 230000 SUMMARY

- 1. THE SCOPE OF THIS PROJECT IS TO PROVIDE REPLACEMENT HEATING AND MECHANICAL EXHAUST SYSTEMS FOR AN EXISTING PUBLIC RESTROOM BUILDING.
- 2. ALL BUILDINGS ARE A SEISMIC DESIGN CATEGORY OF B. WHICH MEANS THAT MECHANICAL SYSTEMS ARE EXEMPT FROM SEISMIC BRACING REQUIREMENTS.

#### 230030 DEFINITIONS

- 1. FURNISH: TO PURCHASE AND DELIVER AN ITEM TO THE
- 3.2. EQUIPMENT STAGING AREA COMPLETE WITH ALL REQUIRED
- APPURTENANCES. 2. INSTALL: TO MOVE THE ITEM FROM THE STAGING AREA AND FASTEN TO THE STRUCTURE.
- 3. PROVIDE: TO FURNISH AND INSTALL. 4. OWNER: UNION COUNTY OF NEW JERSEY

# 230040 SUBSTITUTIONS

- 1. ALL SUBSTITUTIONS MUST BE APPROVED PRIOR TO BIDDING. PROVIDE SUBSTITUTION INFORMATION DURING THE BID-PHASE QUESTION AND ANSWER PERIOD. INCLUDE DETAILED DATA ON THE PROPOSED SUBSTITUTION INCLUDING DOLLAR AMOUNT OF PROPOSED SAVINGS. ENGINEER SHALL REVIEW THE INFORMATION AND DETERMINE
- WHETHER THE SUBSTITUTION WILL BE ALLOWED. 2. ANY CHANGES TO THE CONTRACT DOCUMENTS DUE TO THE SUBSTITUTION SHALL BE COORDINATED BY THE GENERAL CONTRACTOR AND ANY ADDITIONAL COST TO MODIFY THE DESIGN OR MODIFY THE SCOPE OF OTHER TRADES SHALL BE INCLUDED IN THE PROPOSED SAVINGS. THIS SHALL INCLUDE MODIFICATIONS TO THE STRUCTURAL SCOPE FOR EQUIPMENT SUPPORT AS WELL AS MODIFICATIONS TO ELECTRICAL BRANCH CIRCUITRY OR FEEDERS FOR EQUIPMENT.

#### 230050 SUBMITTALS

- 1. ALL SUBMITTALS SHALL BE ROUTED TO THE ARCHITECT FOR DISTRIBUTION TO ALL DESIGN PROFESSIONALS.
- 2. ALL SUBMITTALS SHALL BEAR A COVER-SHEET FROM THE GENERAL CONTRACTOR INDICATING THEY HAVE REVIEWED THE SUBMITTAL AND FIND IT TO CONFORM TO THE
- CONTRACT DOCUMENTS. 3. SHOP DRAWING SUBMISSIONS CONSISTING OF PRODUCT DATA CUT-SHEETS MAY BE SUBMITTED ELECTRONICALLY.
- 4. SHOP DRAWING SUBMISSIONS CONSISTING OF COORDINATION PLANS, LAYOUT DRAWINGS, FIRE PROTECTION SHOP DRAWINGS, FIRE ALARM SHOP DRAWINGS, SHEET METAL SHOP DRAWINGS, ETC. SHALL BE SUBMITTED IN LARGE FORMAT, ORIGINAL SIZE ON PAPER. PROVIDE FIVE COPIES OF THE SHOP DRAWINGS. THE ENGINEER SHALL KEEP A COPY, THE ARCHITECT SHALL KEEP A COPY, THE REMAINING THREE COPIES WILL BE RETURNED TO THE
- GENERAL CONTRACTOR. 5. REQUESTS FOR INFORMATION (RFIS) SHALL INCLUDE THE QUESTION, THE REFERENCED PORTION OF THE CONTRACT DOCUMENTS, AND THE CONTRACTOR'S RECOMMENDED
- SUGGESTION FOR REMEDY. 6. DELEGATED-DESIGN SUBMISSIONS SHALL BE PROVIDED WITH A COVER-SHEET INDICATING THE PROFESSIONAL OF RECORD THAT WILL SIGN AND SEAL THE DOCUMENT. ORIGINAL SIGNED AND SEALED DOCUMENTS DO NOT NEED TO BE SUBMITTED UNTIL THE DOCUMENTS ARE APPROVED BY THE
- 7. REFER TO THE INDIVIDUAL SPECIFICATION SECTIONS FOR THE REQUIRED SUBMITTALS.
- 8. COMPILE OPERATION AND MAINTENANCE (O&M) MANUALS AND SUBMIT ELECTRONICALLY FOR APPROVAL. AFTER APPROVAL OF ALL MANUALS, PROVIDE TWO COPIES OF A PRINTED, BOUND SET TO THE OWNER AND A COMPACT DISC WITH THE DATA AS .PDFS.

# 230060 TEMPORARY REQUIREMENTS DURING CONSTRUCTION

1. IN THE CONSTRUCTION AREAS, THE CONTRACTOR SHALL PROVIDE TEMPORARY HEAT FOR THE DURATION OF THE CONSTRUCTION OF THE PROJECT. PROVIDE TEMPORARY HEATERS AS REQUIRED TO KEEP THE SPACE ABOVE 55 DEGREES FAHRENHEIT. IF EXISTING OR PROPOSED EQUIPMENT IS USED, THE CONTRACTOR SHALL PROVIDE TEMPORARY FILTERS ON THE RETURN AIR INLETS AND IN THE UNIT. ALL CONSTRUCTION FILTERS SHALL BE REMOVED AFTER CONSTRUCTION AND THE UNIT FILTERS SHALL BE REPLACED WITH NEW FILTERS.

# 230070 QUALITY ASSURANCE

- 1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH INDUSTRY STANDARDS AND SHALL CONFORM TO THE NEW JERSEY UNIFORM CONSTRUCTION CODE. THIS PROJECT IS AN ALTERATION IN ACCORDANCE WITH THE REHABILITATION SUBCODE. AS SUCH, ONLY THE REFERENCED SECTIONS OF THE ADOPTED SUBCODES ARE FOLLOWED. THE CURRENTLY ADOPTED SUBCODES WITH AMENDMENTS ARE AS FOLLOWS:
- 1.1. INTERNATIONAL BUILDING CODE 2021 1.2. NATIONAL STANDARD PLUMBING CODE 2021
- 1.3. INTERNATIONAL MECHANICAL CODE 2021
- 1.4. INTERNATIONAL FUEL GAS CODE 2021 1.5. NATIONAL ELECTRIC CODE 2020
- 1.6. ASHRAE 90.1-2019 1.7. ICC A117.1-2017
- WARRANTY 2.1. CONTRACTOR TO PROVIDE ONE YEAR WARRANTY ON ALL EQUIPMENT AND PARTS AS WELL AS INSTALLATION. CONTRACT SHALL INCLUDE ONE YEAR OF ON-SITE SFRVICE.

# 230100 EXECUTION

- 1. ALL CUTTING AND PATCHING OF THE BUILDING SHALL BE PERFORMED BY THE CONTRACTOR. REMOVAL OF EXISTING SYSTEMS, COMPONENTS, SUPPORTS, ETC. SHALL HAVE ALL EXISTING HOLES OR PENETRATIONS PATCHED TO MATCH THE EXISTING ADJACENT CONSTRUCTION.
- 2. REMOVE AND DISPOSE OF IN A LEGAL MANNER ALL CONSTRUCTION DEBRIS IDENTIFIED TO BE REMOVED. THI CONSTRUCTION AREA SHALL BE BROOM SWEPT EACH NIGHT. DO NOT LET RUBBISH ACCUMULATE.
- 3. ALL CONSTRUCTION MATERIAL THAT CAN BE RECYCLED SHALL BE RECYCLED. MAINTAIN ALL RECEIPTS AND SUBMIT COPIES OF THE RECEIPT TO THE ARCHITECT TO DOCUMENT THE QUANTITIES OF THE RECYCLED MATERIAL.

# 230110 O&M DATA

REQUIREMENTS.

- 1. PROVIDE OPERATION AND MAINTENANCE MANUALS. REFER TO THE INDIVIDUAL SPECIFICATION SECTIONS FOR
- 2. THE O&M MANUALS SHALL INCLUDE AS-BUILT DOCUMENTATION. AS-BUILT DOCUMENTATION SHALL CONSIST OF CONTRACTOR RED-LINED CONTRACT DOCUMENTS. INCLUDE THE AS-BUILT DOCUMENTATION WITH THE O&M SUBMITTALS.

1. PROVIDE TRAINING ON ALL REQUIRED SYSTEMS. REFER TO THE INDIVIDUAL SPECIFICATION SECTIONS FOR REQUIREMENTS. ALL TRAINING SHALL BE VIDEO-RECORDED. THE VIDEO RECORDING SHALL HAVE CLEAR AUDIO AND VIDEO RECORDING, THE QUALITY OF THE RECORDING SHALL BE DETERMINED BY THE ARCHITECT AND ENGINEER. ANY RECORDING THAT IS NOT ACCEPTED SHALL BE RE-RECORDED.

# 230300 ROOFING

1. ALL ROOF PENETRATIONS SHALL BE WEATHERPROOF IN ALL RESPECTS. ANY WORK DONE ON THE ROOF SHALL BE PERFORMED BY A CONTRACTOR CERTIFIED BY THE ROOF MANUFACTURER TO MAINTAIN THE EXISTING ROOF WARRANTY

# 230500 MECHANICAL COMMON REQUIREMENTS

 SCOPE 1.1. IDENTIFICATION

SHOP DRAWINGS 2.1. SUBMIT SHOP DRAWINGS FOR ALL ITEMS INCLUDING PRODUCT DATA AND DETAILS. 3. IDENTIFICATION

#### 3.1. DUCTWORK

3.1.2. MINIMUM LETTER SIZE SHALL BE ½".

- 3.1.1. PROVIDE MULTI-COLOR PLASTIC LABELS FOR 240000 LOUVERS MECHANICAL ENGRAVING WITH WHITE LETTERING ON BLUE BACKGROUND.
- 3.1.3. IDENTIFY THE DUCTWORK SERVICE AS WELL AS FLOW DIRECTION. 3.1.4. INSTALL DUCTWORK LABELS DIRECTLY TO
- DUCTWORK INSULATION EVERY 15' OR AT EACH WALL PENETRATION.
- 3.2.1. PROVIDE MULTI-COLOR PLASTIC LABELS FOR MECHANICAL ENGRAVING WITH WHITE LETTERING ON
- BLACK BACKGROUND.

# 230593 TESTING, ADJUSTING, AND BALANCING

#### SCOPE

1.1. CONSTANT VOLUME AIR HANDLING SYSTEMS

3.2.2. MINIMUM LETTER SIZE SHALL BE 1"

- SUBMITTALS
- 2.1. SUBMIT TAB CONTRACTOR QUALIFICATIONS. 2.2. SUBMIT CERTIFIED TAB REPORTS
- 3. QUALITY ASSURANCE 3.1. TESTING, ADJUSTING, AND BALANCING CONTRACTOR SHALL BE CERTIFIED BY THE NEBB OR AABC. 4. FOLLOW PROCEDURES IN ACCORDANCE WITH AABC'S NATIONAL STANDARDS FOR TOTAL SYSTEM BALANCING OR

NEBB'S PROCEDURAL STANDARDS FOR TESTING, ADJUSTING,

- AND BALANCING OF ENVIRONMENTAL SYSTEMS. 5. CUT INSULATION AND DUCTWORK AS REQUIRED TO OBTAIN
- MEASUREMENTS. PATCH AND REPAIR ALL COMPONENTS. 6. PRIOR TO BALANCING ENSURE THAT AIR FILTERS ARE IN
- 7. EXAMINE ALL DUCTWORK AND DAMPERS TO ENSURE THE INSTALLATION IS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- 8. DESIGN AIRFLOWS ARE STANDARD CUBIC FEET PER MINUTE. ENSURE ALL OF THE DATA IS CONVERTED TO SCFM. 9. ADJUST AIRFLOWS TO BE WITHIN +/- 10% OF THE DESIGN VALUES.
- 10. DOCUMENT ANY ITEMS OUT OF TOLERANCE WITH POSSIBLE CONTRIBUTING FACTORS. DOCUMENT OTHER DEFICIENCIES SUCH AS NOISE AND OTHER INSTALLATION ISSUES.
- 11. PREPARE AND SUBMIT FINAL REPORT TO ARCHITECT. 12. WORK WITH THE CONTROL VENDOR TO PROVIDE ANY VALUES THAT WOULD BE USEFUL FOR SETTING STATIC PRESSURE SETPOINTS AND PROVIDE TIME AS NECESSARY. 13. AFTER SUBSTANTIAL COMPLETION OF THE ENTIRE PROJECT,
- PROVIDE FOR ONE ADDITIONAL VISIT TO THE SITE TO SPOT CHECK AIRFLOW VALUES TO ENSURE THE SYSTEM IS OPERATING AS IT WAS BALANCED.

### 233113 DUCTWORK

- SCOPE 1.1. SINGLE-WALL DUCTWORK
- 1.2. DUCT LINER SUBMITTALS
- 2.1. SUBMIT SHOP DRAWINGS INCLUDING DUCTWORK SHOP
- 2.2. PROVIDE SHEET METAL SHOP DRAWINGS PREPARED AT LEAST  $\frac{1}{4}$ " = 1'-0" SCALE COORDINATED WITH THE EXISTING CONDITIONS.
- 3. COMPLY WITH SMACNA STANDARDS FOR DUCT CONSTRUCTION. 4. COMPLY WITH SMACNA STANDARDS FOR DUCT SUPPORTS
- FOR STRAP AND ROD SIZING. 5. HANGER RODS SHALL BE CADMIUM PLATED STEEL RODS
- AND NUTS. 6. INSTALL DUCTWORK AS INDICATED ON APPROVED SHOP DRAWINGS.
- 7. COMPLY WITH SMACNA STANDARDS FOR DUCT INSTALLATION. 8. SUPPORT DUCTWORK IN ACCORDANCE WITH SMACNA
- STANDARDS. 8.1. DELEGATED DESIGN: PROVIDE DESIGN OF DUCT CONSTRUCTION, REINFORCEMENTS, HANGERS AND SUPPORTS. DESIGN SHALL BE SIGNED AND SEALED BY
- A PROFESSIONAL ENGINEER. 8.2. DUCT HANGERS AND SUPPORTS SHALL WITHSTAND THE EFFECTS OF GRAVITY LOADS AND STRESSES; EXTERIOR HANGERS AND SUPPORTS SHALL WITHSTAND THE
- EFFECTS OF WIND LOADS AND STRESSES. 9. ALL BRANCH TAKE-OFFS SHALL HAVE MANUAL VOLUME
- 10. ALL BRANCH TAKE-OFFS SHALL BE 45-DEGREE TAKE-OFFS. 11. REFER TO DUCT/INSULATION SCHEDULE FOR DUCT SEAL CLASSES AND PRESSURE SEAL CLASSES.
- 12. SEALANT SHALL BE A MAXIMUM FLAME—SPREAD INDEX OF 25 AND A MAXIMUM SMOKE-DEVELOPED INDEX OF 50 WHEN TESTED ACCORDING TO UL 723; CERTIFIED BY AN NRTL. 13. SEALANT SHALL BE A WATER-BASED JOINT AND SEAM SEALANT; BRUSH ON APPLICATION METHOD; MINIMUM 65 PERCENT SOLIDS CONTENT; MINIMUM 20 SHORE A HARDNESS; WATER RESISTANT; MOLD AND MILDEW
- RESISTANT; MAXIMUM 75 G/L (LESS WATER) VOC; AND COMPATIBLE WITH GALVANIZED SHEET STEEL. 14. ALL SIZES SHOWN ON THE DRAWINGS ARE CLEAR INSIDE DIMENSIONS. FOR INTERNALLY LINED DUCTWORK, INCREASE THE SIZE OF THE SHEET METAL.
- 15. PROVIDE INTERNALLY LINED DUCTWORK ON ALL RETURN AIR TRANSFER DUCTWORK. 16. ELBOWS SHALL BE LONG-RADIUS TYPE RATHER THAN
- RECTANGULAR WHERE INSTALLATION PERMITS. 17. DUCT LINER SHALL COMPLY WITH ASTM C 1071 AND SHALL BE MANUFACTURED BY JOHNS MANVILLE, KNAUF, OR OWENS
- 17.1. LINER SHALL HAVE ANTIMICROBIAL EROSION-RESISTANT COATING. 17.2. LINER SHALL BE 1" THICK.

# 233423 HVAC POWER VENTILATORS

# 1.2. CEILING MOUNTED VENTILATORS (EF-A)

- SUBMITTALS 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA AND
- 3. UL COMPLIANCE: POWER VENTILATORS SHALL COMPLY WITH
- 4. CEILING MOUNTED VENTILATORS 4.1. SHALL BE MANUFACTURED BY LOREN COOK, GREENHECK, OR TWIN CITY FAN. 4.2. REFER TO SCHEDULE FOR PERFORMANCE AND BASIS OF
- 4.3. PROVIDE EQUIPMENT SUPPORTS FOR CEILING MOUNTED 4.4. PROVIDE ACCESS DOORS WHERE REQUIRED TO SERVICE
- AND MAINTAIN THE FANS WHERE ACCESS IS OTHERWISE NOT POSSIBLE; COORDINATE WITH ARCHITECT. 4.5. INSTALL IN ACCORDANCE WITH MANUFACTURER'S
- RECOMMENDATIONS. 4.6. MAKE FINAL DUCT CONNECTION WITH FLEXIBLE DUCT CONNECTION.

# 239617 ELECTRIC UNIT HEATERS

# SCOPE

- 1.1. ELECTRIC UNIT HEATERS (EUH-A)
- SUBMITTALS 2.1. PROVIDE SHOP DRAWINGS INCLUDING PRODUCT DATA. 2.2. PROVIDE OPERATIONS AND MAINTENANCE MANUAL.
- 3. ELECTRIC UNIT HEATERS 3.1. SHALL BE MANUFACTURED BY BRASCH, QMARK, OR
- 3.2. ALL HEATERS SHALL PROVIDE A MINIMUM OF TWO STAGES OF HEATING. 3.3. PROVIDE EQUIPMENT SUPPORTS FOR CEILING AND WALL MOUNTING CONFIGURATIONS.
- 3.4. REFER TO SCHEDULE FOR PERFORMANCE DATA AND BASIS OF DESIGN.
- 3.5. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.

# 1. SCOPE

- SUBMITTALS 2.1. PROVIDE SHOP DRAWINGS INCLUDING PRODUCT DATA.
- 2.2. PROVIDE OPERATIONS AND MAINTENANCE MANUAL. LOUVERS
- 3.1. SHALL BE MANUFACTURED BY RUSKIN OR GREENHECK. 3.2. PROVIDE EQUIPMENT AND BUILDING SUPPORTS. 3.3. REFER TO SCHEDULE FOR PERFORMANCE DATA AND
- BASIS OF DESIGN. 3.4. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.

#### **DESIGN CRITERIA** SUMMER OUTDOOR DESIGN CONDITIONS | DRY BULB: 94.3°F (0.4% COOLING DRY BULB) (PER ASHRAE FUNDAMENTALS - 2021) WET BUILB: 74.4°F (0.4% EVAPORATION WET BUILB WINTER OUTDOOR DESIGN CONDITIONS DRY BULB: 12.8°F (99.6% HEATING DRY BULB) 1.1. STATIONARY DRAINABLE LOUVERS (L-A,B) (PER ASHRAE FUNDAMENTALS - 2021) WINTER INDOOR DESIGN CONDITIONS INDOOR AIR TEMPERATURE: 70°F (DB) DESIGN CITY NEWARK, NJ

	EXHAUS <sup>1</sup>	<b>SCHED</b>	ULE	
UNIT SERVED	SPACE	AREA (FT²)	EXHAUST REQUIRED (CFM)	EXHAUST PROVIDED (CFM)
	MADISO	ON AVE PARK		
EF-A	WOMEN'S ROOM	160	100	160
EF-A	MEN'S ROOM	160	100	160
50 CFM PER FIX	TURE WHEN CONT	.1: TOILET ROOMS TINUOUS EXHAUS Y DURING OCCUP	r is provide	D. ALL

DUCT/INSULATION SCHEDULE											
DUCT SERVICE		PRESSUF	RE CLASS	DUC.	TWORK	MINIMUM INSULATION R-VALUE					
	SMACNA SEAL CLASS	PRESSURE	INCHES W.C.	MATERIAL	CODE COMPLIANCE	EXTERIOR	UNCONDITIONED SPACE OR BURIED DUCT				
EXHAUST	A	NEGATIVE	1" W.C.	GALV. STEEL G60	ASTM A653/A653M	NONE	NONE				

CLIMATE ZONE

		CENTR	IFUGA	L FAN	SCHED	ULE				
TAG	DESCRIPTION	FLOW	STATIC	DRIVE		ELECTRICAL		BASIS	OF DESIGN	NOTES
IAG	DESCRIPTION	(CFM)	PRESSURE	DRIVE	V/ø/Hz	MOTOR HP	MOTOR RPM	MAKE	MODEL	NOIES
EF-A	CEILING SURFACE MOUNTED EXHAUST VENTILATOR	150	0.25"	DIRECT	115/1/60	0.02 (BHP)	921	GREENHECK	SP-A390-VG	1-9
1. 2. 3.	ST FAN SCHEDULE NOTES: PROVIDE ELECTRONICALLY COMMUTATED MOTOR WITH 0-10 PROVIDE REMOTE WALL-MOUNTED SPEED DIAL. PROVIDE DISCONNECT SWITCH. PROVIDE STANDARD GRILLE.	OVDC INPUT	SIGNAL.	6. 7. 8.	PROVIDE MOU PROVIDE 24VE PROVIDE HAN PROVIDE CON' PROVIDE BACI	DC CONTROLS D/OFF/AUTO TROLLER WITH	TRANSFORM CONTROLLER SCHEDULING	AND 3RD P	ARTY TIME CLOCK	

	L(	)UVE	<b>R SC</b> I	HEDU	JLE			
T40	DECORIDATION		DIMENSION	 S	FREE AREA	BASIS	OF DESIGN	NOTES
TAG	DESCRIPTION	HEIGHT	WIDTH	DEPTH	(SQ. FT.)	MAKE	MODEL	
L-A	STATIONARY DRAINABLE BLADE LOUVER	8"	16"	2"	0.20	GREENHECK	ESD-202	1,2
L-B	STATIONARY DRAINABLE BLADE LOUVER	12"	14"	6"	0.40	GREENHECK	ESD-635	1,2

		ELECTI	RIC UN	IT HEA	TER SO	CHEDU	LE		
TAG	DESCRIPTION	AIRFLOW	BTU/HR	ELECTRICAL BASIS OF DESIGN					NOTES
170	DESCRIPTION	AIRFLOW (CFM)	БІО/ПК	V/ø/Hz	WATTS	AMPS	MAKE	MODEL	NOTES
EUH-A	ELECTRIC UNIT HEATER	350	17,060	208/1/60	5,000	24.34	BRASCH	BH-240-U1050C	1–8

- ELECTRIC UNIT HEATER SCHEDULE NOTES:
- PROVIDE TWO-STAGE HEATER. PROVIDE DIRECTIONAL LOUVERS.
  - PROVIDE DISCONNECT SWITCH. PROVIDE BUILT-IN 24V TRANSFORMER AND CONTACTOR.
- PROVIDE MANUAL RESET CUTOUT (IN ADDITION TO AUTOMATIC CUTOUT). PROVIDE REMOTE, WALL MOUNTED, LOW VOLTAGE, 2-STAGE THERMOSTAT
- PROVIDE UNIVERSAL WALL & CEILING MOUNTING BRACKET. UNIT TO BE MOUNTED FROM CEILING. PROVIDE POLYESTER POWDER COAT FINISH. COORDINATE ENCLOSURE COLOR WITH ARCHITECT PRIOR TO ORDERING.

PROVIDE MINIMUM TWO-COAT 70% PVDF PAINT; COORDINATE COLOR WITH ARCHITECT.

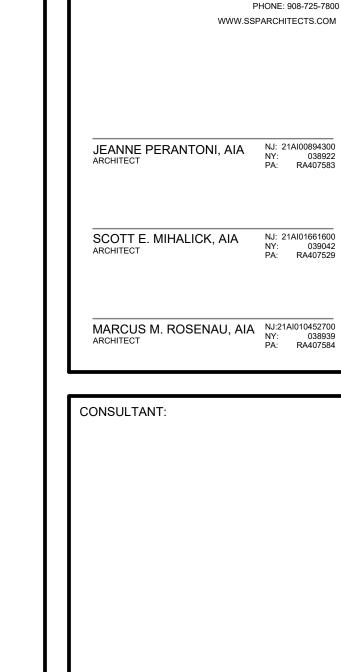
SYMBOL	DESCRIPTION					
	CEILING MOUNTED EXHAUST AIR GRILLE OR REGISTER. REFER TO SCHEDULE.					
CEILING MOUNTED EXHAUST AIR GRILLE OR REGISTER. REFER TO SCHE  XXX  MECHANICAL EQUIPMENT TAG FOR EQUIPMENT REQUIRING POWER.	MECHANICAL EQUIPMENT TAG FOR EQUIPMENT REQUIRING POWER.					
CEILING MOUNTED EXHAUST AIR GRILLE OR REGISTER. REFER TO SCHEDULE  MECHANICAL EQUIPMENT TAG FOR EQUIPMENT REQUIRING POWER.  MECHANICAL EQUIPMENT TAG FOR EQUIPMENT THAT DOES NOT REQUIRE P  TEMPERATURE SENSOR.  FAN SPEED DIAL/CONTROLLER.  SUPPLY DUCTWORK TURNING UP.  SUPPLY DUCTWORK TURNING DOWN.  AIRFLOW UNDER NEGATIVE PRESSURE.  MECHANICAL EQUIPMENT/DUCTWORK TO BE REMOVED.						
Ō	TEMPERATURE SENSOR.					
(Ē)	FAN SPEED DIAL/CONTROLLER.					
$\mathbb{N}$	SUPPLY DUCTWORK TURNING UP.					
SUPPLY DUCTWORK TURNING UP.  SUPPLY DUCTWORK TURNING DOWN.  AIRFLOW UNDER NEGATIVE PRESSURE.						
MECHANICAL EQUIPMENT  TEMPERATURE SENSOR.  FAN SPEED DIAL/CONTR  SUPPLY DUCTWORK TUR  SUPPLY DUCTWORK TUR  AIRFLOW UNDER NEGATI  MECHANICAL EQUIPMENT  EXISTING MECHANICAL E	MECHANICAL EQUIPMENT/DUCTWORK TO BE REMOVED.					
	EXISTING MECHANICAL EQUIPMENT.					
	MECHANICAL EQUIPMENT/DUCTWORK.					

SYMBOL LEGEND

ABBRV	ABBREVIATION
AFF	ABOVE FINISHED FLOOR
AHRI	AMERICAN HEATING REFRIGERATING INSTITUTE
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
EAT	ENTERING AIR TEMPERATURE
EWT	ENTERING WATER TEMPERATURE
EF	EXHAUST FAN
EG	EXHAUST GRILLE
EH	ELECTRIC HEATER
ESP	EXTERNAL STATIC PRESSURE
FLA	FULL LOAD AMPS
GUH	GAS UNIT HEATER
HOA	HAND/OFF/AUTO
HP	HORSEPOWER
kW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LD	LINEAR DIFFUSER
LWT	LEAVING WATER TEMPERATURE
MAN	MANUAL
MAU	MAKEUP AIR UNIT
MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
MCA	MINIMUM CIRCUIT AMPACITY
MOCP	MAXIMUM OVERCURRENT PROTECTION
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
N.G.	NATURAL GAS
PL	PILOT LIGHT
RG	RETURN AIR GRILLE
RPM	REVOLUTIONS PER MINUTE
RTU	ROOFTOP UNIT
SEER	SEASONAL ENERGY EFFICIENCY RATIO
SD	SUPPLY DIFFUSER
SSPB	START-STOP PUSH BUTTON
UL	UNDERWRITER'S LABORATORY
"WC	INCHES OF WATER COLUMN
XT	TRANSFORMER

**ABBREVIATIONS** 

MECHANICAL DRAWING LIST									
HEET NUMBER	SHEET TITLE								
M10	MECHANICAL SPECIFICATIONS, SCHEDULES, AND LEGENDS								
M11	MECHANICAL PLANS — MADISON AVE PARK								



50 DIVISION STREET, SUITE 503

SOMERVILLE, NJ 08876

REVIEW:

PHASE / SUBMISSION: ISSUED FOR BID ISSUE DATE: AUGUST 31, 2023 **REVISIONS:** MARK DATE DESCRIPTION NJ SDA PACKAGE #: NJ SDA #: NJ DOE #: SSP #: 22-8845 © SSP ARCHITECTS



THE COUNTY OF UNION

2325 SOUTH AVENUE

INTERIOR RESTROOM FACILITIES

**RENOVATIONS AT:** 

**AVENUE PARK** 

UNION COUNTY

PARKS -

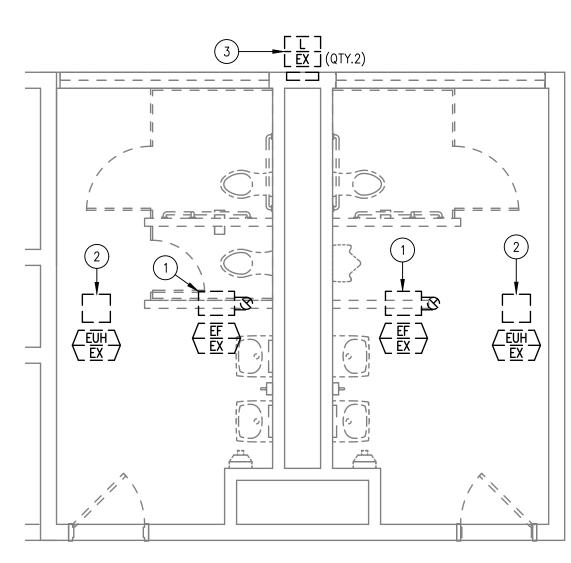
1333 MADISON AVE. RAHWAY, NJ 07065

CITY OF RAHWAY

SHEET NAME: **MECHANICAL** SPECIFICATIONS, **SCHEDULES, AND LEGENDS** 







# **MECHANICAL DEMOLITION PLAN - MADISON AVE PARK**

**COM***check* **Software Version COM***check***Web** 

90.1 (2019) Standard

Elizabeth, New Jersey

Owner/Agent:

Alteration

Heating: 2 each - Unit Heater, Electric, Capacity = 17 kBtu/h

No minimum efficiency requirement applies

**Mechanical Compliance Certificate** 

22-0080 UNION COUNTY - MADISON AVE

Fan System: TOILET ROOM | TOILET ROOM -- Compliance (Motor nameplate HP and fan efficiency method) : Passes

EUH-A Supply, Constant Volume, 350 CFM, 0.1 motor nameplate hp, 0.00 fan energy index , fan exception: Single

EF-A Exhaust, Constant Volume, 150 CFM, 0.1 motor nameplate hp, 0.00 fan energy index , fan exception: Single

Compliance Statement: The proposed mechanical alteration project represented in this document is consistent with the building

plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been

designed to meet the 90.1 (2019) Standard requirements in COMcheck Version COMcheckWeb and to comply with any applicable

Signature

Designer/Contractor:

Report date: 08/29/23

Page 1 of 9

# **PLAN KEYED NOTES:**

- (1) REMOVE EXISTING CEILING MOUNTED EXHAUST FAN, ASSOCIATED DUCTWORK, SUPPORTS, WIRING,
- (2) REMOVE EXISTING ELECTRIC UNIT HEATER, SUPPORTS, WIRING, CONTROLS, ETC.
- (3) REMOVE EXISTING EXTERIOR LOUVER AND WALL SLEEVES (QTY. 2).

**Project Information** 

**Mechanical Systems List** 

Quantity System Type & Description

fan < 1 HP or < 0.89 kW

**Mechanical Compliance Statement** 

SYSTEM VERIFICATION REQUIRED.

mandatory requirements listed in the Inspection Checklist.

Project Title: 22-0080 UNION COUNTY - MADISON AVE

1 HEATING/EXHAUST SYSTEM

Energy Code:

Project Title:

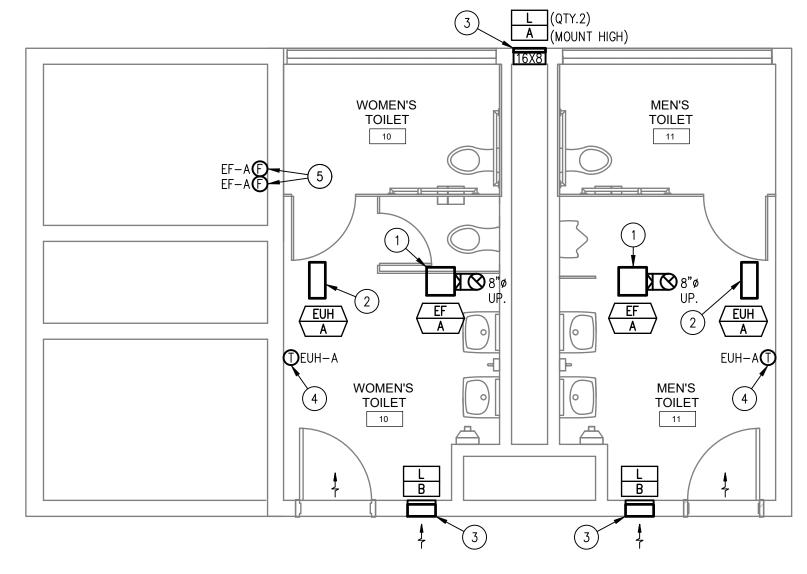
Climate Zone: Project Type:

Name - Title

Data filename:

Construction Site:

Location:



# MECHANICAL PLAN - MADISON AVE PARK 1/4"=1'-0"

# **PLAN KEYED NOTES:**

- 1) PROVIDE CEILING MOUNTED EXHAUST FAN. TERMINATE DUCTWORK NO LESS THAN 14" ABOVE ADJACENT ROOF LEVEL OUTDOORS. REFER TO DETAIL 3/M11.
- 2 PROVIDE ELECTRIC UNIT HEATER.
- (3) PROVIDE EXTERIOR LOUVER AND ALUMINUM WALL SLEEVE.
- (4) PROVIDE REMOTE WALL-MOUNTED THERMOSTAT WITH VENTED LOCKBOX.
- (5) PROVIDE REMOTE WALL-MOUNTED FAN SPEED DIAL AND CONTROLLER.

# GALV. 1/2" MESH SCREEN WITH FRAME AND BACKDRAFT DAMPER. RAINHOOD SHALL BE 18 GAUGE GALV. STEEL WITH CAULKED JOINTS. COAT WITH PITCH. DIM. SHALL MATCH DUCT SIZE SHOWN ON PLAN. - WELDED SEAM ∠ 2" COUNTERFLASHING - SHEETMETAL SCREW (COAT WITH PITCH). 16 GAUGE CHANNEL 12" HIGH X 2" DEEP 2" RIGID INSULATION THRU BOLT W/WASHERS ---- ROOFING ROOF DECK STRUCTURAL SUPPORTS — REFERENCE STRUCTURAL - EXHAUST OR FRESH AIR DUCT

# GOOSENECK DETAIL - EXHAUST AIR DUCTWORK NOT TO SCALE

# EF-A SEQUENCE OF OPERATION

RUN CONDITIONS — SCHEDULED: THE FAN SHALL RUN ACCORDING TO A USER DEFINABLE SCHEDULE, THE OCCUPANCY SCHEDULE.

**DRAWING GENERAL NOTES:** 

DISTURBED DURING CONSTRUCTION.

EQUIPMENT, PIPING, AND DUCTWORK.

LETTERING ON BLACK BACKGROUND.

2. MINIMUM LETTER SIZE SHALL BE 1"

1. REMOVE ALL MISCELLANEOUS SUPPORTS, CONTROLS, WIRING, TUBING, ETC. FOR EXISTING

2. PATCH AND SEAL EXISTING OPENINGS THAT ARE OBSOLETE FROM THE DEMOLITION.

3. IF THE EXISTING STRUCTURE HAS SPRAY FIREPROOFING. REPAIR ANY FIREPROOFING

4. TAKE DOWN CEILING, LIGHTS, SPRINKLERS, ETC. AS REQUIRED TO INSTALLATION OF

1. PROVIDE MULTI-COLOR PLASTIC LABELS FOR MECHANICAL ENGRAVING WITH WHITE

EQUIPMENT, DUCTWORK, AND PIPING SPECIFIED TO BE REMOVED.

**EQUIPMENT IDENTIFICATION NOTES:** 

THE FAN SHALL HAVE A USER DEFINABLE (ADJ.) MINIMUM RUNTIME.

THE CONTROLLER SHALL MONITOR THE FAN STATUS.

#### EUH-A SEQUENCE OF OPERATION RUN CONDITIONS - SCHEDULED:

THE UNIT SHALL RUN ACCORDING TO A USER DEFINABLE TIME SCHEDULE IN THE FOLLOWING

OCCUPIED MODE: THE UNIT SHALL MAINTAIN A 70°F (ADJ.) HEATING SETPOINT.

UNOCCUPIED MODE (NIGHT SETBACK): THE UNIT SHALL MAINTAIN A 55°F (ADJ.) HEATING SETPOINT.

THE CONTROLLER SHALL MONITOR THE FAN STATUS.

THE FAN SHALL HAVE A USER DEFINABLE (ADJ.) MINIMUM RUNTIME.

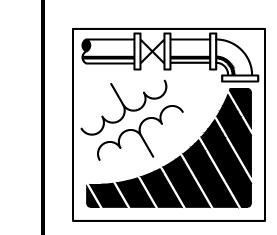
THE ZONE SENSOR.

ZONE SETPOINT ADJUST: THE OCCUPANT SHALL BE ABLE TO ADJUST THE ZONE TEMPERATURE HEATING SETPOINT AT

ELECTRIC HEATING:
THE CONTROLLER SHALL MEASURE THE ZONE TEMPERATURE AND MODULATE THE ELECTRIC HEATING COIL TO MAINTAIN ITS SETPOINT. TO PREVENT SHORT CYCLING, THE STAGE SHALL HAVE A USER DEFINABLE (ADJ.) MINIMUM RUNTIME.

THE REHEATING SHALL BE ENABLED WHENEVER:

 THE ZONE TEMPERATURE IS BELOW SETPOINT. AND SUFFICIENT AIRFLOW IS PROVIDED.



# **ENGINEERING DRIVEN DESIGN PC**

555 Route One South Suite 100 Iselin, New Jersey 08830 (848) 247-6150 www.engineerdriven.com

Project # 22-0080 Jeffrey N. Beeden Professional Engineer NJ License 24GE04746800 REVIEW:



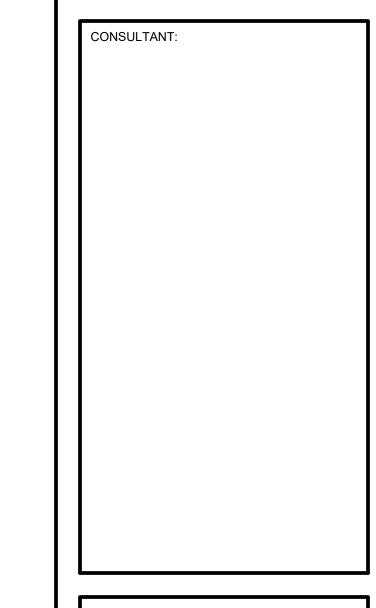
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# PHASE / SUBMISSION: ISSUED FOR BID ISSUE DATE: AUGUST 31, 2023 **REVISIONS:** MARK DATE DESCRIPTION

NJ SDA PACKAGE #: NJ SDA #: NJ DOE #: SSP#:

22-8845 © SSP ARCHITECTS

THE COUNTY OF UNION

2325 SOUTH AVENUE

INTERIOR RESTROOM

**FACILITIES** RENOVATIONS AT: UNION COUNTY

PARKS -

**AVENUE PARK** 1333 MADISON AVE.

CITY OF RAHWAY

SHEET NAME:

**MECHANICAL PLANS** - MADISON AVE **PARK** 

RAHWAY, NJ 07065

UNION COUNTY

# **ELECTRICAL SPECIFICATIONS:**

#### 260000 SUMMARY

- 1. THE SCOPE OF THIS PROJECT IS TO UPGRADE ALL MECHANICAL AND PLUMBING SYSTEMS, EQUIPMENT, AND FIXTURES AS WELL AS TO PROVIDE UPGRADES AND MODIFICATIONS TO THE EXISTING ELECTRICAL SYSTEMS FOR
- RESTROOMS IN UNION COUNTY PUBLIC PARKS... 2. THE BUILDING IS A SEISMIC DESIGN CATEGORY OF B, WHICH MEANS THAT ELECTRICAL SYSTEMS ARE EXEMPT FROM SEISMIC BRACING REQUIREMENTS.

### 260010 DEFINITIONS

- 1. FURNISH: TO PURCHASE AND DELIVER AN ITEM TO THE STAGING AREA COMPLETE WITH ALL REQUIRED
- APPURTENANCES. 2. INSTALL: TO MOVE THE ITEM FROM THE STAGING AREA
- AND FASTEN TO THE STRUCTURE. 3. PROVIDE: TO FURNISH AND INSTALL.

### 260040 SUBSTITUTIONS

- 1. ALL SUBSTITUTIONS MUST BE APPROVED PRIOR TO BIDDING. PROVIDE SUBSTITUTION INFORMATION DURING THE BID-PHASE QUESTION AND ANSWER PERIOD. INCLUDE DETAILED DATA ON THE PROPOSED SUBSTITUTION INCLUDING DOLLAR AMOUNT OF PROPOSED SAVINGS. ENGINEER SHALL REVIEW THE INFORMATION AND DETERMINE WHETHER THE SUBSTITUTION
- 2. ANY CHANGES TO THE CONTRACT DOCUMENTS DUE TO THE SUBSTITUTION SHALL BE COORDINATED BY THE GENERAL CONTRACTOR AND ANY ADDITIONAL COST TO MODIFY THE DESIGN OR MODIFY THE SCOPE OF OTHER TRADES SHALL BE INCLUDED IN THE PROPOSED SAVINGS. THIS SHALL INCLUDE MODIFICATIONS TO THE STRUCTURAL SCOPE FOR EQUIPMENT SUPPORT AS WELL AS MODIFICATIONS TO ELECTRICAL BRANCH CIRCUITRY OR FEEDERS FOR EQUIPMENT.

#### 260050 SUBMITTALS

- 1. ALL SUBMITTALS SHALL BE ROUTED TO THE ARCHITECT FOR DISTRIBUTION TO ALL DESIGN PROFESSIONALS. 2. ALL SUBMITTALS SHALL BEAR A COVER-SHEET FROM THE GENERAL CONTRACTOR INDICATING THEY HAVE REVIEWED THE
- 3. SHOP DRAWING SUBMISSIONS CONSISTING OF PRODUCT DATA

SUBMITTAL AND FIND IT TO CONFORM TO THE CONTRACT

SHOP DRAWINGS. THE ENGINEER SHALL KEEP A COPY, THE

- CUT-SHEETS MAY BE SUBMITTED ELECTRONICALLY. 4. SHOP DRAWING SUBMISSIONS CONSISTING OF COORDINATION PLANS, LAYOUT DRAWINGS, FIRE PROTECTION SHOP DRAWINGS, FIRE ALARM SHOP DRAWINGS, SHEET METAL SHOP DRAWINGS, ETC. SHALL BE SUBMITTED IN LARGE FORMAT ORIGINAL SIZE ON PAPER. PROVIDE FIVE COPIES OF THE
- ARCHITECT SHALL KEEP A COPY, THE REMAINING THREE COPIES WILL BE RETURNED TO THE GENERAL CONTRACTOR. 5. REQUESTS FOR INFORMATION (RFIS) SHALL INCLUDE THE QUESTION. THE REFERENCED PORTION OF THE CONTRACT
- DOCUMENTS, AND THE CONTRACTOR'S RECOMMENDED SUGGESTION FOR REMEDY. 6. DELEGATED-DESIGN SUBMISSIONS SHALL BE PROVIDED WITH A COVER-SHEET INDICATING THE PROFESSIONAL OF RECORD THAT WILL SIGN AND SEAL THE DOCUMENT. ORIGINAL SIGNED AND SEALED DOCUMENTS DO NOT NEED TO BE SUBMITTED UNTIL THE DOCUMENTS ARE APPROVED BY THE
- ARCHITECT AND ENGINEER. REFER TO THE INDIVIDUAL SPECIFICATION SECTIONS FOR THE REQUIRED SUBMITTALS.
- 8. COMPILE OPERATION AND MAINTENANCE (0&M) MANUALS AND SUBMIT ELECTRONICALLY FOR APPROVAL. AFTER APPROVAL OF ALL MANUALS, PROVIDE TWO COPIES OF A PRINTED, BOUND SET TO THE OWNER AND A FLASH DRIVE WITH THE DATA AS .PDFS.

# 260070 QUALITY ASSURANCE

- 1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH INDUSTRY STANDARDS AND SHALL CONFORM TO THE NEW JERSEY UNIFORM CONSTRUCTION CODE. THE CURRENTLY ADOPTED SUBCODES WITH AMENDMENTS ARE AS FOLLOWS:
- 1.1. INTERNATIONAL BUILDING CODE 2021 1.2. NATIONAL STANDARD PLUMBING CODE 2021 1.3. INTERNATIONAL MECHANICAL CODE 2021
- 1.4. INTERNATIONAL FUEL GAS CODE 2021 1.5. NATIONAL ELECTRIC CODE 2020
- 1.6. ASHRAE 90.1-2019

# 260100 EXECUTION

- 1. ALL CUTTING AND PATCHING OF THE BUILDING SHALL BE PERFORMED BY THE CONTRACTOR. REMOVAL OF EXISTING SYSTEMS, COMPONENTS, SUPPORTS, ETC. SHALL HAVE ALL EXISTING HOLES OR PENETRATIONS PATCHED TO MATCH THE EXISTING ADJACENT CONSTRUCTION.
- 2. REMOVE AND DISPOSE OF IN A LEGAL MANNER ALL CONSTRUCTION DEBRIS IDENTIFIED TO BE REMOVED. THE CONSTRUCTION AREA SHALL BE BROOM SWEPT EACH NIGHT. DO NOT LET RUBBISH ACCUMULATE.
- 3. ALL CONSTRUCTION MATERIAL THAT CAN BE RECYCLED SHALL BE RECYCLED. MAINTAIN ALL RECEIPTS AND SUBMIT COPIES OF THE RECEIPT TO THE ARCHITECT TO DOCUMENT THE QUANTITIES OF THE RECYCLED MATERIAL.

# 260110 O&M DATA

- 1. PROVIDE OPERATION AND MAINTENANCE MANUALS. REFER TO THE INDIVIDUAL SPECIFICATION SECTIONS FOR
- 2. THE O&M MANUALS SHALL INCLUDE AS-BUILT DOCUMENTATION. AS-BUILT DOCUMENTATION SHALL CONSIST OF CONTRACTOR RED-LINED CONTRACT DOCUMENTS. INCLUDE THE AS-BUILT DOCUMENTATION WITH THE O&M

# 260130 FIRESTOPPING

1. ALL PENETRATIONS THROUGH FIRE-RATED ASSEMBLIES SHALL HAVE APPROPRIATE INTUMESCENT MATERIAL FIRE STOPPING INSTALLED. ALL OPENINGS SHALL BE CAULKED AND SEALED WITH SSS INTUMESCENT FIRESTOP SEALANT AS MANUFACTURED BY SPECIFIED TECHNOLOGIES, INC.

1. ALL ROOF PENETRATIONS SHALL BE WEATHERPROOF IN ALL RESPECTS. ANY WORK DONE ON THE ROOF SHALL BE PERFORMED BY A CONTRACTOR CERTIFIED BY THE ROOF

MANUFACTURER TO MAINTAIN THE EXISTING ROOF WARRANTY.

# 260500 COMMON ELECTRICAL REQUIREMENTS

- SCOPE 1.1. LOW-VOLTAGE POWER CONDUCTORS AND CABLES 1.2. GROUNDING
- 1.3. HANGERS AND SUPPORTS 1.4. RACEWAYS AND BOXES
- SUBMITTALS 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA.
- 2.2. SUBMIT OPERATION AND MAINTENANCE DATA. 2.3. SUBMIT TEST REPORTS. 3. LOW-VOLTAGE POWER CONDUCTORS AND CABLES
- 3.1. PROVIDE WIRE MANUFACTURED BY BELDEN, SOUTHWIRE, OR ALPHA WIRE.
- 3.2. COPPER CONDUCTORS SHALL COMPLY WITH NEMA WC 3.3. CONDUCTOR INSULATION SHALL BE THHN-2 OR
- 3.4. MULTI-CONDUCTOR CABLES SHALL COMPLY WITH NEMA
- WC 70. 3.5. MULTI-CONDUCTOR CABLES SHALL CONSIST OF
- METAL-CLAD CABLE (MC). 3.6. SUPPORTS SHALL BE GALVANIZED STEEL SUPPORTS AS DESCRIBED IN NECA 1 AND NECA 101.

3.7. ALL BRANCH CIRCUITS HAVE BEEN DESIGNED BASED ON

- RESISTIVITY OF COPPER CONDUCTORS. 3.8. BRANCH CIRCUIT WIRE SHALL BE SOLID CONDUCTOR
- FOR NO. 10 AWG AND SMALLER AND STRANDED FOR LARGER CONDUCTORS. 3.9. INSTALL BRANCH CIRCUITS AND FEEDERS IN
- ACCORDANCE WITH THE RACEWAY APPLICATION TABLE ON THE CONTRACT DOCUMENTS.

- SHALL BE TYPE MC CABLE. 3.11. EXPOSED BRANCH CIRCUITS SHALL BE PULLED
- CONDUCTORS IN RACEWAY. 3.12. IDENTIFY AND COLOR-CODE CONDUCTORS IN
- ACCORDANCE WITH CHAPTER 2 OF THE NEC. 3.13. INSTALL EQUIPMENT GROUND CONDUCTORS WITH ALL
- FEEDERS AND BRANCH CIRCUITS. 4. METAL RACEWAY

4.1. PROVIDE RACEWAY MANUFACTURED BY SOUTHWIRE,

- THOMAS & BETTS, OR WESTERN TUBE AND CONDUIT. 4.2. GALVANIZED RIGID CONDUIT (GRC) SHALL COMPLY WITH ANSI C80.1 AND UL 6.
- 4.3. ELECTRIC METALLIC TUBING (EMT) SHALL COMPLY WITH ANSI C80.3 AND UL797.
- 4.4. FLEXIBLE METAL CONDUIT (FMC) SHALL COMPLY WITH UL 1 AND SHALL BE ZINC COATED.
- 4.5. LIQUID TIGHT FLEXIBLE METAL CONDUIT (LFMC) SHALL COMPLY WITH UL 360 AND SHALL BE FLEXIBLE STEEL CONDUIT WITH PVC JACKET.
- 4.6. FITTINGS SHALL COMPLY WITH NEMA FB 1 AND UL 4.7. SHEET METAL PULL, JUNCTION, OUTLET, AND DEVICE
- BOXES SHALL COMPLY WITH NEMA OS 1. OUTLET AND DEVICE BOXES SHALL ALSO COMPLY WITH UL 514A. 5. GROUNDING
- 5.1. INSTALL BONDING STRAPS AND JUMPERS IN AREAS ACCESSIBLE FOR INSPECTION AND MAINTENANCE. 5.2. BOND METAL DUCTWORK TO EQUIPMENT GROUNDING
- CONDUCTORS OF ASSOCIATED FANS. INSTALL BONDING JUMPER ACROSS FLEXIBLE DUCTWORK CONNECTIONS. 5.3. EXOTHERMICALLY WELD GROUNDING ELECTRODE
- CONDUCTORS TO GROUNDING ELECTRODES, UNLESS OTHERWISE NOTED. 5.4. PERFORM TESTS ON THE GROUNDING SYSTEM.
- 5.4.1. TESTS SHALL INCLUDE MEASUREMENT OF GROUND RESISTANCES. 5.4.2. PREPARE TEST REPORT AND SUBMIT TO OWNER FOR REVIEW.
- 5.4.3. IF TESTS MEASURE HIGH RESISTIVITY INCLUDE RECOMMENDATIONS FOR IMPROVING THE GROUNDING SYSTEM.
- 6. HANGERS AND SUPPORTS 6.1. INSTALL HANGERS AND SUPPORTS IN ACCORDANCE WITH NECA 1 AND NECA 101.
- 6.2. PROVIDE MAXIMUM SUPPORT SPACING AS REQUIRED BY NFPA 70. MINIMUM ROD SIZE SHALL BE 3/8".
- 7. COLOR CODE CONDUCTORS FOR 240/120V SYSTEMS SHALL MATCH THE EXISTING COLOR CODING. 8. LABEL JUNCTION AND PULL BOXES WITH THE BRANCH
- CIRCUIT AND PANEL INFORMATION INDICATING WHICH CIRCUITS ARE ROUTED THROUGH THE BOX. 9. UTILIZE A CLEAR PLASTIC LABEL WITH BLACK LETTERING IDENTIFYING THE BRANCH CIRCUIT FOR EACH OUTLET.
- ADHERE THE LABEL TO THE DEVICE COVERPLATE. 10. PROVIDE MULTI-COLOR PLASTIC LABELS FOR MECHANICAL ENGRAVING WITH WHITE LETTERING ON BLACK BACKGROUND.
- 10.1. MINIMUM LETTER SIZE SHALL BE 1/2" 11. LABEL ALL ELECTRICAL PANELS, DISCONNECT SWITCHES, AND LIGHTING CONTROL PANELS.

#### 260923 LIGHTING CONTROL DEVICES

- SCOPE 1.1. OCCUPANCY SENSORS
- SUBMITTALS 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA. 2.2. SUBMIT OPERATION AND MAINTENANCE DATA.
- PROGRAMMABLE CONTROLS AND/OR DIP SWITCH ADJUSTMENTS. 3. PROVIDE AUTOMATIC LIGHTING CONTROLS AS SPECIFIED ON

2.3. PROVIDE TRAINING ON ALL CONTROL DEVICES WITH

- THE CONTRACT DOCUMENTS. 3.1. PROVIDE CONTROLS MANUFACTURED BY HUBBELL,
- WATTSTOPPER, LITE CONTROL, OR SENSORSWITCH. 3.2. PROVIDE ALL POWER PACKS AND RELAY PACKS
- REQUIRED TO ACHIEVE THE SEQUENCE OF OPERATION OUTLINED ON THE CONTRACT DOCUMENTS.

UNLESS OTHERWISE NOTED.

# 262416 EXISTING PANELBOARDS

- SCOPE 1.1. PANELBOARDS
- 2. REFER TO PANEL SCHEDULES AND SINGLE LINE DIAGRAM FOR DETAILED INFORMATION ON EACH PANELBOARD. 3. PROVIDE CIRCUIT BREAKERS THAT MATCH THE INTERRUPTING
- CURRENT RATING OF THE PANELBOARD. 4. CIRCUIT BREAKERS SHALL BE MOLDED CASE, INVERSE TIME AND INSTANTANEOUS TRIP, QUICK MAKE/QUICK BREAK TYPE. ALL CIRCUIT BREAKERS SHALL BE BOLT-ON STYLE. MULTIPLE POLE CIRCUIT BREAKERS SHALL OPEN ALL POLES SIMULTANEOUSLY. CIRCUIT BREAKER INTERRUPTING RATING SHALL MATCH THE PANEL RATING INDICATED IN THE SCHEDULE. ALL COMPONENTS SHALL BE FULLY RATED,
- 5. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- 6. FOR ANY BREAKERS DESIGNATED AT "LOCKABLE", PROVIDE POWER/BLOC BY SAFETY DESIGN PERMANENTLY-MOUNTED SYSTEM TO PANELBOARD OR EQUIVALENT PERMANENTLY MOUNTED BREAKER LOCKING SYSTEM. BREAKER SHALL BE LOCKABLE IN THE ON/OFF POSITION.
- 7. PROVIDE A TYPEWRITTEN DIRECTORY CARD IN TRANSPARENT CARD HOLDER INCORPORATING THE EXISTING DIRECTORY CARD AND THIS PROJECT'S MODIFICATIONS.
- 8. AS EXISTING BRANCH CIRCUITS ARE MADE SPARES IN EXISTING PANELBOARDS LABEL AS SUCH AND OPEN THE
- 9. AFTER SUBSTANTIAL COMPLETION, BUT NOT MORE THAN 60 DAYS AFTER FINAL ACCEPTANCE, MEASURE THE LOAD DURING A PERIOD OF NORMAL SYSTEM LOADING AND MAKE CIRCUIT CHANGES TO BALANCE THE PHASE LOADING. PROVIDE A REPORT DOCUMENTING THE CHANGES AND UPDATE THE PANEL DIRECTORY CARD.

# 262726 WIRING DEVICES

- SCOPE 1.1. RECEPTACLES
- 1.2. SWITCHES
- SUBMITTALS
- 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA. 2.2. SUBMIT OPERATION AND MAINTENANCE DATA.
- 3. PROVIDE DEVICES MANUFACTURED BY COOPER, HUBBELL, LEVITON, OR PASS & SEYMOUR.
- 4. REFER TO SYMBOL LEGEND AND CONTRACT DOCUMENTS FOR CONFIGURATION AND REQUIREMENTS.
- 5. DEVICE COLOR SHALL BE SELECTED BY THE ARCHITECT IN THE SHOP DRAWING PHASE. 6. PROVIDE WALL PLATES TO FIT THE DEVICES. WALL PLATES
- SHALL BE COLORED SMOOTH HIGH IMPACT THERMOPLASTIC TO MATCH DEVICE COLOR IN FINISHED AREAS. 7. INSTALL IN ACCORDANCE WITH MANUFACTURER'S
- INSTALLATION INSTRUCTIONS. 8. PROVIDE BRANCH CIRCUIT IDENTIFICATION FOR OUTLETS. 9. PRIOR TO INSTALLING SWITCHES, CONFIRM DOOR SWINGS AND
- LOCATIONS OF FURNITURE PARTITIONS. 10. INSTALL ALL DEVICES IN ACCORDANCE WITH NJ BARRIER FREE SUBCODE.

# 262816 ENCLOSED SWITCHES

- SCOPE 1.1. NONFUSIBLE SWITCHES
- SUBMITTALS 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA.
- 2.2. SUBMIT OPERATION AND MAINTENANCE DATA. 3. NONFUSIBLE SWITCHES 3.1. PROVIDE HEAVY DUTY, SINGLE THROW, 600V RATED
- DICONNECT. 3.2. PROVIDE LOCKABLE HANDLE. 3.3. PROVIDE INTERLOCK WITH COVER IN CLOSED POSITION.
- 4. DISCONNECT SWITCHES SHALL COMPLY WITH UL 98 AND

- ENCLOSURES
- 6.1. INDOOR LOCATIONS, NEMA 250, TYPE 1. 6.2. OUTDOOR LOCATIONS, NEMA 250, TYPE 3R.

- 265100 INTERIOR LIGHTING SCOPE
- 1.1. LUMINAIRES SUBMITTALS
- 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA.
- 2.2. SUBMIT OPERATION AND MAINTENANCE DATA. 2.3. PROVIDE EXTENDED SEVEN YEAR WARRANTIES FROM THE DATE OF SUBSTANTIAL COMPLETION FOR SELF-CONTAINED BATTERY-POWERED EMERGENCY FIXTURES OR BALLASTS. THE FIRST YEAR SHALL BE A FULL WARRANTY AND THE REMAINING SIX YEARS SHALL
- BE PRORATED. 3. REFER TO THE LIGHTING FIXTURE SCHEDULE FOR DETAILED
- 4. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.

# SYMBOL LEGEND

L	DESCRIPTION
	AC GENERAL USE SNAP SWITCH, 20 AMP, 120—277 VOLT — SINGLE POLE. × INDICATES SWITCHING CONTROL, WHERE NONE SHOWN SERVES ENTIRE ROOM.

TT DRY TYPE TRANSFORMER (PLAN VIEW). REFER TO SCHEDULE.

- HEAVY DUTY DISCONNECT SWITCH. xx INDICATES RATED SWITCH AMPS, WHERE NONE SHOWN, PROVIDE 30 AMPERE SWITCH.
- J WALL-MOUNTED JUNCTION BOX.
- (CO) CEILING-MOUNTED CARBON MONOXIDE ALARM. MODEL: KIDDE KN-COP-IC OR EQUIVALENT.
- $\square$ | EXISTING SURFACE MOUNTED PANELBOARD. REFER TO SCHEDULE, IF USED.
- | ELECTRICAL EQUIPMENT OR WIRING.
- EXISTING ELECTRICAL EQUIPMENT OR WIRING TO REMAIN.
- LEXISTING ELECTRICAL EQUIPMENT OR WIRING TO BE REMOVED OR RELOCATED. REFER TO PLANS FOR SCOPE.
- EHD | ELECTRIC HAND DRYER. JUNCTION BOX FOR AUTOMATIC FAUCET OR FLUSHOMETER POWER. COORDINATE MOUNTING LOCATION AND EXACT POWER REQUIREMENTS WITH PLUMBING CONTRACTOR.

#### **ABBREVIATIONS** | ABBRV | ABBREVIATION 3P THREE POLE 4P FOUR POLE AC ARMOR CLAD (WHEN REFERENCING CABLE) OR ALTERNATING CURRENT AMP AMPERE CONDUI CATV CABLE TELEVISION CONN. CONNECTED EMT ELECTRICAL METALLIC TUBING FMC | FLEXIBLE METAL CONDUIT G | EQUIPMENT GROUND GROUNDING ELECTRODE CONDUCTOR GFCI GROUND FAULT CIRCUIT INTERRUPTING GFP GROUND FAULT PROTECTION GRC GALVANIZED RIGID CONDUIT KAIC KILOAMPERE INTERUPPTING RATING kVA KILOVOLT-AMPERE LFMC LIQUID TIGHT, FLEXIBLE METAL CONDUIT MC METAL CLAD CABLE MCB MAIN CIRCUIT BREAKER MLO MAIN LUGS ONLY N NEUTRAL NEC NATIONAL ELECTRICAL CODE NEMA NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION OCP OVERCURRENT PROTECTION PIR PASSIVE INFRARED PV PHOTOVOLTAIC RGS RIGID GALVANIZED STEEL CONDUIT

RNC RIGID NONMETALLIC CONDUIT

US ULTRASONIC

VA VOLT-AMPERE

WP NEMA 3R ENCLOSURE

S SWITCHED, REFER TO PLANS FOR CONTROL

V VOLTS (UNLESS NEXT TO COMMUNICATION SYMBOL, THEN VOICE).

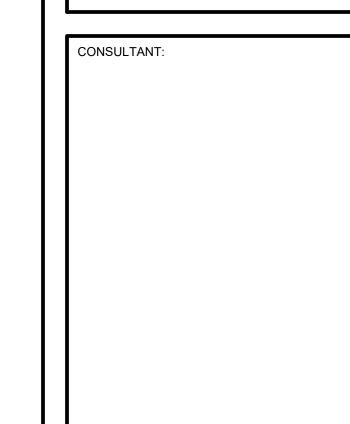
# **RACEWAY APPLICATION TABLE** EXPOSED OR CONCEALED UNDERGROUND CONNECTION TO VIBRATING EQUIPMENT EXPOSED EXPOSED THE FOLLOWING LOCATIONS UP TO 20' AFF: LOADING DOCKS, WAREHOUSES, MAINTENANCE AREAS, MECHANICAL ROOMS. CONCEALED IN CEILINGS AND EMT (MC / AC CABLE WHERE WALLS OR PARTITIONS |SPECIFICATIONS ALLOW). CONNECTION TO VIBRATING QUIPMENT DAMP OR WET LOCATIONS

# 50 DIVISION STREET, SUITE 503 WWW.SSPARCHITECTS.COM JEANNE PERANTONI, AIA ARCHITECT NJ: 21AI00894300 NY: 038922 PA: RA407583

SOMERVILLE, NJ 08876

PHONE: 908-725-7800

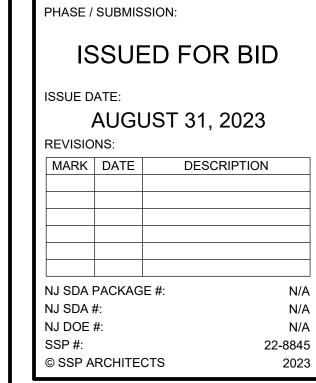
REVIEW:



SCOTT E. MIHALICK, AIA
ARCHITECT

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THE COUNTY OF UNION

INTERIOR RESTROOM FACILITIES **RENOVATIONS AT:** 

2325 SOUTH AVENUE

**UNION COUNTY** PARKS -

**AVENUE PARK** 

1333 MADISON AVE. RAHWAY, NJ 07065

CITY OF RAHWAY UNION COUNTY



# ENGINEERING DRIVEN DESIGN PC

**ELECTRICAL DRAWING LIST** 

Sheet Title

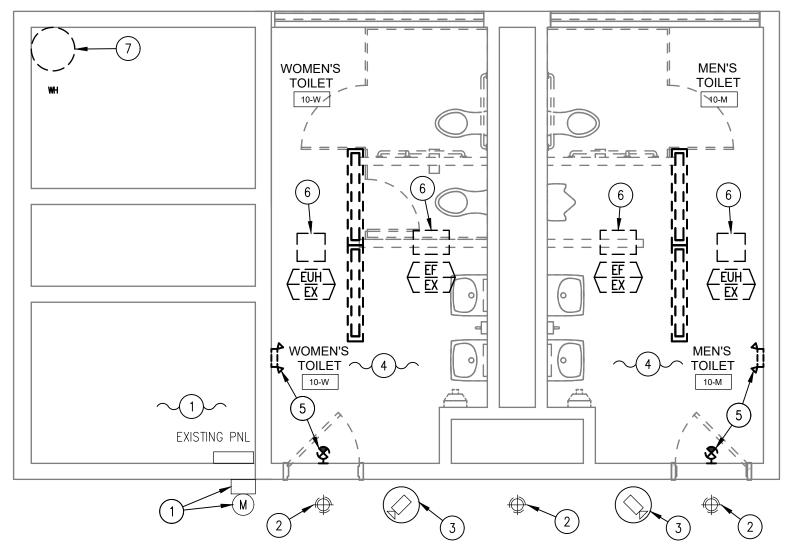
ELECTRICAL SPECIFICATIONS AND GENERAL NOTES

ELECTRICAL PLAN - MADISON AVE. PARK

Professional Engineer NJ License 24GE04746800 SHEET NAME: **ELECTRICAL SPECIFICATIONS AND GENERAL NOTES** SHEET NUMBER:

NEMA KS 1. 3.10. CONCEALED BRANCH CIRCUITS SERVING OTHER DEVICES

5. DISCONNECT SWITCHES SHALL HAVE MECHANICAL LUGS.



# ELECTRICAL DEMOLITION PLAN - MADISON AVE PARK 1/4"=1'-0"

# **DEMOLITION PLAN GENERAL NOTES:**

- 1. FOR ALL ITEMS DESIGNATED TO BE REMOVED. REMOVE THE BRANCH CIRCUIT, ASSOCIATED OBSOLETE WIRING, ANY SUPPORTS, CONTROLS, ETC FOR OBSOLETE ITEMS. UNLESS NOTED OTHERWISE.
- PATCH EXISTING GENERAL CONSTRUCTION TO REMAIN TO MATCH THE EXISTING ADJACENT CONSTRUCTION FOR ALL ITEMS DESIGNATED TO BE REMOVED.
- 3. REMOVE ALL ITEMS FROM PREMISES DAILY AND KEEP CONSTRUCTION SITE BROOM
- 4. UTILIZE EXISTING ELECTRICAL POWER FOR CONSTRUCTION POWER. COORDINATE DEMOLITION TO PROVIDE GFCI RECEPTACLE EVERY 400 SQUARE FEED DURING CONSTRUCTION. IF CONSTRUCTION POWER CAN NOT BE COORDINATED WITH DEMOLITION, PROVIDE TEMPORARY POWER FOR CONSTRUCTION ACTIVITIES.
- 5. PROVIDE TEMPORARY LIGHTING THROUGHOUT CONSTRUCTION.
- 6. ENSURE DEMOLITION DOES NOT AFFECT ADJACENT SPACES. THE ADJACENT SPACES WILL REMAIN OCCUPIED THROUGHOUT CONSTRUCTION.
- 8. TEMPORARILY REMOVE ALL ELECTRICAL ITEMS IN CEILING AS REQUIRED TO ACCOMMODATE SCOPE OF WORK. REINSTALL UPON COMPLETION OF WORK. COORDINATE WITH MECHANICAL AND PLUMBING CONTRACTOR.

# **DEMOLITION PLAN KEYED NOTES:**

- (1) EXISTING ELECTRICAL EQUIPMENT TO REMAIN.
- 2 EXISTING EXTERIOR LIGHTING FIXTURES TO REMAIN.

EQUIPMENT WITH MECHANICAL CONTRACTOR.

- 3 EXISTING CCTV CAMERAS TO REMAIN.
- 4) REMOVE EXISTING LIGHTING FIXTURES, AND LIGHTING CONTROLS. MAINTAIN ASSOCIATED BRANCH CIRCUITRY. REFER TO 2/E11 FOR MORE INFORMATION.
- 5 REMOVE EXISTING EXIT SIGNS AND EMERGENCY LIGHTS. MAINTAIN ASSOCIATED BRANCH CIRCUITRY. REFER TO 2/E11 FOR MORE INFORMATION.
- 6 REMOVE EXISTING ELECTRICAL EQUIPMENT AND WIRING ASSOCIATED WITH MECHANICAL EQUIPMENT TO BE REMOVED. COORDINATE REMOVAL OF
- 7 REMOVE EXISTING ELECTRICAL EQUIPMENT AND WIRING ASSOCIATED WITH WATER HEATER TO BE REMOVED. COORDINATE REMOVAL OF WATER HEATER WITH PLUMBING CONTRACTOR.

		LIGH	TING FIXTURE SCHEDULE			G	ENERAL NOTE	ES: 3,4
TAG/SYMBOL	MAKE	BASIS OF DESIGN  MAKE MODEL  DESCRIPTION		VOLTAGE	WATTS	LUMENS	CRI/ TEMP.	NOTES
A	CURRENT	PVNT-4-4-35-35K8-D01-UNV-TR	SURFACE MOUNTED VANDAL RESISTANT LINEAR FIXTURE	120V	35	5154	80/3500K	NOTES -
<b>⊗</b>	LITHONIA	LV-S-W-Q-R-120/277-ELN-SD	VANDAL RESISTANT EXIT SIGN WITH INTEGRAL BATTERY PACK	120V	3.3	N/A	N/A	NOTE 1
<b>↔</b>	DUALLITE	EV-2-D-I-VRS	WALL MOUNTED EMERGENCY LIGHTING UNIT WITH VANDAL RESISTANT SHIELD VRS	120V	1	125	70/5000K	NOTE 2

LIGHTING FIXTURE SCHEDULE NOTES:

1. PROVIDE EXIT SIGN WITH ILLUMINATED FACES BASED ON SHADED QUADRANTS. PROVIDE ARROWS AS REQUIRED. INTEGRAL BATTERY SHALL PROVIDE FOR AT LEAST 90 MINUTE ILLUMINATION UPON FAILURE OF POWER.

2. PROVIDE WALL—MOUNTED EMERGENCY LIGHTING UNIT WITH INTEGRAL BATTERY THAT SHALL PROVIDE FOR AT LEAST 90 MINUTE ILLUMINATION UPON FAILURE OF POWER.

PROVIDE ALL NECESSARY MOUNTING HARDWARE, COMPONENTS, AND LED DRIVERS.
 PROJECT TO INCLUDE MULTIPLE CEILING AND TILE TYPES. COORDINATE FIXTURE MOUNTING WITH CEILING SHOP DRAWINGS.

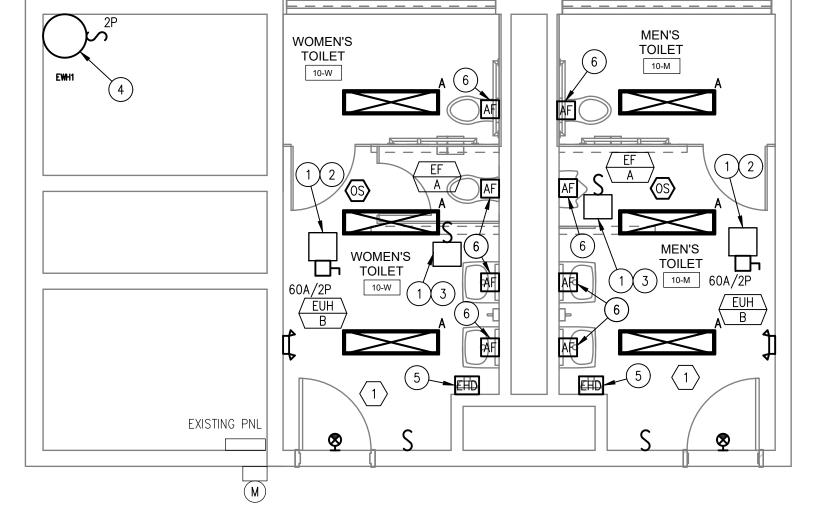
	AUTO	MATIC	CLIGHTING CONTR	ROL SC	HED	ULE
TAG	BASIS OF	DESIGN	DESCRIPTION	SENSOR	VOLT.	NOTES
IAG	MAKE	MODEL	DESCRIP HON	SENSOR	VOL1.	INUIES
(S)	NX	NXSMDT- OMNI SERIES	LOW VOLTAGE DUAL TECHNOLOGY OCCUPANCY CEILING SENSOR	PIR/US	24V	1,3
					GENERAL	<b>NOTES:</b> 1,2

AUTOMATIC LIGHTING CONTROL SCHEDULE NOTES:

1. PROVIDE LOW VOLTAGE DIMMING POWERPACKS AS REQUIRED. NX MODEL: NXRCFX2.

2. PROVIDE ALL LIGHTING CONTROL SWITCHES AND SENSORS WITH WHITE FINISH.

PROVIDE CAT6 WIRING FROM SENSORS TO POWER PACKS AS REQUIRED.

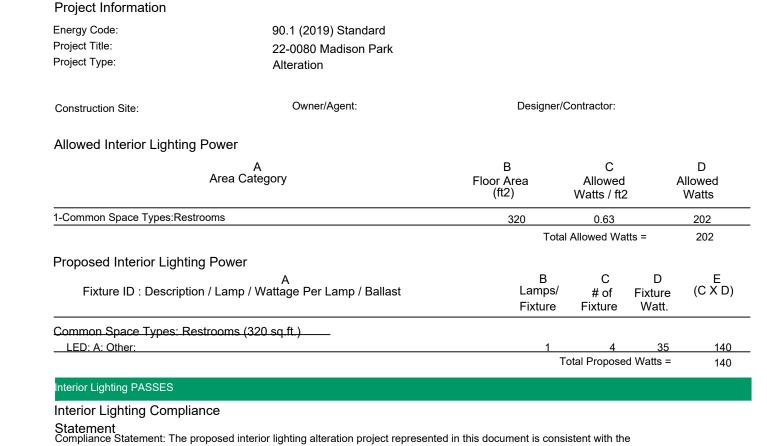


# **ELECTRICAL PLAN - MADISON AVE PARK**1/4"=1'-0"

# **ELECTRICAL PLAN GENERAL NOTES:**

- ALL POWER IN SPACE SHALL BE DERIVED FROM EXISTING PANELBOARD IN UTILITY ROOM UNLESS OTHERWISE NOTED.
- 2. PROVIDE BRANCH CIRCUITRY TO ALL EMERGENCY EXIT SIGNS FROM ADJACENT LIGHTING CIRCUIT
- 3. CONNECT REPLACEMENT LIGHTING FIXTURES, LIGHTING CONTROLS, EXIT SIGNS AND EMERGENCY LIGHTING UNITS TO MAINTAINED BRANCH CIRCUITRY. MODIFY AND EXTEND BRANCH CIRCUITRY AS REQUIRED.

# COMcheck Software Version COMcheckWeb Interior Lighting Compliance Certificate



building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting

with any applicable mandatory requirements listed in the Inspection Checklist.

systems have been designed to meet the 90.1 (2019) Standard requirements in COMcheck Version COMcheckWeb and to comply

 Project Title:
 22-0080 Madison Park
 Report date: 03/16/23

 Data filename:
 Page 2 of 7

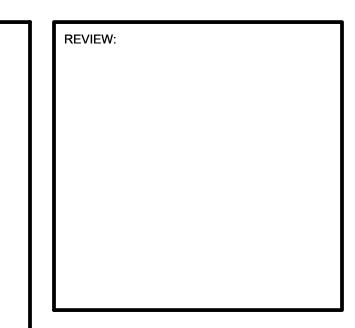
# **ELECTRICAL PLAN KEYED NOTES:**

- 1) PROVIDE POWER AND WIRING FOR HVAC CONTROLS. COORDINATE EXACT REQUIREMENTS WITH MECHANICAL CONTRACTOR.
- 2 PROVIDE A 35A/2P CIRCUIT BREAKER FOR EACH BATHROOM HEATER IN EXISTING SPACE PANELBOARD. PROVIDE 2#8,#10G IN 3/4" CONDUIT FROM CIRCUIT BREAKER TO HEATER. COORDINATE EXACT REQUIREMENTS WITH MECHANICAL CONTRACTOR.
- 3 PROVIDE A 20A/1P CIRCUIT BREAKER IN EXISTING SPACE PANELBOARD TO SERVE BATHROOM EXHAUST FANS. PROVIDE 2#12,#12G IN 3/4" CONDUIT FROM CIRCUIT BREAKER TO EXHAUST FANS. COORDINATE EXACT REQUIREMENTS WITH MECHANICAL CONTRACTOR.
- 4 PROVIDE A 20A/2P CIRCUIT BREAKER IN EXISTING SPACE PANELBOARD TO SERVE BATHROOM WATER HEATER. PROVIDE 2#10,#10G IN 3/4" CONDUIT FROM CIRCUIT BREAKER TO WATER HEATER. COORDINATE EXACT REQUIREMENTS WITH PLUMBING CONTRACTOR.
- 5 PROVIDE A 20A/1P CIRCUIT BREAKER FOR EACH BATHROOM HAND DRYER IN EXISTING SPACE PANELBOARD. PROVIDE 2#12,#12G IN 3/4" CONDUIT FROM CIRCUIT BREAKER TO HAND DRYER. COORDINATE EXACT REQUIREMENTS WITH PLUMBING CONTRACTOR. PROVIDE LOCKING MECHANISM FOR CIRCUIT BREAKER.
- 6 PROVIDE POWER AND WIRING FOR AUTOMATIC FAUCET OR FLUSHOMETER FIXTURES. COORDINATE EXACT REQUIREMENTS WITH PLUMBING CONTRACTOR. REFER TO E01 FOR MORE INFORMATION.

AUTOMATIC FULL OFF

# LIGHTING CONTROL SEQUENCE OF OPERATION REQUIRED CONTROL DESCRIPTION OPERATION ALL LIGHTING FIXTURES WITHIN SPACE SHALL BE AUTOMATICALLY SHUT OFF WITHIN 20

MINUTES OF ALL OCCUPANTS LEAVING SPACE.





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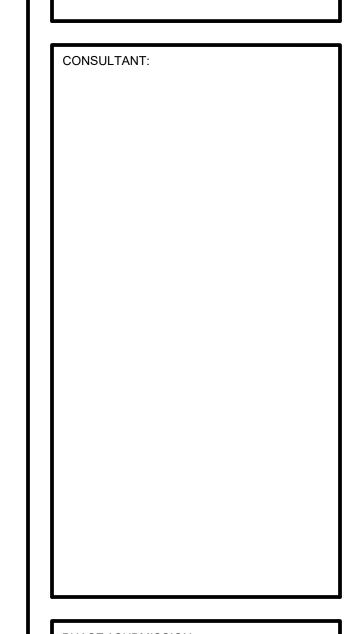
 PA: RA407583
 RA407583

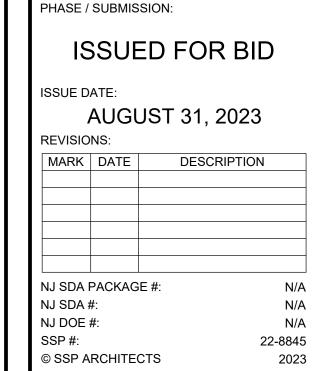
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THE COUNTY OF UNION

2325 SOUTH AVENUE

INTERIOR RESTROOM FACILITIES RENOVATIONS AT:

UNION COUNTY
PARKS MADISON
AVENUE PARK

1333 MADISON AVE. RAHWAY, NJ 07065

CITY OF RAHWAY

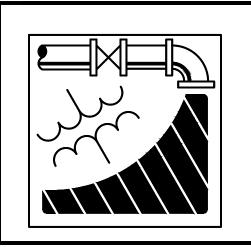
SHEET NAME:

ELECTRICAL PLAN - MADISON AVE. PARK

UNION COUNTY

SHEET NUMBER:

E11



# ENGINEERING DRIVEN DESIGN PC 555 Route One South Suite 100 Iselin, New Jersey 08830 (848) 247-6150

www.engineerdriven.com

Project # 22-0080

Jeffrey N. Beeden
Professional Engineer
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# THE COUNTY OF UNION

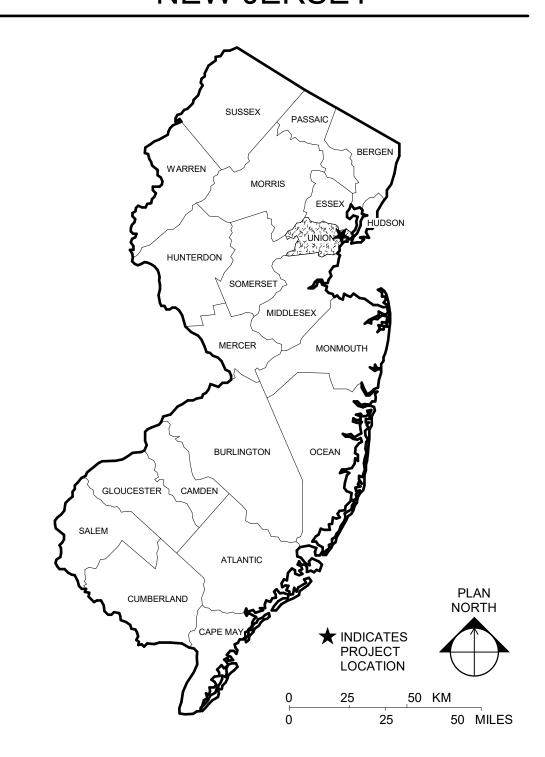
2325 SOUTH AVENUE, SCOTCH PLAINS, NEW JERSEY 07076

# INTERIOR RESTROOM FACILITIES RENOVATIONS AT:

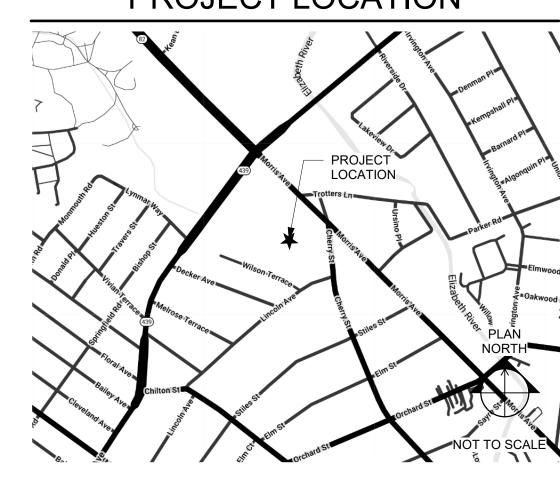
# UNION COUNTY PARKS: PHIL RIZZUTO PARK

8 NORTH AVE ELIZABETH, NEW JERSEY 07208 CITY OF ELIZABETH - UNION COUNTY - NEW JERSEY

# **NEW JERSEY**



# PROJECT LOCATION



# 1. GENERAL

A. PERFORM WORK IN STRICT ACCORDANCE WITH CONTRACT REQUIREMENTS.

B. PERFORM WORK IN COMPLIANCE WITH GOVERNING LAWS, CODES, SUB-

C. PERFORM WORK IN A FIRST CLASS WORKMANLIKE MANNER.

CODES, ORDINANCES, AND REGULATIONS.

- D. PROVIDE WORK PER REFERENCE, NOTE, DETAIL, ITEMIZATION, AND
- E. PROVIDE WORK FOR COMPLETE, OPERATIONAL, AND FULLY FUNCTIONING SYSTEMS AND ASSEMBLIES. THIS INCLUDES, BUT IS NOT LIMITED TO, LABOR, MATERIALS, EQUIPMENT, TRANSPORTATION, AND CONNECTIONS.
- F. FOLLOW MANUFACTURER'S LATEST PRESCRIBED WRITTEN INSTRUCTIONS
- G. DRAWINGS AND SPECIFICATIONS ARE COMPLIMENTARY AND INTEGRAL PARTS OF THE CONTRACT DOCUMENTS.
- H. IN THE CASE OF A CONFLICT WITHIN THE CONTRACT DOCUMENTS, THE GREATER COST SHALL TAKE PRECEDENCE.
- I. NOTIFY ARCHITECT IN WRITING OF DISCREPANCIES, OMISSIONS, AND CONFLICTS FOR CLARIFICATION PRIOR TO COMMENCEMENT OF WORK. J. DO NOT PROCEED WITH WORK UNDER CLARIFICATION REVIEW UNTIL WRITTEN DETERMINATION IS ISSUED BY THE ARCHITECT. WORK THAT

PROCEEDS WITHOUT CLARIFICATION MAY BE DEEMED NON-CONFORMING

- K. REMOVE, REPAIR, AND REPLACE NON-CONFORMING WORK TO THE ARCHITECT'S APPROVAL AT THE CONTRACTOR'S EXPENSE.
- L. ARRANGE WORK TO AGREE WITH ACCOMPLISHMENT OF WORK IN COORDINATION WITH OTHER TRADES AND OWNER'S OPERATIONS.
- M. NOTES AND KEYNOTES ARE TYPICAL FOR SIMILAR AND LIKE CONDITIONS.
- N. ABBREVIATIONS ARE THOSE IN COMMON USE UNLESS NOTED OTHERWISE.
- 2. FIELD VERIFICATION
- A. VISIT SITE PRIOR TO BIDDING TO REVIEW AND CONFIRM SCOPE OF WORK AND SITE LOGISTICS.
- B. FIELD VERIFY EXISTING CONDITIONS, DIMENSIONS, AND EXTENT OF WORK PRIOR TO COMMENCEMENT OF SAID WORK.

# 3. PERMITS AND INSPECTIONS

- A. OBTAIN BUILDING PERMITS AND APPROVALS.
- B. PROVIDE COPY OF BUILDING PERMIT TO ARCHITECT AND OWNER PRIOR TO COMMENCEMENT OF WORK.
- C. COORDINATE INSPECTIONS IN A TIMELY MANNER.

# I. PROTECTION OF WORK

- A. PROTECT IN-PLACE CONSTRUCTION DURING THE COURSE OF THE WORK. IN-PLACE MATERIALS AND SURFACES SHALL BE LEFT AS THEY APPEARED PRIOR TO COMMENCEMENT OF THE WORK.
- B. PERFORM WORK SO THAT MINIMAL DAMAGE TO IN-PLACE CONSTRUCTION IS
- C. REPAIR DAMAGES CAUSED DURING THE COURSE OF THE WORK TO THE ARCHITECT'S APPROVAL AT THE CONTRACTOR'S EXPENSE.

- A. SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- B. INITIATE, MAINTAIN, SUPERVISE, AND ENFORCE A REASONABLE AND PRUDENT SAFETY PROGRAM INCLUDING. BUT NOT BE LIMITED TO. ISOLATION OF WORK AREAS, PEDESTRIAN PROTECTION, PROMPT REMOVAL OF DEBRIS, AND RESOLUTION OF ENDANGERING CONDITIONS.
- C. PROVIDE AND MAINTAIN TEMPORARY PARTITIONS, ENCLOSURES, AND BARRIERS THROUGHOUT THE COURSE OF CONSTRUCTION.
- D. MAINTAIN EGRESS ACCESS AT ALL TIMES.
- E. PROTECT AND MAINTAIN EXISTING FIRE PROTECTION, FIRE ALARM, AND SMOKE DETECTION SYSTEMS SO THAT THEY REMAIN FULLY OPERATIONAL DURING THE COURSE OF THE WORK.
- F. PROTECT AND MAINTAIN EXISTING FIRE RATED ASSEMBLIES.
- G. REPAIR AND RE-ESTABLISH DAMAGED FIRE RATED ASSEMBLIES.

# 6. CUTTING AND PENETRATIONS

- A. COORDINATE LOCATION AND SIZE OF PENETRATIONS, HOLES, AND
- PROVIDE CHASES, HOLES, AND OPENINGS CONSTRUCTED AND CUT TRUE, SQUARE AND OF A PROPER SIZE FOR PROPER INSTALLATION OF THE WORK,

# GENERAL PROJECT NOTES

- 6. CUTTING AND PENETRATIONS (CONTINUED)
- C. IN CASE OF FAILURE TO LEAVE OR CUT SAME IN PROPER PLACE, CUT THEM AFTERWARDS AT CONTRACTOR'S EXPENSE.
- D. LIMIT CUTTING TO THE LEAST EXTENT NECESSARY TO COMPLETE THE WORK. NO EXCESSIVE CUTTING WILL BE PERMITTED.
- E. PROVIDE FRAMES AND BRACING AT DUCT PENETRATIONS IN WALL, CEILING ROOF, AND FLOOR ASSEMBLIES.
- F. PROVIDE AUTOMATIC FIRE DAMPERS AND FIRESTOP ASSEMBLIES AT PENETRATIONS IN FIRE AND SMOKE RATED ASSEMBLIES.
- A. PATCHING INCLUDES, BUT IS NOT LIMITED TO, FILLING, MENDING, REPAIRING, AND REFINISHING MATERIALS, COMPONENTS, AND SURFACES TO MATCH
- ADJACENT CONSTRUCTION OR PREPARE TO RECEIVE NEW FINISHES. B. PATCHING INCLUDES, BUT IS NOT LIMITED TO, MATCHING EXISTING ADJACENT MATERIAL, COLOR, TEXTURE, APPEARANCE, FINISH, COURSING,
- C. PATCH TO MATCH AND ALIGN SURFACES TO AFFORD A FINISHED NEAT APPEARANCE SO THAT THERE IS NO VISUAL EVIDENCE OF PATCHING.
- D. PATCH MATERIALS AND SURFACES IMPACTED BY THE WORK.

FIRE RATING, DURABILITY, AND ACOUSTICAL CRITERIA.

- E. PROVIDE RECOMMENDED LEVELING EMULSION TO CORRECT VARIANCE IN ADJACENT FLOOR SURFACES WHERE WALLS ARE REMOVED TO CREATE
- F. REMOVE EXCESSIVE HIGH FINISH OR PROVIDE FILL IN LOW AREA FOR SMOOTH FINISHED SURFACE.
- G. PATCH MATERIALS, COMPONENTS, AND SURFACES TO RESTORE AND MAINTAIN A WEATHER TIGHT BUILDING ENCLOSURE.
- H. CUT AND CAP EXISTING PIPING BELOW GRADE AND BEHIND FINISHED
- I. INFILL DOOR FRAME HINGE MORTISES AND PREPARE FRAMES FOR NEW DOORS AND FINISHES.

# 8. STRUCTURAL MODIFICATIONS

- A. DO NOT MODIFY STRUCTURAL MEMBERS WITHOUT ARCHITECT'S WRITTEN
- B. CONDUCT OPERATIONS IN A MANNER TO PREVENT DAMAGE TO POSSIBLE HIDDEN STRUCTURAL ELEMENTS.
- C. VERIFY EXTENT AND LOCATION OF STRUCTURAL MEMBERS PRIOR TO DEMOLITION. NOTIFY ARCHITECT IMMEDIATELY IF POTENTIAL QUESTION IS
- D. IF UNCOVERED, PREVIOUSLY HIDDEN STRUCTURAL ELEMENTS ARE TO REMAIN INTACT. CONTACT ARCHITECT IMMEDIATELY FOR CLARIFICATION.
- E. TEMPORARY BRACING AND SHORING IS THE SOLE RESPONSIBILITY OF THE
- F. PROVIDE TEMPORARY BRACING AND SHORING NECESSARY TO COMPLETE CONTRACTUAL SCOPE OF WORK. EACH PRIME CONTRACTOR IS RESPONSIBLE FOR TEMPORARY BRACING AND SHORING NECESSARY TO ACCOMPLISH THEIR WORK 9. UTILITIES AND SANITARY FACILITIES

# A. VERIFY AND COORDINATE AVAILABLE FACILITIES, LOCATIONS, AND SERVICE CONNECTIONS WITH UTILITY COMPANIES. ESTABLISH TEMPORARY

- FACILITIES WHEN APPLICABLE. B. PROVIDE TEMPORARY UTILITIES NECESSARY TO PERFORM THE WORK.
- C. NOTIFY ARCHITECT AND OWNER OF PROPOSED SERVICE INTERRUPTIONS A MINIMUM OF 72 HOURS IN ADVANCE OF INTERRUPTION.
- D. LIMIT SERVICE INTERRUPTIONS TO THE SHORTEST DURATION POSSIBLE E. PROVIDE SANITARY FACILITIES FOR CONTRACTOR'S USE. CONTRACTOR'S USE OF BUILDING SANITARY FACILITIES IS NOT PERMITTED.

# 10. LAYOUT

- A. PROVIDE WORK PER WRITTEN DIMENSIONS. DO NOT SCALE THE DRAWINGS. B. EXISTING CONSTRUCTION DIMENSIONS ARE GIVEN FROM FINISHED SURFACES UNLESS NOTED OTHERWISE.
- C. NEW CONSTRUCTION DIMENSIONS ARE GIVEN FROM FACE OF STUD, MASONRY, AND CONCRETE UNLESS NOTED OTHERWISE.
- D. CLEAR DIMENSIONS ARE GIVEN FROM FINISHED SURFACES.
- E. PLANS ARE DIAGRAMMATIC AND SHOW GENERAL ARRANGEMENT AND EXTENT OF WORK.
- F. MODIFICATIONS TO ACTUAL ARRANGEMENT OF WORK TO ADDRESS FIELD AND UNFORESEEN CONDITIONS MAY BE NECESSARY.
- G. EQUIPMENT PAD SIZES INDICATED ARE APPROXIMATE. COORDINATE ACTUAL DIMENSIONS WITH RESPECTIVE EQUIPMENT MANUFACTURER.

# 10. LAYOUT (CONTINUED)

ABOVE UNLESS NOTED OTHERWISE.

- H. PROVIDE BLOCKING FOR WALL MOUNTED ITEMS, INCLUDING, BUT NOT LIMITED TO, DOOR HARDWARE, VISUAL DISPLAY BOARDS, TOILET COMPARTMENTS, LAVATORY SUPPORTS, GRAB BARS, AND TOILET
- I. PARTITION TYPES ARE CONTINUOUS ABOVE AND BELOW OPENINGS UNLESS NOTED OTHERWISE.
- J. EXTEND NEW WALLS AND PARTITIONS TO THE UNDERSIDE OF THE DECK
- K. PROVIDE FIRE RESISTANCE RATED (FLAME SPREAD) INTERIOR MATERIALS AND FINISHES IN COMPLIANCE WITH THE CURRENT BUILDING CODE.
- L. PROVIDE ACCESS DOORS AND PANELS FOR EQUIPMENT ACCESS. COORDINATE SIZES, LOCATIONS, AND TYPES WITH TRADES AND ARCHITECT.
- M. PROVIDE ACCESS DOORS AND PANELS FOR FIRE DAMPER ACCESS.

# COORDINATE SIZES, LOCATIONS, AND TYPES WITH TRADES AND ARCHITECT

- 11. DEMOLITION
- A. PERFORM DEMOLITION WORK NECESSARY TO COMPLETE CONTRACTUAL SCOPE OF WORK. EACH PRIME CONTRACTOR IS RESPONSIBLE FOR
- DEMOLITION NECESSARY TO ACCOMPLISH THEIR WORK. B. REMOVE COMPONENTS IN THEIR ENTIRETY INCLUDING, BUT NOT LIMITED TO ASSOCIATED SUPPORTS, HARDWARE, FASTENERS, MASTIC, AND SEALANT
- UNLESS NOTED OTHERWISE. C. REMOVE ITEMS AND PREPARE AREA TO RECEIVE NEW WORK UNLESS NOTED
- D. REMOVE ITEMS AND PATCH AREA TO MATCH ADJACENT CONSTRUCTION
- UNLESS NOTED OTHERWISE. E. REMOVE FINISHES AND SUBFLOORS DOWN TO SUBSTRATE UNLESS NOTED
- F. REMOVE FLOORING DOWN TO SUBSTRATE. WHERE MULTIPLE FLOORING
- ASSEMBLIES ARE ENCOUNTERED, CONTACT ARCHITECT FOR CLARIFICATION.
- G. REMOVE CEILINGS TO EXPOSE STRUCTURE ABOVE. WHERE MULTIPLE CEILING ARE ENCOUNTERED, CONTACT ARCHITECT FOR CLARIFICATION.
- H. WHERE CONCRETE SLAB IS TO BE REMOVED, REMOVE FLOOR FINISH, BASE, AND CONCRETE SLAB.
- I. WALL REMOVAL INCLUDES WAINSCOT, CHAIR RAIL, TRIM, AND OTHER WALL FINISHES AND OTHER WALL MOUNTED ITEMS.

### 12. SALVAGE AND DISPOSAL A. PROVIDE WASTE AND RECYCLING CONTAINERS UNLESS NOTED OTHERWISE.

B. RECYCLE CONSTRUCTION DEBRIS TO THE GREATEST EXTENT POSSIBLE.

C. REMOVE CONSTRUCTION DEBRIS, RUBBISH, AND WASTE MATERIAL TO A

LAWFUL OFF-SITE DISPOSAL OR RECYCLING FACILITY UNLESS NOTED

- D. COORDINATE EXTENT, STORAGE, AND REINSTALLATION OF SALVAGED MATERIAL EXTENT WITH OWNER.
- E. REMOVE EXCESS SALVAGED MATERIAL AT THE COMPLETION OF THE PROJECT UNLESS NOTED OTHERWISE.
- A. CLEAN IMPACTED AREAS FREE OF DUST AND DEBRIS ON A REGULAR BASIS DURING THE COURSE OF THE WORK.
- B. CLEAN IMPACTED AREAS FREE OF DUST AND DEBRIS UPON COMPLETION OF WORK. IN-PLACE MATERIALS AND SURFACES SHALL BE LEFT AS THEY APPEARED PRIOR TO COMMENCEMENT OF THE WORK.

# APPLICABLE CODES

### APPLICABLE CONSTRUCTION CODES AND SUBCODES: - INTERNATIONAL BUILDING CODE 2021 (NEW JERSEY EDITION)

- INTERNATIONAL FIRE CODE 2018 REHABILITATION - NEW JERSEY ADMINISTRATIVE CODE 5:23-6 (2021) - NATIONAL STANDARD PLUMBING CODE 2021

- NATIONAL ELECTRICAL CODE (NFPA 70) 2020

- ASHRAE 90.1-2021(COMMERCIAL) - INTERNATIONAL MECHANICAL CODE 2021

- INTERNATIONAL FUEL GAS CODE 2021

NOTE: THIS PROJECT CONSTITUTES AN ALTERATION TO THE EXISTING BUILDING AND HAS BEEN DESIGNED FOR AND SHOULD BE REVIEWED UNDER THE

# **CODE SUMMARY**

STORAGE FACILITIES (TO REMAIN) = 311.3 LOW HAZARD STORAGE GOUP S1

EXISTING BUILDING IS MIXED USE / NON SEPARATED. THE MORE STRINGENT

UNIFORM CONSTUCTION CODE REHABILITATION SUBCODE 5:23 SUB CHAPTER 6.

BARRIER FREE - ICC/ANSI A117.1-2017

- **BUILDING CLASSIFICATION:** <u>USE AND OCCUPANCY CLASSIFICATION</u>
  • RESTROOM FACILITIES (*TO BE RENOVATED*) = 312: UTILITY & MISC GROUP U
- OCCUPANCY REQUIREMENT WILL BE USED PER CHAPTER 5.

# 601 - TYPE 2B (NON-COMBUSTABLE / UNPROTECTED)

- EXISTING BUILDING IS UNSPRINKLERED AS ALLOWED BY AREA REQUIREMENTS
- 508.2.4 SEPARATION OF OCCUPANCIES

  NO SEPARATION IS REQUIRED BETEWEN ACCESSORY OCCUPANCIES AND THE

# MAIN OCCUPANCY.

BUILDINGS OR PORTIONS OF BUILDINGS THAT COMPLY WITH THE PROVISIONS OF THIS SECTION SHALL BE CONSIDERED NONSEPARATED OCCUPANCIES. 508.3.2: THE ALLOWABLE BUILDING AREA, HEIGHT, AND NUMBER OF STORIES OF

- **BUILDING DATA:**
- 504.3 ALLOWABLE BUILDING HEIGHT IN FEET
   ALLOWED:

**OCCUPANCY GROUPS** 

- 1. S2 = 55'-0" 2. U = not applicable • ACTUAL = < 25'-0"
- 504.4 ALLOWABLE BUILDING HEIGHT IN STORIES 1. S2 = 3 STORIES
- 2. U = not applicableACTUAL = 1 STORY
- 1. S2 = 26,000 SF 2. U = 9,000 SF PER COMMENT i.
- ACTUAL = 650 SF \*\* FRONTAGE INCREASE NOT INCLUDED / REQUIRED
- AREA OF RESTROOM RENOVATIONS

   500 SE

# FIRE RESISTANCE RATING REQUIREMENTS:

\* X = FIRE SEPARATION DISTANCE IN FEET

TABLES 601 & 602 - CONSTRUCTION TYPE FIRE-RESISTANCE RATING

BUILDING ELEMENT	FIRE RESISTANCE
STRUCTURAL FRAME: INCLUDING COLUMNS, GIRDERS, BEAMS &TRUSSES	N/A
NONBEARING PARTITIONS & BEARING WALLS (EXT):  X* < 10  10 < X* < 30  X* > 30	1 HOURS 0 HOURS 0 HOURS
NONBEARING PARTITIONS & BEARING WALLS (INT):	N/A
ROOF CONSTRUCTION: INCLUDING SUPPORTING BEAMS AND JOISTS	N/A

# PROJECT TEAM

# OWNER:

UNION COUNTY PARK MAINTENANCE 2325 SOUTH AVE SCOTCH PLAINS, NEW JERSEY 07076 (908) 654-9890

SSP ARCHITECTURAL GROUP

SOMERVILLE, NJ 08876

WWW.SSPARCHITECTS.COM

PHONE: (908) 725-7800

FAX: (908) 725-7957

50 DIVISION STREET, SUITE 503

WWW.UCNJ.ORG

**ARCHITECTS** 



ISELIN, NJ 08830

(888) 422-7830



MECHANICAL, ELECTRICAL, AND PLUMBING ENGINEER: 555 ROUTE 1 SOUTH, SUITE 100

WWW.ENGINEERDRIVEN.COM

# DRAWING LIST

SHEET NAME ARCHITECTURAL

PHIL RIZZUTO PARK COVER SHEET DEMO & PROPOSED PLANS FINISH PLAN, INTERIOR ELEVATIONS, AND DETAILS PLUMBING

PLUMBING SPECIFICATIONS AND SYMBOLS PLUMBING PLANS - PHIL RIZZUTO PARK **MECHANICAL** MECHANICAL SPECIFICATIONS, SCHEDULES, AND LEGENDS MECHANICAL PLANS - PHIL RIZZUTO PARK

MECHANICAL DETAILS AND CONTROLS **ELECTRICAL** THE BUILDING SHALL BE BASED ON THE MOST RESTRICTIVE ALLOWANCES FOR ELECTRICAL SPECIFICATIONS AND SYMBOL LEGEND ELECTRICAL PLANS - PHIL RIZZUTO PARK TOTAL: 10

# **EGRESS SUMMARY**

# **MEANS OF EGRESS**

TOILET ROOM FACILITIES DO NOT CARRY AN OCCUPANCY LOAD PER NJIBC

CHAPTER 10 THERE ARE NO CHANGES TO THE EGRESS COMPONENTS. THERE ARE NO CHANGES TO THE EGRESS OF THE GROUP B AND S1 SECTIONS OF THE BUILDING. THE EXISTING EGRESS PATH FROM THE TOILET FACILITIES WILL

### • OCCUPANCY A, E F-1, M, R, S-1: WITH SPRINKLER SYSTEM - 250' OCCUPANCY B: WITH SPRINKLER SYSTEM - 300'

• EGRESS WIDTH MODIFIER = 0.2"

IBC 1010 DOORS, GATES AND TURNSTILES • MINIMUM CLEAR DOOR WIDTH SHALL BE 32" (2'-8")

HEIGHT OF DOOR OPENINGS SHALL NOT BE LESS THAN 80" (6'-8")

# PLUMBING FIXTURE SUMMARY

# **GENERAL USE - PARK RESTROOM FACILITIES**

# THIS RESTROOM FACILITY IS PROVIDED FOR PUBLIC USE SERVING THE

UNION COUNTY PARKS SYSTEM. THE EXISTING NUMBER OF PLUMBING FIXTURES IS REMAINING **UNCHANGED**  THIS PROJECT CONSTITUTES A RENOVATION AND SHOULD BE REVIEWED AS SUCH. UPGRADES WILL BE MADE FOR BARRIER FREE ACCESSIBILITY.

PHASE / SUBMISSION

ISSUED FOR BID AUGUST 31, 2023

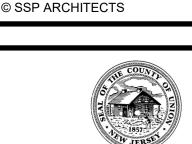
DESCRIPTION

NJ SDA PACKAGE#

NJ SDA #:

NJ DOE #:

SSP#:



THE COUNTY OF UNION

2325 SOUTH AVENUE

SCOTCH PLAINS, NEW JERSEY 07076

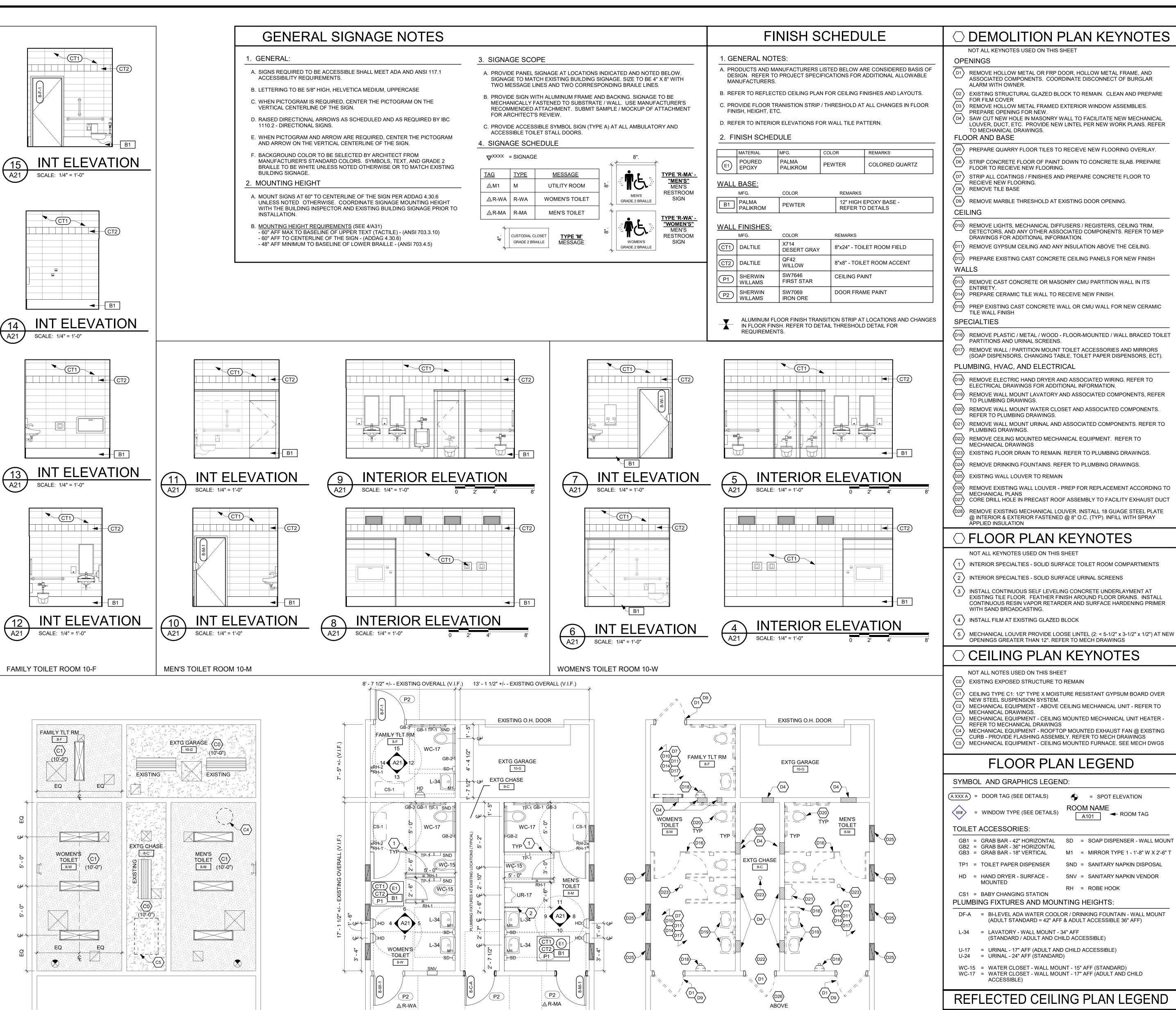
INTERIOR RESTROOM FACILITIES **RENOVATIONS AT:** 

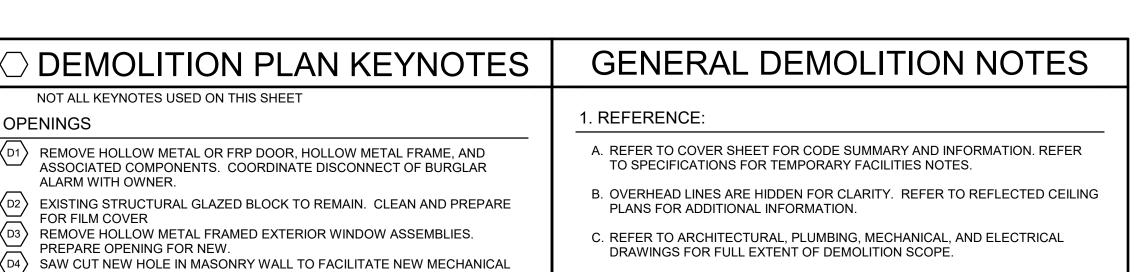
UNION COUNTY

8 NORTH AVE ELIZABETH, NEW JERSEY 07208 CITY OF ELIZABETH UNION COUNTY

PHIL RIZZUTO PARK

**COVER SHEET** 





2. GENERAL

SCOPE OF WORK.

UNLESS NOTED OTHERWISE.

TO ARCHITECT AND OWNER.

3. ASBESTOS:

4. PATCHING:

IS INCURRED.

1. REFERENCE:

2. GENERAL

BUILDING ENCLOSURE.

D. COORDINATE SIZE AND LOCATION OF DEMOLITION WORK WITH

A. VERIFY EXISTING CONDITIONS PRIOR TO DEMOLITION.

E. NOTES ARE TYPICAL FOR SIMILAR AND LIKE CONDITIONS.

TO COMPLETE CONTRACTUAL SCOPE OF WORK.

ARCHITECTURAL AND PLUMBING/MECHANICAL/ELECTRICAL DRAWINGS.

B. PROTECT IN-PLACE ASSEMBLIES FOR DURATION OF CONSTRUCTION.

F. NOT ALL DEMOLITION PLAN KEYNOTES MAY BE USED ON EACH SHEET

G. REMOVE ITEMS IN THEIR ENTIRETY INCLUDING. BUT NOT LIMITED TO.

ASSOCIATED SUPPORTS, HARDWARE, FASTENERS, MASTIC, AND SEALANT

H. VERIFY EXTENT AND LOCATION OF BEARING MEMBERS AND WALLS BEFORE

DEMOLITION. NOTIFY ARCHITECT IMMEDIATELY IF POTENTIAL QUESTION IS

TEMPORARY BRACING AND SHORING IS THE SOLE RESPONSIBILITY OF THE

. PRIOR TO SAW CUTTING CONCRETE SLAB (IF INDICATED ON DRAWING OR

(GPR) SCAN OF THE SLAB TO LOCATE ANY UNDERGROUND UTILITIES

CONTRACTOR. PROVIDE TEMPORARY BRACING AND SHORING NECESSARY

REQUIRED BY SCOPE OF WORK) PERFORM A GROUND PENETRATING RADAR

(PLUMBING LINES, ELECTRICAL CONDUIT, ETC). PROVIDE SKETCH / REPORT

A. THERE ARE NO KNOWN ASBESTOS CONTAINING MATERIALS (ACM) PRESENT

IN THE SPACE. IF ANY PRESUMED ASBESTOS CONTAINING MATERIALS (PACM) ARE ENCOUNTERED DURING THE COURSE OF THE PROJECT, NOTIFY

THE ARCHITECT AND THE OWNER IMMEDIATELY. DO NOT DISTURBED

MATERIAL. THE OWNER WILL RETAIN AN ENVIRONMENTAL ENGINER /

A. PERFORM WORK SO THAT MINIMAL DAMAGE TO ADJACENT CONSTRUCTION

C. PATCH MATERIALS AND SURFACES TO MATCH ADJACENT CONSTRUCTION.

D. PATCH COMPONENTS AND ASSEMBLIES TO REESTABLISH A WEATHER TIGHT

GENERAL FLOOR PLAN NOTES

A. REFER TO COVERSHEET FOR CODE INFORMATION, TOILET FIXTURE

B. REFER TO ARCHITECTURAL, PLUMBING, MECHANICAL, AND ELECTRICAL,

C. PATCH MASONRY WALLS. FILL ABANDONED PENETRATIONS TO MATCH ADJACENT CONSTRUCTION AND PREPARE FOR FINISHES AS INDICATED ON

D. PROTECT IN-PLACE ASSEMBLIES TO REMAIN AND ITEMS DESIGNATED AS

CALCULATIONS, AND CONSTRUCTION REQUIREMENTS.

DRAWINGS FOR FULL SCOPE AND EXTENT OF WORK.

SALVAGE ON DEMOLITION DRAWINGS.

TESTING COMPANY TO PERFORM SAMPLING AND TESTING.

B. CLEAN AND PATCH DISTURBED MATERIALS AND SURFACES.

C. PERFORM DEMOLITION WORK NECESSARY TO COMPLETE CONTRACTUAL

D. DASHED LINES GENERALLY INDICATE EXTENTS OF DEMOLITION, BUT ARE

NOT INTENDED TO BE ALL-INCLUSIVE OF EVERY DEMOLITION INSTANCE.

50 DIVISION STREET, SUITE 503 SOMERVILLE, NJ 08876 PHONE: 908-725-7800

JEANNE PERANTONI, AIA NJ: 21AI008943

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SCOTT E. MIHALICK, AIA NJ: 21AI01661600

MARCUS M. ROSENAU, AIA NJ21AI0104527

CONSULTANT:

PHASE / SUBMISSION: **ISSUED FOR BID** 

AUGUST 31, 2023

DESCRIPTION

NJ SDA PACKAGE#

© SSP ARCHITECTS

NJ SDA #:

NJ DOE #:

SSP #:

C. DIMENSIONS OF STUD PARTITIONS ARE GIVEN TO FACE OF STUD UNLESS

NOTED OTHERWISE.

B. DIMENSIONS OF CMU ARE NOMINAL AND ARE GIVEN TO THE FACE OF WALL

A. KEY NOTES MAY NOT BE INDICATED AT ALL LOCATIONS BUT ARE TYPICAL FOR

3. TOILET ROOM NOTES:

UNLESS NOTED OTHERWISE.

SIMILAR CONDITIONS

A. ALL ACCESSIBLE TOILET ACCESSORIES AND PLUMBING FIXTURES SHALL MEET ANSI A117.1 - 2009 STANDARDS

B. ACCESSORIES ASSOCIATED WITH PLUMBING FIXTURES SHALL BE MOUNTED TO THE SAME ACCESSIBLE HEIGHT ASSOCIATED WITH THAT FIXTURE.

ACCESSORIES NOT ASSOCIATED WITH A PLUMBING FIXTURE SHALL BE MOUNTED AT STANDARD HEIGHT UNLESS NOTED OTHERWISE.

D. ACCESSORIES THAT ARE OPERATED BY SENSORS AND THAT ARE 'HANDS-FREE' SHALL BE MOUNTED TO CENTERLINE OF DISPENSOR OR NOZZLE. E. FLUSH HANDLES SHALL BE LOCATED TO THE OPEN SIDE OF WATER CLOSET

# GENERAL CEILING PLAN NOTES

. REFERENCE:

A. REFER TO FINISH PLAN AND INTERIOR ELEVATIONS FOR ROOM FINISH

2. GENERAL

A. FIELD VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION.

B. NOTES ARE TYPICAL FOR SIMILAR AND LIKE CONDITIONS.

C. PLAN KEYNOTES MAY NOT BE INDICATED AT ALL LOCATIONS BUT ARE

TYPICAL FOR SIMILAR AND LIKE INSTANCES. D. NOT ALL PLAN KEYNOTES OR GRAPHICS MAYBE USED ON THIS SHEET.

E. NOT ALL CEILING MOUNTED ITEMS MAY BE SHOWN

F. COORDINATE ACTUAL DUCTWORK CONFIGURATION TO MINIMIZE EXPOSED

G. INDICATE SUPPLY GRILLES. RETURN GRILLES. SPRINKLER HEADS. SMOKE DETECTORS, LIGHTS, SPEAKERS, VIDEO, WIRELESS ACCESS POINTS, AND EXIT SIGNS ON COORDINATION DRAWINGS. FINAL PLACEMENT TO BE

# 3. GENERAL CEILING SCOPE:

A. PROVIDE ACCESS DOORS AND PANELS FOR EQUIPMENT ACCESS. COORDINATE LOCATIONS WITH ARCHITECT PRIOR TO INSTALLATION.

APPROVED BY ARCHITECT PRIOR TO INSTALLATION.

B. DO NOT ATTACH NEW CEILING GRID TO RECESSED AND SEMI-RECESSED CEILING MECHANICAL UNITS.

. PAINT EXPOSED METAL DECK, STRUCTURAL STEEL, STRUCTURE, DUCTWORK, PIPING, SPRINKLER PIPING, CONDUIT, ETC. EXPOSED TO VIEW ABOVE ACT CEILINGS ARE TO BE PAINTED WITH DRY FALL PAINTED FINISH( TYPICAL FOR ALL LOCATIONS WITH EXPOSED OR PARTIALLY EXPOSED STRUCTURE) INCLUDING ABOVE CEILINGS IN CORRIDORS.

D. PROVIDE FLUSH SEALANT AT CONTROL JOINTS AND PAINT.

A. DIMENSIONS ARE TO FINISHED SURFACE UNLESS NOTED OTHERWISE.

B. INSTALL LIGHT FIXTURES CENTERED ABOVE PLUMBING FIXTURES OR GROUP

CEILING DIFFUSER SEE MECH DRAWINGS E. PROVIDE EXPANSION / JOINT LINES AT GYPSUM BOARD CEILINGS. CEILING REGISTER / GRILL 4. LAYOUT: SEE MECH DRAWINGS

RECESSED OR SURFACE MOUNT LIGHT FIXTURE SUSPENDED UTILITY EXHAUST FAN LIGHT - ATTACH TO SEE MECH DRAWINGS SUSPENSION GRID

PROPOSED FLOOR PLAN

REFLECTED CEILING PLAN

A21

SCALE: 1/4" = 1'-0"

**DEMOLITION PLAN** 

**TOILET ACCESSORIES:** GB1 = GRAB BAR - 42" HORIZONTAL SD = SOAP DISPENSER - WALL MOUN GB2 = GRAB BAR - 36" HORIZONTAL GB3 = GRAB BAR - 18" VERTICAL

SND = SANITARY NAPKIN DISPOSAL SNV = SANITARY NAPKIN VENDOR HD = HAND DRYER - SURFACE -

FLOOR PLAN LEGEND

= SPOT ELEVATION

M1 = MIRROR TYPE 1 - 1'-8" W X 2'-6"

CS1 = BABY CHANGING STATION

PLUMBING FIXTURES AND MOUNTING HEIGHTS

DF-A = BI-LEVEL ADA WATER COOLOR / DRINKING FOUNTAIN - WALL MOUNT (ADULT STANDARD = 42" AFF & ADULT ACCESSIBLE 36" AFF) L-34 = LAVATORY - WALL MOUNT - 34" AFF

(STANDARD / ADULT AND CHILD ACCESSIBLE) U-17 = URINAL - 17" AFF (ADULT AND CHILD ACCESSIBLE)

WC-15 = WATER CLOSET - WALL MOUNT - 15" AFF (STANDARD) WC-17 = WATER CLOSET - WALL MOUNT - 17" AFF (ADULT AND CHILD ACCESSIBLE)

# REFLECTED CEILING PLAN LEGEND

SYMBOL LEGEND: C1) CEILING TYPE KEYNOTE

EXIT SIGN

EMERGENCY LIGHT

OF PLUMBING FIXTURES UNLESS NOTED OTHERWISE. C. CEILING HEIGHTS ARE FROM FINISH FLOOR UNLESS NOTED OTHERWISE THE COUNTY OF UNION

2325 SOUTH AVENUE SCOTCH PLAINS, NEW JERSEY 07076

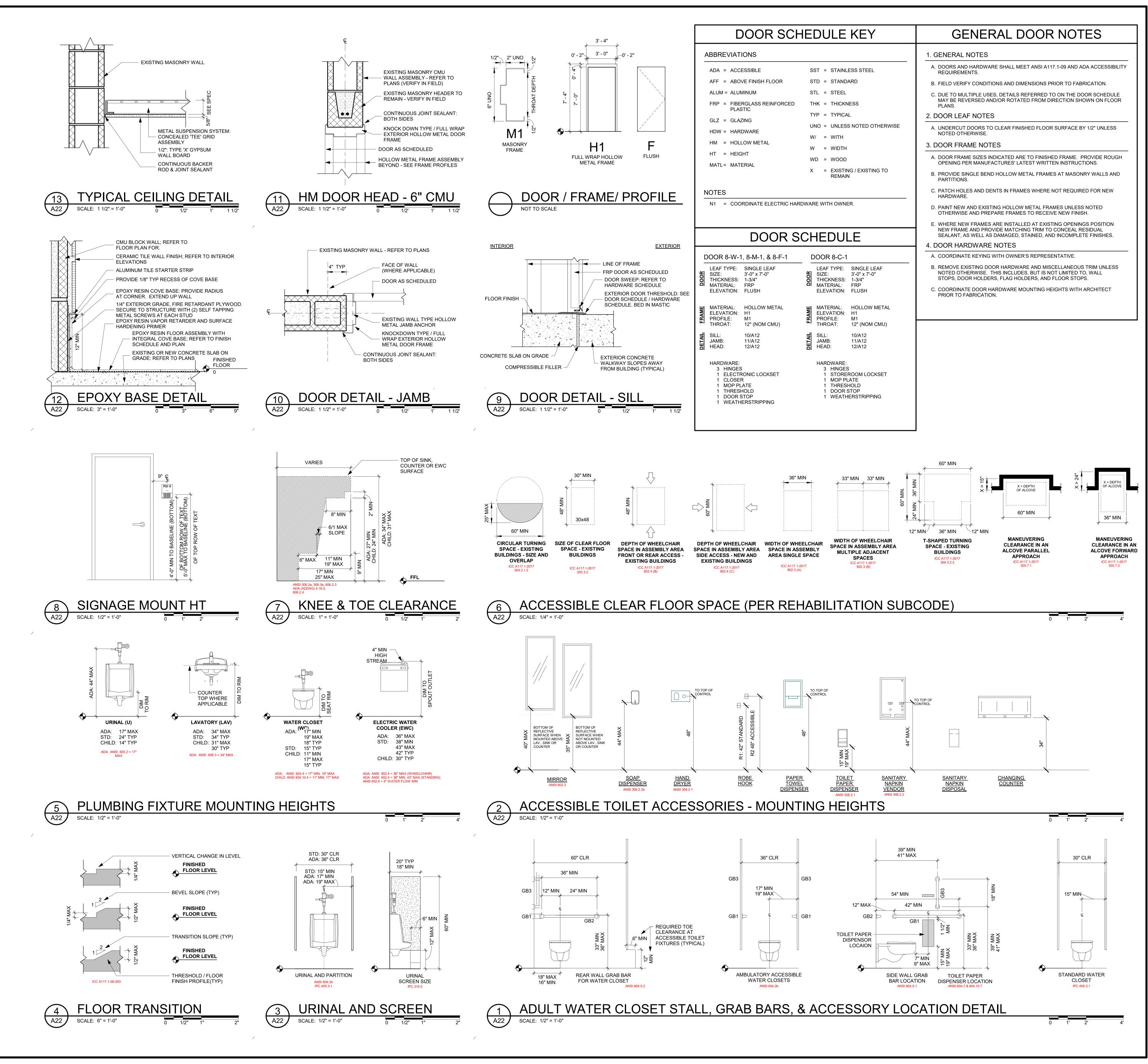
INTERIOR RESTROOM FACILITIES **RENOVATIONS AT:** 

**UNION COUNTY** PARKS: PHIL RIZZUTO PARK

8 NORTH AVE ELIZABETH, NEW JERSEY 07208 CITY OF ELIZABETH UNION COUNT

**DEMO & PROPOSED** 

**PLANS** SHEET NUMBER:



**REVIEW:** 



JEANNE PERANTONI, AIA NJ: 21AI0089430

SCOTT E. MIHALICK, AIA NJ: 21Al01661600

MARCUS M. ROSENAU, AIA NY: 03893

CONSULTANT:

ISSUED FOR BID ISSUE DATE: AUGUST 31, 2023 **REVISIONS:** DESCRIPTION NJ SDA PACKAGE#: NJ SDA #: NJ DOE #: SSP#: © SSP ARCHITECTS

PHASE / SUBMISSION:



THE COUNTY OF UNION 2325 SOUTH AVENUE

INTERIOR RESTROOM **FACILITIES** 

SCOTCH PLAINS, NEW JERSEY 07076

**RENOVATIONS AT: UNION COUNTY** 

PARKS: PHIL RIZZUTO PARK

8 NORTH AVE ELIZABETH, NEW JERSEY 07208 CITY OF ELIZABETH UNION COUNT

FINISH PLAN, **INTERIOR ELEVATIONS, AND DETAILS** 

#### SUMMARY

- 1.1. THE SCOPE OF THIS PROJECT IS TO UPGRADE ALL MECHANICAL AND PLUMBING SYSTEMS, EQUIPMENT, AND FIXTURES AS WELL AS TO PROVIDE UPGRADES AND MODIFICATIONS TO THE EXISTING ELECTRICAL SYSTEMS FOR RESTROOMS IN UNION COUNTY PUBLIC PARKS.
- 1.2. THE BUILDING IS A SEISMIC DESIGN CATEGORY OF B, WHICH MEANS THAT PLUMBING SYSTEMS DO NOT REQUIRE SEISMIC BRACING.

### 2. DEFINITIONS

- 2.1. FURNISH: TO PURCHASE AND DELIVER AN ITEM TO THE STAGING AREA COMPLETE WITH ALL REQUIRED APPURTENANCES.
- 2.2. INSTALL: TO MOVE THE ITEM FROM THE STAGING AREA AND FASTEN TO THE STRUCTURE. 2.3. PROVIDE: TO FURNISH AND INSTALL.

#### 3. QUALITY ASSURANCE

- 3.1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH INDUSTRY STANDARDS AND SHALL CONFORM TO THE NEW JERSEY UNIFORM CONSTRUCTION CODE. THE CURRENTLY ADOPTED SUBCODES WITH AMENDMENTS ARE AS FOLLOWS:
- 3.1.1. INTERNATIONAL BUILDING CODE 2021
- 3.1.2. NATIONAL STANDARD PLUMBING CODE 2021 3.1.3. INTERNATIONAL MECHANICAL CODE 2021
- 3.1.4. INTERNATIONAL FUEL GAS CODE 2021 3.1.5. NATIONAL ELECTRIC CODE 2020
- 3.1.6. ASHRAE 90.1-2019 3.1.7. ICC A117.1-2017
- 3.1.8. NFPA 13-2019 (ADOPTED THROUGH IBC 2021) 3.2. WHERE THE CONTRACT DOCUMENTS INDICATE MORE STRINGENT REQUIREMENTS THAN THE PRECEDING CODES AND ORDINANCES, THE CONTRACT DOCUMENTS SHALL TAKE PRECEDENCE. PRIOR TO ORDERING AND/OR INSTALLING ANY PORTION OF THE WORK WHICH APPEARS TO BE IN CONFLICT THE WORK SHALL BE BROUGHT TO THE ARCHITECT/ENGINEER'S ATTENTION
- FOR DIRECTIONS AS TO WHAT IS PROVIDED. 3.3. IN THE EVENT OF A CONFLICT WITH CODES, THE MORE STRINGENT REQUIREMENTS SHALL APPLY.

### 4. FIRESTOPPING

4.1. ALL PENETRATIONS THROUGH FIRE-RATED ASSEMBLIES SHALL HAVE APPROPRIATE INTUMESCENT MATERIAL FIRE STOPPING INSTALLED. ALL OPENINGS SHALL BE CAULKED AND SEALED WITH SSS INTUMESCENT FIRESTOP SEALANT AS MANUFACTURED BY SPECIFIED TECHNOLOGIES, INC.

5.1. ALL ROOF PENETRATIONS SHALL BE WEATHERPROOF IN ALL RESPECTS. ANY WORK DONE ON THE ROOF SHALL BE PERFORMED BY A CONTRACTOR CERTIFIED BY THE ROOF MANUFACTURER TO MAINTAIN THE EXISTING ROOF

# 6. CONTRACT DRAWINGS AND SPECIFICATIONS:

- 6.1. CONTRACT DRAWINGS ARE GENERALLY DIAGRAMMATI AND CONVEY THE SCOPE OF WORK AND GENERAL ARRANGEMENT OF APPARATUS AND EQUIPMENT. TH DRAWINGS DO NOT INTEND TO SHOW EVERY OFFSET AND ACCESSORY REQUIRED, NOR EVERY STRUCTURAL DIFFICULTY THAT MAY BE ENCOUNTERED. 6.2. THE LOCATIONS OF ALL ITEMS SHOWN ON THE
- DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS THAT RE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE ONLY. THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS MUST BE DETERMINED AT THE PROJECT SITE AND SHALL FOLLOW DRAWINGS IN LAYING OUT WORK AND SHALL CHECK DRAWINGS OF THE OTHER TRADES TO VERIFY SPACES IN WHICH WORK WILL BE INSTALLED. 6.3. MAINTAIN MAXIMUM HEADROOM AND SPACE CONDITIONS
- AT ALL POINTS. 6.4. IF DIRECTED BY THE GENERAL CONTRACTOR, ENGINEER, AND/OR ARCHITECT, THE SUBCONTRACTOR SHALL, WITHOUT EXTRA CHARGE, MAKE REASONABLE MODIFICATIONS IN THE LAYOUT AS NEEDED TO PREVENT CONFLICT WITH OTHER OF OTHER TRADES OR BEFORE
- PROPER EXECUTION OF THE WORK. 6.5. THE SPECIFICATIONS ARE INTENDED ONLY TO COMPLEMENT THE DRAWINGS; HOWEVER, WORK DETAILED AND/OR NOTED ONLY ON THE DRAWINGS OR WORK DESCRIBED ONLY IN THE SPECIFICATIONS SHALL ALL BE CONSIDERED AS PART OF THE SCOPE OF WORK.

# 7. OBTAINING INFORMATION

7.1. OBTAIN FROM THE MANUFACTURER THE PROPER METHOD OF INSTALLATION AND CONNECTION OF THE EQUIPMENT THAT IS TO BE FURNISHED AND INSTALLED OBTAIN ALL INFORMATION THAT IS NECESSARY TO FACILITATE THE WORK AND TO COMPLETE THE PROJECT.

# 8. ELECTRICAL EQUIPMENT

- 8.1. ELECTRICAL COMPONENTS OF PLUMBING EQUIPMENT AND SYSTEMS. SHALL BE PROVIDED UNDER THE RELATED SECTION OF DIVISION 22.
- 8.2. ALL ELECTRICAL EQUIPMENT INSTALLED IN CONCEALED SPACES SHALL BE PROVIDED WITH A HARD-WIRED ELECTRICAL CONNECTION. PLUG-TYPE DISCONNECTS SHALL NOT BE ALLOWED IN CONCEALED SPACES. EQUIPMENT PROVIDED WITH PLUG-IN CORDS SHALL NOT HAVE THEIR CORDS MODIFIED.

# 9. OPENINGS IN EXTERIOR WALLS OR ROOF

9.1. OPENINGS IN EXTERIOR WALLS OR ROOF SHALL BE KEPT PROPERLY PLUGGED AND CAULKED AT ALL TIMES, EXCEPT WHEN BEING WORKED ON TO PRECLUDE THE POSSIBILITY OF FLOODING DUE TO STORM OR OTHER AFTER COMPLETION OF WORK, OPENINGS SHALL BE PERMANENTLY SEALED AND CAULKED IN A MANNER APPROVED BY THE ARCHITECT.

# 10. COOPERATION WITH OTHER TRADES

- 10.1. GIVE FULL COOPERATION TO OTHER TRADES AND FURNISH IN WRITING TO THE ARCHITECT ANY INFORMATION NECESSARY TO PERMIT THE WORK OF ALL TRADES TO BE INSTALLED SATISFACTORILY AND WITH THE LEAST POSSIBLE INTERFERENCE OR DELAY
- 10.2. FINAL LOCATION OF PLUMBING FIXTURES AND OTHER PIECES OF EQUIPMENT, WHETHER OR NOT FURNISHED BY THE PLUMBING SUBCONTRACTOR, REQUIRING PLUMBING SERVICES SHALL BE COORDINATED WITH THE ARCHITECTURAL PLANS. ADDITIONAL OFFSETS, FITTINGS, ETC., SHALL BE PROVIDED AS NEEDED TO MEET THIS REQUIREMENT AT NO EXTRA COST TO THE OWNER.
- 10.3. IF DISCREPANCIES EXIST IN THE SCOPE OF WORK AS TO WHAT TRADE PROVIDES ITEMS THEY SHALL BE REPORTED TO THE ARCHITECT/ENGINEER PRIOR TO SIGNING CONTRACT. IF DISCREPANCIES ARE NOT REPORTED, THE PLUMBING SUBCONTRACTOR SHALL FURNISH SUCH ITEMS AS NEEDED FOR A COMPLETE AND OPERABLE SYSTEM.
- 10.4. DISTRIBUTION SYSTEMS WHICH REQUIRE PITCH OR SLOPE SUCH AS PLUMBING DRAINS, STEAM AND CONDENSATE PIPING SHALL HAVE THE RIGHT OF WAY OVER THOSE WHICH DO NOT.
- 10.5. IN ALL SPACES, PRIOR TO INSTALLATION OF VISIBLE MATERIAL AND EQUIPMENT, INCLUDING ACCESS PANELS. REVIEW ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND WHERE NOT DEFINITELY INDICATED. REQUEST INFORMATION FROM ARCHITECT.
- 10.6. WHERE PLUMBING WORK SHALL INTERFERE WITH THE WORK OF OTHER TRADES, ASSIST IN WORKING OUT THE SPACE CONDITIONS TO MAKE SATISFACTORY ADJUSTMENTS BEFORE INSTALLATION. WITHOUT EXTRA COST TO OWNERS, MAKE REASONABLE MODIFICATIONS TO THE WORK AS REQUIRED BY NORMAL STRUCTURAL INTERFERENCES. PAY THE GENERAL CONTRACTOR FOR ADDITIONAL OPENINGS, OR RELOCATING AND/OR ENLARGING EXISTING OPENING THROUGH CONCRETE FLOORS, WALLS, BEAMS AND ROOF REQUIRED FOR ANY

WORK WHICH WAS NOT PROPERLY COORDINATED. ALI PIPING AND ASSOCIATED COMPONENTS TO BE AS TIGHT TO UNDERSIDE OF STRUCTURE AS POSSIBLE. 10.7. WHERE CONFLICTS OR POTENTIAL CONFLICTS EXIST AND ENGINEERING GUIDANCE IS DESIRED, SUBMIT SKETCH OF PROPOSED RESOLUTION TO ARCHITECT AND ENGINEER

#### 11. EXISTING CONDITIONS:

FOR REVIEW AND APPROVAL.

- 11.1. EXISTING PIPING, EQUIPMENT, ETC. AS SHOWN ON PLAN, IS GENERALLY DIAGRAMMATIC 11.2. EXISTING LAYOUT SHOWN IS BASED ON A COMBINATION
- EXISTING DRAWINGS. 11.3. CONTRACTOR IS TO VERIFY EXISTING CONDITIONS PRIOR TO BEGINNING WORK

OF FIELD OBSERVATION AND, WHERE AVAILABLE,

EXISTING PIPING, EQUIPMENT, WET COLUMNS, ETC. ARE FULLY FUNCTIONAL AND CAN BE REUSED FOR THIS PROJECT, WHERE REQUIRED. 11.4.1. WHERE EXISTING PIPING EQUIPMENT, ETC. IS TO BE

11.4. CONTRACT DRAWINGS MAKE THE ASSUMPTION THAT ALL

- REUSED, CONTRACTOR IS TO VERIFY ITS FUNCTIONALITY PRIOR TO MAKING FINAL CONNECTIONS.
- 11.4.2. NOTIFY ENGINEER AND ARCHITECT IF EXISTING PIPING, EQUIPMENT, ETC. CAN NOT BE USED AS PART OF THIS PROJECT. 11.5. EXISTING SANITARY PIPING
- 11.5.1. CONTRACTOR IS TO CLEAN, JET FLUSH, AND SCOPE EXISTING TO REMAIN SANITARY PIPING WITHIN THE AREA OF WORK. PROVIDE REPORT TO ENGINEER AND ARCHITECT WITH PIPING CONDITION.
- 11.5.2. CONTRACTOR TO VERIFY EXISTING LOCATION. INVERT, DIRECTION OF FLOW, ETC. PRIOR TO INSTALLATION OF NEW SANITARY PIPING. 11.6. IF NOT ALREADY INDICATED ON THE CONTRACT
- DRAWINGS, EXISTING ABOVE GRADE PVC/ABS SANITARY VENT, OR STORM WATER PIPING LOCATED IN A RETURN AIR PLENUM WITHIN THE SCOPE OF WORK IS TO BE FIRE WRAPPED OR REPLACED WITH CAST IRON OR COPPER DWV PIPING. 11.3. NOTIFY ENGINEER AND ARCHITECT IF EXISTING
- CONDITIONS DIFFER SIGNIFICANTLY FROM THOSE SHOWN ON PLAN, OR IF EXISTING CONDITIONS DO NOT PERMIT PROPOSED PLUMBING PLAN.

#### 12. BIDDER'S REPRESENTATION:

- 12.1. BY THE ACT OF SUBMITTING A BID FOR THE PROPOSED CONTRACT, THE BIDDER REPRESENTS THAT: 12.1.1. THE BIDDER AND ALL SUBCONTRACTORS HAVE CAREFULLY AND THOROUGHLY REVIEWED THE DRAWINGS, SPECIFICATIONS, AND OTHER
- CONSTRUCTION CONTRACT DOCUMENTS. 12.1.2. THE BIDDER INTENDS TO USE CONTRACTORS WHO ARE LICENSED, SKILLED AND EXPERIENCED IN THE TYPE OF CONSTRUCTION REPRESENTED BY THE CONSTRUCTION CONTRACT DOCUMENTS BID UPON. 12.1.3. NEITHER THE BIDDER NOR ANY OF THE BIDDER'S EMPLOYEES, AGENTS, INTENDED SUPPLIERS, OR
- REPRESENTATIONS 12.1.4. THE BID FIGURE IS BASED SOLELY UPON THE CONSTRUCTION CONTRACT DOCUMENTS AND PROPERLY ISSUED WRITTEN ADDENDA AND NO UPON OTHER WRITTEN REPRESENTATION.

SUBCONTRACTORS HAVE RELIED UPON ANY VERBAL

#### 13. PROTECTION

13.1. PROTECT ALL WORK AND MATERIAL FROM DAMAGE BY WORK AND WORKMEN, AND ACCEPT LIABILITY FOR ALL DAMAGE THUS CAUSED.

13.2. BE RESPONSIBLE FOR WORK AND EQUIPMENT UNTIL

- FINALLY INSPECTED, TESTED, AND ACCEPTED. PROTECT WORK AGAINST THEFT, INJURY OR DAMAGE: AND CAREFULLY STORE MATERIAL AND EQUIPMENT RECEIVED ON SITE, WHICH IS NOT IMMEDIATELY INSTALLED. 13.3. CLOSE OPEN ENDS OF WORK WITH TEMPORARY COVERS
- OR PLUGS DURING STORAGE AND CONSTRUCTION TO PREVENT ENTRY OF OBSTRUCTING MATERIAL 13.4. ALL OPENINGS IN STORED & INSTALLED PIPING SHALL BE COVERED & SEALED WHEN NOT IN USE TO PREVENT CONTAMINATION FROM DUST & DEBRIS.

# 14. MATERIALS AND WORKMANSHIP

- 14.1. ALL MATERIALS AND APPARATUS REQUIRED FOR THE WORK, EXCEPT AS SPECIFICALLY SPECIFIED OTHERWISE, SHALL BE NEW, OF FIRST-CLASS QUALITY, AND SHALL BE FURNISHED, DELIVERED, ERECTED, CONNECTED AND FINISHED IN EVERY DETAIL, AND SHALL BE SO SELECTED AND ARRANGED AS TO FIT PROPERLY INTO THE BUILDING SPACES. WHERE NO SPECIFIC KIND OR QUALITY OF MATERIAL IS GIVEN, A FIRST-CLASS STANDARD ARTICLE AS APPROVED BY THE ARCHITECT SHALL BE FURNISHED
- 14.2. FURNISH THE SERVICES OF AN EXPERIENCED FOREMAN WHO SHALL BE CONSTANTLY IN CHARGE OF THE INSTALLATION OF THE WORK, TOGETHER WITH ALL SKILLED WORKMEN, FITTERS, METAL WORKERS, WELDER, HELPERS, AND LABOR REQUIRED TO UNLOAD, TRANSFER ERECT, CONNECT, ADJUST, START, OPERATE, AND TEST EACH SYSTEM.
- 14.3. ALL EQUIPMENT AND MATERIALS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED INSTALLATION INSTRUCTIONS AS WELL AS UL LISTING INSTRUCTIONS AND ALL LOCAL, STATE AND NATIONAL CODES.

# 15. ACCESSIBILITY

- 15.1. ASSURE AND BE RESPONSIBLE FOR THE ADEQUACY OF SHAFTS AND CHASES, THE ADEQUATE CLEARANCE IN DOUBLE PARTITIONS AND HUNG CEILINGS FOR THE PROPER INSTALLATION OF THE WORK.
- 15.2. COOPERATE WITH ALL OTHER TRADES WHOSE WORK IS IN THE SAME SPACE. SUCH SPACES AND CLEARANCES SHALL, HOWEVER, BE KEPT TO THE MINIMUM SIZE
- 15.3. LOCATE ALL EQUIPMENT, WHICH MUST BE SERVICED, OPERATED. ADJUSTED OR MAINTAINED IN FULLY ACCESSIBLE POSITIONS. EQUIPMENT SHALL INCLUDE. BUT NOT BE LIMITED TO. VALVES, TRAPS, CLEANOUTS MOTORS, CONTROLLERS, STRAINERS, RPZS, TRAP PRIMERS, WATER HAMMER ARRESTORS, AND DRAINS, REQUIRED FOR BETTER ACCESSIBILITY, FURNISH ACCESS DOORS FOR THIS PURPOSE, MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE TO ALLOW FOR BETTER ACCESSIBILITY, AND THE ENGINEER SHALL APPROVE ANY CHANGE.
- 15.4. ACCESS PANELS: 15.4.1. PROVIDE ACCESS PANELS FOR INSTALLATION IN CONCRETE BLOCK WALLS OR GYPSUM WALLBOARD CEILINGS AND PARTITIONS IN LOCATIONS, WHICH REQUIRE ACCESS FOR SERVICE TO THE ITEMS LOCATED BEHIND THE PERMANENT GYPSUM

15.4.2. ACCESS PANELS SHALL BE INSTALLED WHERE

REQUIRED TO GAIN ACCESS TO VALVES, TRAP PRIMERS, WATER HAMMER ARRESTORS, CLEANOUTS, 15.4.3. PANELS SHALL BE FLUSH, INSULATED, CONTAIN

WALLBOARD OR CONCRETE BLOCK FINISH.

- CONTINUOUS STEEL HINGE AND SCREWDRIVER OPFRATED. 15.4.4. PANELS SHALL BE RATED EQUAL TO THE ASSEMBLY THAT THEY ARE BEING INSTALLED IN.
- 15.4.5. PANELS SHALL BE UL LISTED. 15.4.6. ACCESS PANELS LOCATED IN FIRE RATED PARTITIONS SHALL BE FIRE PANELS. THE FRAME AND PANEL ASSEMBLY OF THESE FIRE PANELS SHALL BE MANUFACTURED UNDER THE FACTORY INSPECTION SERVICE OF THE UNDERWRITERS' LABORATORIES, INC., AND SHALL BEAR A LABEL READING: "FRAME AND FIRE PANEL ASSEMBLY, RATING 2 HOURS. (B) TEMPERATURE RISE 30 MINUTES, 250° F. MAXIMUM." RATED PANELS
- SHALL BE EQUIPPED WITH AUTOMATIC CLOSING MECHANISM AND BE SELF-LATCHING. 15.4.7. PANELS SHALL BE PROVIDED WITH SCREWDRIVER OPERATED FLUSH CAM LOCKS.
- 15.4.8. PANEL SIZE SHALL BE 12 INCHES X 12 INCHES EXCEPT FURNISH A LARGER SIZE IF REQUIRED TO SERVICE A PARTICULAR ITEM. 15.4.9. THE EXACT LOCATION AND SIZE OF EACH ACCESS

PANEL SHALL BE REVIEWED WITH, AND APPROVED

### 16. CUTTING AND PATCHING

BY, THE ENGINEER.

- 16.1. PROVIDE ALL CUTTING AND PATCHING NECESSARY TO INSTALL THE WORK SPECIFIED IN THIS DIVISION. PATCHING SHALL MATCH ADJACENT SURFACES. AT FLOOR SLABS & WALL OPENINGS TO BE CORED DRILLED OR CUT, CONTRACTOR SHALL FIND AND MARK ON BOTH FACES ALL REINFORCING, REBAR, CONDUITS, UTILITIES, ETC. BY MEANS OF X-RAY, PACH-OMETER OR PROF-OMETER. SUBMIT SKETCH SHOWING LOCATIONS OF ALL FINDINGS AND PROPOSED CUTS OR CORES.
- 16.2. NO STRUCTURAL MEMBERS SHALL BE CUT WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER, AND ALL SUCH CUTTING SHALL BE ACCOMPLISHED IN A MANNER DIRECTED BY THE STRUCTURAL ENGINEER. 17. GROUNDING

17.1. ALL COMPONENTS OF PLUMBING PIPING SYSTEMS SHALL BE PROPERLY GROUNDED TO BUILDING GROUND. WHERE GROUND PATH IS INTERRUPTED BY NON-CONDUCTIVE MATERIALS, APPROPRIATE BONDING OR GROUNDING TO BUILDING GROUND SHALL BE PROVIDED.

#### 18. DEMOLITION

- 18.1. PRIOR TO SUBMITTING BID. VISIT SITE AND IDENTIFY EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT WORK OF THIS SECTION. DEMOLITION WORK WILL REQUIRE CAREFUL SITE EXAMINATION PRIOR TO
- 18.2. NO COMPENSATION WILL BE GRANTED FOR ADDITIONAL WORK CAUSED BY UNFAMILIARITY WITH SITE CONDITIONS THAT ARE VISIBLE OR READILY CONSTRUED BY EXPERIENCED OBSERVERS.
- 18.3. PRIOR TO COMMENCING DEMOLITION, CONTRACTOR SHALL IDENTIFY WITH OWNER ANY EQUIPMENT TO BE RETURNED TO THE OWNER AFTER DEMOLITION. ALL OTHER DEBRIS SHALL BE DISPOSED OF BY THIS CONTRACTOR IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.
- 18.4. ANY SHUTDOWNS REQUIRED FOR DEMOLITION SHALL BE COORDINATED WITH BUILDING OWNER TO AVOID IMPACT TO OPERATIONS.
- 18.5. DURING DEMOLITION, ANY EQUIPMENT, DUCTWORK, PIPING, ETC. FOUND TO BE ABANDONED SHALL BE DEMOLISHED. EXISTING UNUSED CONNECTIONS TO EXISTING PIPING SHALL BE CUT BACK TO THE MAINS AND CAPPED ACCORDINGLY 18.6. UNDER DEMOLITION, THE FOLLOWING IS, IN BRIEF, THE
- EXTENT OF THE WORK TO BE PERFORMED BY THE PLUMBING CONTRACTOR UNDER THIS CONTRACT. 18.6.1. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISCONNECTION AND REMOVAL OF THE EXISTING PLUMBING EQUIPMENT PIPING, VALVES, ETC., IN DESIGNATED CUT & CAP
- PIPING BACK TO MAINS. 18.6.2. PATCH ALL ROOF AND WALL PENETRATIONS TO MATCH EXISTING. 18.6.3. THIS CONTRACTOR SHALL PROTECT WORK AGAINST INJURY OR DAMAGE; AND CAREFULLY STORE
- MATERIAL AND EQUIPMENT TO BE RELOCATED. 18.6.4. OPEN ENDS OF WORK SHALL BE CLOSED WITH TEMPORARY COVERS OR PLUGS DURING STORAGE AND CONSTRUCTION TO PREVENT ENTRY OF OBSTRUCTING MATERIAL.

# 19. EXCAVATION AND BACKFILL

- 19.1. WORK UNDER THIS SECTION SHALL COMMENCE ONLY AFTER PROPER BEDDING MATERIAL HAS BEEN PROVIDED, GRADED AND PROPERLY COMPACTED. EXCAVATION SHALL BE KEPT OPEN UNTIL SYSTEM HAS BEEN INSPECTED, TESTED AND APPROVED.
- 19.2. THE PLUMBING CONTRACTOR SHALL OBSERVE ALL EXCAVATION, BACKFILLING AND COMPACTION OF ALL UNDERGROUND PIPING ASSOCIATED WITH WORK UNDER THIS SECTION.

# 20. EQUIPMENT CONNECTIONS:

- 20.1. MAKE ALL FINAL PLUMBING CONNECTIONS TO ALL NEW AS WELL AS EXISTING TO BE RELOCATED EQUIPMENT INCLUDING, BUT NOT LIMITED TO, SUCH EQUIPMENT: 20.1.1. KITCHEN EQUIPMENT 20.1.2. WATER HEATERS
- 20.1.3. TOILET ROOM FIXTURES. 20.2. PROVIDE ALL ROUGH PLUMBING SYSTEMS TO THESE SAME ITEMS OF EQUIPMENT 20.3. REFER TO EQUIPMENT SHOP DRAWINGS AND

# 21. TESTING PIPING SYSTEMS

ANY WORK.

21.1. TEST ALL WORK IN THE PRESENCE OF THE ARCHITECT/ENGINEER AND/OR OWNER, OWNER'S REPRESENTATIVE, AND PLUMBING INSPECTOR AS CALLED FOR IN LOCAL CODES.

MANUFACTURES REQUIREMENTS FOR FINAL LOCATIONS

OF CONNECTION PRIOR TO LAYING OUT OR INSTALLING

- 21.2. AFTER SOIL, WASTE AND VENT PIPING IS IN PLACE AND BEFORE BEING FURRED IN, PLUG LOWER ENDS AND FILL THE SYSTEM SHALL BE LEFT UNDER THESE CONDITIONS AND WATER LEVEL SHALL BE MAINTAINED INTACT FOR A PERIOD OF AT LEAST FOUR HOURS. 21.3. TEST DOMESTIC WATER PIPING AND SERVICE BY APPLYING A HYDROSTATIC PRESSURE OF 125 PSI USING
- A PUMP FOR THIS PURPOSE. MAKE SURE THAT ALL LINES ARE PROPERLY PLUGGED OR CAPPED AND THAT AIR HAS BEEN VENTED BEFORE APPLYING PRESSURE WHICH SHALL REMAIN CONSTANT WITHOUT PUMPING FOR AT LEAST ONE HOUR.
- 21.4. GAS SYSTEM PIPING SHALL BE TESTED AT A PRESSURE OF 50 PSIG AND PRESSURE SHALL BE HELD FOR TWO HOURS MINIMUM.
- 21.5. THIS CONTRACTOR SHALL FURNISH ALL EQUIPMENT, LABOR AND MATERIALS, REQUIRED FOR THESE TESTS 21.6. ANY LEAKS IN JOINTS OR EVIDENCE OF DEFECTIVE PIPE OR FITTINGS DISCLOSED BY TEST SHALL BE IMMEDIATELY CORRECTED BY REPLACING DEFECTIVE PARTS WITH NEW JOINTS OR CORRECTED MATERIALS NO MAKESHIFT REPAIRS EFFECTED BY CAULKING THREADED PIPE WITH LEAD WOOL, APPLICATION OF WICKING OR PATENTED COMPOUNDS BEING PERMITTED. PERFORM SMOKE TEST AS REQUIRED BY LOCAL CODE OR BY THE ARCHITECT/ENGINEER.

# 22.PROTECTION AND CLEANING

- 22.1. EACH SUBCONTRACTOR SHALL BE RESPONSIBLE FOR HIS WORK AND FOUIPMENT UNTIL FINALLY INSPECTED. TEST AND ACCEPTED. CAREFULLY STORE MATERIALS WHICH ARE NOT IMMEDIATELY INSTALLED AFTER DELIVERY ON SITE. CLOSE OPEN ENDS OR WORK WITH TEMPORARY COVERS OR PLUG DURING CONSTRUCTION TO PREVENT ENTRY OF OBSTRUCTING MATERIAL.
- MATERIALS OF OTHER TRADES FROM DAMAGE THAT MIGHT BE CAUSED BY THIS WORK OR WORKMAN AND MAKE GOOD DAMAGE THUS CAUSED. 22.3. THE PREMISES SHALL BE KEPT REASONABLY CLEAN AT ALL TIMES, AND RUBBISH SHALL BE REMOVED AS

22.2. EACH SUBCONTRACTOR SHALL PROTECT WORK AND

DIRECTED BY THE GENERAL CONTRACTOR. 22.4. UPON COMPLETION OF THIS WORK, THE CONTRACTOR SHALL CLEAN ALL FIXTURES AND EQUIPMENT AND REPLACE DAMAGED PARTS. UPON FAILURE OF THIS CONTRACTOR TO FULFILL THEIR OBLIGATION, THIS WORK WILL BE TAKEN CARE OF AT THEIR EXPENSE.

# 23. CHLORINATION

- 23.1. EACH WATER PIPING SYSTEM (COLD, HOT, RECIRCULATION, TEPID, ETC.) SHALL BE CLEANED AND DISINFECTED BY THIS CONTRACTOR. CLEANING AND DISINFECTION SHALL BE PERFORMED AFTER ALL PIPES, VALVES, FIXTURES, AND OTHER COMPONENTS OF THE SYSTEM ARE INSTALLED, TESTED AND READY FOR OPERATION.
- 23.2. ALL WATER PIPING SYSTEMS SHALL BE THOROUGHLY FLUSHED WITH CLEAN POTABLE WATER PRIOR TO DISINFECTION TO REMOVE DIRT AND OTHER

CONTAMINANTS. 23.3. DISINFECTION SHALL BE DONE USING SODIUM

NOT PERMITTED.

HYPOCHLORITE IN THE FOLLOWING MANNER.

23.3.1. A SERVICE COCK SHALL BE PROVIDED AND

LOCATED AT THE WATER SERVICE ENTRANCE

EVEN RATE. DURING DISINFECTION, FLOW OF

PROPORTIONING PUMP OR DEVICE THROUGH THE

SERVICE COCK SLOWLY AND CONTINUOUSLY AT AN

DISINFECTING AGENT INTO MAIN WATER SUPPLY IS

23.3.2. THE DISINFECTING AGENT SHALL BE INJECTED BY A

- - 23.3.3. ALL SECTIONAL VALVES SHALL BE OPENED DURING DISINFECTION. ALL OUTLETS SHALL BE FULLY OPENED DURING INJECTION AND THE RESIDUAL CHECKED WITH ORTHOTOLIDIN SOLUTION.
  - 23.3.4. WHEN THE CHLORINE RESIDUAL CONCENTRATION. CALCULATED ON THE VOLUME OF WATER THE PIPING WILL CONTAIN INDICATED NOT LESS THE 50 PPM (PARTS PER MILLION) AT ALL OUTLETS THEN ALL VALVES SHALL BE CLOSED AND SECURED.
  - 23.3.5. THE RESIDUAL CHLORINE SHALL BE RETAINED IN THE PIPING SYSTEM FOR A PERIOD OF NOT LESS THAN 24 HOURS. 23.3.6. AFTER THE RETENTION, THE RESIDUAL SHALL BE
  - PROCESS SHALL BE REPEATED AS DESCRIBED 23.3.7. IF SATISFACTORY, THEN ALL FIXTURES SHALL BE FLUSHED WITH CLEAN POTABLE WATER UNTIL RESIDUAL CHLORINE BY ORTHOTOLIDIN TEST SHALL

NOT LESS THEN 5 PPM. IF LESS THEN THE

BE NOT GREATER THAN THE INCOMING WATER

- 23.4. ALL WORK AND CERTIFICATION OF PERFORMANCE SHALL BE PERFORMED BY APPROVED APPLICATORS OR QUALIFIED PERSONNEL WITH CHEMICAL AND LABORATORY EXPERIENCE. CERTIFICATION OF
- PERFORMANCE SHALL INDICATE: 23.4.1. NAME AND LOCATION OF THE JOB AND DATE WHEN DISINFECTION WAS PERFORMED.
- 23.4.3. RETENTION PERIOD OF DISINFECTANT IN PIPING MATFRIAL 23.4.4. PPM CHLORINE DURING RETENTION.

23.4.2. MATERIAL USED FOR DISINFECTION.

- 23.4.5. PPM CHLORINE AFTER FLUSHING. 23.4.6. STATEMENT THAT DISINFECTION WAS PERFORMED AS SPECIFIED. 23.4.7. SIGNATURE AND ADDRESS OF COMPANY OR
- PERSON PERFORMING DISINFECTION. 23.5. UPON COMPLETION OF FINAL FLUSHING THE PLUMBING SUBCONTRACTOR SHALL OBTAIN A MINIMUM OF ONE WATER SAMPLE FROM EACH WATER PIPING SYSTEM AND SUBMIT SAMPLES TO A STATE APPROVED LABORATORY. SAMPLES SHALL BE TAKEN FROM FAUCETS LOCATED AT HIGHEST FLOOR AND FURTHEST FROM METER OR MAIN WATER SUPPLY.
- 23.6. IF ANALYSIS DOES NOT SATISFY THE ABOVE MINIMUM REQUIREMENTS, THE DISINFECTION PROCEDURE SHALL BE REPEATED. 23.7. BEFORE ACCEPTANCE OF THE SYSTEMS, THIS

CONTRACTOR SHALL SUBMIT TO THE PROJECT MANAGER

AND CLERK OF WORKS FOR HIS/HER REVIEW, THREE (3)

COPIES OF CERTIFICATION OF PERFORMANCE AS SPECIFIED ABOVE. 23.8. UNDER NO CIRCUMSTANCES SHALL THIS CONTRACTOR PERMIT THE USE OF ANY PORTION OF DOMESTIC WATER SYSTEM UNTIL PROPERLY DISINFECTED FLUSHED AND

# **ABBREVIATIONS**

ABBRV	ABBREVIATION
,	FOOT (FEET) (0.3048 METERS)
"	INCH(S) (25.4 MILLIMETERS)
DFU	DRAINAGE FIXTURE UNIT
(X)DCW	(EXISTING) DOMESTIC COLD WATER
(X)DHW	(EXISTING) DOMESTIC HOT WATER
(X)DW	(EXISTING) DISHWASHER
DP	DOWN PIPE
EST.	ESTIMATE
(X)FCO	(EXISTING) FLOOR CLEAN OUT
(X)FD	(EXISTING) FLOOR DRAIN
(X)GWH	(EXISTING) GAS WATER HEATER
GPM	GALLONS PER MINUTE
(X)(H)WC	(EXISTING) (ADA) WATER CLOSET
(X)(H)SH	(EXISTING) (ADA) SHOWER
(X)IWH	(EXISTING) INSTANTANEOUS WATER HEATER
(X)(H)LAV	(EXISTING) (ADA) LAVATORY
(X)PS	(EXISTING) PANTRY SINK
PSI	POUNDS PER SQUARE INCH. (6.89 KILOPASCAL)
(X)REF	(EXISTING) REFRIGERATOR
(X)SS	(EXISTING) SERVICE SINK
(X)(E)TP	(EXISTING) (ELECTRONIC) TRAP PRIMER
(X)(H)U	(EXISTING) (ADA) URINAL
USG	U.S. GALLON (3.785 LITERS)
(X)VTR	(EXISTING) VENT THROUGH ROOF

(X)WCO (EXISTING) WALL CLEAN OUT

(EXISTING) WATER HAMMER ARRESTOR

()WSOB (EXISTING) WALL RECESSED WATER SUPPLY OUTLET BOX

# **PLUMBING SPECIFICATIONS:**

DETAILED DATA ON THE PROPOSED SUBSTITUTION INCLUDING

DOLLAR AMOUNT OF PROPOSED SAVINGS. ENGINEER SHALL

REVIEW THE INFORMATION AND DETERMINE WHETHER THE

2. ANY CHANGES TO THE CONTRACT DOCUMENTS DUE TO THE

SUBSTITUTION SHALL BE COORDINATED BY THE GENERAL

CONTRACTOR AND ANY ADDITIONAL COST TO MODIFY THE

DESIGN OR MODIFY THE SCOPE OF OTHER TRADES SHALL

INCLUDE MODIFICATIONS TO THE STRUCTURAL SCOPE FOR

1. ALL SUBMITTALS SHALL BE ROUTED TO THE ARCHITECT FOR

GENERAL CONTRACTOR INDICATING THEY HAVE REVIEWED

DATA CUT-SHEETS MAY BE SUBMITTED ELECTRONICALLY.

4. SHOP DRAWING SUBMISSIONS CONSISTING OF COORDINATION

DRAWINGS, FIRE ALARM SHOP DRAWINGS, SHEET METAL

SHOP DRAWINGS, ETC. SHALL BE SUBMITTED IN LARGE

FORMAT. ORIGINAL SIZE ON PAPER. PROVIDE FIVE COPIES

OF THE SHOP DRAWINGS. THE ENGINEER SHALL KEEP A

PLANS, LAYOUT DRAWINGS, FIRE PROTECTION SHOP

COPY. THE ARCHITECT SHALL KEEP A COPY. THE

REMAINING THREE COPIES WILL BE RETURNED TO THE

5. REQUESTS FOR INFORMATION (RFIS) SHALL INCLUDE THE

DOCUMENTS, AND THE CONTRACTOR'S RECOMMENDED

QUESTION, THE REFERENCED PORTION OF THE CONTRACT

6. DELEGATED-DESIGN SUBMISSIONS SHALL BE PROVIDED WITH

THAT WILL SIGN AND SEAL THE DOCUMENT. ORIGINAL

SIGNED AND SEALED DOCUMENTS DO NOT NEED TO BE

7. REFER TO THE INDIVIDUAL SPECIFICATION SECTIONS FOR

8. COMPILE OPERATION AND MAINTENANCE (O&M) MANUALS

1. ALL CUTTING AND PATCHING OF THE BUILDING SHALL BE

2. REMOVE AND DISPOSE OF IN A LEGAL MANNER ALL

3. ALL CONSTRUCTION MATERIAL THAT CAN BE RECYCLED

THE QUANTITIES OF THE RECYCLED MATERIAL.

PERFORMED BY THE CONTRACTOR. REMOVAL OF EXISTING

SYSTEMS, COMPONENTS, SUPPORTS, ETC. SHALL HAVE ALL

CONSTRUCTION DEBRIS IDENTIFIED TO BE REMOVED. THE

CONSTRUCTION AREA SHALL BE BROOM SWEPT EACH NIGHT.

SHALL BE RECYCLED. MAINTAIN ALL RECEIPTS AND SUBMIT

COPIES OF THE RECEIPT TO THE ARCHITECT TO DOCUMENT

1. PROVIDE OPERATION AND MAINTENANCE MANUALS. REFER

TO THE INDIVIDUAL SPECIFICATION SECTIONS FOR

DOCUMENTATION. AS-BUILT DOCUMENTATION SHALL

DOCUMENTS. INCLUDE THE AS-BUILT DOCUMENTATION WITH

2.1. SUBMIT SHOP DRAWINGS FOR ALL PRODUCTS INCLUDING

2.2. VALVE TAG CHART LISTING ALL OF THE VALVES KEYED

2.3. A FLOOR PLAN SHOWING THE LOCATION OF ALL VALVES

3.1. GALVANIZED STEEL-PIPE SLEEVES: ASTM A 53, TYPE

3.2. INSTALL SLEEVES FOR PIPING PENETRATING PARTITIONS

3.3. PROVIDE APPROPRIATE FIRESTOPPING/JOINT SEALANT IN

CHROME-PLATED FINISH AND CONCEALED HINGE AND

4.2. INSTALL ESCUTCHEONS FOR PIPES PENETRATING WALLS

5.1. PROVIDE SELF-ADHESIVE PIPE LABELS THAT INCLUDES

ARROWS, AND LETTERING AT LEAST 1/2" HIGH.

5.3. PROVIDE VALVE TAG CHART LISTING EACH VALVE AND

5.4. PROVIDE SELF-ADHESIVE PIPE LABELS EVERY 50 FEET

NEAR EACH VALVE, BRANCH CONNECTION, AND

2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA.

3. VALVES SHALL BE MANUFACTURED BY MILWAUKEE VALVE,

4.1. PROVIDE TWO PIECE STANDARD-PORT, BRONZE BALL

4.3. CONFORM TO NSF/ANSI 372 FOR POTABLE WATER

4.4. PROVIDE EXTENSION STEM WHEN INSTALLED IN PIPING

6. INSTALL VALVES IN HORIZONTAL PIPING WITH STEM AT OR

VALVES WITH STAINLESS STEEL TRIM. FOR VALVES

USED IN POTABLE WATER SYSTEMS, PROVIDE LOW LEAD

VALVES FOR POTABLE WATER. 600 WOG WITH SOLDER

2.2. SUBMIT OPERATION AN MAINTENANCE DATA.

NIBCO, OR WATTS REGULATOR.

OR PRESS ENDS.

APPLICATIONS.

WITH INSULATION.

ABOVE CENTER OF PIPE.

220700 PLUMBING INSULATION

1.1. PIPING INSULATION

MOVEMENT.

1. SCOPE

SUBMITTALS

5. INSTALL VALVES IN ACCORDANCE WITH THE

MANUFACTURER'S INSTALLATION INSTRUCTIONS.

7. INSTALL VALVES IN POSITIONS TO ALLOW FULL STEM

8. PROVIDE BALL VALVES FOR SHUT-OFF DUTY ON PIPING

4.2. CONFORM TO MSS SP-110.

CORRESPONDING TAG NUMBER. ALSO PROVIDE A FULL

SCALE SET OF PLANS IDENTIFYING THE LOCATION OF

EACH VALVE AND KEYING THE VALVE TAG NUMBER TO

PENETRATIONS OF WALLS OR FLOORS. PROVIDE LABELS

WHERE VISIBLE FROM ACCESS PANELS THAT PROVIDE

ACCESS TO SPACES ABOVE CEILINGS OR WITHIN WALLS.

5.2. PROVIDE VALVE TAGS THAT ARE STAMPED BRASS.

COLOR-CODING FOR EACH SYSTEM, FLOW DIRECTION

AND CEILINGS. INSTALL TO CLOSELY FIT AROUND

PIPING AND INSULATION WITH AN OUTER DIAMETER TO

E, GRADE B, SCHEDULE 40 ZINC COATED WITH PLAIN

CONSIST OF CONTRACTOR RED-LINED CONTRACT

2. THE O&M MANUALS SHALL INCLUDE AS-BUILT

EXISTING HOLES OR PENETRATIONS PATCHED TO MATCH THE

AND SUBMIT ELECTRONICALLY FOR APPROVAL. AFTER

APPROVAL OF ALL MANUALS, PROVIDE TWO COPIES OF A

PRINTED, BOUND SET TO THE OWNER AND A COMPACT DISC

A COVER-SHEET INDICATING THE PROFESSIONAL OF RECORD

SUBMITTED UNTIL THE DOCUMENTS ARE APPROVED BY THE

2. ALL SUBMITTALS SHALL BEAR A COVER-SHEET FROM THE

THE SUBMITTAL AND FIND IT TO CONFORM TO THE

3. SHOP DRAWING SUBMISSIONS CONSISTING OF PRODUCT

BE INCLUDED IN THE PROPOSED SAVINGS. THIS SHALL

EQUIPMENT SUPPORT AS WELL AS MODIFICATIONS TO

ELECTRICAL BRANCH CIRCUITRY OR FEEDERS FOR

DISTRIBUTION TO ALL DESIGN PROFESSIONALS.

SUBSTITUTION WILL BE ALLOWED.

EQUIPMENT.

CONTRACT DOCUMENTS.

GENERAL CONTRACTOR.

SUGGESTION FOR REMEDY

ARCHITECT AND ENGINEER.

THE REQUIRED SUBMITTALS.

WITH THE DATA AS .PDFS.

FXISTING ADJACENT CONSTRUCTION.

DO NOT LET RUBBISH ACCUMULATE

220100 EXECUTION

220110 O&M DATA

1. SCOPE

1.1. SLEEVES

SUBMITTALS

SLEEVES

1.2. ESCUTCHEONS

1.3. IDENTIFICATION

OR WALLS.

4. ESCUTCHEONS

5. IDENTIFICATION

220500 PLUMBING VALVES

1.1. BALL VALVES

2. SUBMITTALS

BALL VALVES

1. SCOPE

ALL PENETRATIONS.

PRODUCT DATA.

TO THE TAG NUMBER.

KEYED TO THE VALVE TAG CHART.

4.1. SPLIT-CASTING BRASS TYPE WITH POLISHED

COMPLETELY COVER THE OPENING.

THE VALVE TAG CHART.

REQUIREMENTS.

THE O&M SUBMITTALS

220400 PLUMBING COMMON REQUIREMENTS

220050 SUBMITTALS

- 220040 SUBSTITUTIONS 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA. 3. PIPING INSULATION 1. ALL SUBSTITUTIONS MUST BE APPROVED PRIOR TO BIDDING 3.1. INSULATION SHALL BE MANUFACTURED BY JOHNS PROVIDE SUBSTITUTION INFORMATION DURING THE MANVILLE, KNAUF, OR OWENS CORNING. BID-PHASE QUESTION AND ANSWER PERIOD. INCLUDE
  - INSULATION. TYPE I, RATED UP TO 850°F. COMPLY WITH ASTM C 547, TYPE I, GRADE A WITH FACTORY-APPLIED ASJ-SSL. ASJ-SSL SHALL BE FACTORY APPLIED, SELF-SEALING, PRESSURE SENSITIVE ACRYLIC BASED ADHESIVE COVERED BY A REMOVABLE PROTECTIVE STRIP COMPLYING WITH ASTM C1136, TYPE 3.3. INSULATION SURFACE SHALL MEET ASTM E 84 FLAME
  - SPREAD AND SMOKE DEVELOPED RATINGS OF 25/50. 3.4. FLEXIBLE ELASTOMERIC INSULATION SHALL COMPLY WITH

3.2. INSULATION SHALL BE MINERAL-FIBER, PREFORMED PIPE

- ASTM C 534. 3.5. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- 3.6. INSTALL LONGITUDINAL SEAMS FACING UP. 3.7. INSTALL INSULATION ON ALL PIPING LISTED AND OVER ALL FITTINGS, VALVES, AND SPECIALTIES. FOR SPECIALTIES THAT REQUIRE REGULAR MAINTENANCE SUCH AS DRAIN VALVES, STRAINERS, AND BALANCING VALVES PROVIDE PRE-FORMED INSULATION COMPONENTS THAT PERMIT MAINTENANCE WITHOUT DAMAGING THE INSULATION.
- 3.8. REFER TO PIPING MATERIALS AND INSULATION SCHEDULE

# PLUMBING PIPING

- 1. SCOPE 1.1. DOMESTIC WATER PIPING 1.2. SANITARY AND VENT PIPING
- 1.3. PIPE FITTINGS 1.4. PIPING SUPPORTS
- SUBMITTALS 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA. 2.2. SUBMIT FIELD QUALITY CONTROL REPORTS.
- 2.2.1. HYDROSTATIC TEST REPORTS
- 2.2.2. DISINFECTING ACTIVITIES REPORTS
- 3.1. HARD COPPER TUBE: ASTM B 88, TYPE L WATER TUBE. 3.2. SOFT COPPER TUBE: ASTM B 88, TYPE K WATER TUBE. 3.3. SCHEDULE 40 PVC PIPE, ASTM D2665, DRAIN, WASTE,
- 3.3. PROVIDE DIELECTRIC FITTINGS ON ALL PIPING JOINING
- DISSIMILAR METALS. 3.3.1. TRANSITION FROM PVC SCHEDULE 40 SOLID WALL PIPE TO CAST IRON SHALL UTILIZE HUSKY SD4000 (ORANGE) (BASIS OF DESIGN). A STANDARD TWO
- APPROVED AS AN EQUAL. 3.4. INSTALL PIPING WITH APPROPRIATE PITCH AND PARALLEL TO BUILDING WALLS.

BAND RUBBER "FERNCO" FITTING WILL NOT BE

- 3.5. INSTALL PIPING TO CONSERVE SPACE IN THE BUILDING. ENSURE PIPING IS LOCATED TO ALLOW FOR OPENING OF CEILINGS OR ACCESS PANELS 3.6. INSTALL PIPING TO ALLOW FOR SERVICING OF
- PIPING NEEDS TO IMPEDE SERVICE CLEARANCE NOTIFY ARCHITECT/ENGINEER. 3.7. DO NOT INSTALL PIPING ABOVE ELECTRICAL PANELS OR EQUIPMENT WITHOUT APPROVAL FROM

EQUIPMENT AND MAINTAIN REQUIRED CLEARANCES. IF

- ARCHITECT/ENGINEER. 3.8. INSTALL UNIONS OR FLANGES ON ALL PIPING CONNECTING TO EQUIPMENT
- 3.9. PROVIDE IDENTIFICATION ON ALL PIPING AS SPECIFIED. 3.10. ARRANGE FOR ALL REQUIRED INSPECTIONS PRIOR TO CONCEALING PIPING.
- 3.11. INSTALL SLEEVES AS SPECIFIED 3.12. INSULATE PIPING AS SPECIFIED

4. PIPE FITTINGS

- 4.1. DOMESTIC WATER: 4.1.1. WROUGHT-COPPER, SOLDER JOINT FITTINGS ASME
- B16.22 WROUGHT COPPER PRESSURE FITTINGS. 4.1.2. COPPER UNIONS - MSS SP-123 4.1.3. COPPER PRESSURE SEAL JOINT FITTINGS AS
- MANUFACTURED BY ELKHART, NIBCO, OR VIEGA. 4.2. SANITARY, VENT 4.2.1. PVC SOCKET FITTINGS ASTM D2665 MADE TO ASTM D3311 DRAIN, WASTE, AND VENT PATTERNS AND
- TO FIT SCHEDULE 40 PVC. 4.2.2. COPPER DRAINAGE FITTINGS: ASME B16.23. CAST COPPER OR ASME B16.29. WROUGHT COPPER. SOLDER-JOINT FITTINGS
- MANUFACTURED BY MIFAB, TYLER, OR DALLAS. SUPPORTS 5.1. REFER TO SCHEDULE ON PO2 — PLUMBING SCHEDULES. 6. REFER TO PLUMBING PIPING MATERIAL/INSULATION

4.2.3. HEAVY-DUTY, HUBLESS-PIPING COUPLINGS AS

- SCHEDULE FOR APPLICATION DETAILS. 7. DOMESTIC WATER PIPING 7.1. TEST FOR LEAKS AND DEFECTS OF THE PIPING SYSTEM.
- 7.1.1. PROVIDE HYDROSTATIC PRESSURE TEST 50 PSIG IN EXCESS OF OPERATING PRESSURE 7.1.2. PREPARE TEST REPORTS
- OVER EACH PHASE OF CONSTRUCTION. 8. SANITARY PIPING
- 8.2. INSTALL ALL PIPING LESS THAN 3" WITH A ¼" PER FOOT SLOPE IN DIRECTION OF FLOW.
- 9.1. INSTALL ALL PIPING WITH A 1/16" PER FOOT SLOPE TO DRAIN TO SANITARY PIPING

# 221119 DOMESTIC WATER PIPING SPECIALTIES

- 1. SCOPE
- 1.2. WATER HAMMER ARRESTOR
- 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA. 3. TRAP PRIMER
- 3.3. DRAINAGE-TYPE AND ELECTRIC TRAP PRIMER
- INSTALLATION INSTRUCTIONS. 4. WATER HAMMER ARRESTORS
- 4.3. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS. 4.4. STANDARD ASSE 1010 OR PDI-WH 201.

# 221319 SANITARY WASTE PIPING SPECIALTIES

- 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA. FLOOR DRAINS
- 3.3. REFER TO SCHEDULE FOR DETAILS. 3.4. INSTALL IN ACCORDANCE WITH MANUFACTURER'S

INSTALLATION INSTRUCTIONS.

# 1. SCOPE

HEATER, EWH.

- 1.2. EXPANSION TANK, EXP. 1.3. COMMERCIAL, ELECTRIC, INSTANTANEOUS WATER HEATER,
- SUBMITTALS
- SMITH, LOCHINVAR, OR BRADFORD WHITE.
- 3.2. REFER TO THE SCHEDULE FOR PERFORMANCE REQUIREMENTS.
- 3.4. TANKS SHALL HAVE 150 PSI WORKING PRESSURE AND SHALL BE EQUIPPED WITH HIGH DENSITY ANODE. 3.5. ALL INTERNAL SURFACES OF THE HEATER EXPOSED TO
- 3.6. PROVIDE THREE YEAR WARRANTY.
- 3.8. SUPPORT WATER HEATER FROM ABOVE AND MOUNT HIGH IN ROOM. 3.9. PIPE P&T RELIEF TO THE JANITOR'S SERVICE SINK.
- WATER HEATER AND PIPE THE PAN TO THE JANITOR'S SERVICE SINK SEPARATE FROM THE RELIEF PIPING. 3.11. PROVIDE A LEAK DETECTOR IN THE WELDED SEAM DRAIN PAN THAT WILL DETECT WATER IN THE DRAIN PAN. IN THE EVENT OF WATER IN THE DRAIN PAN, THE LEAK DETECTOR SHALL HAVE AN AUDIBLE ALERT AND THREE SOLENOID VALVES SHALL CLOSE TO ISOLATE
- 4.1. PROVIDE EXPANSION TANK MANUFACTURED BY AMTROL,
- AO SMITH, OR TACO. 4.2. REFER TO SCHEDULE FOR PRODUCT BASIS FOR DESIGN.

TANK BEFORE TESTING AND LABELING. INCLUDE

ASME B1.20.1 PIPE THREAD. 4.4. INTERIOR FINISH: COMPLY WITH NSF 61 BARRIER MATERIALS FOR POTABLE-WATER TANK LININGS, INCLUDING EXTENDING FINISH INTO AND THROUGH TANK FITTINGS AND OUTLETS.

# 4.5. AIR-CHARGING VALVE: FACTORY INSTALLED

- SUBMITTALS FIXTURES
- SPECIFICATION INFORMATION. 3.2. ALL FIXTURES SHALL BE INSTALLED IN ACCORDANCE WITH ALL STATE BARRIER FREE REQUIREMENTS. 3.3. INSTALL ALL FIXTURES IN ACCORDANCE WITH
- LUMBING EQUIPMENT \_\_\_\_\_ss\_\_\_\_ ANITARY PIPING ABOVE VISIBLE FLOOR.
- SANITARY PIPING BELOW VISIBLE FLOOR. VENT PIPING. \_\_\_\_\_
- \_\_\_\_\_

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- 7.1.3. CLEAN AND DISINFECT POTABLE PIPING SYSTEMS AND PROVIDE REPORTS OF DISINFECTING ACTIVITIES. 7.1.4. PROVIDE TESTS AND CLEANING PRIOR TO TURNING
- 8.1. INSTALL ALL PIPING 3" AND UP WITH A 1/8" PER FOOT SLOPE IN DIRECTION OF FLOW.
- 8.3. TEST PIPING FOR LEAKS WITH HYDROSTATIC TESTS. PROVIDE TEST REPORTS. VENT PIPING

#### 9.2. TEST PIPING FOR LEAKS WITH HYDROSTATIC TESTS. PROVIDE TEST REPORTS.

- 1.1. TRAP PRIMER
- 2. SUBMITTALS
- JAY R. SMITH, PRECISION PLUMBING PRODUCTS, OR 3.2. SUPPLY-TYPE TRAP PRIMER STANDARD: ASSE 1018.
- 4.1. WATER HAMMER ARRESTORS SHALL BE MANUFACTURED BY MIFAB, JAY R. SMITH, OR WATTS,
- 1. SCOPE
- 3.1. DRAINS SHALL BE MANUFACTURED BY MIFAB, JAY R. SMITH OR WATTS.
- 223300 ELECTRIC, DOMESTIC-WATER HEATERS

- 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA
- 3.1. PROVIDE A WATER HEATER MANUFACTURED BY AO
- 3.3. WATER HEATER SHALL BE LISTED BY UL AND APPROVED TO NSF STANDARD 5.
- WATER SHALL BE GLASSLINED WITH AN ALKALINE
- BOROSILICATE COMPOSITION THAT HAS BEEN FUSED-TO-STEEL.
- 3.7. INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- 3.10. PROVIDE A WELDED SEAM DRAIN PAN BELOW THE

THE WATER HEATER AND PREVENT WATER OUTSIDE OF

- THE WATER HEATER FROM FLOODING THE ROOM. 4. EXP
- 4.3. TAPPINGS: FACTORY-FABRICATED STEEL, WELDED TO

- 224000 PLUMBING FIXTURES 1. SCOPE
- 1.1. (H)WC 1.2. (H)U 1.3. (H)LAV 1.4. PS

1.5. SS

2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA.

3.1. REFER TO SCHEDULE FOR BASIS OF DESIGN AND

# SYMBOL LEGEND DESCRIPTION SYMBOL \_\_\_\_\_ OMESTIC COLD WATER PIPING

# DOMESTIC HOT WATER PIPING (120°F)

- QUIPMENT OR PIPING TO BE REMOVED.
- EXISTING DOMESTIC COLD WATER PIPING. \_\_\_\_\_\_

- 3.1. TRAP PRIMERS SHALL BE MANUFACTURED BY MIFAB,
- STANDARD: ASSE 1044. 3.4. REFER TO SCHEDULE FOR DETAILS. 3.5. INSTALL IN ACCORDANCE WITH MANUFACTURER'S
- 4.2. REFER TO SCHEDULE AND DETAIL FOR DETAILS
- 1.1. FLOOR DRAINS SUBMITTALS
- 3.2. STANDARD: ASME A112.6.3.
- 1.1. COMMERCIAL, ELECTRIC, STORAGE DOMESTIC-WATER

- MANUFACTURER'S RECOMMENDATIONS \_\_\_\_\_ DOMESTIC COLD WATER PIPING (BELOW GRADE)
- PIPING TURNING DOWN. PIPING TEE.
- PIPING TURNING UP. FLOOR DRAIN  $\infty$ DRAIN AND TRAP ASSEMBLY.

FLOOR CLEAN OUT

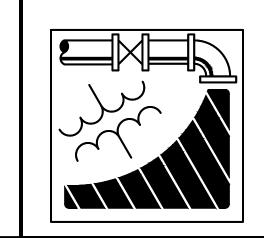
WALL CLEANOUT

SHUT OFF VALVE.

POINT OF CONNECTION TO EXISTING.

SHEET NUMBER

EYNOTE TAG LECTRONIC TRAP PRIMER



#### 555 Route One South Suite 100 Iselin, New Jersey 08830 (848) 247-6150 www.engineerdriven.com Project # 22-0080

Jeffrey N. Beeden

Professional Engineer NJ License 24GE04746800

**PLUMBING DRAWING LIST** 

PLUMBING SPECIFICATIONS AND SYMBOLS

PLUMBING PLANS - PHIL RIZZUTO PARK

ENGINEERING DRIVEN DESIGN PC

SHEET TITLE

50 DIVISION STREET, SUITE 503 SOMERVILLE, NJ 08876 PHONE: 908-725-7800 WWW.SSPARCHITECTS.COM

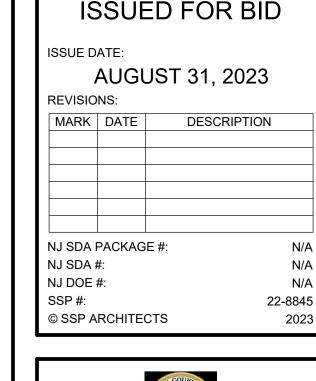
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JEANNE PERANTONI, AIA NJ: 21AI0089430 SCOTT E. MIHALICK, AIA

MARCUS M. ROSENAU, AIA NJ:21AI01045270

PHASE / SUBMISSION:

CONSULTANT:



THE COUNTY OF UNION 2325 SOUTH AVENUE INTERIOR RESTROOM

PARKS -

**PARK** 

8 NORTH AVE

ELIZABETH, NEW JERSEY 07208

**PLUMBING** 

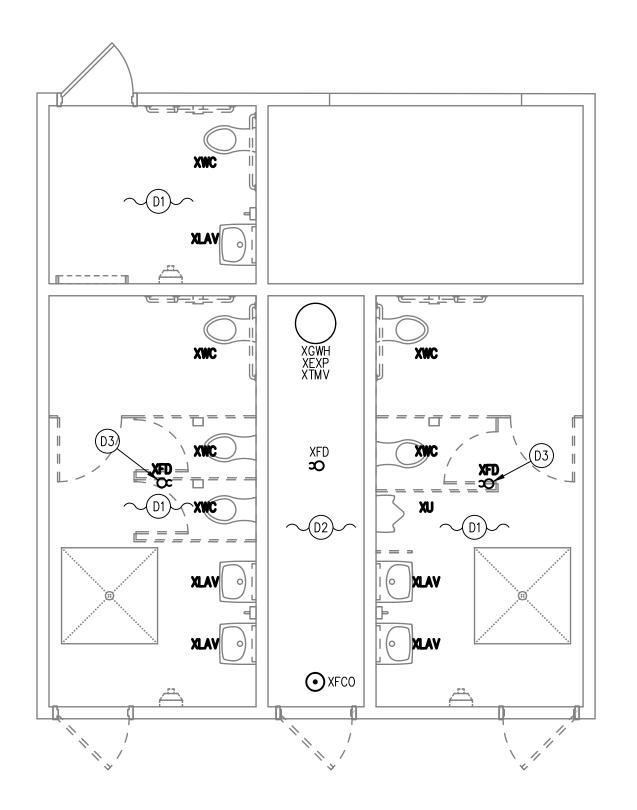
**SPECIFICATIONS** 

AND SYMBOLS

FACILITIES

**RENOVATIONS AT:** 

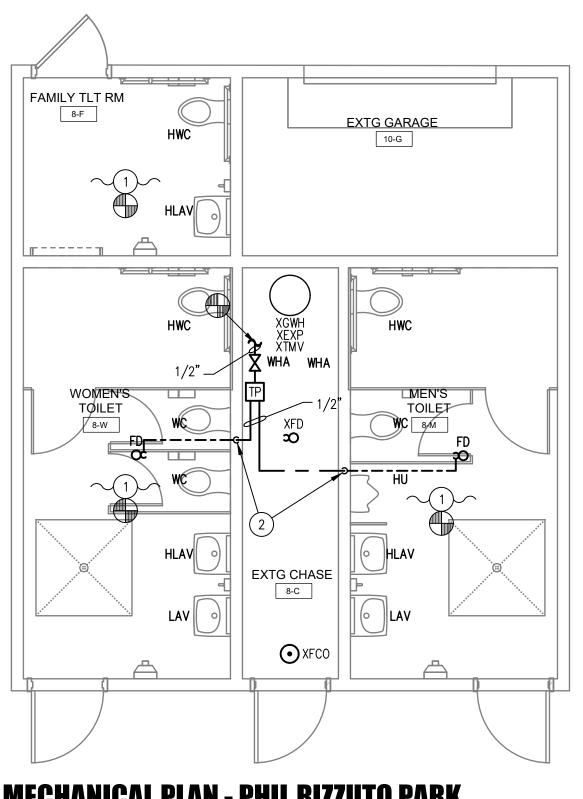
CITY OF ELIZABETH UNION COUNTY SHEET NAME:



# MECHANICAL PLUMBING PLAN - PHIL RIZZUTO PARK

# **DRAWING KEYED NOTES:**

- D1) REMOVE EXISTING PLUMBING FIXTURES. MAINTAIN ROUTING FOR USE WITH NEW FIXTURES.
- (D2) REMOVE EXISTING WATER HAMMER ARRESTORS AND TRAP PRIMERS, AS REQUIRED.
- (D3) REMOVE EXISTING FLOOR DRAIN. MAINTAIN PIPING FOR USE WITH NEW FLOOR DRAIN.



# MECHANICAL PLAN - PHIL RIZZUTO PARK 1/4"=1'-0"

# **DRAWING KEYED NOTES:**

# **GENERAL NOTES:**

- 1. PATCH EXISTING PIPING WHERE DEMO PIPING IS REMOVED. 2. PATCH ALL OPENINGS FROM REMOVED PIPING TO MATCH EXISTING ADJACENT
- 3. REMOVE ALL INSULATION, SUPPORTS, ETC. FROM PIPING TO BE REMOVED. 4. TAKE DOWN AND REINSTALL ALL CEILING AND CEILING-MOUNTED DEVICES REQUIRED
- TO CONSTRUCT THIS SCOPE. 5. CONTRACTOR TO TRENCH, AS REQUIRED, TO ACCOMMODATE SCOPE OF WORK.
- INSULATE ALL DOMESTIC HOT AND COLD WATER PIPING. PROVIDE ALL PIPE LABELS AND VALVE TAGS, REFER TO SPECIFICATIONS. PROVIDE ACCESS PANELS FOR ALL WATER HAMMER ARRESTORS.

PART OF THIS PROJECT ARE NO LONGER FUNCTIONAL.

– BALL VA

TRAP PRIMER VALVE

\_\_\_\_\_ 3-1/2" <del>\_\_\_\_</del>

FIGURE NO. SYMBOL

NOTE: SIZE REFERS TO JAY R. SMITH PRODUCT LINE.

ALTERNATE PRODUCT DIMENSIONS.

REFER TO MANUFACTURER'S SPECIFICATIONS FOR

WATER HAMMER ARRESTOR DETAIL

NOT TO SCALE

---- WATER SUPPLY

2 TO 4 OPN'G

CONNECTION \_\_\_\_ TO FL DR TRAP

(TYPICAL)

∠COMPRESSION CHAMBER

9. CONTRACTOR TO CONFIRM FUNCTIONALITY OF EXISTING PIPING, EQUIPMENT, WET COLUMNS, ETC. PRIOR TO MAKING CONNECTIONS. NOTIFY ENGINEER AND ARCHITECT IF ANY EXISTING PIPING, EQUIPMENT, WET COLUMNS, ETC. SPECIFIED TO BE USED AS

				<b>ELEC</b> 1	RIC W	ATER HEA	TER SCHE	DULE							
TAG	DESCRIPTION	CAPACITY	TEMP. RISE	SET TEMP.	MFG.	MODEL	LOCATION	ELECTF	RICAL REQ	UIREMENTS	CONN	ECTION :	SIZE (")	ACCESSOREIS	NOTES
IAG	DESCRIP HON	(GALLONS)	(GPH @ 100°F)	<b>(</b> F)	MFG.	MODEL	LOCATION	VOLTAGE	PHASE	POWER (KW)	S	CW	HW	ACCESSOREIS	
	STORAGE TYPE ELECTRIC WATER HEATER WITH GLASS LINED TANK. TANK RATED FOR 150 PSI WORKING PRESSURE	30	18	140	A.O. SMITH	DEL-30	MADISON AVE. PARK	240	1ø	4	3/4	3/4	3/4	1,2,3	а
	STORAGE TYPE ELECTRIC WATER HEATER WITH GLASS LINED TANK. TANK RATED FOR 150 PSI WORKING PRESSURE	10	8	140	A.O. SMITH	DEL-10	MATTANO PARK	120	1ø	2	3/4	3/4	3/4	1,2,3	а
ACCESSOR	RIES:							NOTES:							
1. PROVID	1. PROVIDE EXPANSION TANK. REFER TO EXPANSION TANK SCHEDULE FOR MORE INFORMATION.						a. REFER	TO INSTAL	LATION DETAIL.	•					
2. PROVID	E DI-ELECTRIC FITTINGS, AS NEEDED.														
3. PROVID	E HOUSE KEEPING PAD, DRIP PAN, AND A	LL REQUIRED (	COMPONENTS FOR	COMPLETE I	NSTALLATION.										

TAG	DESCRIPTION	MAKE	MODEL	L ELEC. REQ.	ACCESSORIES		NOTES				
IAG		WICH				S	V	CW	HW	NG	NUIES
EXP	ASME RATED DIAPHRAGM EXPANSION TANK. 2.1 GALLONS WITH 0.9 GALLON ACCEPTANCE.	AMTROL	ST-5C	-	-			3/4"			-
FD	CAST IRON BODY FLOOR DRAIN. 8" SQUARE STRAINER. NICKEL-BRONZE FINISH. 3" OUTLET. SUPPLY WITH P-TRAP.	JAY R. SMITH	FIG. 2005Y	-	1,2	3"	2"	1/2"			-
TP	PRESSURE DROP ACTIVATED TRAP PRIMER. BRASS BODY, 3 PSI PRESSURE DROP REQUIRED.	PRECISION PLUMBING PRODUCTS	PR-500	-	3			1/2"			-
ГМV	THERMOSTATIC MIXING VALVE. MIN 1.0 GPM, 10 PSI PRESSURE DROP AT 18 GPM. SET TO 110°F	LEONARD	TM-26-LF	-	-						-
WHA	ENGINEERED WATER HAMMER ARRESTOR. ALL STAINLESS STEEL CONSTRUCTION.	JAY R. SMITH	FIG. 5010	-	-			NOTE a			a

	PL	UMBING FIXT	TURE SCHE	DULE						
TAG	DESCRIPTION	MAKE	MODEL	FLOW RATE	ACCESSORIES		NOTES			
IAG		MARL	MODEL	FLOW RAIL	ACCESSORIES	S	٧	CW	HW	NOTES
(H)U	BARRIER FREE WALL-HUNG VITREOUS CHINA URINAL.	AMERICAN STANDARD	6590.001.020	0.5 GPF	8	2"	1-1/2"	1-1/2"		b,c
(H)WC	BARRIER FREE WALL-HUNG FLUSHOMETER TOILET WITH ELONGATED OPEN FRONT SEAT.	AMERICAN STANDARD	2634.101	1.28 GPF	9,10	4"	2"	1-1/2"		b <b>,</b> c
(H)LAV	WALL-HUNG VITREOUS CHINA LAVATORY.	AMERICAN STANDARD	0355.012	0.5 GPM	1,2,3,4,5,6,7	1-1/2"	1-1/2"	1/2"	1/2"	a,b,c
1. 2. 3. 4. 5. 6. 7.	SORIES:  PROVIDE P-TRAP.  PROVIDE SLOAN FAUCET MODEL: EAF-350.  PROVIDE BELOW-DECK MECHANICAL WATER MIXING VALVE, POWERS LFE- PROVIDE MCGUIRE 155WC OPEN GRID DRAIN.  PROVIDE FAUCET SUPPLIES CHROME PLATED ANGLE VALVE.  PROVIDE WATTS WCA-411 BASIN CARRIER.  PROVIDE TRUBRO LAVGUARD2 INSULATION PRODUCT ON ALL EXPOSED F PROVIDE SLOAN ROYAL 195 ESS-0.5 -HW CONCEALED SENSOR FLUSHC  PROVIDE SLOAN ROYAL 152 ESS-1.28-TMO-SWB-2-10-3/4-LDIM-HW	PIPING BELOW BASIN. METER.	b. PROVIDE WHI	TE COLOR FIXTUR	O FLEXIBLE COPPI RE, CONFIRM WITH WITH EXISTING FI	ARCHITE	CT DURII	NG SHOP	DRAWING	

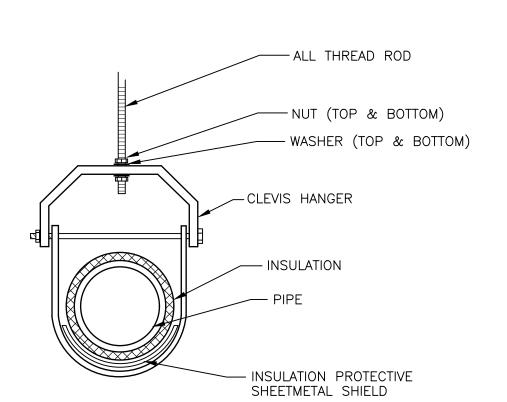
HARDWIRED FLUSHVALVE WITH MECHANICAL OVER RIDE. 10. PROVIDE HEAVY DUTY FOR ELONGATED BOWL TOILET SEAT.

PIPING MATERIALS/INSULATION SCHEDULE											
SERVICE	SIZES	LOCATION	MATERIAL	FITTINGS	INSULATION	JACKET	THICKNESS	NOTES			
DOMESTIC WATER	ALL	ABOVE GROUND	TYPE L COPPER	SOLDER OR PRESSURE SEAL	MINERAL-FIBER	ASJ	1"	<b>†</b> -			
DOMESTIC WATER	ALL	BELOW GROUND	TYPE K COPPER	NONE	ELASTOMERIC	_	1/2"	_			
SANITARY WASTE	ALL	ALL	PVC	SOLVENT WELD	-	_	_	_			
SANITARY VENT	ALL	ALL	PVC	SOLVENT WELD	_	-	_	_			

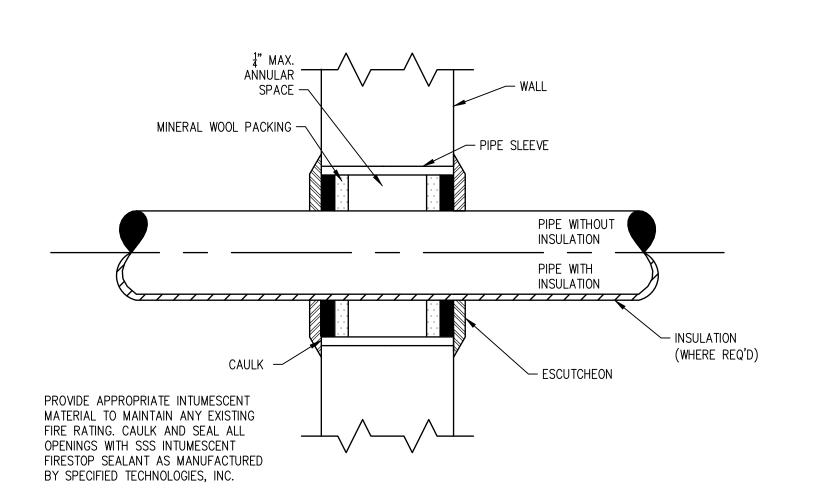
# (1) MODIFY EXISTING ROUGHING, AS REQUIRED, FOR USE WITH NEW FIXTURE/FLOOR DRAIN. (2) 1/2" PIPE DROPS BELOW FLOOR TO SERVE FLOOR DRAIN. 12" MIN ── TRAP PRIMER CONNECTION DETAIL NOT TO SCALF



# TYPICAL PIPING INDENTIFICATION NOT TO SCALE

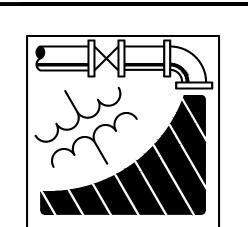


					<del></del> 1						
PIPING SUPPORT CRITERIA											
COPPER PIPE SIZE	MAX. HORIZ. SPACING	MIN. ROD SIZE	PVC PIPE SIZE	MAX. HORIZ. SPACING	MIN. ROD SIZE						
3/4" AND SMALLER	5-FEET	3/8"	1-1/2" TO 2"	4-FEET	3/8"						
1" TO 1-1/4"	6-FEET	3/8"	3"	4-FEET	1/2"						
1-1/2" TO 2"	8-FEET	3/8"	4" TO 5"	4-FEET	5/8"						
2-1/2"	9-FEET	1/2"	6" TO 8"	4-FEET	3/4"						
3" TO 5"	10-FEET	1/2"	10" TO 12"	4-FEET	7/8"						
6"	10-FEET	5/8"									
8"	10-FEET	3/4"									
SUPPORT VERTICAL PIPIN	G EVERY 10-FE	ET.	SUPPORT VERTICAL PIPIN	G EVERY 4-FEE	T.						



PIPE THROUGH INTERIOR WALL PARTITION

NOT TO SCALE



# **ENGINEERING DRIVEN DESIGN PC**

555 Route One South Suite 100 Iselin, New Jersey 08830 (848) 247-6150 www.engineerdriven.com Project # 22-0080

Jeffrey N. Beeden Professional Engineer NJ License 24GE04746800

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PHASE / SUBMISSION: ISSUED FOR BID ISSUE DATE: AUGUST 31, 2023 **REVISIONS:** MARK DATE DESCRIPTION

NJ SDA PACKAGE #: NJ SDA #: NJ DOE #: SSP#: 22-8845 © SSP ARCHITECTS



THE COUNTY OF UNION

2325 SOUTH AVENUE

INTERIOR RESTROOM **FACILITIES RENOVATIONS AT:** 

UNION COUNTY PARKS -PHIL RIZZUTTO

PARK 8 NORTH AVE

ELIZABETH, NEW JERSEY 07208

CITY OF ELIZABETH UNION COUNTY

SHEET NAME:

PLUMBING PLANS -PHIL RIZZUTO PARK

# **MECHANICAL SPECIFICATIONS:**

#### 230000 SUMMARY

- 1. THE SCOPE OF THIS PROJECT IS TO PROVIDE REPLACEMENT HEATING AND MECHANICAL EXHAUST SYSTEMS FOR AN EXISTING PUBLIC RESTROOM BUILDING.
- 2. ALL BUILDINGS ARE A SEISMIC DESIGN CATEGORY OF B, WHICH MEANS THAT MECHANICAL SYSTEMS ARE EXEMPT FROM SEISMIC BRACING REQUIREMENTS.

#### 230030 DEFINITIONS

- 1. FURNISH: TO PURCHASE AND DELIVER AN ITEM TO THE
- STAGING AREA COMPLETE WITH ALL REQUIRED APPURTENANCES.
- 2. INSTALL: TO MOVE THE ITEM FROM THE STAGING AREA AND FASTEN TO THE STRUCTURE. 3. PROVIDE: TO FURNISH AND INSTALL.
- 4. OWNER: UNION COUNTY OF NEW JERSEY

# 230040 SUBSTITUTIONS

- 1. ALL SUBSTITUTIONS MUST BE APPROVED PRIOR TO BIDDING. PROVIDE SUBSTITUTION INFORMATION DURING THE BID-PHASE QUESTION AND ANSWER PERIOD. INCLUDE DETAILED DATA ON THE PROPOSED SUBSTITUTION INCLUDING DOLLAR AMOUNT OF PROPOSED SAVINGS. ENGINEER SHALL REVIEW THE INFORMATION AND DETERMINE
- WHETHER THE SUBSTITUTION WILL BE ALLOWED. 2. ANY CHANGES TO THE CONTRACT DOCUMENTS DUE TO THE SUBSTITUTION SHALL BE COORDINATED BY THE GENERAL CONTRACTOR AND ANY ADDITIONAL COST TO MODIFY THE DESIGN OR MODIFY THE SCOPE OF OTHER TRADES SHALL BE INCLUDED IN THE PROPOSED SAVINGS. THIS SHALL INCLUDE MODIFICATIONS TO THE STRUCTURAL SCOPE FOR EQUIPMENT SUPPORT AS WELL AS MODIFICATIONS TO ELECTRICAL BRANCH CIRCUITRY OR FEEDERS FOR EQUIPMENT.

#### 230050 SUBMITTALS

- 1. ALL SUBMITTALS SHALL BE ROUTED TO THE ARCHITECT FOR
- DISTRIBUTION TO ALL DESIGN PROFESSIONALS. 2. ALL SUBMITTALS SHALL BEAR A COVER-SHEET FROM THE GENERAL CONTRACTOR INDICATING THEY HAVE REVIEWED THE SUBMITTAL AND FIND IT TO CONFORM TO THE
- CONTRACT DOCUMENTS. 3. SHOP DRAWING SUBMISSIONS CONSISTING OF PRODUCT DATA CUT-SHEETS MAY BE SUBMITTED ELECTRONICALLY
- 4. SHOP DRAWING SUBMISSIONS CONSISTING OF COORDINATION PLANS, LAYOUT DRAWINGS, FIRE PROTECTION SHOP DRAWINGS, FIRE ALARM SHOP DRAWINGS, SHEET METAL SHOP DRAWINGS, ETC. SHALL BE SUBMITTED IN LARGE FORMAT, ORIGINAL SIZE ON PAPER. PROVIDE FIVE COPIES OF THE SHOP DRAWINGS. THE ENGINEER SHALL KEEP A COPY, THE ARCHITECT SHALL KEEP A COPY, THE REMAINING THREE COPIES WILL BE RETURNED TO THE
- GENERAL CONTRACTOR. 5. REQUESTS FOR INFORMATION (RFIS) SHALL INCLUDE THE QUESTION, THE REFERENCED PORTION OF THE CONTRACT DOCUMENTS, AND THE CONTRACTOR'S RECOMMENDED
- SUGGESTION FOR REMEDY. 6. DELEGATED-DESIGN SUBMISSIONS SHALL BE PROVIDED WITH A COVER-SHEET INDICATING THE PROFESSIONAL OF RECORD THAT WILL SIGN AND SEAL THE DOCUMENT. ORIGINAL SIGNED AND SEALED DOCUMENTS DO NOT NEED TO BE SUBMITTED UNTIL THE DOCUMENTS ARE APPROVED BY THE
- ARCHITECT AND ENGINEER. 7. REFER TO THE INDIVIDUAL SPECIFICATION SECTIONS FOR THE REQUIRED SUBMITTALS.
- 8. COMPILE OPERATION AND MAINTENANCE (O&M) MANUALS AND SUBMIT ELECTRONICALLY FOR APPROVAL. AFTER APPROVAL OF ALL MANUALS, PROVIDE TWO COPIES OF A PRINTED, BOUND SET TO THE OWNER AND A COMPACT DISC WITH THE DATA AS .PDFS.

# 230060 TEMPORARY REQUIREMENTS DURING CONSTRUCTION

1. IN THE CONSTRUCTION AREAS, THE CONTRACTOR SHALL PROVIDE TEMPORARY HEAT FOR THE DURATION OF THE CONSTRUCTION OF THE PROJECT. PROVIDE TEMPORARY HEATERS AS REQUIRED TO KEEP THE SPACE ABOVE 55 DEGREES FAHRENHEIT. IF EXISTING OR PROPOSED EQUIPMENT IS USED, THE CONTRACTOR SHALL PROVIDE TEMPORARY FILTERS ON THE RETURN AIR INLETS AND IN THE UNIT. ALL CONSTRUCTION FILTERS SHALL BE REMOVED AFTER CONSTRUCTION AND THE UNIT FILTERS SHALL BE REPLACED WITH NEW FILTERS.

# 230070 QUALITY ASSURANCE

- 1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH INDUSTRY STANDARDS AND SHALL CONFORM TO THE NEW JERSEY UNIFORM CONSTRUCTION CODE. THIS PROJECT IS AN ALTERATION IN ACCORDANCE WITH THE REHABILITATION SUBCODE. AS SUCH, ONLY THE REFERENCED SECTIONS OF THE ADOPTED SUBCODES ARE FOLLOWED. THE CURRENTLY ADOPTED SUBCODES WITH AMENDMENTS ARE AS FOLLOWS:
- 1.1. INTERNATIONAL BUILDING CODE 2021
- 1.2. NATIONAL STANDARD PLUMBING CODE 2021 1.3. INTERNATIONAL MECHANICAL CODE 2021
- 1.4. INTERNATIONAL FUEL GAS CODE 2021 1.5. NATIONAL ELECTRIC CODE 2020
- 1.6. ASHRAE 90.1-2019 1.7. ICC A117.1-2017 WARRANTY
- 2.1. CONTRACTOR TO PROVIDE ONE YEAR WARRANTY ON ALL EQUIPMENT AND PARTS AS WELL AS INSTALLATION. CONTRACT SHALL INCLUDE ONE YEAR OF ON-SITE SFRVICE.

# 230100 EXECUTION

- 1. ALL CUTTING AND PATCHING OF THE BUILDING SHALL BE PERFORMED BY THE CONTRACTOR. REMOVAL OF EXISTING SYSTEMS, COMPONENTS, SUPPORTS, ETC. SHALL HAVE ALL EXISTING HOLES OR PENETRATIONS PATCHED TO MATCH THE EXISTING ADJACENT CONSTRUCTION.
- 2. REMOVE AND DISPOSE OF IN A LEGAL MANNER ALL CONSTRUCTION DEBRIS IDENTIFIED TO BE REMOVED. THE
- CONSTRUCTION AREA SHALL BE BROOM SWEPT EACH NIGHT. DO NOT LET RUBBISH ACCUMULATE. 3. ALL CONSTRUCTION MATERIAL THAT CAN BE RECYCLED SHALL BE RECYCLED. MAINTAIN ALL RECEIPTS AND SUBMIT
- COPIES OF THE RECEIPT TO THE ARCHITECT TO DOCUMENT THE QUANTITIES OF THE RECYCLED MATERIAL.

# 230110 O&M DATA

- 1. PROVIDE OPERATION AND MAINTENANCE MANUALS. REFER TO THE INDIVIDUAL SPECIFICATION SECTIONS FOR
- REQUIREMENTS. 2. THE O&M MANUALS SHALL INCLUDE AS-BUILT DOCUMENTATION. AS-BUILT DOCUMENTATION SHALL CONSIST OF CONTRACTOR RED-LINED CONTRACT DOCUMENTS. INCLUDE THE AS-BUILT DOCUMENTATION WITH

# THE O&M SUBMITTALS.

1. PROVIDE TRAINING ON ALL REQUIRED SYSTEMS. REFER TO THE INDIVIDUAL SPECIFICATION SECTIONS FOR REQUIREMENTS. ALL TRAINING SHALL BE VIDEO-RECORDE THE VIDEO RECORDING SHALL HAVE CLEAR AUDIO AND VIDEO RECORDING. THE QUALITY OF THE RECORDING SHALL BE DETERMINED BY THE ARCHITECT AND ENGINEER. ANY RECORDING THAT IS NOT ACCEPTED SHALL BE

# 230300 ROOFING

1. ALL ROOF PENETRATIONS SHALL BE WEATHERPROOF IN ALL RESPECTS. ANY WORK DONE ON THE ROOF SHALL BE PERFORMED BY A CONTRACTOR CERTIFIED BY THE ROOF MANUFACTURER TO MAINTAIN THE EXISTING ROOF

# 230500 MECHANICAL COMMON REQUIREMENTS

# 1.1. IDENTIFICATION

SCOPE

RE-RECORDED.

2. SHOP DRAWINGS 2.1. SUBMIT SHOP DRAWINGS FOR ALL ITEMS INCLUDING PRODUCT DATA AND DETAILS. IDENTIFICATION

- 3.1. DUCTWORK 3.1.1. PROVIDE MULTI-COLOR PLASTIC LABELS FOR MECHANICAL ENGRAVING WITH WHITE LETTERING ON BLUE BACKGROUND.
- 3.1.2. MINIMUM LETTER SIZE SHALL BE ½". 3.1.3. IDENTIFY THE DUCTWORK SERVICE AS WELL AS FLOW DIRECTION.
- 3.1.4. INSTALL DUCTWORK LABELS DIRECTLY TO DUCTWORK INSULATION EVERY 15' OR AT EACH WALL PENETRATION. 3.2. PIPING
- 3.2.1. PROVIDE SELF-ADHESIVE PIPE LABELS THAT INCLUDES COLOR-CODING FOR EACH SYSTEM, FLOW DIRECTION ARROWS, AND LETTERING AT LEAST 1/2" HIGH. 3.2.2. PROVIDE SELF-ADHESIVE PIPE LABELS EVERY 15
- FEET, NEAR EACH BRANCH CONNECTION AND PENETRATIONS OF WALLS OR FLOORS. PROVIDE LABELS WHERE VISIBLE FROM ACCESS PANELS THAT PROVIDE ACCESS TO SPACES ABOVE CEILINGS OR WITHIN WALLS.
- 3.2. EQUIPMENT 3.2.1. PROVIDE MULTI-COLOR PLASTIC LABELS FOR MECHANICAL ENGRAVING WITH WHITE LETTERING ON
- BLACK BACKGROUND. 3.2.2. MINIMUM LETTER SIZE SHALL BE 1"

# 230593 TESTING, ADJUSTING, AND BALANCING

- 1. SCOPE 1.1. CONSTANT VOLUME AIR HANDLING SYSTEMS SUBMITTALS
- 2.1. SUBMIT TAB CONTRACTOR QUALIFICATIONS. 2.2. SUBMIT CERTIFIED TAB REPORTS 3. QUALITY ASSURANCE
- 3.1. TESTING, ADJUSTING, AND BALANCING CONTRACTOR SHALL BE CERTIFIED BY THE NEBB OR AABC. 4. FOLLOW PROCEDURES IN ACCORDANCE WITH AABC'S NATIONAL STANDARDS FOR TOTAL SYSTEM BALANCING OR NEBB'S PROCEDURAL STANDARDS FOR TESTING, ADJUSTING,
- AND BALANCING OF ENVIRONMENTAL SYSTEMS. 5. CUT INSULATION AND DUCTWORK AS REQUIRED TO OBTAIN MEASUREMENTS. PATCH AND REPAIR ALL COMPONENTS.
- 6. PRIOR TO BALANCING ENSURE THAT AIR FILTERS ARE IN PLACE. 7. EXAMINE ALL DUCTWORK AND DAMPERS TO ENSURE THE INSTALLATION IS IN ACCORDANCE WITH THE CONTRACT
- 8. DESIGN AIRFLOWS ARE STANDARD CUBIC FEET PER MINUTE. ENSURE ALL OF THE DATA IS CONVERTED TO SCFM. 9. ADJUST AIRFLOWS TO BE WITHIN +/- 10% OF THE DESIGN
- VALUES. 10. DOCUMENT ANY ITEMS OUT OF TOLERANCE WITH POSSIBLE CONTRIBUTING FACTORS. DOCUMENT OTHER DEFICIENCIES SUCH AS NOISE AND OTHER INSTALLATION ISSUES.
- 12. WORK WITH THE CONTROL VENDOR TO PROVIDE ANY VALUES THAT WOULD BE USEFUL FOR SETTING STATIC PRESSURE SETPOINTS AND PROVIDE TIME AS NECESSAR' 13. AFTER SUBSTANTIAL COMPLETION OF THE ENTIRE PROJECT PROVIDE FOR ONE ADDITIONAL VISIT TO THE SITE TO SPOT CHECK AIRFLOW VALUES TO ENSURE THE SYSTEM IS OPERATING AS IT WAS BALANCED.

11. PREPARE AND SUBMIT FINAL REPORT TO ARCHITECT

### 230713 DUCTWORK INSULATION

- 1.1. PROVIDE INSULATION ON DUCTWORK IN ACCORDANCE WITH DUCT/INSULATION SCHEDULE ON THIS DRAWING. 2. SHOP DRAWINGS
- 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA AND DETAILS. 3. ALL INSULATION MUST MEET ASTM E 84 FLAME-SPREAD
- INDEX OF 25 OR LESS AND SMOKE-DEVELOPED INDEX OF 50 OR LESS. 4. MINERAL FIBER BLANKET INSULATION SHALL BE TYPE III
- WITH FACTORY-APPLIED FSK JACKET. INSULATION SHALL BE MANUFACTURED BY JOHNS MANVILLE, OWENS CORNING, OR KNAUF

5. REFER TO DUCT/INSULATION SCHEDULE FOR INSULATION

R-VALUE. 6. INSTALL INSULATION IN ACCORDANCE WITH

MANUFACTURER'S RECOMMENDATIONS.

# 232113 HVAC PIPING

- 1. SCOPE 1.1. CONDENSATE DRAIN PIPING
- 2. SHOP DRAWINGS 2.1. PROVIDE SHOP DRAWINGS INCLUDING PRODUCT DATA FOR ALL PIPING AND EQUIPMENT.
- 2.2. PROVIDE PIPING LAYOUT SHOP DRAWINGS PREPARED AT LEAST  $\frac{1}{4}$ "=1'-0". SCALE COORDINATED WITH THE EXISTING CONDITIONS AND SYSTEMS TO BE INSTALLED.
- 3. PVC PIPING SYSTEMS 3.1. SCHEDULE 40 PVC PIPE, ASTM D2665, DRAIN, WASTE,
- 4. SLOPE ALL CONDENSATE DRAINAGE PIPING AT LEAST 1/8" PER FOOT IN DIRECTION OF FLOW. 5. SUPPORT PIPING WITH CLEVIS HANGERS IN ACCORDANCE
- WITH SCHEDULE ON THE DRAWINGS. 6. UNIONS 6.1. PROVIDE UNIONS AT ALL CONNECTIONS TO EQUIPMENT,
- CONTROL DEVICES, ETC. WHICH MAY REQUIRE REMOVAL FOR SERVICING OR REPAIR.
- 6.2. UNIONS 2" IN DIAMETER AND SMALLER SHALL BE SCREW TYPE. 6.3. UNIONS LARGER THAN 2 " IN DIAMETER SHALL BE FLANGE TYPE.
- 7. FLUSH ALL PIPING SYSTEMS AFTER CONSTRUCTION COMPLETION.

8. LABEL ALL PIPING AFTER INSULATION IS INSTALLED.

# 233113 DUCTWORK

- SCOPE 1.1. SINGLE-WALL DUCTWORK
- 1.2. DUCT LINER SUBMITTALS
- 2.1. SUBMIT SHOP DRAWINGS INCLUDING DUCTWORK SHOP STANDARDS
- 2.2. PROVIDE SHEET METAL SHOP DRAWINGS PREPARED AT LEAST  $\frac{1}{4}$ " = 1'-0" SCALE COORDINATED WITH THE EXISTING CONDITIONS.
- 3. COMPLY WITH SMACNA STANDARDS FOR DUCT CONSTRUCTION. 4. COMPLY WITH SMACNA STANDARDS FOR DUCT SUPPORTS
- FOR STRAP AND ROD SIZING. 5. HANGER RODS SHALL BE CADMIUM PLATED STEEL RODS AND NUTS.
- 6. INSTALL DUCTWORK AS INDICATED ON APPROVED SHOP DRAWINGS. 7. COMPLY WITH SMACNA STANDARDS FOR DUCT
- INSTALLATION. 8. SUPPORT DUCTWORK IN ACCORDANCE WITH SMACNA 8.1. DELEGATED DESIGN: PROVIDE DESIGN OF DUCT
- CONSTRUCTION, REINFORCEMENTS, HANGERS AND SUPPORTS. DESIGN SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER. 8.2. DUCT HANGERS AND SUPPORTS SHALL WITHSTAND THE EFFECTS OF GRAVITY LOADS AND STRESSES; EXTERIOR
- HANGERS AND SUPPORTS SHALL WITHSTAND THE EFFECTS OF WIND LOADS AND STRESSES. 9. ALL BRANCH TAKE-OFFS SHALL HAVE MANUAL VOLUME DAMPERS.
- 10. ALL BRANCH TAKE-OFFS SHALL BE 45-DEGREE TAKE-OFFS.
- 11. REFER TO DUCT/INSULATION SCHEDULE FOR DUCT SEAL CLASSES AND PRESSURE SEAL CLASSES. 12. SEALANT SHALL BE A MAXIMUM FLAME—SPREAD INDEX OF
- 25 AND A MAXIMUM SMOKE-DEVELOPED INDEX OF 50 WHEN TESTED ACCORDING TO UL 723; CERTIFIED BY AN NRTL. 13. SEALANT SHALL BE A WATER-BASED JOINT AND SEAM SEALANT; BRUSH ON APPLICATION METHOD; MINIMUM 65

- PERCENT SOLIDS CONTENT; MINIMUM 20 SHORE A HARDNESS; WATER RESISTANT; MOLD AND MILDEW
- RESISTANT; MAXIMUM 75 G/L (LESS WATER) VOC; AND COMPATIBLE WITH GALVANIZED SHEET STEEL. 14. ALL SIZES SHOWN ON THE DRAWINGS ARE CLEAR INSIDE
- DIMENSIONS. FOR INTERNALLY LINED DUCTWORK, INCREASE THE SIZE OF THE SHEET METAL. 15. PROVIDE INTERNALLY LINED DUCTWORK ON ALL RETURN AIR TRANSFER DUCTWORK.

16. ELBOWS SHALL BE LONG-RADIUS TYPE RATHER THAN

- RECTANGULAR WHERE INSTALLATION PERMITS. 17. DUCT LINER SHALL COMPLY WITH ASTM C 1071 AND SHALL BE MANUFACTURED BY JOHNS MANVILLE, KNAUF, OR OWENS 17.1. LINER SHALL HAVE ANTIMICROBIAL EROSION-RESISTANT COATING.
- 17.2. LINER SHALL BE 1" THICK. 233300 AIR DUCT ACCESSORIES

# 1. SCOPE

- 1.1. MANUAL VOLUME DAMPERS
- SUBMITTALS 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA AND 2.2. INCORPORATE INFORMATION INTO SHEET METAL SHOP
- DRAWINGS. 3. MANUAL VOLUME DAMPERS 3.1. STEEL MANUAL VOLUME DAMPERS SHALL BE
- MANUFACTURED BY AIR BALANCE, NAILOR, OR RUSKIN. 3.2. STANDARD LEAKAGE RATING. 3.3. MULTIPLE— OR SINGLE—BLADE DAMPERS WITH GALVANIZED STEEL BLADES WITH OIL-IMPREGNATED
- 3.4. INSTALL MANUAL VOLUME DAMPERS AT EACH BRANCH TAKE-OFF. 3.5. SET MANUAL VOLUME DAMPERS TO FULLY OPEN PRIOR

### 233423 HVAC POWER VENTILATORS

TO BALANCING.

BRONZE BEARINGS.

- 1.2. CENTRIFUGAL ROOF VENTILATORS (EF-A)
- SUBMITTALS 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA AND DETAILS. 3. UL COMPLIANCE: POWER VENTILATORS SHALL COMPLY WITH
- 4. CENTRIFUGAL ROOF VENTILATORS 4.1. SHALL BE MANUFACTURED BY LOREN COOK,
- GREENHECK, OR TWIN CITY FAN. 4.2. REFER TO SCHEDULE FOR PERFORMANCE AND BASIS OF
- 4.3. PROVIDE 14" HIGH ROOF CURB SLOPED TO MATCH ROOF FOR ROOFTOP MOUNTED FANS. CONFIRM ROOF CONSTRUCTION PRIOR TO ORDERING.
- 4.4. INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. 4.5. MAKE FINAL DUCT CONNECTION WITH FLEXIBLE DUCT

# 233713 DIFFUSERS, REGISTERS, AND GRILLES

# 1. SCOPE

1.1. DIFFUSERS AND GRILLES

CONNECTION.

- 2. SUBMITTALS 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA.
- 3. DIFFUSERS AND GRILLES 3.1. PROVIDE IN ACCORDANCE WITH THE SCHEDULE ON THE
- CONTRACT DOCUMENTS. 3.2. SHALL BE MANUFACTURED BY TITUS, PRICE, OR NAILOR. 3.3. COORDINATE ARCHITECTURAL SUSPENDED CEILING GRID
- WITH MOUNTING BORDER PRIOR TO ORDERING. 3.4. INSTALL DIFFUSERS, REGISTERS, AND GRILLES IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION
- INSTRUCTIONS. 3.5. INSTALL DIFFUSERS, REGISTERS, AND GRILLES AS INDICATED ON APPROVED SHEET METAL SHOP

3.6. ENSURE FINAL CONNECTIONS TO DIFFUSERS, REGISTERS,

### AND GRILLES ARE SEALED AND TIGHT. 235100 BREECHING, CHIMNEYS, AND STACKS

# 1. SCOPE

- 1.1. LISTED SPECIAL GAS VENTS
- 2. SUBMITTALS 2.1. PROVIDE SHOP DRAWINGS INCLUDING PRODUCT DATA. 2.2. PROVIDE OPERATION AND MAINTENANCE DATA.
  - 2.3. PROVIDE SHOP DRAWINGS PREPARED AT LEAST 1/4" = 1'-0" SCALE COORDINATED WITH THE EXISTING CONDITIONS. 3. MANUFACTURERS: PRODUCTS SHALL BE MANUFACTURED BY
  - HEAT-FAB, METAL-FAB, OR SELKIRK. VENTS 4.1. LISTED SPECIAL GAS VENTS SHALL BE DOUBLE-WALL CONSTRUCTION WITH 1/2" AIRSPACE TESTED ACCORDING
  - TO UL 1738 AND RATED FOR 480°F CONTINUOUSLY. 4.1.1. INNER SHELL: ASTM A959, TYPE 29-4C STAINLESS
- 4.1.2. OUTER SHELL: STAINLESS STEEL. 5. SCHEDULE 5.1. PROVIDE ALL CONDENSING APPLIANCES WITH LISTED

SPECIAL GAS VENTS.

# **FURNACES**

- 1.1. FURNACES (F-A)2. SUBMITTALS 2.1. PROVIDE SHOP DRAWINGS INCLUDING PRODUCT DATA
- 2.2. PROVIDE OPERATIONS AND MAINTENANCE MANUAL 2.3. PROVIDE ONE SET OF SPARE FILTERS FOR EACH UNIT.
- 3. PACKAGED ROOFTOP UNITS 3.1. SHALL BE MANUFACTURED BY CARRIER, TRANE, OR
- 3.2. REFER TO SCHEDULE FOR PERFORMANCE DATA AND BASIS OF DESIGN. 3.3. PROVIDE APPROPRIATE EQUIPMENT SUPPORTS TO WITHSTAND WIND LOADING.
- 3.4. UNITS SHALL PROVIDE FOR CONSTANT AIR VOLUME OPERATION WITH AN ELECTRONICALLY COMMUTATED 3.5. NATURAL GAS HEATING CONTROL VALVE SHALL BE

MODULATING TYPE WITH A MINIMUM OF A 35% TURN

- DOWN AT LOWEST GAS INPUT 3.6. UNITS SHALL HAVE SINGLE POINT ELECTRICAL POWER AND SHALL HAVE A 24 VOLT CONTROL CIRCUIT FOR INTERFACE WITH THE FACTORY AND EXTERNAL
- CONTROLS. 3.7. INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- 3.8. PROVIDE FLEXIBLE DUCT CONNECTIONS AT FINAL UNIT CONNECTION OF DUCTWORK. 3.9. PROVIDE TRAINING TO PROPERTY MANAGER ON

OPERATION AND MAINTENANCE OF UNIT.

### 3.10. LABEL EACH UNIT AS SPECIFIED. 240000 LOUVERS

LOUVERS

 SCOPE 1.1. STATIONARY DRAINABLE LOUVERS (L-A)

INSTALLATION INSTRUCTIONS.

- SUBMITTALS 2.1. PROVIDE SHOP DRAWINGS INCLUDING PRODUCT DATA. 2.2. PROVIDE OPERATIONS AND MAINTENANCE MANUAL.
- 3.1. SHALL BE MANUFACTURED BY RUSKIN OR GREENHECK. 3.2. PROVIDE EQUIPMENT AND BUILDING SUPPORTS. 3.3. REFER TO SCHEDULE FOR PERFORMANCE DATA AND BASIS OF DESIGN.

3.4. INSTALL IN ACCORDANCE WITH MANUFACTURER'S

**DESIGN CRITERIA** 

SUMMER OUTDOOR DESIGN CONDITIONS	DRY BULB: 94.3% (0.4% COOLING DRY BULB)
(PER ASHRAE FUNDAMENTALS – 2021)	WET BULB: 74.4°F (0.4% EVAPORATION WET BULB)
WINTER OUTDOOR DESIGN CONDITIONS (PER ASHRAE FUNDAMENTALS – 2021)	DRY BULB: 12.8°F (99.6% HEATING DRY BULB)
WINTER INDOOR DESIGN CONDITIONS	INDOOR AIR TEMPERATURE: 70°F (DB)
DESIGN CITY	NEWARK, NJ

CLIMATE ZONE

#### **EXHAUST SCHEDULE** AREA (FT²) | REQUIRED | PROVIDED UNIT SERVED SPACE (CFM) (CFM) PHIL RIZZUTO PARK 150 150 WOMEN'S ROOM MEN'S ROOM 150 150 **l** 210 . FROM IMC 2021 TABEL 403.3.1.1: TOILET ROOMS - PUBLIC REQUIRE 50 CFM PER FIXTURE WHEN CONTINUOUS EXHAUST IS PROVIDED. ALL FANS ARE TO RUN CONTINUOUSLY DURING OCCUPIED PERIODS.

XX-X	DIFFUARD DEGIATED	AND O								
^^ <u>_</u> ^	DIFFUSER, REGISTER, AND GRILLE SCHEDULE									
TAG	DESCRIPTION	AIRFLOW (CFM)	NECK SIZE	FACE SIZE	MAX NC	MAKE	MODEL	NOTES		
SD-A	STEEL 24"x24" PLAQUE-FACE LAY-IN CEILING DIFFUSER	180	8"ø	12"x12"	< 15	PRICE	SPD	1,3		
SD-B	STEEL 24"x24" PLAQUE-FACE LAY-IN CEILING DIFFUSER	180	8"ø	24"x24"	< 15	PRICE	SPD	1,3		
SD-C	STEEL 24"x24" PLAQUE-FACE LAY-IN CEILING DIFFUSER	360-365	10 <b>"</b> ø	24"x24"	18	PRICE	SPD	1,3		
RG-A	STEEL SURFACE MOUNT 45° LOUVERED FACE EXHAUST GRILLE	130-215	10"x10"	Nk.+1-3/4"	16	PRICE	530	1,2,4,5		
RG-B	STEEL SURFACE MOUNT 45° LOUVERED FACE EXHAUST GRILLE	360	12"x12"	Nk.+1-3/4"	18	PRICE	530	1,2,4,5		
EG-A	ALUMINUM SURFACE MOUNT 45° LOUVERED FACE EXHAUST GRILLE	50	6"x6"	Nk.+1-3/4"	< 15	PRICE	630	1,2,4,5		
EG-B	ALUMINUM SURFACE MOUNT 45° LOUVERED FACE EXHAUST GRILLE	150	8"x8"	Nk.+1-3/4"	15	PRICE	630	1,2,4,5		

2.	SURFACE MOUNT WITH PLASTER FRAME.
3.	PROVIDE INTEGRAL RADIAL BLADE DAMPER OPERABLE FROM FACE OF DIFFUSER.
4.	PROVIDE INTEGRAL OPPOSED BLADE DAMPER.

DIFFUSER, REGISTER, AND GRILLE SCHEDULE NOTES:

PROVIDE SQUARE TO ROUND ADAPTER.

COLOR: WHITE

FXHAUST

PROVIDE REMOTE WALL-MOUNTED SPEED DIAL.

PROVIDE 24VDC CONTROLS TRANSFORMER WHERE REQUIRED.

PROVIDE DISCONNECT SWITCH.

PROVIDE GALVANIZED STEEL HOUSING. HOUSING SHALL BE PRE-PAINTED.

PROVIDE HIGH EFFICIENCY CONDENSING-TYPE FURNACE WITH PRIMARY AND SECONDARY HEAT EXCHANGERS.

DUCT/INSULATION SCHEDULE											
	PRESSURE CLASS DUCTWORK						LATION R-VALUE				
DUCT SERVICE	SMACNA SEAL CLASS			CODE COMPLIANCE	EXTERIOR	UNCONDITIONED SPACE OR BURIED DUCT					
SUPPLY	А	POSITIVE	1" W.C.	GALV. STEEL G60	ASTM A653/A653M	R-12	R-6				
RETURN	А	NEGATIVE	1" W.C.	GALV. STEEL G60	ASTM A653/A653M	R-12	R-6				
FURNACE VENTS	А	POS./NEG.	1" W.C.	GALV. STEEL G60	ASTM A653/A653M	R-12	R-6				

GALV. STEEL G60 | ASTM A653/A653M | NONE

1. ALL SUPPLY, RETURN, OUTDOOR AIR, AND EXHAUST DUCTWORK WITHIN 15 FEET OF EXHAUST FAN OR UNIT HEATER SHALL BE INTERNALLY LINED AN SHALL NOT REQUIRE DUCT WRAP.

1" W.C.

2. FLUE EXHAUST VENTING SHALL BE DOUBLE—WALL, INTERNALLY INSULATED (BETWEEN WALLS), WITH THE INNER SHELL CONSTRUCTED OF AL—29C STAINLESS STEEL. SEE SPECIFICATION SECTION FOR FURTHER DETAILS AND REQUIREMENTS. . COMBUSTION AIR FURNACE VENT SHALL HAVE A NEGATIVE PRESSURE CLASS AND THE FLUE EXHAUST VENT SHALL HAVE A POSITIVE PRESSURE

PIPING MATERIALS/INSULATION SCHEDULE									
CEDVICE			PIPING		NOTES				
SERVICE	SIZES	LOCATION	MATERIAL	FITTINGS	TYPE	JACKET	THICKNESS	INUIES	
CONDENSATE DRAIN	< 1-1/4"	INDOOR	SCHEDULE 40 PVC	SOLVENT WELD	_	_	_	_	

	CENTRIFUGAL FAN SCHEDULE										
TAG	DESCRIPTION	FLOW	STATIC PRESSURE	DRIVE		ELECTRICAL		BASIS	NOTES		
IAG	DESCRIPTION	(CFM)			V/ø/Hz	MOTOR HP	MOTOR RPM	MAKE	MODEL	NOTES	
F-A	ROOF MOUNTED EXHAUST VENTILATOR	350	0.50"	DIRECT	115/1/60	1/6	1348	GREENHECK	G-095-VG	1–8	
	XHAUST FAN SCHEDULE NOTES:  5. PROVIDE HAND/OFF/AUTO CONTROLLER AND 3RD PARTY TIME CLOCK.										
1.	PROVIDE ELECTRONICALLY COMMUTATED MOTOR WITH 0-1	OVDC INPUT	SIGNAL.	6.	PROVIDE CON	TROLLER WITH	+ SCHEDULING	CAPABILITY.			

LOUVER SCHEDULE NOTES:

PROVIDE ALUMINUM INSECT & BIRD SCREEN.

PROVIDE PH NEUTRALIZATION KIT, HORIZONTAL DRAINAGE KIT, AND CONDENSATE DRAIN PIPING TO MAKE A COMPLETE DRAIN SYSTEM. 8. PROVIDE EQUIPMENT SUPPORTS TO SUSPEND UNIT FROM STRUCTURE HORIZONTALLY.

	LOUVER SCHEDULE									
TAG		DIMENSIONS FREE ARE				BASIS	NOTE			
IAG	DESCRIPTION	HEIGHT	WIDTH	DEPTH	(SQ. FT.)	MAKE	MODEL	NOTES		
L-A	STATIONARY DRAINABLE BLADE LOUVER	12"	36"	4"	0.90	GREENHECK	ESD-435	1,2		

8. PROVIDE BACKDRAFT DAMPER.

PROVIDE MINIMUM TWO-COAT 70% PVDF PAINT: COORDINATE COLOR WITH ARCHITECT.

PROVIDE MINIMUM 14" HIGH INSULATED ROOF CURB.

# SYMBOL LEGEND CEILING MOUNTED SUPPLY AIR DIFFUSER. REFER TO SCHEDULE.

CEILING MOUNTED RETURN AIR GRILLE OR REGISTER. REFER TO SCHEDULE.

CEILING MOUNTED EXHAUST AIR GRILLE OR REGISTER. REFER TO SCHEDULE. 145° BRANCH TAKE-OFF WITH MANUAL VOLUME DAMPER.

(XXX) | MECHANICAL EQUIPMENT TAG FOR EQUIPMENT REQUIRING POWER.

SYMBOL DESCRIPTION

MECHANICAL EQUIPMENT TAG FOR EQUIPMENT THAT DOES NOT REQUIRE POWER.

XX-X DIFFUSER, REGISTER, OR GRILLE TAG. REFER TO SCHEDULE. ### INDICATES THE MAXIMUM ### | AIRFLOW THE DEVICE WILL SEE IN STANDARD CFM. T | TEMPERATURE SENSOR.

(F) | FAN SPEED DIAL/CONTROLLER. M 24VAC MOTOR ACTUATOR FOR DAMPER.

SUPPLY DUCTWORK TURNING UP. IF > 1 SUPPLY DUCTWORK TURNING DOWN.

POINT OF CONNECTION TO EXISTING.

— — | MECHANICAL EQUIPMENT/DUCTWORK TO BE REMOVED.

→ AIRFLOW UNDER NEGATIVE PRESSURE.

■ | FLEXIBLE DUCTWORK CONNECTION.

**−C−** CONDENSATE DRAIN PIPING.

UNDERWRITER'S LABORATOR'

"WC INCHES OF WATER COLUMN

XT TRANSFORMER

EXISTING MECHANICAL EQUIPMENT — | MECHANICAL EQUIPMENT/DUCTWORK.

# **ABBREVIATIONS**

ABBRV	ABBREVIATION
AFF	ABOVE FINISHED FLOOR
AHRI	AMERICAN HEATING REFRIGERATING INSTITUTE
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
EAT	ENTERING AIR TEMPERATURE
EWT	ENTERING WATER TEMPERATURE
EF	EXHAUST FAN
EG	EXHAUST GRILLE
EH	ELECTRIC HEATER
ESP	EXTERNAL STATIC PRESSURE
FLA	FULL LOAD AMPS
GUH	GAS UNIT HEATER
HOA	HAND/OFF/AUTO
HP	HORSEPOWER
kW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LD	LINEAR DIFFUSER
LWT	LEAVING WATER TEMPERATURE
MAN	MANUAL
MAU	MAKEUP AIR UNIT
MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
MCA	MINIMUM CIRCUIT AMPACITY
MOCP	MAXIMUM OVERCURRENT PROTECTION
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
N.G.	NATURAL GAS
PL	PILOT LIGHT
RG	RETURN AIR GRILLE
RPM	REVOLUTIONS PER MINUTE
RTU	ROOFTOP UNIT
SEER	SEASONAL ENERGY EFFICIENCY RATIO
SD	SUPPLY DIFFUSER
SSPB	START-STOP PUSH BUTTON

### **MECHANICAL DRAWING LIST** SHEET NUMBER MECHANICAL SPECIFICATIONS, SCHEDULES, AND LEGENDS M20

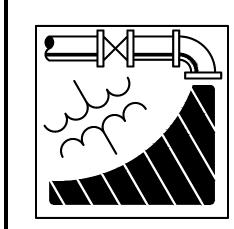
MECHANICAL PLANS - PHIL RIZZUTO PARK

MECHANICAL DETAILS AND CONTROLS

	FURNACE SCHEDULE  SUPPLY MINIMUM HEATING SUPPLY FAN FLECTRICAL BASIS OF DESIGN															
TAG	DESCRIPTION		MINIMUM OA AIRFLOW		HEA	TING			SUPPLY FAI	١		ELECTRICAL		BASI	IS OF DESIGN	NOTES
TAG	DESCRIPTION	AIRFLOW (CFM)	(CFM)	EAT	LAT	N.G. INPUT	N.G. OUTPUT	ESP	BHP	MOTOR HP	V/ø/Hz	MCA	MOCP	MAKE	MODEL	NOTES
F-A	NATURAL GAS INDIRECT—FIRED HEATING, HIGH EFFICIENCY CONDENSING FURNACE	1450	350	56.1°F	105.7°F	80 MBH	78 MBH	1.0"WC	0.788	1	115/1/60	14.7	20	CARRIER	59TP6B080V2120	1–8
	KEUP AIR UNIT NOTES; PROVIDE THE FOLLOWING:  PROVIDE VARIABLE—SPEED, ELECTRONICALLY COMMUTATED MOTOR.  5. PROVIDE FLUE EXHAUST VENTING AND COMBUSTION AIR PIPING TO MAKE A COMPLETE SYSTEM. STRICTLY ADHERE TO MANUFACTURER'S INSTALLATION AND CLEARANCE REQUIREMENTS.															

. PROVIDE STANDALONE UNIT CONTROLLER.

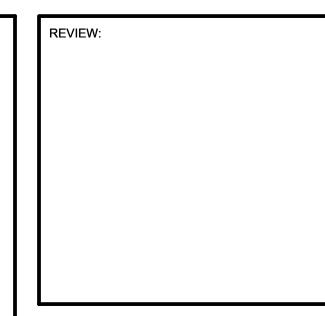
PROVIDE 24V TRANSFORMER FOR CONNECTION TO MOTORIZED DAMPER.



#### ENGINEERING DRIVEN DESIGN PC 555 Route One South Suite 100

Iselin, New Jersey 08830 (848) 247-6150 www.engineerdriven.com Project # 22-0080

Jeffrey N. Beeden Professional Engineer NJ License 24GE04746800





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CONSULTANT:

PHASE / SUBMISSION: ISSUED FOR BID

ISSUE DATE: AUGUST 31, 2023 **REVISIONS:** MARK DATE DESCRIPTION

NJ SDA #: NJ DOE #: © SSP ARCHITECTS

22-8845

NJ SDA PACKAGE #:

SSP #:

THE COUNTY OF UNION

2325 SOUTH AVENUE INTERIOR RESTROOM FACILITIES

PARKS -

RENOVATIONS AT:

PARK 8 NORTH AVE ELIZABETH, NEW JERSEY 07208

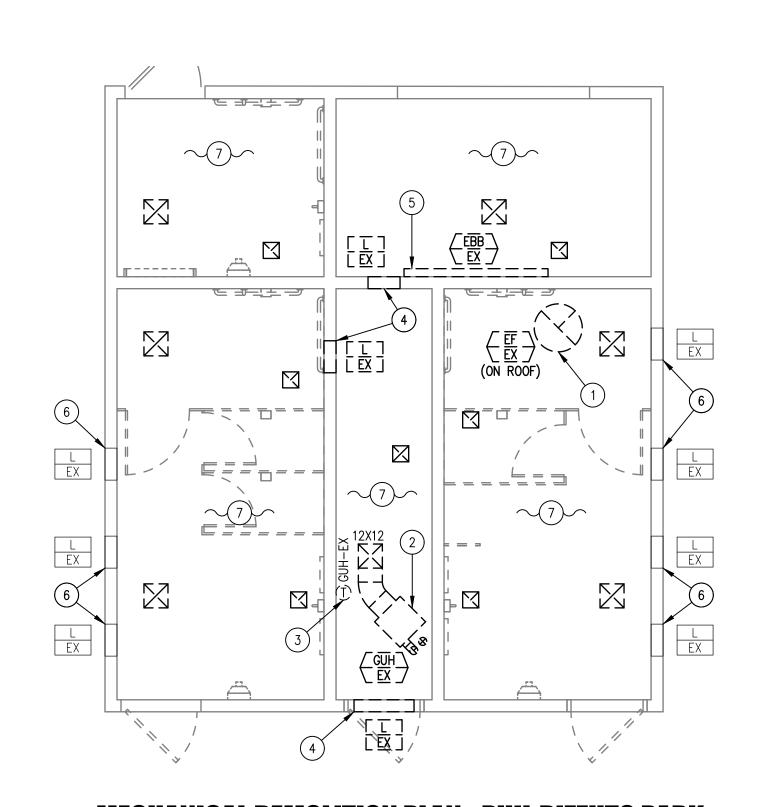
UNION COUNTY

SHEET NAME: **MECHANICAL** SPECIFICATIONS, SCHEDULES, AND

CITY OF ELIZABETH

SHEET NUMBER:

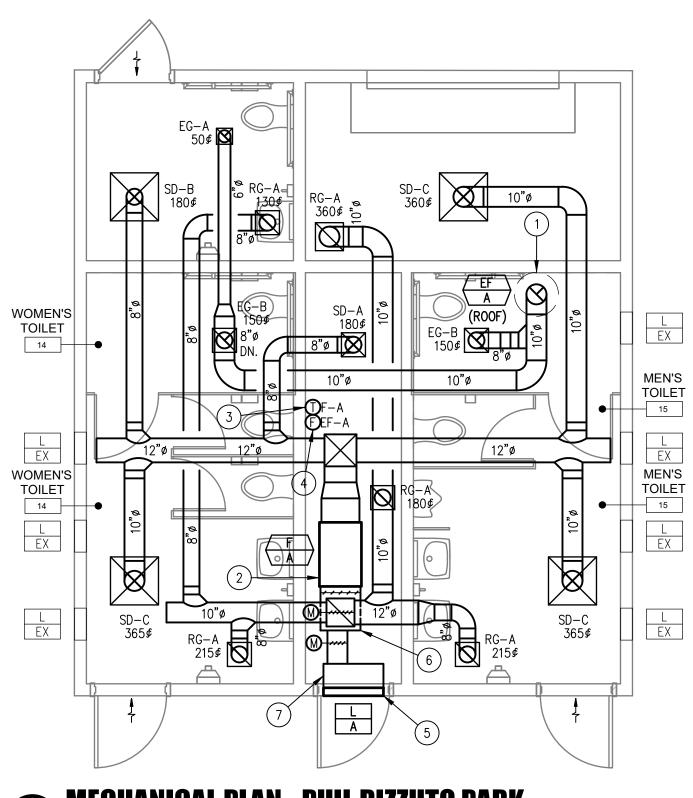
**LEGENDS** 



# MECHANICAL DEMOLITION PLAN - PHIL RIZZUTO PARK 1/4"=1'-0"

# **PLAN KEYED NOTES:**

- 1) REMOVE EXISTING ROOFTOP MOUNTED EXHAUST FAN, SUPPORTS, CONTROLS, WIRING, ASSOCIATED DUCTWORK, ETC.
- 2 REMOVE EXISTING GAS-FIRED UNIT HEATER, ALL ASSOCIATED DUCTWORK, SUPPORTS, CONTROLS, WIRING, VENTING, ETC.
- 3 REMOVE EXISTING THERMOSTAT.
- 4 REMOVE EXISTING EXTERIOR/INTERIOR LOUVER, WALL SLEEVE, ETC.
- 5 REMOVE EXISTING ELECTRIC BASEBOARD HEATER.
- (6) EXISTING EXTERIOR LOUVER TO REMAIN.
- (7) REMOVE ALL DUCTWORK ABOVE CEILINGS.

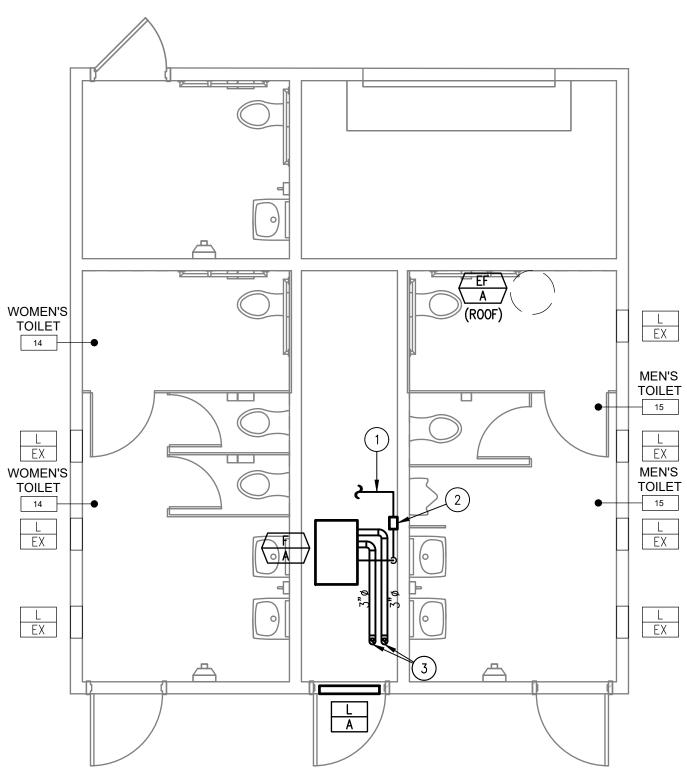


# MECHANICAL PLAN - PHIL RIZZUTO PARK 1/4"=1'-0"

# **PLAN KEYED NOTES:**

- 1) PROVIDE ROOFTOP MOUNTED EXHAUST FAN.
- 2) PROVIDE HORIZONTALLY SUSPENDED HIGH EFFICIENCY CONDENSING FURNACE.
- 3 PROVIDE REMOTE, WALL-MOUNTED THERMOSTAT.
- 4 PROVIDE REMOTE WALL-MOUNTED FAN SPEED DIAL AND CONTROLLER.

  5 PROVIDE LOUVER, ALUMINUM WALL SLEEVE, ETC. ABOVE DOOR IN EXISTING OPENING.
- 6 PROVIDE HEAVY DUTY GAUGE GALVANIZED STEEL MIXING BOX WITH FILTER RACK AND 24V MOTORIZED DAMPERS FOR VENTILATION AND RETURN AIR. FILTER RACK SHALL BE FITTED WITH A MERV 8 FILTER. REFER TO DETAIL 9/M22.
- 7 PROVIDE INSULATED SHEET METAL PLENUM CONNECTED TO EXTERIOR LOUVER. PLENUM SHALL BE OPEN TO THE SPACE EXCEPT FOR PORTION DUCTED TO FURNACE MIXING BOX.



# MECHANICAL PIPING PLAN - PHIL RIZZUTO PARK

# **PLAN KEYED NOTES:**

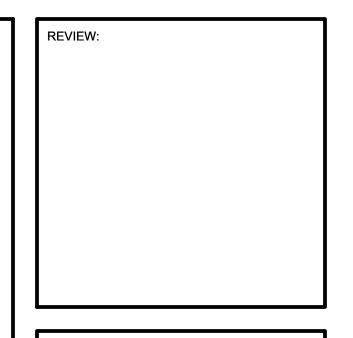
- 1) PROVIDE CONDENSATE DRAIN PIPING AND DRAIN TRAP. DRAIN TO NEAREST FLOOR DRAIN. SIZE PIPING IN ACCORDANCE WITH FURNACE MANUFACTURER'S INSTRUCTIONS, BUT NO LESS THAN 3/4"ø.
- (2) PROVIDE PH NEUTRALIZATION KIT.
- PROVIDE AND TERMINATE COMBUSTION AIR INTAKE AND FLUE EXHAUST VENTING IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS ABOVE THE

# **PLAN GENERAL NOTES:**

- 1. REMOVE ALL MISCELLANEOUS SUPPORTS, CONTROLS, WIRING, TUBING, ETC. FOR EXISTING EQUIPMENT, DUCTWORK, AND PIPING SPECIFIED TO BE REMOVED.
- PATCH AND SEAL EXISTING OPENINGS THAT ARE OBSOLETE FROM THE DEMOLITION.
   BALANCE ALL DIFFUSERS AND VAV BOXES IN ACCORDANCE WITH THE VALUES SHOWN
- ON THIS PLAN AND IN THE EXISTING VAV TERMINAL UNIT SCHEDULE.

  4. IF THE EXISTING STRUCTURE HAS SPRAY FIREPROOFING. REPAIR ANY FIREPROOFING
- DISTURBED DURING CONSTRUCTION.

  5. TAKE DOWN CEILING, LIGHTS, SPRINKLERS, ETC. AS REQUIRED TO INSTALLATION OF EQUIPMENT, PIPING, AND DUCTWORK.





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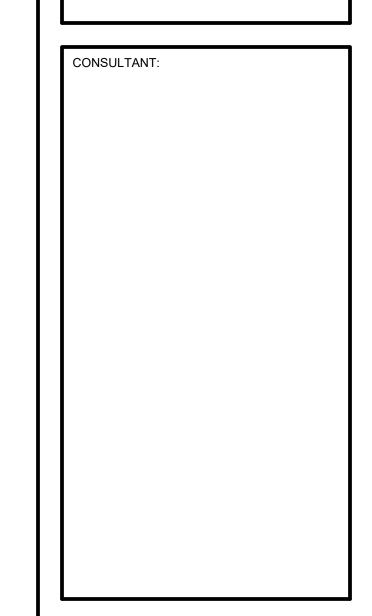
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# ISSUED FOR BID ISSUE DATE: AUGUST 31, 2023 REVISIONS: MARK DATE DESCRIPTION NJ SDA PACKAGE #: N/A NJ SDA #: N/A NJ DOE #: N/A SSP #: 22-8845 © SSP ARCHITECTS 2023



THE COUNTY OF UNION

2325 SOUTH AVENUE

INTERIOR RESTROOM FACILITIES RENOVATIONS AT:

UNION COUNTY PARKS -PHIL RIZZUTTO

8 NORTH AVE

PARK

ELIZABETH, NEW JERSEY 07208

CITY OF ELIZABETH UNION COUNTY

SHEET NAME:

MECHANICAL PLANS
- PHIL RIZZUTO PARK

SHEET NUMBER:

**M21** 

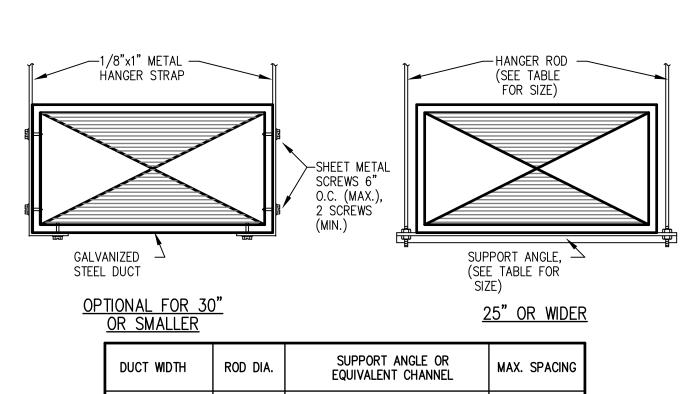


# ENGINEERING DRIVEN DESIGN PC

555 Route One South Suite 100 Iselin, New Jersey 08830 (848) 247-6150 www.engineerdriven.com Project # 22-0080

Jeffrey N. Beeden Professional Engineer NJ License 24GE04746800

TED: 8/30/2023 7:38 AM

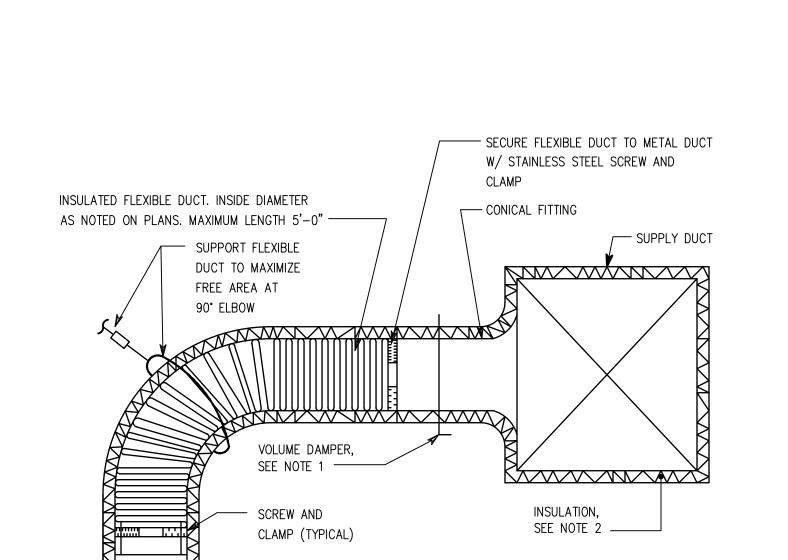


OK SWALLER			
DUCT WIDTH	ROD DIA.	SUPPORT ANGLE OR EQUIVALENT CHANNEL	MAX. SPACING
26" TO 30"	3/8"	1-1/2" x 1-1/2" x 1/8"	8'-0" O.C.
31" TO 42"	3/8"	1-1/2" x 1-1/2" x 1/8"	6'-0" O.C.
43" TO 60"	1/2"	1-1/2" x 1-1/2" x 1/8"	6'-0" O.C.
61" TO 84"	1/2"	2" x 2" x 1/4"	4'-0" O.C.
85" AND UP	1/2"	3" x 3" x 1/4"	4'-0" O.C.

# TYPICAL DUCTWORK SUPPORT SCHEDULE NOT TO SCALE

AIR DEVICE NECK

AIR DEVICE SIZE

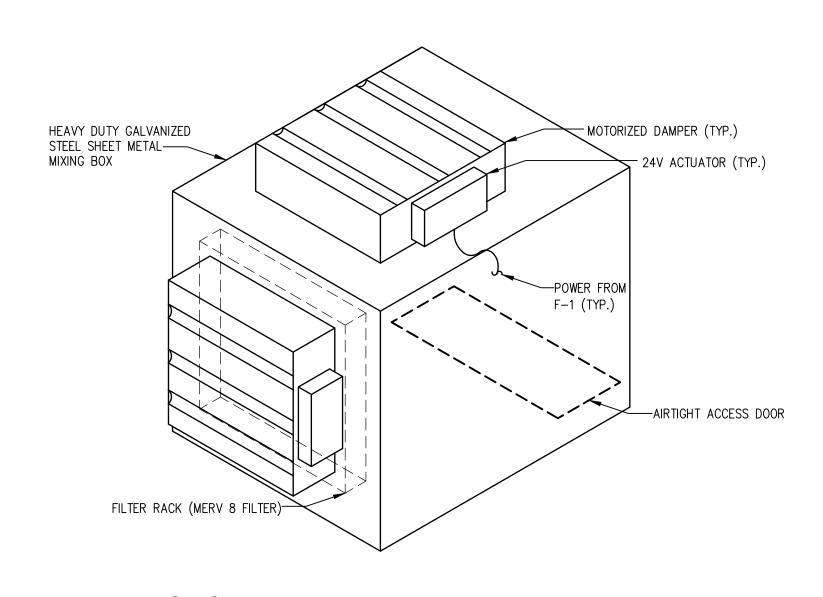


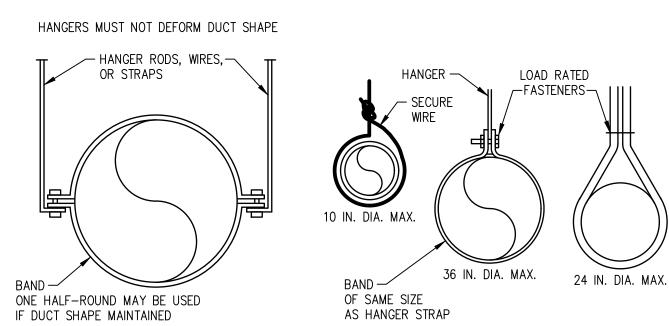
CEILING —

2. SEE SPECIFICATION FOR INSULATION THICKNESS AND TYPE.

1. EXTEND VOLUME DAMPER NECK PAST INSULATION.

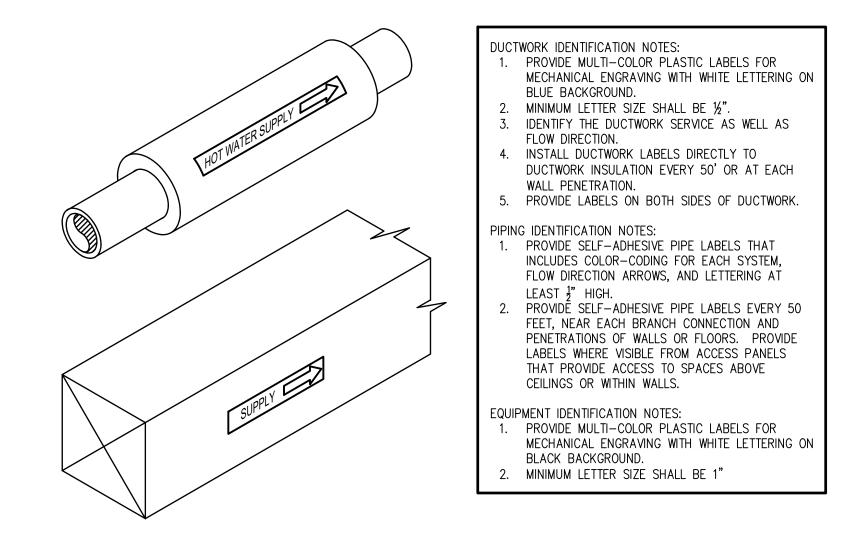




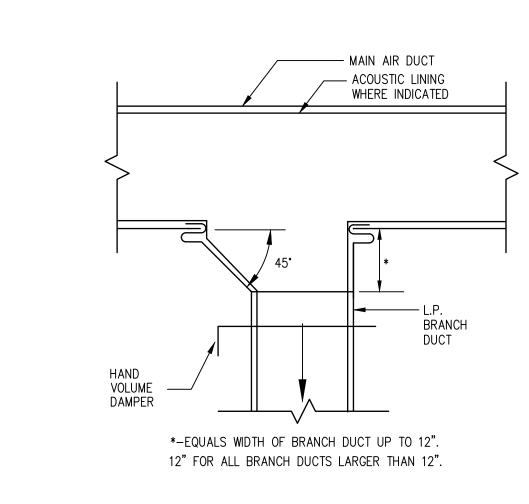


DUCT DIAMETER	MAX. SPACING	WIRE DIA.	ROD DIA.	STRAP
UP TO 10"	12'-0" O.C.	ONE 12 GA	1/4"	1" x 22 GA
11" TO 18"	12'-0" O.C.	TWO 12 GA	1/4"	1" x 22 GA
19" TO 24"	12'-0" O.C.	TWO 10 GA	1/4"	1" x 22 GA
25" TO 36"	12'-0" O.C.	TWO 8 GA	3/8"	1" x 20 GA
SUPPORT VERTICAL	L DUCTWORK EVE	RY 10-FEET	WITH ONE SU	JPPORT MINIMUM

# TYPICAL ROUND DUCTWORK SUPPORT SCHEDULE NOT TO SCALE

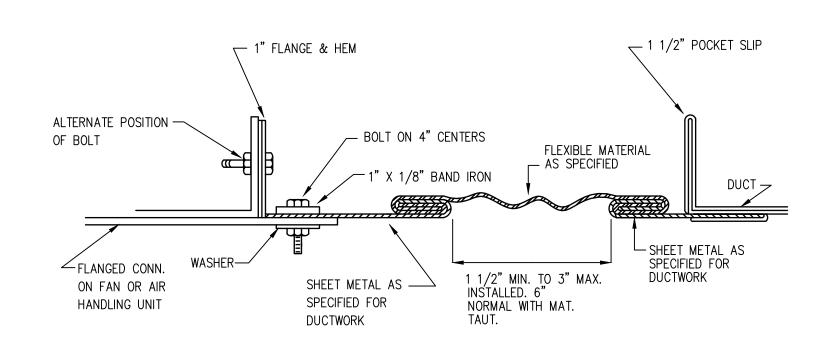






TYPICAL BRANCH DUCT TAKE-OFF

NOT TO SCALE



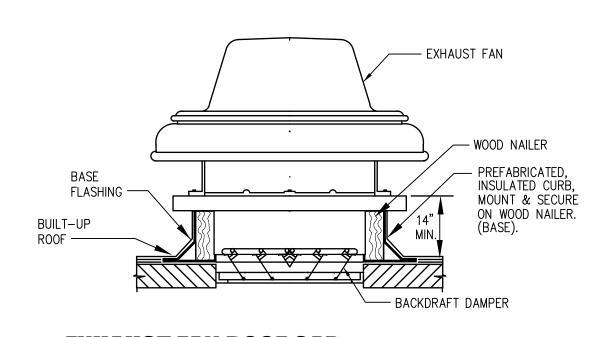


EF-A SEQUENCE OF OPERATION

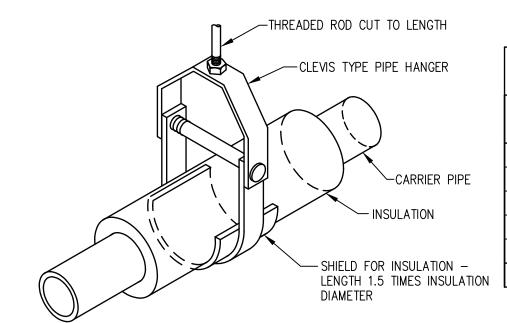
RUN CONDITIONS — SCHEDULED:

F-A SEQUENCE OF OPERATION

RUN CONDITIONS - SCHEDULED:



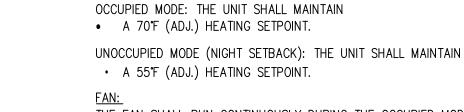




PVC PIPE SIZE	MAX. HORIZ. SPACING	MIN. ROD SIZE
1-1/2" TO 2"	4-FEET	3/8"
3"	4-FEET	1/2"
4" TO 5"	4-FEET	5/8"
6" TO 8"	4-FEET	3/4"
10" TO 12"	4-FEET	7/8"

CLEVIS TYPE PIPE HANGER FOR INSULATED PIPE

NOT TO SCALE



THE FAN SHALL RUN CONTINUOUSLY DURING THE OCCUPIED MODE. DURING THE UNOCCUPIED MODE, THE FAN SHALL RUN ONLY WHEN GAS HEATING IS ACTIVE.

THE UNIT SHALL RUN ACCORDING TO A USER DEFINABLE TIME SCHEDULE IN THE FOLLOWING

THE FAN SHALL RUN ACCORDING TO A USER DEFINABLE SCHEDULE, THE OCCUPANCY

THE FAN SHALL HAVE A USER DEFINABLE (ADJ.) MINIMUM RUNTIME.

THE CONTROLLER SHALL MONITOR THE FAN STATUS.

THE CONTROLLER SHALL MONITOR THE FAN STATUS.

ZONE SETPOINT ADJUST: THE OCCUPANT SHALL BE ABLE TO ADJUST THE ZONE TEMPERATURE HEATING SETPOINT AT THE ZONE SENSOR.

GAS HEATING:
THE CONTROLLER SHALL MEASURE THE ZONE TEMPERATURE AND STAGE THE GAS HEAT TO MAINTAIN ITS SETPOINT. TO PREVENT SHORT CYCLING, THE STAGE SHALL HAVE A USER DEFINABLE (ADJ.) MINIMUM RUNTIME.

THE REHEATING SHALL BE ENABLED WHENEVER:

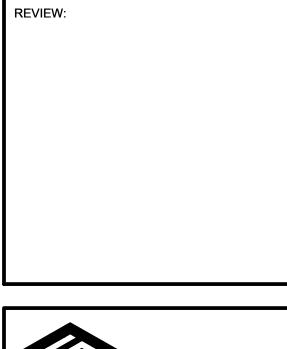
THE ZONE TEMPERATURE IS BELOW SETPOINT.

AND SUFFICIENT AIRFLOW IS PROVIDED.



(848) 247-6150 Project # 22-0080

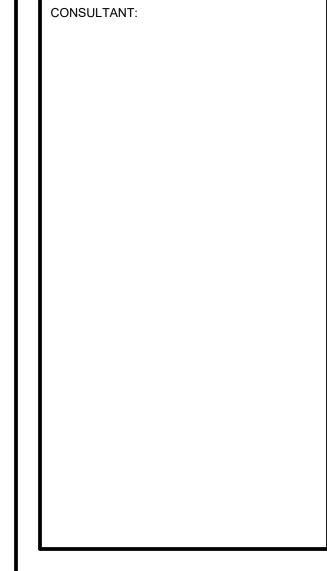
**ENGINEERING DRIVEN DESIGN PC** 555 Route One South Suite 100 Iselin, New Jersey 08830 www.engineerdriven.com Jeffrey N. Beeden Professional Engineer NJ License 24GE04746800

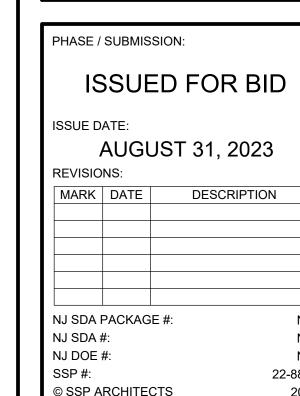




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PARKS -PHIL RIZZUTTO

PARK 8 NORTH AVE ELIZABETH, NEW JERSEY 07208

CITY OF ELIZABETH UNION COUNTY

SHEET NAME:

**MECHANICAL DETAILS AND** CONTROLS

# **ELECTRICAL SPECIFICATIONS:**

#### 260000 SUMMARY

- 1. THE SCOPE OF THIS PROJECT IS TO UPGRADE ALL MECHANICAL AND PLUMBING SYSTEMS, EQUIPMENT, AND FIXTURES AS WELL AS TO PROVIDE UPGRADES AND MODIFICATIONS TO THE EXISTING ELECTRICAL SYSTEMS FOR
- RESTROOMS IN UNION COUNTY PUBLIC PARKS.. 2. THE BUILDING IS A SEISMIC DESIGN CATEGORY OF B, WHICH MEANS THAT ELECTRICAL SYSTEMS ARE EXEMPT FROM SEISMIC BRACING REQUIREMENTS.

### 260010 DEFINITIONS

- 1. FURNISH: TO PURCHASE AND DELIVER AN ITEM TO THE STAGING AREA COMPLETE WITH ALL REQUIRED
- APPURTENANCES. 2. INSTALL: TO MOVE THE ITEM FROM THE STAGING AREA
- AND FASTEN TO THE STRUCTURE. 3. PROVIDE: TO FURNISH AND INSTALL.

# 260040 SUBSTITUTIONS

- 1. ALL SUBSTITUTIONS MUST BE APPROVED PRIOR TO BIDDING. PROVIDE SUBSTITUTION INFORMATION DURING THE BID-PHASE QUESTION AND ANSWER PERIOD. INCLUDE DETAILED DATA ON THE PROPOSED SUBSTITUTION INCLUDING DOLLAR AMOUNT OF PROPOSED SAVINGS. ENGINEER SHALL REVIEW THE INFORMATION AND DETERMINE WHETHER THE SUBSTITUTION
- 2. ANY CHANGES TO THE CONTRACT DOCUMENTS DUE TO THE SUBSTITUTION SHALL BE COORDINATED BY THE GENERAL CONTRACTOR AND ANY ADDITIONAL COST TO MODIFY THE DESIGN OR MODIFY THE SCOPE OF OTHER TRADES SHALL BE INCLUDED IN THE PROPOSED SAVINGS. THIS SHALL INCLUDE MODIFICATIONS TO THE STRUCTURAL SCOPE FOR EQUIPMENT SUPPORT AS WELL AS MODIFICATIONS TO ELECTRICAL BRANCH CIRCUITRY OR FEEDERS FOR EQUIPMENT.

#### 260050 SUBMITTALS

- 1. ALL SUBMITTALS SHALL BE ROUTED TO THE ARCHITECT FOR DISTRIBUTION TO ALL DESIGN PROFESSIONALS. 2. ALL SUBMITTALS SHALL BEAR A COVER-SHEET FROM THE GENERAL CONTRACTOR INDICATING THEY HAVE REVIEWED THE
- 3. SHOP DRAWING SUBMISSIONS CONSISTING OF PRODUCT DATA

SUBMITTAL AND FIND IT TO CONFORM TO THE CONTRACT

- CUT-SHEETS MAY BE SUBMITTED ELECTRONICALLY. 4. SHOP DRAWING SUBMISSIONS CONSISTING OF COORDINATION PLANS, LAYOUT DRAWINGS, FIRE PROTECTION SHOP DRAWINGS, FIRE ALARM SHOP DRAWINGS, SHEET METAL SHOP
- DRAWINGS, ETC. SHALL BE SUBMITTED IN LARGE FORMAT ORIGINAL SIZE ON PAPER. PROVIDE FIVE COPIES OF THE SHOP DRAWINGS. THE ENGINEER SHALL KEEP A COPY, THE ARCHITECT SHALL KEEP A COPY, THE REMAINING THREE COPIES WILL BE RETURNED TO THE GENERAL CONTRACTOR.
- 5. REQUESTS FOR INFORMATION (RFIS) SHALL INCLUDE THE QUESTION, THE REFERENCED PORTION OF THE CONTRACT DOCUMENTS, AND THE CONTRACTOR'S RECOMMENDED SUGGESTION FOR REMEDY.
- 6. DELEGATED-DESIGN SUBMISSIONS SHALL BE PROVIDED WITH A COVER-SHEET INDICATING THE PROFESSIONAL OF RECORD THAT WILL SIGN AND SEAL THE DOCUMENT. ORIGINAL SIGNED AND SEALED DOCUMENTS DO NOT NEED TO BE SUBMITTED UNTIL THE DOCUMENTS ARE APPROVED BY THE
- ARCHITECT AND ENGINEER. REFER TO THE INDIVIDUAL SPECIFICATION SECTIONS FOR THE REQUIRED SUBMITTALS.
- 8. COMPILE OPERATION AND MAINTENANCE (0&M) MANUALS AND SUBMIT ELECTRONICALLY FOR APPROVAL. AFTER APPROVAL OF ALL MANUALS, PROVIDE TWO COPIES OF A PRINTED, BOUND SET TO THE OWNER AND A FLASH DRIVE WITH THE DATA AS .PDFS.

# 260070 QUALITY ASSURANCE

- 1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH INDUSTRY STANDARDS AND SHALL CONFORM TO THE NEW JERSEY UNIFORM CONSTRUCTION CODE. THE CURRENTLY ADOPTED SUBCODES WITH AMENDMENTS ARE AS FOLLOWS:
- 1.1. INTERNATIONAL BUILDING CODE 2021 1.2. NATIONAL STANDARD PLUMBING CODE 2021 1.3. INTERNATIONAL MECHANICAL CODE 2021
- 1.4. INTERNATIONAL FUEL GAS CODE 2021 1.5. NATIONAL ELECTRIC CODE 2020
- 1.6. ASHRAE 90.1-2019

# 260100 EXECUTION

- 1. ALL CUTTING AND PATCHING OF THE BUILDING SHALL BE PERFORMED BY THE CONTRACTOR. REMOVAL OF EXISTING SYSTEMS, COMPONENTS, SUPPORTS, ETC. SHALL HAVE ALL EXISTING HOLES OR PENETRATIONS PATCHED TO MATCH THE EXISTING ADJACENT CONSTRUCTION.
- 2. REMOVE AND DISPOSE OF IN A LEGAL MANNER ALL CONSTRUCTION DEBRIS IDENTIFIED TO BE REMOVED. THE CONSTRUCTION AREA SHALL BE BROOM SWEPT EACH NIGHT. DO NOT LET RUBBISH ACCUMULATE.
- 3. ALL CONSTRUCTION MATERIAL THAT CAN BE RECYCLED SHALL BE RECYCLED. MAINTAIN ALL RECEIPTS AND SUBMIT COPIES OF THE RECEIPT TO THE ARCHITECT TO DOCUMENT THE QUANTITIES OF THE RECYCLED MATERIAL.

# 260110 O&M DATA

- 1. PROVIDE OPERATION AND MAINTENANCE MANUALS. REFER TO THE INDIVIDUAL SPECIFICATION SECTIONS FOR
- 2. THE O&M MANUALS SHALL INCLUDE AS-BUILT DOCUMENTATION. AS-BUILT DOCUMENTATION SHALL CONSIST OF CONTRACTOR RED-LINED CONTRACT DOCUMENTS. INCLUDE THE AS-BUILT DOCUMENTATION WITH THE O&M

# 260130 FIRESTOPPING

1. ALL PENETRATIONS THROUGH FIRE-RATED ASSEMBLIES SHALL HAVE APPROPRIATE INTUMESCENT MATERIAL FIRE STOPPING INSTALLED. ALL OPENINGS SHALL BE CAULKED AND SEALED WITH SSS INTUMESCENT FIRESTOP SEALANT AS MANUFACTURED BY SPECIFIED TECHNOLOGIES, INC.

1. ALL ROOF PENETRATIONS SHALL BE WEATHERPROOF IN ALL RESPECTS. ANY WORK DONE ON THE ROOF SHALL BE PERFORMED BY A CONTRACTOR CERTIFIED BY THE ROOF

MANUFACTURER TO MAINTAIN THE EXISTING ROOF WARRANTY.

# 260500 COMMON ELECTRICAL REQUIREMENTS

- SCOPE 1.1. LOW-VOLTAGE POWER CONDUCTORS AND CABLES 1.2. GROUNDING
- 1.3. HANGERS AND SUPPORTS 1.4. RACEWAYS AND BOXES
- SUBMITTALS 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA.
- 2.2. SUBMIT OPERATION AND MAINTENANCE DATA. 2.3. SUBMIT TEST REPORTS. 3. LOW-VOLTAGE POWER CONDUCTORS AND CABLES
- 3.1. PROVIDE WIRE MANUFACTURED BY BELDEN, SOUTHWIRE, OR ALPHA WIRE.
- 3.2. COPPER CONDUCTORS SHALL COMPLY WITH NEMA WC 3.3. CONDUCTOR INSULATION SHALL BE THHN-2 OR
- 3.4. MULTI-CONDUCTOR CABLES SHALL COMPLY WITH NEMA
- WC 70. 3.5. MULTI-CONDUCTOR CABLES SHALL CONSIST OF
- METAL—CLAD CABLE (MC). 3.6. SUPPORTS SHALL BE GALVANIZED STEEL SUPPORTS AS DESCRIBED IN NECA 1 AND NECA 101.

3.7. ALL BRANCH CIRCUITS HAVE BEEN DESIGNED BASED ON

- RESISTIVITY OF COPPER CONDUCTORS. 3.8. BRANCH CIRCUIT WIRE SHALL BE SOLID CONDUCTOR
- FOR NO. 10 AWG AND SMALLER AND STRANDED FOR LARGER CONDUCTORS.
- 3.9. INSTALL BRANCH CIRCUITS AND FEEDERS IN ACCORDANCE WITH THE RACEWAY APPLICATION TABLE
- ON THE CONTRACT DOCUMENTS. 3.10. CONCEALED BRANCH CIRCUITS SERVING OTHER DEVICES

- SHALL BE TYPE MC CABLE. 3.11. EXPOSED BRANCH CIRCUITS SHALL BE PULLED
- CONDUCTORS IN RACEWAY. 3.12. IDENTIFY AND COLOR-CODE CONDUCTORS IN
- ACCORDANCE WITH CHAPTER 2 OF THE NEC.
- 3.13. INSTALL EQUIPMENT GROUND CONDUCTORS WITH ALL FEEDERS AND BRANCH CIRCUITS. 4. METAL RACEWAY
- 4.1. PROVIDE RACEWAY MANUFACTURED BY SOUTHWIRE, THOMAS & BETTS, OR WESTERN TUBE AND CONDUIT. 4.2. GALVANIZED RIGID CONDUIT (GRC) SHALL COMPLY WITH ANSI C80.1 AND UL 6.
- 4.3. ELECTRIC METALLIC TUBING (EMT) SHALL COMPLY WITH ANSI C80.3 AND UL797.
- 4.4. FLEXIBLE METAL CONDUIT (FMC) SHALL COMPLY WITH UL 1 AND SHALL BE ZINC COATED.
- 4.5. LIQUID TIGHT FLEXIBLE METAL CONDUIT (LFMC) SHALL COMPLY WITH UL 360 AND SHALL BE FLEXIBLE STEEL CONDUIT WITH PVC JACKET.
- 4.6. FITTINGS SHALL COMPLY WITH NEMA FB 1 AND UL 4.7. SHEET METAL PULL, JUNCTION, OUTLET, AND DEVICE BOXES SHALL COMPLY WITH NEMA OS 1. OUTLET AND
- DEVICE BOXES SHALL ALSO COMPLY WITH UL 514A. 5. GROUNDING 5.1. INSTALL BONDING STRAPS AND JUMPERS IN AREAS ACCESSIBLE FOR INSPECTION AND MAINTENANCE.
- 5.2. BOND METAL DUCTWORK TO EQUIPMENT GROUNDING CONDUCTORS OF ASSOCIATED FANS. INSTALL BONDING
- JUMPER ACROSS FLEXIBLE DUCTWORK CONNECTIONS. 5.3. EXOTHERMICALLY WELD GROUNDING ELECTRODE CONDUCTORS TO GROUNDING ELECTRODES, UNLESS
- OTHERWISE NOTED. 5.4. PERFORM TESTS ON THE GROUNDING SYSTEM. 5.4.1. TESTS SHALL INCLUDE MEASUREMENT OF GROUND RESISTANCES.
- FOR REVIEW. 5.4.3. IF TESTS MEASURE HIGH RESISTIVITY INCLUDE RECOMMENDATIONS FOR IMPROVING THE GROUNDING SYSTEM.

5.4.2. PREPARE TEST REPORT AND SUBMIT TO OWNER

- 6. HANGERS AND SUPPORTS 6.1. INSTALL HANGERS AND SUPPORTS IN ACCORDANCE
- WITH NECA 1 AND NECA 101. 6.2. PROVIDE MAXIMUM SUPPORT SPACING AS REQUIRED BY NFPA 70. MINIMUM ROD SIZE SHALL BE 3/8".
- 7. COLOR CODE CONDUCTORS FOR 240/120V SYSTEMS SHALL MATCH THE EXISTING COLOR CODING.
- 8. LABEL JUNCTION AND PULL BOXES WITH THE BRANCH CIRCUIT AND PANEL INFORMATION INDICATING WHICH CIRCUITS ARE ROUTED THROUGH THE BOX. 9. UTILIZE A CLEAR PLASTIC LABEL WITH BLACK LETTERING IDENTIFYING THE BRANCH CIRCUIT FOR EACH OUTLET.
- ADHERE THE LABEL TO THE DEVICE COVERPLATE. 10. PROVIDE MULTI-COLOR PLASTIC LABELS FOR MECHANICAL ENGRAVING WITH WHITE LETTERING ON BLACK BACKGROUND.
- 10.1. MINIMUM LETTER SIZE SHALL BE 1/2" 11. LABEL ALL ELECTRICAL PANELS, DISCONNECT SWITCHES, AND LIGHTING CONTROL PANELS.

#### 260923 LIGHTING CONTROL DEVICES

- SCOPE 1.1. OCCUPANCY SENSORS
- . SUBMITTALS 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA. 2.2. SUBMIT OPERATION AND MAINTENANCE DATA.
- 2.3. PROVIDE TRAINING ON ALL CONTROL DEVICES WITH PROGRAMMABLE CONTROLS AND/OR DIP SWITCH ADJUSTMENTS.
- 3. PROVIDE AUTOMATIC LIGHTING CONTROLS AS SPECIFIED ON THE CONTRACT DOCUMENTS.
- 3.1. PROVIDE CONTROLS MANUFACTURED BY HUBBELL, WATTSTOPPER, LITE CONTROL, OR SENSORSWITCH.
- 3.2. PROVIDE ALL POWER PACKS AND RELAY PACKS REQUIRED TO ACHIEVE THE SEQUENCE OF OPERATION

OUTLINED ON THE CONTRACT DOCUMENTS.

# 262416 EXISTING PANELBOARDS

UNLESS OTHERWISE NOTED.

# SCOPE

- 1.1. PANELBOARDS 2. REFER TO PANEL SCHEDULES AND SINGLE LINE DIAGRAM FOR DETAILED INFORMATION ON EACH PANELBOARD.
- 3. PROVIDE CIRCUIT BREAKERS THAT MATCH THE INTERRUPTING CURRENT RATING OF THE PANELBOARD. 4. CIRCUIT BREAKERS SHALL BE MOLDED CASE, INVERSE TIME AND INSTANTANEOUS TRIP, QUICK MAKE/QUICK BREAK TYPE. ALL CIRCUIT BREAKERS SHALL BE BOLT-ON STYLE. MULTIPLE POLE CIRCUIT BREAKERS SHALL OPEN ALL POLES SIMULTANEOUSLY. CIRCUIT BREAKER INTERRUPTING RATING SHALL MATCH THE PANEL RATING INDICATED IN THE SCHEDULE. ALL COMPONENTS SHALL BE FULLY RATED,
- 5. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- 6. FOR ANY BREAKERS DESIGNATED AT "LOCKABLE", PROVIDE POWER/BLOC BY SAFETY DESIGN PERMANENTLY-MOUNTED SYSTEM TO PANELBOARD OR EQUIVALENT PERMANENTLY MOUNTED BREAKER LOCKING SYSTEM. BREAKER SHALL BE LOCKABLE IN THE ON/OFF POSITION.
- 7. PROVIDE A TYPEWRITTEN DIRECTORY CARD IN TRANSPARENT CARD HOLDER INCORPORATING THE EXISTING DIRECTORY CARD AND THIS PROJECT'S MODIFICATIONS.
- 8. AS EXISTING BRANCH CIRCUITS ARE MADE SPARES IN EXISTING PANELBOARDS LABEL AS SUCH AND OPEN THE
- 9. AFTER SUBSTANTIAL COMPLETION, BUT NOT MORE THAN 60 DAYS AFTER FINAL ACCEPTANCE, MEASURE THE LOAD DURING A PERIOD OF NORMAL SYSTEM LOADING AND MAKE CIRCUIT CHANGES TO BALANCE THE PHASE LOADING. PROVIDE A REPORT DOCUMENTING THE CHANGES AND UPDATE THE PANEL DIRECTORY CARD.

# 262726 WIRING DEVICES

- SCOPE 1.1. RECEPTACLES
- 1.2. SWITCHES
- SUBMITTALS 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA.
- 2.2. SUBMIT OPERATION AND MAINTENANCE DATA. 3. PROVIDE DEVICES MANUFACTURED BY COOPER, HUBBELL,
- LEVITON, OR PASS & SEYMOUR.
- 4. REFER TO SYMBOL LEGEND AND CONTRACT DOCUMENTS FOR CONFIGURATION AND REQUIREMENTS.
- 5. DEVICE COLOR SHALL BE SELECTED BY THE ARCHITECT IN THE SHOP DRAWING PHASE. 6. PROVIDE WALL PLATES TO FIT THE DEVICES. WALL PLATES SHALL BE COLORED SMOOTH HIGH IMPACT THERMOPLASTIC
- TO MATCH DEVICE COLOR IN FINISHED AREAS. 7. INSTALL IN ACCORDANCE WITH MANUFACTURER'S
- INSTALLATION INSTRUCTIONS. 8. PROVIDE BRANCH CIRCUIT IDENTIFICATION FOR OUTLETS. 9. PRIOR TO INSTALLING SWITCHES, CONFIRM DOOR SWINGS AND
- LOCATIONS OF FURNITURE PARTITIONS. 10. INSTALL ALL DEVICES IN ACCORDANCE WITH NJ BARRIER FREE SUBCODE.

# 262816 ENCLOSED SWITCHES

- SCOPE 1.1. NONFUSIBLE SWITCHES
- SUBMITTALS
- 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA. 2.2. SUBMIT OPERATION AND MAINTENANCE DATA.
- 3. NONFUSIBLE SWITCHES 3.1. PROVIDE HEAVY DUTY, SINGLE THROW, 600V RATED DICONNECT.
- 3.2. PROVIDE LOCKABLE HANDLE. 3.3. PROVIDE INTERLOCK WITH COVER IN CLOSED POSITION.
- 4. DISCONNECT SWITCHES SHALL COMPLY WITH UL 98 AND NEMA KS 1. 5. DISCONNECT SWITCHES SHALL HAVE MECHANICAL LUGS.

- ENCLOSURES
- 6.1. INDOOR LOCATIONS, NEMA 250, TYPE 1. 6.2. OUTDOOR LOCATIONS, NEMA 250, TYPE 3R.

# 265100 INTERIOR LIGHTING

- SCOPE 1.1. LUMINAIRES
- SUBMITTALS 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA.
- 2.2. SUBMIT OPERATION AND MAINTENANCE DATA. 2.3. PROVIDE EXTENDED SEVEN YEAR WARRANTIES FROM THE DATE OF SUBSTANTIAL COMPLETION FOR SELF-CONTAINED BATTERY-POWERED EMERGENCY FIXTURES OR BALLASTS. THE FIRST YEAR SHALL BE A FULL WARRANTY AND THE REMAINING SIX YEARS SHALL
- BE PRORATED. 3. REFER TO THE LIGHTING FIXTURE SCHEDULE FOR DETAILED
- 4. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.

# SYMBOL LEGEND

BOL	DESCRIPTION
×	AC GENERAL USE SNAP SWITCH, 20 AMP, 120-277 VOLT - SINGLE POLE.
	x INDICATES SWITCHING CONTROL, WHERE NONE SHOWN SERVES ENTIRE ROOM.

- SHOWN, PROVIDE 30 AMPERE SWITCH.

- EXISTING ELECTRICAL EQUIPMENT OR WIRING TO REMAIN.

| EXISTING ELECTRICAL EQUIPMENT OR WIRING TO BE REMOVED OR RELOCATED. REFER TO

- J WALL-MOUNTED JUNCTION BOX.
- (CO) CEILING-MOUNTED CARBON MONOXIDE ALARM. MODEL: KIDDE KN-COP-IC OR EQUIVALENT.

- TT DRY TYPE TRANSFORMER (PLAN VIEW). REFER TO SCHEDULE.
- «X—— HEAVY DUTY DISCONNECT SWITCH. XX INDICATES RATED SWITCH AMPS, WHERE NONE
- □ EXISTING SURFACE MOUNTED PANELBOARD. REFER TO SCHEDULE, IF USED.
- | ELECTRICAL EQUIPMENT OR WIRING.
- PLANS FOR SCOPE. EHD | ELECTRIC HAND DRYER.
- JUNCTION BOX FOR AUTOMATIC FAUCET OR FLUSHOMETER POWER. COORDINATE MOUNTING LOCATION AND EXACT POWER REQUIREMENTS WITH PLUMBING CONTRACTOR.

# **ABBREVIATIONS**

- 4P FOUR POLE AC ARMOR CLAD (WHEN REFERENCING CABLE) OR ALTERNATING CURRENT AMP AMPERE l condui CATV CABLE TELEVISION
- CONN. CONNECTED EMT | ELECTRICAL METALLIC TUBING

| ABBRV | ABBREVIATION

3P | THREE POLE

- FMC | FLEXIBLE METAL CONDUIT G | EQUIPMENT GROUND
- GEC GROUNDING ELECTRODE CONDUCTOR
- GFCI GROUND FAULT CIRCUIT INTERRUPTING
- GFP GROUND FAULT PROTECTION GRC GALVANIZED RIGID CONDUIT KAIC KILOAMPERE INTERUPPTING RATING
- kVA KILOVOLT-AMPERE | LFMC | LIQUID TIGHT, FLEXIBLE METAL CONDUIT
- MC | METAL CLAD CABLE MCB MAIN CIRCUIT BREAKER
- MLO MAIN LUGS ONLY N NEUTRAL NEC NATIONAL ELECTRICAL CODE
- NEMA NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION OCP OVERCURRENT PROTECTION PIR PASSIVE INFRARED
- PV PHOTOVOLTAIC RGS RIGID GALVANIZED STEEL CONDUI RNC RIGID NONMETALLIC CONDUIT

S SWITCHED, REFER TO PLANS FOR CONTROL

WP NEMA 3R ENCLOSURE

US ULTRASONIC V VOLTS (UNLESS NEXT TO COMMUNICATION SYMBOL, THEN VOICE). VA VOLT-AMPERE

CONNECTION TO VIBRATING

DAMP OR WET LOCATIONS

QUIPMENT

RACEWAY APP	LICATION TABLE
OUTDOORS	RACEWAY
EXPOSED OR CONCEALED	GRC
UNDERGROUND	RNC
CONNECTION TO VIBRATING EQUIPMENT	LFMC
INDOORS	RACEWAY
EXPOSED	EMT
EXPOSED THE FOLLOWING LOCATIONS UP TO 20' AFF: LOADING DOCKS, WAREHOUSES, MAINTENANCE AREAS, MECHANICAL ROOMS.	GRC
CONCEALED IN CEILINGS AND WALLS OR PARTITIONS	EMT (MC / AC CABLE WHERE SPECIFICATIONS ALLOW).

REVIEW:



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ISSUE DATE: AUGUST 31, 2023 **REVISIONS:** MARK DATE DESCRIPTION NJ SDA PACKAGE #: NJ SDA #: NJ DOE #: SSP #:



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2325 SOUTH AVENUE

INTERIOR RESTROOM

THE COUNTY OF UNION

FACILITIES **RENOVATIONS AT: UNION COUNTY** PARKS -PHIL RIZZUTTO

**PARK** 8 NORTH AVE

ELIZABETH, NEW JERSEY 07208

**SPECIFICATIONS** 

**AND SYMBOL** 

CITY OF ELIZABETH UNION COUNTY SHEET NAME: **ELECTRICAL** 

**LEGEND** SHEET NUMBER:

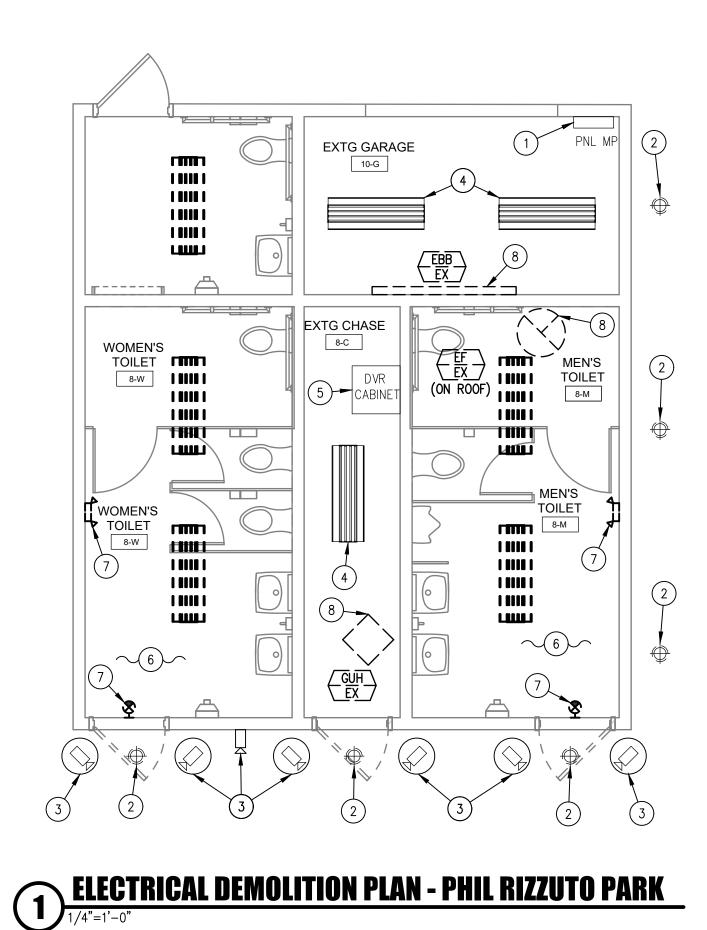
**ELECTRICAL DRAWING LIST** Sheet Title

ELECTRICAL SPECIFICATIONS AND SYMBOL LEGEND

| ELECTRICAL PLAN - PHIL RIZZUTTO PARK

ENGINEERING DRIVEN DESIGN PC 555 Route One South Suite 100 Iselin, New Jersey 08830 (848) 247-6150 www.engineerdriven.com Project # 22-0080

> Jeffrey N. Beeden Professional Engineer NJ License 24GE04746800



# **DEMOLITION PLAN GENERAL NOTES:**

- FOR ALL ITEMS DESIGNATED TO BE REMOVED. REMOVE THE BRANCH CIRCUIT, ASSOCIATED OBSOLETE WIRING, ANY SUPPORTS, CONTROLS, ETC FOR OBSOLETE ITEMS. UNLESS NOTED OTHERWISE.
- 2. PATCH EXISTING GENERAL CONSTRUCTION TO REMAIN TO MATCH THE EXISTING ADJACENT CONSTRUCTION FOR ALL ITEMS DESIGNATED TO BE REMOVED.
- 3. REMOVE ALL ITEMS FROM PREMISES DAILY AND KEEP CONSTRUCTION SITE BROOM
- 4. UTILIZE EXISTING ELECTRICAL POWER FOR CONSTRUCTION POWER. COORDINATE DEMOLITION TO PROVIDE GFCI RECEPTACLE EVERY 400 SQUARE FEED DURING CONSTRUCTION. IF CONSTRUCTION POWER CAN NOT BE COORDINATED WITH DEMOLITION, PROVIDE TEMPORARY POWER FOR CONSTRUCTION ACTIVITIES.
- 5. PROVIDE TEMPORARY LIGHTING THROUGHOUT CONSTRUCTION.
- 6. ENSURE DEMOLITION DOES NOT AFFECT ADJACENT SPACES. THE ADJACENT SPACES WILL REMAIN OCCUPIED THROUGHOUT CONSTRUCTION.
- 8. TEMPORARILY REMOVE ALL ELECTRICAL ITEMS IN CEILING AS REQUIRED TO ACCOMMODATE SCOPE OF WORK. REINSTALL UPON COMPLETION OF WORK. COORDINATE WITH MECHANICAL AND PLUMBING CONTRACTOR.

# **DEMOLITION PLAN KEYED NOTES:**

- 1) EXISTING PANELBOARD TO REMAIN.
- (2) EXISTING EXTERIOR LIGHTING TO REMAIN.
- (5) EXISTING DVR CABINET TO REMAIN.
- (6) REMOVE EXISTING LIGHTING FIXTURES, AND LIGHTING CONTROLS. MAINTAIN ASSOCIATED BRANCH CIRCUITRY. REFER TO 2/E21 FOR MORE INFORMATION.
- (7) REMOVE EXISTING EXIT SIGNS, AND EMERGENCY LIGHTING UNITS. MAINTAIN
- EQUIPMENT WITH MECHANICAL CONTRACTOR.

LIGHTING FIXTURE SCHEDULE  GENERAL NOTES: 3,4								
TAG/SYMBOL	MAKE	BASIS OF DESIGN MODEL	DESCRIPTION	VOLTAGE	WATTS	LUMENS	CRI/ TEMP.	NOTES
A	CURRENT	PVNT-4-4-35-35K8-D01-UNV-TR	SURFACE MOUNTED VANDAL RESISTANT LINEAR FIXTURE	120V	35	5154	80/3500K	NOTES -
<b>⊗</b>	LITHONIA	LV-S-W-Q-R-120/277-ELN-SD	VANDAL RESISTANT EXIT SIGN WITH INTEGRAL BATTERY PACK	120V	3.3	N/A	N/A	NOTE 1
₩	DUALLITE	EV-2-D-I-VRS	WALL MOUNTED EMERGENCY LIGHTING UNIT WITH VANDAL RESISTANT SHIELD VRS	120V	1	125	70/5000K	NOTE 2

LIGHTING FIXTURE SCHEDULE NOTES: 1. PROVIDE EXIT SIGN WITH ILLUMINATED FACES BASED ON SHADED QUADRANTS. PROVIDE ARROWS AS REQUIRED. INTEGRAL BATTERY SHALL PROVIDE FOR AT LEAST 90 MINUTE ILLUMINATION UPON FAILURE OF POWER. PROVIDE WALL-MOUNTED EMERGENCY LIGHTING UNIT WITH INTEGRAL BATTERY THAT SHALL PROVIDE FOR AT LEAST 90 MINUTE ILLUMINATION UPON FAILURE OF POWER. PROVIDE ALL NECESSARY MOUNTING HARDWARE, COMPONENTS, AND LED DRIVERS. 4. PROJECT TO INCLUDE MULTIPLE CEILING AND TILE TYPES. COORDINATE FIXTURE MOUNTING WITH CEILING SHOP DRAWINGS.

TAG -	BASIS OF DESIGN		BASIS OF DESIGN DESCRIPTION		SENSOR	VOLT.	NOTES
140	MAKE	MODEL	DESCRIPTION	SLNSON	VOL1.	NOILS	
Sos	NX	LHMTS SERIES	LINE VOLTAGE DUAL TECHNOLOGY OCCUPANCY WALL SWITCH/SENSOR	PIR/US	120/ 277V	2	
(OS)	NX	NXSMDT- OMNI SERIES	LOW VOLTAGE DUAL TECHNOLOGY OCCUPANCY CEILING SENSOR	PIR/US	24V	1,4	
·					GENERAL	NOTES: 1,3	

PROVIDE ALL LIGHTING CONTROL SWITCHES AND SENSORS WITH WHITE FINISH.

4. PROVIDE CAT6 WIRING FROM SENSORS TO POWER PACKS AS REQUIRED.

- (3) EXTERIOR CCTV CAMERAS AND SECURITY CAMERAS TO REMAIN.
- (4) EXISTING LIGHTING FIXTURE, AND LIGHTING CONTROLS TO REMAIN.

- ASSOCIATED BRANCH CIRCUITRY. REFER TO 2/E21 FOR MORE INFORMATION
- 8 REMOVE EXISTING ELECTRICAL EQUIPMENT AND WIRING ASSOCIATED WITH MECHANICAL EQUIPMENT TO BE REMOVED. COORDINATE REMOVAL OF

Interi	or Lighting Compl	iance Cer	шса	ie	
Project Information					
Energy Code:	90.1 (2019) Standard				
Project Title:	22-0080 Phil Rizzuto Park				
Project Type:	Alteration				
Construction Site:	Owner/Agent:	Designer/0	Contractor:		
Allowed Interior Lighting Po	ower				
	Α	В	С		D
Area Category		Floor Area Allo (ft2) Watt			Allow Wat
1-Common Space Types:Restroor	ms	365	0.63		23
		Total	Allowed Watt	ts =	23
Proposed Interior Lighting F	Power	_		_	
Fixture ID : Description /	A Lamp / Wattage Per Lamp / Ballast	B Lamps/	C # of	D Fixture	(C
	Lamp / Wattage / Cr Lamp / Dallast	Fixture	Fixture	Watt.	
Common Space Types: Restro	ooms (365 sq.ft.)		_		
LED: A: Other:		1T	otal Proposed	35   Watts =	
Interior Lighting PASSES			otai i ropossa		
Interior Lighting Complianc	e				
Statement Compliance Statement: The property	osed interior lighting alteration project represente	ed in this document is cons	istent with the	!	
systems have been designed to n	other calculations submitted with this permit appet the 90.1 (2019) Standard requirements in Cquirements listed in the Inspection Checklist.			o comply	

**ELECTRICAL PLAN GENERAL NOTES:** 

BRANCH CIRCUITRY AS REQUIRED.

1. ALL POWER IN SPACE SHALL BE DERIVED FROM PANELBOARD MP UNLESS OTHERWISE

2. PROVIDE BRANCH CIRCUITRY TO ALL EMERGENCY EXIT SIGNS FROM ADJACENT LIGHTING

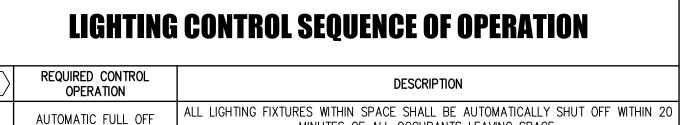
EMERGENCY LIGHTING UNITS TO MAINTAINED BRANCH CIRCUITRY. MODIFY AND EXTEND

3. CONNECT REPLACEMENT LIGHTING FIXTURES, LIGHTING CONTROLS, EXIT SIGNS AND

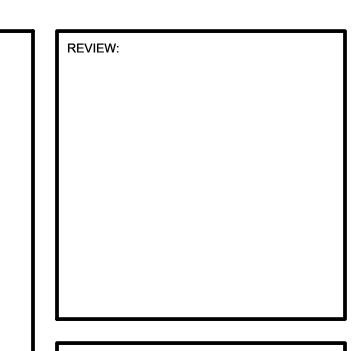
Project Title: 22-0080 Phil Rizzuto Park Report date: 03/16/23 Page 2 of 7 Data filename:

# **ELECTRICAL PLAN KEYED NOTES:**

- 1) PROVIDE POWER FOR CARBON MONOXIDE ALARM. REFER TO E01 FOR MORE
- 2) PROVIDE A 20A/1P CIRCUIT BREAKER IN EXISTING SPACE PANELBOARD TO SERVE CONDENSING FURNACE. PROVIDE 2#12,#12G IN 3/4" CONDUIT FROM CIRCUIT BREAKER TO CONDENSING FURNACE. COORDINATE EXACT REQUIREMENTS WITH MECHANICAL CONTRACTOR.
- (3) PROVIDE A 20A/1P CIRCUIT BREAKER IN EXISTING SPACE PANELBOARD TO SERVE BATHROOM EXHAUST FAN. PROVIDE 2#12,#12G IN 3/4" CONDUIT FROM CIRCUIT BREAKER TO EXHAUST FAN. COORDINATE EXACT REQUIREMENTS WITH MECHANICAL CONTRACTOR.
- 4 MOTORIZED DAMPER SHALL BE CONTROLLED BY ADJACENT MECHANICAL EQUIPMENT. PROVIDE WIRING FROM UNIT TO MOTORIZED DAMPER. COORDINATE EXACT REQUIREMENTS WITH MECHANICAL CONTRACTOR.
- (5) PROVIDE A 20A/1P CIRCUIT BREAKER FOR EACH BATHROOM HAND DRYER IN EXISTING SPACE PANELBOARD. PROVIDE 2#12,#12G IN 3/4" CONDUIT FROM CIRCUIT BREAKER TO HAND DRYER. COORDINATE EXACT REQUIREMENTS WITH PLUMBING CONTRACTOR. PROVIDE LOCKING MECHANISM FOR CIRCUIT BREAKER.
- 6 PROVIDE POWER AND WIRING FOR AUTOMATIC FAUCET OR FLUSHOMETER FIXTURES. COORDINATE EXACT REQUIREMENTS WITH PLUMBING CONTRACTOR. REFER TO E01 FOR MORE INFORMATION.



MINUTES OF ALL OCCUPANTS LEAVING SPACE.





JEANNE PERANTONI, AIA

ARCHITECT

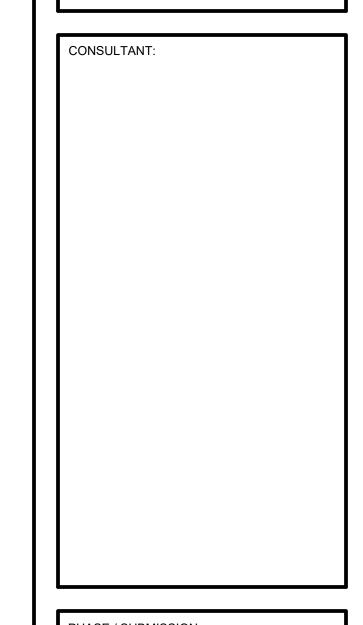
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PA: RA407583

MARCUS M. ROSENAU, AIA

NJ:21AI010452700
NY: 038939
PA: RA407584



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THE COUNTY OF UNION

2325 SOUTH AVENUE

INTERIOR RESTROOM **FACILITIES** 

RENOVATIONS AT: PARKS -

> PARK 8 NORTH AVE

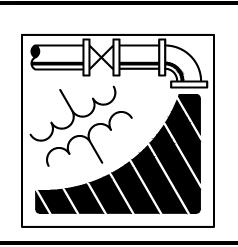
ELIZABETH, NEW JERSEY 07208

CITY OF ELIZABETH UNION COUNTY

SHEET NAME:

**ELECTRICAL PLAN** -PHIL RIZZUTTO PARK

SHEET NUMBER:



#### **ENGINEERING DRIVEN DESIGN PC** 555 Route One South Suite 100 Iselin, New Jersey 08830 (848) 247-6150 www.engineerdriven.com

Project # 22-0080

Jeffrey N. Beeden



# THE COUNTY OF UNION

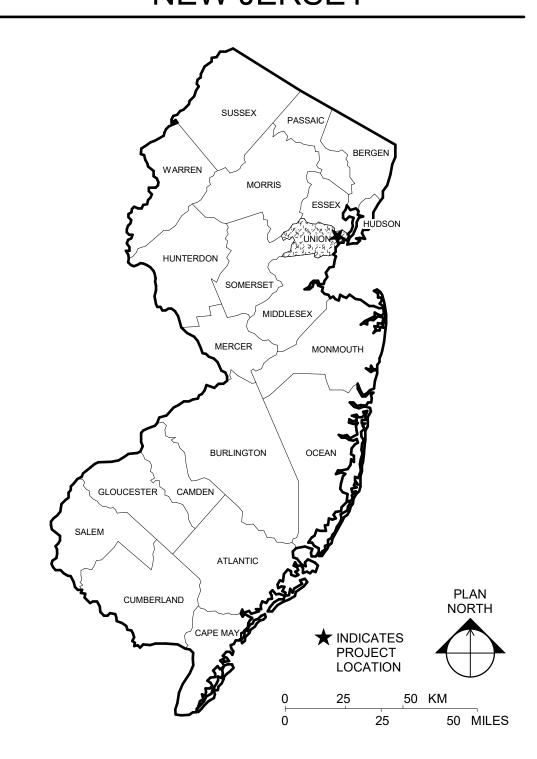
2325 SOUTH AVENUE, SCOTCH PLAINS, NEW JERSEY 07076

# INTERIOR RESTROOM FACILITIES RENOVATIONS AT:

# UNION COUNTY PARKS - MATTANO PARK

360-484 5TH AVE ELIZABETH, NEW JERSEY 07202 CITY OF ELIZABETH - UNION COUNTY - NEW JERSEY

# **NEW JERSEY**



# PROJECT LOCATION



# 1. GENERAL

A. PERFORM WORK IN STRICT ACCORDANCE WITH CONTRACT REQUIREMENTS.

B. PERFORM WORK IN COMPLIANCE WITH GOVERNING LAWS, CODES, SUB-

C. PERFORM WORK IN A FIRST CLASS WORKMANLIKE MANNER.

CODES, ORDINANCES, AND REGULATIONS.

- D. PROVIDE WORK PER REFERENCE, NOTE, DETAIL, ITEMIZATION, AND
- E. PROVIDE WORK FOR COMPLETE, OPERATIONAL, AND FULLY FUNCTIONING SYSTEMS AND ASSEMBLIES. THIS INCLUDES, BUT IS NOT LIMITED TO, LABOR, MATERIALS, EQUIPMENT, TRANSPORTATION, AND CONNECTIONS.
- F. FOLLOW MANUFACTURER'S LATEST PRESCRIBED WRITTEN INSTRUCTIONS
- G. DRAWINGS AND SPECIFICATIONS ARE COMPLIMENTARY AND INTEGRAL
- PARTS OF THE CONTRACT DOCUMENTS. H. IN THE CASE OF A CONFLICT WITHIN THE CONTRACT DOCUMENTS, THE
- GREATER COST SHALL TAKE PRECEDENCE. I. NOTIFY ARCHITECT IN WRITING OF DISCREPANCIES, OMISSIONS, AND CONFLICTS FOR CLARIFICATION PRIOR TO COMMENCEMENT OF WORK.
- J. DO NOT PROCEED WITH WORK UNDER CLARIFICATION REVIEW UNTIL WRITTEN DETERMINATION IS ISSUED BY THE ARCHITECT. WORK THAT PROCEEDS WITHOUT CLARIFICATION MAY BE DEEMED NON-CONFORMING
- K. REMOVE, REPAIR, AND REPLACE NON-CONFORMING WORK TO THE ARCHITECT'S APPROVAL AT THE CONTRACTOR'S EXPENSE.
- L. ARRANGE WORK TO AGREE WITH ACCOMPLISHMENT OF WORK IN
- COORDINATION WITH OTHER TRADES AND OWNER'S OPERATIONS. M. NOTES AND KEYNOTES ARE TYPICAL FOR SIMILAR AND LIKE CONDITIONS.
- N. ABBREVIATIONS ARE THOSE IN COMMON USE UNLESS NOTED OTHERWISE.
- 2. FIELD VERIFICATION
- A. VISIT SITE PRIOR TO BIDDING TO REVIEW AND CONFIRM SCOPE OF WORK AND SITE LOGISTICS.
- B. FIELD VERIFY EXISTING CONDITIONS, DIMENSIONS, AND EXTENT OF WORK PRIOR TO COMMENCEMENT OF SAID WORK.

# 3. PERMITS AND INSPECTIONS

- A. OBTAIN BUILDING PERMITS AND APPROVALS.
- B. PROVIDE COPY OF BUILDING PERMIT TO ARCHITECT AND OWNER PRIOR TO COMMENCEMENT OF WORK.
- C. COORDINATE INSPECTIONS IN A TIMELY MANNER.

# . PROTECTION OF WORK

- A. PROTECT IN-PLACE CONSTRUCTION DURING THE COURSE OF THE WORK. IN-PLACE MATERIALS AND SURFACES SHALL BE LEFT AS THEY APPEARED PRIOR TO COMMENCEMENT OF THE WORK.
- B. PERFORM WORK SO THAT MINIMAL DAMAGE TO IN-PLACE CONSTRUCTION IS
- C. REPAIR DAMAGES CAUSED DURING THE COURSE OF THE WORK TO THE ARCHITECT'S APPROVAL AT THE CONTRACTOR'S EXPENSE.

# 5. SAFETY

- A. SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- B. INITIATE, MAINTAIN, SUPERVISE, AND ENFORCE A REASONABLE AND PRUDENT SAFETY PROGRAM INCLUDING, BUT NOT BE LIMITED TO, ISOLATION OF WORK AREAS, PEDESTRIAN PROTECTION, PROMPT REMOVAL OF DEBRIS, AND RESOLUTION OF ENDANGERING CONDITIONS.
- C. PROVIDE AND MAINTAIN TEMPORARY PARTITIONS, ENCLOSURES, AND BARRIERS THROUGHOUT THE COURSE OF CONSTRUCTION.
- D. MAINTAIN EGRESS ACCESS AT ALL TIMES.
- E. PROTECT AND MAINTAIN EXISTING FIRE PROTECTION, FIRE ALARM, AND SMOKE DETECTION SYSTEMS SO THAT THEY REMAIN FULLY OPERATIONAL DURING THE COURSE OF THE WORK.
- F. PROTECT AND MAINTAIN EXISTING FIRE RATED ASSEMBLIES.
- G. REPAIR AND RE-ESTABLISH DAMAGED FIRE RATED ASSEMBLIES.

# 6. CUTTING AND PENETRATIONS

- A. COORDINATE LOCATION AND SIZE OF PENETRATIONS, HOLES, AND
- PROVIDE CHASES, HOLES, AND OPENINGS CONSTRUCTED AND CUT TRUE. SQUARE AND OF A PROPER SIZE FOR PROPER INSTALLATION OF THE WORK,

# GENERAL PROJECT NOTES

- 6. CUTTING AND PENETRATIONS (CONTINUED)
- C. IN CASE OF FAILURE TO LEAVE OR CUT SAME IN PROPER PLACE, CUT THEM AFTERWARDS AT CONTRACTOR'S EXPENSE. D. LIMIT CUTTING TO THE LEAST EXTENT NECESSARY TO COMPLETE THE WORK.
- NO EXCESSIVE CUTTING WILL BE PERMITTED. E. PROVIDE FRAMES AND BRACING AT DUCT PENETRATIONS IN WALL, CEILING
- ROOF, AND FLOOR ASSEMBLIES.
- F. PROVIDE AUTOMATIC FIRE DAMPERS AND FIRESTOP ASSEMBLIES AT PENETRATIONS IN FIRE AND SMOKE RATED ASSEMBLIES.
- A. PATCHING INCLUDES, BUT IS NOT LIMITED TO, FILLING, MENDING, REPAIRING, AND REFINISHING MATERIALS, COMPONENTS, AND SURFACES TO MATCH ADJACENT CONSTRUCTION OR PREPARE TO RECEIVE NEW FINISHES.
- B. PATCHING INCLUDES, BUT IS NOT LIMITED TO, MATCHING EXISTING ADJACENT MATERIAL, COLOR, TEXTURE, APPEARANCE, FINISH, COURSING, FIRE RATING, DURABILITY, AND ACOUSTICAL CRITERIA.
- C. PATCH TO MATCH AND ALIGN SURFACES TO AFFORD A FINISHED NEAT APPEARANCE SO THAT THERE IS NO VISUAL EVIDENCE OF PATCHING.
- D. PATCH MATERIALS AND SURFACES IMPACTED BY THE WORK.
- E. PROVIDE RECOMMENDED LEVELING EMULSION TO CORRECT VARIANCE IN ADJACENT FLOOR SURFACES WHERE WALLS ARE REMOVED TO CREATE
- F. REMOVE EXCESSIVE HIGH FINISH OR PROVIDE FILL IN LOW AREA FOR SMOOTH FINISHED SURFACE.
- G. PATCH MATERIALS, COMPONENTS, AND SURFACES TO RESTORE AND MAINTAIN A WEATHER TIGHT BUILDING ENCLOSURE.
- H. CUT AND CAP EXISTING PIPING BELOW GRADE AND BEHIND FINISHED
- I. INFILL DOOR FRAME HINGE MORTISES AND PREPARE FRAMES FOR NEW DOORS AND FINISHES.

# 8. STRUCTURAL MODIFICATIONS

- A. DO NOT MODIFY STRUCTURAL MEMBERS WITHOUT ARCHITECT'S WRITTEN
- B. CONDUCT OPERATIONS IN A MANNER TO PREVENT DAMAGE TO POSSIBLE
- HIDDEN STRUCTURAL ELEMENTS. C. VERIFY EXTENT AND LOCATION OF STRUCTURAL MEMBERS PRIOR TO

DEMOLITION. NOTIFY ARCHITECT IMMEDIATELY IF POTENTIAL QUESTION IS

- D. IF UNCOVERED, PREVIOUSLY HIDDEN STRUCTURAL ELEMENTS ARE TO REMAIN INTACT. CONTACT ARCHITECT IMMEDIATELY FOR CLARIFICATION.
- E. TEMPORARY BRACING AND SHORING IS THE SOLE RESPONSIBILITY OF THE
- F. PROVIDE TEMPORARY BRACING AND SHORING NECESSARY TO COMPLETE CONTRACTUAL SCOPE OF WORK. EACH PRIME CONTRACTOR IS RESPONSIBLE FOR TEMPORARY BRACING AND SHORING NECESSARY TO ACCOMPLISH THEIR WORK

#### 9. UTILITIES AND SANITARY FACILITIES A. VERIFY AND COORDINATE AVAILABLE FACILITIES. LOCATIONS. AND SERVICE CONNECTIONS WITH UTILITY COMPANIES. ESTABLISH TEMPORARY

- FACILITIES WHEN APPLICABLE. B. PROVIDE TEMPORARY UTILITIES NECESSARY TO PERFORM THE WORK.
- C. NOTIFY ARCHITECT AND OWNER OF PROPOSED SERVICE INTERRUPTIONS A MINIMUM OF 72 HOURS IN ADVANCE OF INTERRUPTION.
- D. LIMIT SERVICE INTERRUPTIONS TO THE SHORTEST DURATION POSSIBLE E. PROVIDE SANITARY FACILITIES FOR CONTRACTOR'S USE. CONTRACTOR'S USE OF BUILDING SANITARY FACILITIES IS NOT PERMITTED.

# 10. LAYOUT

- A. PROVIDE WORK PER WRITTEN DIMENSIONS. DO NOT SCALE THE DRAWINGS. B. EXISTING CONSTRUCTION DIMENSIONS ARE GIVEN FROM FINISHED
- SURFACES UNLESS NOTED OTHERWISE. C. NEW CONSTRUCTION DIMENSIONS ARE GIVEN FROM FACE OF STUD,
- MASONRY, AND CONCRETE UNLESS NOTED OTHERWISE.
- D. CLEAR DIMENSIONS ARE GIVEN FROM FINISHED SURFACES. E. PLANS ARE DIAGRAMMATIC AND SHOW GENERAL ARRANGEMENT AND

AND UNFORESEEN CONDITIONS MAY BE NECESSARY.

- EXTENT OF WORK. F. MODIFICATIONS TO ACTUAL ARRANGEMENT OF WORK TO ADDRESS FIELD
- G. EQUIPMENT PAD SIZES INDICATED ARE APPROXIMATE. COORDINATE ACTUAL DIMENSIONS WITH RESPECTIVE EQUIPMENT MANUFACTURER.

# 10. LAYOUT (CONTINUED)

ABOVE UNLESS NOTED OTHERWISE.

- H. PROVIDE BLOCKING FOR WALL MOUNTED ITEMS, INCLUDING, BUT NOT LIMITED TO, DOOR HARDWARE, VISUAL DISPLAY BOARDS, TOILET COMPARTMENTS, LAVATORY SUPPORTS, GRAB BARS, AND TOILET
- I. PARTITION TYPES ARE CONTINUOUS ABOVE AND BELOW OPENINGS UNLESS NOTED OTHERWISE.
- J. EXTEND NEW WALLS AND PARTITIONS TO THE UNDERSIDE OF THE DECK
- K. PROVIDE FIRE RESISTANCE RATED (FLAME SPREAD) INTERIOR MATERIALS AND FINISHES IN COMPLIANCE WITH THE CURRENT BUILDING CODE.
- L. PROVIDE ACCESS DOORS AND PANELS FOR EQUIPMENT ACCESS. COORDINATE SIZES, LOCATIONS, AND TYPES WITH TRADES AND ARCHITECT.
- M. PROVIDE ACCESS DOORS AND PANELS FOR FIRE DAMPER ACCESS.

### COORDINATE SIZES, LOCATIONS, AND TYPES WITH TRADES AND ARCHITECT. 11. DEMOLITION

- A. PERFORM DEMOLITION WORK NECESSARY TO COMPLETE CONTRACTUAL SCOPE OF WORK. EACH PRIME CONTRACTOR IS RESPONSIBLE FOR
- DEMOLITION NECESSARY TO ACCOMPLISH THEIR WORK. B. REMOVE COMPONENTS IN THEIR ENTIRETY INCLUDING, BUT NOT LIMITED TO ASSOCIATED SUPPORTS, HARDWARE, FASTENERS, MASTIC, AND SEALANT UNLESS NOTED OTHERWISE.
- C. REMOVE ITEMS AND PREPARE AREA TO RECEIVE NEW WORK UNLESS NOTED
- D. REMOVE ITEMS AND PATCH AREA TO MATCH ADJACENT CONSTRUCTION
- UNLESS NOTED OTHERWISE. E. REMOVE FINISHES AND SUBFLOORS DOWN TO SUBSTRATE UNLESS NOTED
- F. REMOVE FLOORING DOWN TO SUBSTRATE. WHERE MULTIPLE FLOORING
- ASSEMBLIES ARE ENCOUNTERED, CONTACT ARCHITECT FOR CLARIFICATION.
- G. REMOVE CEILINGS TO EXPOSE STRUCTURE ABOVE. WHERE MULTIPLE CEILING ARE ENCOUNTERED, CONTACT ARCHITECT FOR CLARIFICATION.
- H. WHERE CONCRETE SLAB IS TO BE REMOVED, REMOVE FLOOR FINISH, BASE, AND CONCRETE SLAB.
- I. WALL REMOVAL INCLUDES WAINSCOT, CHAIR RAIL, TRIM, AND OTHER WALL FINISHES AND OTHER WALL MOUNTED ITEMS. 12. SALVAGE AND DISPOSAL

# A. PROVIDE WASTE AND RECYCLING CONTAINERS UNLESS NOTED OTHERWISE.

C. REMOVE CONSTRUCTION DEBRIS, RUBBISH, AND WASTE MATERIAL TO A

LAWFUL OFF-SITE DISPOSAL OR RECYCLING FACILITY UNLESS NOTED

- B. RECYCLE CONSTRUCTION DEBRIS TO THE GREATEST EXTENT POSSIBLE.
- D. COORDINATE EXTENT, STORAGE, AND REINSTALLATION OF SALVAGED MATERIAL EXTENT WITH OWNER.
- E. REMOVE EXCESS SALVAGED MATERIAL AT THE COMPLETION OF THE PROJECT UNLESS NOTED OTHERWISE.
- A. CLEAN IMPACTED AREAS FREE OF DUST AND DEBRIS ON A REGULAR BASIS DURING THE COURSE OF THE WORK.
- B. CLEAN IMPACTED AREAS FREE OF DUST AND DEBRIS UPON COMPLETION OF WORK. IN-PLACE MATERIALS AND SURFACES SHALL BE LEFT AS THEY APPEARED PRIOR TO COMMENCEMENT OF THE WORK.

# APPLICABLE CODES

### APPLICABLE CONSTRUCTION CODES AND SUBCODES: - INTERNATIONAL BUILDING CODE 2021 (NEW JERSEY EDITION)

- INTERNATIONAL FIRE CODE 2018 REHABILITATION - NEW JERSEY ADMINISTRATIVE CODE 5:23-6 (2021) - NATIONAL STANDARD PLUMBING CODE 2021

- NATIONAL ELECTRICAL CODE (NFPA 70) 2020

- ASHRAE 90.1-2021(COMMERCIAL) - INTERNATIONAL MECHANICAL CODE 2021

INTERNATIONAL FUEL GAS CODE 2021

NOTE: THIS PROJECT CONSTITUTES AN ALTERATION TO THE EXISTING BUILDING AND HAS BEEN DESIGNED FOR AND SHOULD BE REVIEWED UNDER THE

# **CODE SUMMARY**

UNIFORM CONSTUCTION CODE REHABILITATION SUBCODE 5:23 SUB CHAPTER 6.

BARRIER FREE - ICC/ANSI A117.1-2017

**BUILDING CLASSIFICATION:** <u>USE AND OCCUPANCY CLASSIFICATION</u>
• RESTROOM FACILITIES (*TO BE RENOVATED*) = 312: UTILITY & MISC GROUP U STORAGE FACILITIES (TO REMAIN) = 311.3 LOW HAZARD STORAGE GOUP S1

EXISTING BUILDING IS MIXED USE / NON SEPARATED. THE MORE STRINGENT

OCCUPANCY REQUIREMENT WILL BE USED PER CHAPTER 5.

# • 601 - TYPE 2B (NON-COMBUSTABLE / UNPROTECTED)

- EXISTING BUILDING IS UNSPRINKLERED AS ALLOWED BY AREA REQUIREMENTS
- 508.2.4 SEPARATION OF OCCUPANCIES

  NO SEPARATION IS REQUIRED BETEWEN ACCESSORY OCCUPANCIES AND THE MAIN OCCUPANCY.

#### BUILDINGS OR PORTIONS OF BUILDINGS THAT COMPLY WITH THE PROVISIONS OF THIS SECTION SHALL BE CONSIDERED NONSEPARATED OCCUPANCIES. 508.3.2: THE ALLOWABLE BUILDING AREA, HEIGHT, AND NUMBER OF STORIES OF THE BUILDING SHALL BE BASED ON THE MOST RESTRICTIVE ALLOWANCES FOR

- **BUILDING DATA:**
- 504.3 ALLOWABLE BUILDING HEIGHT IN FEET
   ALLOWED:
- 1. S2 = 55'-0" 2. U = not applicable

**OCCUPANCY GROUPS** 

- ACTUAL = < 20'-0" 504.4 - ALLOWABLE BUILDING HEIGHT IN STORIES
- 1. S2 = 3 STORIES 2. U = not applicableACTUAL = 1 STORY
- 1. S2 = 26,000 SF 2. U = 9,000 SF PER COMMENT i.
- ACTUAL = 800 SF
- \*\* FRONTAGE INCREASE NOT INCLUDED / REQUIRED AREA OF RESTROOM RENOVATIONS

  • 800 SF

# FIRE RESISTANCE RATING REQUIREMENTS:

\* X = FIRE SEPARATION DISTANCE IN FEET

TABLES 601 & 602 - CONSTRUCTION TYPE FIRE-RESISTANCE RATING

BUILDING ELEMENT	FIRE RESISTANCE
STRUCTURAL FRAME: INCLUDING COLUMNS, GIRDERS, BEAMS &TRUSSES	N/A
NONBEARING PARTITIONS & BEARING WALLS (EXT):  X* < 10  10 < X* < 30  X* > 30	1 HOURS 0 HOURS 0 HOURS
NONBEARING PARTITIONS & BEARING WALLS (INT):	N/A
ROOF CONSTRUCTION: INCLUDING SUPPORTING BEAMS AND JOISTS	N/A

# PROJECT TEAM

# OWNER:

UNION COUNTY PARK MAINTENANCE 2325 SOUTH AVE SCOTCH PLAINS, NEW JERSEY 07076 (908) 654-9890

WWW.UCNJ.ORG

**ARCHITECTS** 



WWW.SSPARCHITECTS.COM

PHONE: (908) 725-7800

FAX: (908) 725-7957

ISELIN, NJ 08830

(888) 422-7830

SSP ARCHITECTURAL GROUP

SOMERVILLE, NJ 08876

50 DIVISION STREET, SUITE 503



# MECHANICAL, ELECTRICAL, AND PLUMBING ENGINEER:

555 ROUTE 1 SOUTH, SUITE 100

WWW.ENGINEERDRIVEN.COM



# DRAWING LIST

FINISH PLAN, INTERIOR ELEVATIONS, AND DETAILS

ARCHITECTURAL MATTANO PARK COVER SHEET **DEMO & PROPOSED PLANS** 

**PLUMBING** PLUMBING SPECIFICATIONS AND SYMBOLS PLUMBING PLANS - MATTANO PARK **MECHANICAL** 

MECHANICAL SPECIFICATIONS, SCHEDULES, AND LEGENDS MECHANICAL PLANS - MATTANO PARK **ELECTRICAL** ELECTRICAL SPECIFICATIONS AND SYMBOL LEGEND

ELECTRICAL PLAN - MATTANO PARK

# **EGRESS SUMMARY**

# MEANS OF EGRESS

TOTAL: 9

 TOILET ROOM FACILITIES DO NOT CARRY AN OCCUPANCY LOAD PER NJIBC CHAPTER 10 THERE ARE NO CHANGES TO THE EGRESS COMPONENTS. THERE ARE NO CHANGES TO THE EGRESS OF THE GROUP B AND S1 SECTIONS OF THE BUILDING. THE EXISTING EGRESS PATH FROM THE TOILET FACILITIES WILL

# • OCCUPANCY A, E F-1, M, R, S-1: WITH SPRINKLER SYSTEM - 250'

• EGRESS WIDTH MODIFIER = 0.2"

 OCCUPANCY B: WITH SPRINKLER SYSTEM - 300' IBC 1010 DOORS, GATES AND TURNSTILES • MINIMUM CLEAR DOOR WIDTH SHALL BE 32" (2'-8")

HEIGHT OF DOOR OPENINGS SHALL NOT BE LESS THAN 80" (6'-8")

# PLUMBING FIXTURE SUMMARY

# **GENERAL USE - PARK RESTROOM FACILITIES**

 THIS RESTROOM FACILITY IS PROVIDED FOR PUBLIC USE SERVING THE UNION COUNTY PARKS SYSTEM. THE EXISTING NUMBER OF PLUMBING FIXTURES IS REMAINING **UNCHANGED** THIS PROJECT CONSTITUTES A RENOVATION AND SHOULD BE REVIEWED AS

SUCH. UPGRADES WILL BE MADE FOR BARRIER FREE ACCESSIBILITY.

PHASE / SUBMISSION

ISSUED FOR BID AUGUST 31, 2023

DESCRIPTION

NJ SDA PACKAGE# NJ SDA#: NJ DOE #: SSP#: © SSP ARCHITECTS



2325 SOUTH AVENUE SCOTCH PLAINS, NEW JERSEY 07076 INTERIOR RESTROOM

THE COUNTY OF UNION

FACILITIES

**RENOVATIONS AT:** UNION COUNTY

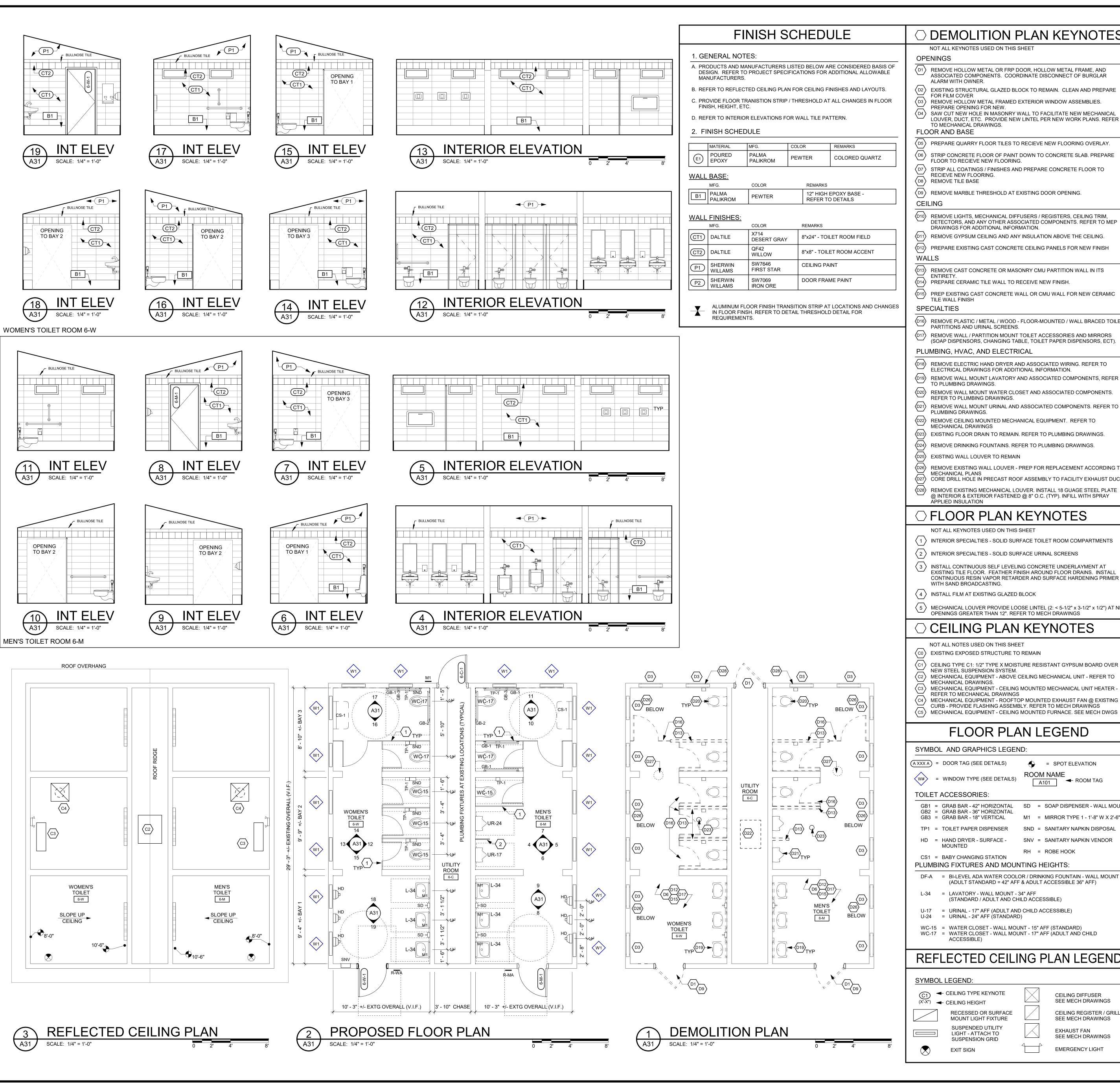
> 360-484 5TH AVE ELIZABETH, NEW JERSEY 07202

MATTANO PARK

CITY OF ELIZABETH UNION COUNTY

MATTANO PARK

**COVER SHEET** 



# ○ DEMOLITION PLAN KEYNOTES

- NOT ALL KEYNOTES USED ON THIS SHEET
- D1 REMOVE HOLLOW METAL OR FRP DOOR, HOLLOW METAL FRAME, AND ASSOCIATED COMPONENTS. COORDINATE DISCONNECT OF BURGLAR
- (D2) EXISTING STRUCTURAL GLAZED BLOCK TO REMAIN. CLEAN AND PREPARE FOR FILM COVER
- (D3) REMOVE HOLLOW METAL FRAMED EXTERIOR WINDOW ASSEMBLIES. PREPARE OPENING FOR NEW. SAW CUT NEW HOLE IN MASONRY WALL TO FACILITATE NEW MECHANICAL LOUVER, DUCT, ETC. PROVIDE NEW LINTEL PER NEW WORK PLANS. REFER
- D5 PREPARE QUARRY FLOOR TILES TO RECIEVE NEW FLOORING OVERLAY.
- FLOOR TO RECIEVE NEW FLOORING.  $\langle extstyle ag{D7} 
  angle$  STRIP ALL COATINGS / FINISHES AND PREPARE CONCRETE FLOOR TO
- RECIEVE NEW FLOORING. (D8) REMOVE TILE BASE
- ⟨D9⟩ REMOVE MARBLE THRESHOLD AT EXISTING DOOR OPENING.
- D10 REMOVE LIGHTS, MECHANICAL DIFFUSERS / REGISTERS, CEILING TRIM, DETECTORS, AND ANY OTHER ASSOCIATED COMPONENTS. REFER TO MEP
- (D11) REMOVE GYPSUM CEILING AND ANY INSULATION ABOVE THE CEILING. (D12) PREPARE EXISTING CAST CONCRETE CEILING PANELS FOR NEW FINISH
- D13 REMOVE CAST CONCRETE OR MASONRY CMU PARTITION WALL IN ITS
- PREPARE CERAMIC TILE WALL TO RECEIVE NEW FINISH.
- D15 PREP EXISTING CAST CONCRETE WALL OR CMU WALL FOR NEW CERAMIC TILE WALL FINISH
- (D16) REMOVE PLASTIC / METAL / WOOD FLOOR-MOUNTED / WALL BRACED TOILET
- (D17) REMOVE WALL / PARTITION MOUNT TOILET ACCESSORIES AND MIRRORS (SOAP DISPENSORS, CHANGING TABLE, TOILET PAPER DISPENSORS, ECT).
- P18 REMOVE ELECTRIC HAND DRYER AND ASSOCIATED WIRING. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
- REMOVE WALL MOUNT LAVATORY AND ASSOCIATED COMPONENTS, REFER TO PLUMBING DRAWINGS.
- REMOVE WALL MOUNT WATER CLOSET AND ASSOCIATED COMPONENTS. REFER TO PLUMBING DRAWINGS. (D21) REMOVE WALL MOUNT URINAL AND ASSOCIATED COMPONENTS. REFER TO
- PLUMBING DRAWINGS. (D22) REMOVE CEILING MOUNTED MECHANICAL EQUIPMENT. REFER TO
- MECHANICAL DRAWINGS  $\langle D23 \rangle$  EXISTING FLOOR DRAIN TO REMAIN. REFER TO PLUMBING DRAWINGS.
- (D24) REMOVE DRINKING FOUNTAINS. REFER TO PLUMBING DRAWINGS.
- (D25) EXISTING WALL LOUVER TO REMAIN
- D26angle REMOVE EXISTING WALL LOUVER PREP FOR REPLACEMENT ACCORDING TO MECHANICAL PLANS (D27) CORE DRILL HOLE IN PRECAST ROOF ASSEMBLY TO FACILITY EXHAUST DUCT
- 28) REMOVE EXISTING MECHANICAL LOUVER. INSTALL 18 GUAGE STEEL PLATE @ INTERIOR & EXTERIOR FASTENED @ 8" O.C. (TYP). INFILL WITH SPRAY

# ○ FLOOR PLAN KEYNOTES

- NOT ALL KEYNOTES USED ON THIS SHEET
- (1) INTERIOR SPECIALTIES SOLID SURFACE TOILET ROOM COMPARTMENTS
- $\langle$  2  $\rangle$  INTERIOR SPECIALTIES SOLID SURFACE URINAL SCREENS
- (3) INSTALL CONTINUOUS SELF LEVELING CONCRETE UNDERLAYMENT AT EXISTING TILE FLOOR. FEATHER FINISH AROUND FLOOR DRAINS. INSTALL CONTINUOUS RESIN VAPOR RETARDER AND SURFACE HARDENING PRIMER WITH SAND BROADCASTING.
- ⟨ 4 ⟩ INSTALL FILM AT EXISTING GLAZED BLOCK
- ( 5 ) MECHANICAL LOUVER PROVIDE LOOSE LINTEL (2: < 5-1/2" x 3-1/2" x 1/2") AT NEW OPENINGS GREATER THAN 12". REFER TO MECH DRAWINGS

# CEILING PLAN KEYNOTES

- NOT ALL NOTES USED ON THIS SHEET
- (CO) EXISTING EXPOSED STRUCTURE TO REMAIN
- $\langle$ C1angle CEILING TYPE C1: 1/2" TYPE X MOISTURE RESISTANT GYPSUM BOARD OVER
- NEW STEEL SUSPENSION SYSTEM. C2》 MECHANICAL EQUIPMENT - ABOVE CEILING MECHANICAL UNIT - REFER TO
- MECHANICAL EQUIPMENT CEILING MOUNTED MECHANICAL UNIT HEATER
- REFER TO MECHANICAL DRAWINGS C4 angle MECHANICAL EQUIPMENT - ROOFTOP MOUNTED EXHAUST FAN @ EXISTING CURB - PROVIDE FLASHING ASSEMBLY. REFER TO MECH DRAWINGS

# FLOOR PLAN LEGEND

# SYMBOL AND GRAPHICS LEGEND:

- (A XXX A) = DOOR TAG (SEE DETAILS)= SPOT ELEVATION
- w#> = WINDOW TYPE (SEE DETAILS) A101 ← ROOM TAG

# **TOILET ACCESSORIES:**

- GB1 = GRAB BAR 42" HORIZONTAL SD = SOAP DISPENSER WALL MOUN
- HD = HAND DRYER SURFACE -
- CS1 = BABY CHANGING STATION
- PLUMBING FIXTURES AND MOUNTING HEIGHTS
- (ADULT STANDARD = 42" AFF & ADULT ACCESSIBLE 36" AFF) L-34 = LAVATORY - WALL MOUNT - 34" AFF
- (STANDARD / ADULT AND CHILD ACCESSIBLE)
- U-17 = URINAL 17" AFF (ADULT AND CHILD ACCESSIBLE)
- WC-15 = WATER CLOSET WALL MOUNT 15" AFF (STANDARD)
- WC-17 = WATER CLOSET WALL MOUNT 17" AFF (ADULT AND CHILD ACCESSIBLE)

# REFLECTED CEILING PLAN LEGEND

- CEILING TYPE KEYNOTE RECESSED OR SURFACE MOUNT LIGHT FIXTURE
- USPENDED UTILITY LIGHT - ATTACH TO SUSPENSION GRID
- CEILING REGISTER / GRILL EXHAUST FAN

M1 = MIRROR TYPE 1 - 1'-8" W X 2'-6"

SND = SANITARY NAPKIN DISPOSAL

SNV = SANITARY NAPKIN VENDOR

SEE MECH DRAWINGS SEE MECH DRAWINGS EMERGENCY LIGHT

CEILING DIFFUSER SEE MECH DRAWINGS

- GENERAL DEMOLITION NOTES
- 1. REFERENCE: A. REFER TO COVER SHEET FOR CODE SUMMARY AND INFORMATION. REFER
- TO SPECIFICATIONS FOR TEMPORARY FACILITIES NOTES. B. OVERHEAD LINES ARE HIDDEN FOR CLARITY. REFER TO REFLECTED CEILING
- PLANS FOR ADDITIONAL INFORMATION. C. REFER TO ARCHITECTURAL, PLUMBING, MECHANICAL, AND ELECTRICAL
- DRAWINGS FOR FULL EXTENT OF DEMOLITION SCOPE. D. COORDINATE SIZE AND LOCATION OF DEMOLITION WORK WITH
- ARCHITECTURAL AND PLUMBING/MECHANICAL/ELECTRICAL DRAWINGS.
- 2. GENERAL A. VERIFY EXISTING CONDITIONS PRIOR TO DEMOLITION.
- B. PROTECT IN-PLACE ASSEMBLIES FOR DURATION OF CONSTRUCTION.
- C. PERFORM DEMOLITION WORK NECESSARY TO COMPLETE CONTRACTUAL SCOPE OF WORK.
- D. DASHED LINES GENERALLY INDICATE EXTENTS OF DEMOLITION, BUT ARE NOT INTENDED TO BE ALL-INCLUSIVE OF EVERY DEMOLITION INSTANCE.
- E. NOTES ARE TYPICAL FOR SIMILAR AND LIKE CONDITIONS.
- F. NOT ALL DEMOLITION PLAN KEYNOTES MAY BE USED ON EACH SHEET
- G. REMOVE ITEMS IN THEIR ENTIRETY INCLUDING, BUT NOT LIMITED TO, ASSOCIATED SUPPORTS, HARDWARE, FASTENERS, MASTIC, AND SEALANT UNLESS NOTED OTHERWISE.
- H. VERIFY EXTENT AND LOCATION OF BEARING MEMBERS AND WALLS BEFORE DEMOLITION. NOTIFY ARCHITECT IMMEDIATELY IF POTENTIAL QUESTION IS
- TEMPORARY BRACING AND SHORING IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. PROVIDE TEMPORARY BRACING AND SHORING NECESSARY
- PRIOR TO SAW CUTTING CONCRETE SLAB (IF INDICATED ON DRAWING OR REQUIRED BY SCOPE OF WORK) PERFORM A GROUND PENETRATING RADAR (GPR) SCAN OF THE SLAB TO LOCATE ANY UNDERGROUND UTILITIES (PLUMBING LINES, ELECTRICAL CONDUIT, ETC). PROVIDE SKETCH / REPORT
- 3. ASBESTOS:

TO ARCHITECT AND OWNER.

- A. THERE ARE NO KNOWN ASBESTOS CONTAINING MATERIALS (ACM) PRESENT IN THE SPACE. IF ANY PRESUMED ASBESTOS CONTAINING MATERIALS (PACM) ARE ENCOUNTERED DURING THE COURSE OF THE PROJECT, NOTIFY THE ARCHITECT AND THE OWNER IMMEDIATELY. DO NOT DISTURBED MATERIAL. THE OWNER WILL RETAIN AN ENVIRONMENTAL ENGINER /
- PATCHING:

IS INCURRED.

- A. PERFORM WORK SO THAT MINIMAL DAMAGE TO ADJACENT CONSTRUCTION
- B. CLEAN AND PATCH DISTURBED MATERIALS AND SURFACES.

TO COMPLETE CONTRACTUAL SCOPE OF WORK.

C. PATCH MATERIALS AND SURFACES TO MATCH ADJACENT CONSTRUCTION

TESTING COMPANY TO PERFORM SAMPLING AND TESTING.

D. PATCH COMPONENTS AND ASSEMBLIES TO REESTABLISH A WEATHER TIGHT BUILDING ENCLOSURE.

# GENERAL FLOOR PLAN NOTES

### 1. REFERENCE:

- A. REFER TO COVERSHEET FOR CODE INFORMATION, TOILET FIXTURE CALCULATIONS, AND CONSTRUCTION REQUIREMENTS.
- B. REFER TO ARCHITECTURAL, PLUMBING, MECHANICAL, AND ELECTRICAL, DRAWINGS FOR FULL SCOPE AND EXTENT OF WORK.
- C. PATCH MASONRY WALLS. FILL ABANDONED PENETRATIONS TO MATCH ADJACENT CONSTRUCTION AND PREPARE FOR FINISHES AS INDICATED ON
- D. PROTECT IN-PLACE ASSEMBLIES TO REMAIN AND ITEMS DESIGNATED AS SALVAGE ON DEMOLITION DRAWINGS.
- 2. GENERAL
- A. KEY NOTES MAY NOT BE INDICATED AT ALL LOCATIONS BUT ARE TYPICAL FOR SIMILAR CONDITIONS
- B. DIMENSIONS OF CMU ARE NOMINAL AND ARE GIVEN TO THE FACE OF WALL UNLESS NOTED OTHERWISE.
- C. DIMENSIONS OF STUD PARTITIONS ARE GIVEN TO FACE OF STUD UNLESS NOTED OTHERWISE.
- 3. TOILET ROOM NOTES:
- A. ALL ACCESSIBLE TOILET ACCESSORIES AND PLUMBING FIXTURES SHALL MEET ANSI A117.1 - 2009 STANDARDS
- B. ACCESSORIES ASSOCIATED WITH PLUMBING FIXTURES SHALL BE MOUNTED TO THE SAME ACCESSIBLE HEIGHT ASSOCIATED WITH THAT FIXTURE.
- C. ACCESSORIES NOT ASSOCIATED WITH A PLUMBING FIXTURE SHALL BE MOUNTED AT STANDARD HEIGHT UNLESS NOTED OTHERWISE.
- D. ACCESSORIES THAT ARE OPERATED BY SENSORS AND THAT ARE 'HANDS-
- FREE' SHALL BE MOUNTED TO CENTERLINE OF DISPENSOR OR NOZZLE.

E. FLUSH HANDLES SHALL BE LOCATED TO THE OPEN SIDE OF WATER CLOSET

# GENERAL CEILING PLAN NOTES

# . REFERENCE:

- A. REFER TO FINISH PLAN AND INTERIOR ELEVATIONS FOR ROOM FINISH
- 2. GENERAL
- A. FIELD VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION. B. NOTES ARE TYPICAL FOR SIMILAR AND LIKE CONDITIONS.
- C. PLAN KEYNOTES MAY NOT BE INDICATED AT ALL LOCATIONS BUT ARE
- TYPICAL FOR SIMILAR AND LIKE INSTANCES. D. NOT ALL PLAN KEYNOTES OR GRAPHICS MAYBE USED ON THIS SHEET.
- E. NOT ALL CEILING MOUNTED ITEMS MAY BE SHOWN
- F. COORDINATE ACTUAL DUCTWORK CONFIGURATION TO MINIMIZE EXPOSED G. INDICATE SUPPLY GRILLES, RETURN GRILLES, SPRINKLER HEADS, SMOKE DETECTORS, LIGHTS, SPEAKERS, VIDEO, WIRELESS ACCESS POINTS, AND

EXIT SIGNS ON COORDINATION DRAWINGS. FINAL PLACEMENT TO BE

#### APPROVED BY ARCHITECT PRIOR TO INSTALLATION. 3. GENERAL CEILING SCOPE:

- A. PROVIDE ACCESS DOORS AND PANELS FOR EQUIPMENT ACCESS. COORDINATE LOCATIONS WITH ARCHITECT PRIOR TO INSTALLATION.
- B. DO NOT ATTACH NEW CEILING GRID TO RECESSED AND SEMI-RECESSED CEILING MECHANICAL UNITS.
- . PAINT EXPOSED METAL DECK, STRUCTURAL STEEL, STRUCTURE, DUCTWORK, PIPING, SPRINKLER PIPING, CONDUIT, ETC. EXPOSED TO VIEW ABOVE ACT CEILINGS ARE TO BE PAINTED WITH DRY FALL PAINTED FINISH( TYPICAL FOR ALL LOCATIONS WITH EXPOSED OR PARTIALLY EXPOSED STRUCTURE) INCLUDING ABOVE CEILINGS IN CORRIDORS.
- D. PROVIDE FLUSH SEALANT AT CONTROL JOINTS AND PAINT.

# E. PROVIDE EXPANSION / JOINT LINES AT GYPSUM BOARD CEILINGS.

# 4. LAYOUT:

- A. DIMENSIONS ARE TO FINISHED SURFACE UNLESS NOTED OTHERWISE.
- B. INSTALL LIGHT FIXTURES CENTERED ABOVE PLUMBING FIXTURES OR GROUP OF PLUMBING FIXTURES UNLESS NOTED OTHERWISE.
- C. CEILING HEIGHTS ARE FROM FINISH FLOOR UNLESS NOTED OTHERWISE

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JEANNE PERANTONI, AIA NJ: 21A1008943

MARCUS M. ROSENAU, AIA NY: 0380

SCOTT E. MIHALICK, AIA NJ: 21AI01661600

CONSULTANT:

PHASE / SUBMISSION:

ISSUE DATE: AUGUST 31, 2023

ISSUED FOR BID

DESCRIPTION

NJ SDA PACKAGE# NJ SDA #: NJ DOE #:

SSP #: © SSP ARCHITECTS

THE COUNTY OF UNION

SCOTCH PLAINS, NEW JERSEY 07076 INTERIOR RESTROOM

2325 SOUTH AVENUE

**RENOVATIONS AT: UNION COUNTY** 

FACILITIES

MATTANO PARK

360-484 5TH AVE

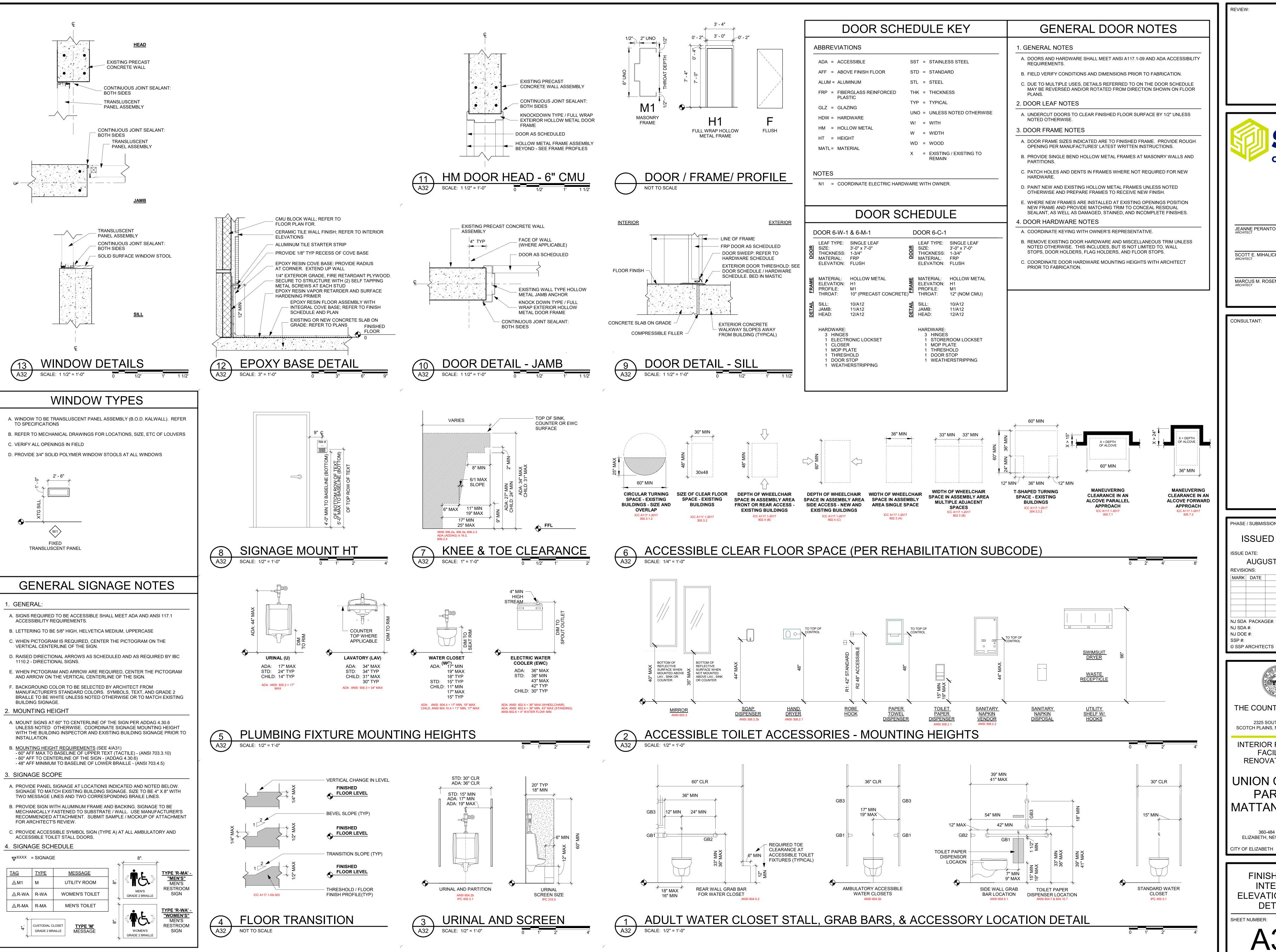
**DEMO & PROPOSED** 

**PLANS** 

ELIZABETH, NEW JERSEY 07202

PARKS -

CITY OF ELIZABETH UNION COUNT



**REVIEW:** 



JEANNE PERANTONI, AIA NJ: 21A1008943t

CONSULTANT:

SCOTT E. MIHALICK, AIA NJ: 21Al01661600 MARCUS M. ROSENAU, AIA NY: 0389

PHASE / SUBMISSION: ISSUED FOR BID

ISSUE DATE: AUGUST 31, 2023 DESCRIPTION

**REVISIONS:** 

NJ SDA PACKAGE#: NJ SDA #: NJ DOE #: SSP#:

THE COUNTY OF UNION

2325 SOUTH AVENUE

SCOTCH PLAINS, NEW JERSEY 07076 INTERIOR RESTROOM

**FACILITIES RENOVATIONS AT:** 

**UNION COUNTY** PARKS -MATTANO PARK

360-484 5TH AVE ELIZABETH, NEW JERSEY 07202 CITY OF ELIZABETH UNION COUNT

FINISH PLAN, **INTERIOR ELEVATIONS, AND DETAILS** 

#### SUMMARY

- 1.1. THE SCOPE OF THIS PROJECT IS TO UPGRADE ALL MECHANICAL AND PLUMBING SYSTEMS, EQUIPMENT, AND FIXTURES AS WELL AS TO PROVIDE UPGRADES AND MODIFICATIONS TO THE EXISTING ELECTRICAL SYSTEMS FOR RESTROOMS IN UNION COUNTY PUBLIC PARKS.
- 1.2. THE BUILDING IS A SEISMIC DESIGN CATEGORY OF B, WHICH MEANS THAT PLUMBING SYSTEMS DO NOT REQUIRE SEISMIC BRACING.

#### 2. DEFINITIONS

- 2.1. FURNISH: TO PURCHASE AND DELIVER AN ITEM TO THE STAGING AREA COMPLETE WITH ALL REQUIRED APPURTENANCES.
- 2.2. INSTALL: TO MOVE THE ITEM FROM THE STAGING AREA AND FASTEN TO THE STRUCTURE. 2.3. PROVIDE: TO FURNISH AND INSTALL.

#### 3. QUALITY ASSURANCE

- 3.1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH INDUSTRY STANDARDS AND SHALL CONFORM TO THE NEW JERSEY UNIFORM CONSTRUCTION CODE. THE CURRENTLY ADOPTED SUBCODES WITH AMENDMENTS ARE AS FOLLOWS:
- 3.1.1. INTERNATIONAL BUILDING CODE 2021 3.1.2. NATIONAL STANDARD PLUMBING CODE 2021
- 3.1.3. INTERNATIONAL MECHANICAL CODE 2021
- 3.1.4. INTERNATIONAL FUEL GAS CODE 2021 3.1.5. NATIONAL ELECTRIC CODE 2020
- 3.1.6. ASHRAE 90.1-2019 3.1.7. ICC A117.1-2017
- 3.1.8. NFPA 13-2019 (ADOPTED THROUGH IBC 2021) 3.2. WHERE THE CONTRACT DOCUMENTS INDICATE MORE STRINGENT REQUIREMENTS THAN THE PRECEDING CODES AND ORDINANCES, THE CONTRACT DOCUMENTS SHALL TAKE PRECEDENCE. PRIOR TO ORDERING AND/OR INSTALLING ANY PORTION OF THE WORK WHICH APPEARS TO BE IN CONFLICT THE WORK SHALL BE BROUGHT TO THE ARCHITECT/ENGINEER'S ATTENTION
- FOR DIRECTIONS AS TO WHAT IS PROVIDED. 3.3. IN THE EVENT OF A CONFLICT WITH CODES, THE MORE STRINGENT REQUIREMENTS SHALL APPLY.

#### 4. FIRESTOPPING

4.1. ALL PENETRATIONS THROUGH FIRE-RATED ASSEMBLIES SHALL HAVE APPROPRIATE INTUMESCENT MATERIAL FIRE STOPPING INSTALLED. ALL OPENINGS SHALL BE CAULKED AND SEALED WITH SSS INTUMESCENT FIRESTOP SEALANT AS MANUFACTURED BY SPECIFIED TECHNOLOGIES, INC.

5.1. ALL ROOF PENETRATIONS SHALL BE WEATHERPROOF IN ALL RESPECTS. ANY WORK DONE ON THE ROOF SHALL BE PERFORMED BY A CONTRACTOR CERTIFIED BY THE ROOF MANUFACTURER TO MAINTAIN THE EXISTING ROOF

#### 6. CONTRACT DRAWINGS AND SPECIFICATIONS:

- 6.1. CONTRACT DRAWINGS ARE GENERALLY DIAGRAMMATI AND CONVEY THE SCOPE OF WORK AND GENERAL ARRANGEMENT OF APPARATUS AND EQUIPMENT. TH DRAWINGS DO NOT INTEND TO SHOW EVERY OFFSET AND ACCESSORY REQUIRED, NOR EVERY STRUCTURAL DIFFICULTY THAT MAY BE ENCOUNTERED. 6.2. THE LOCATIONS OF ALL ITEMS SHOWN ON THE
- DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS THAT RE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE ONLY. THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS MUST BE DETERMINED AT THE PROJECT SITE AND SHALL FOLLOW DRAWINGS IN LAYING OUT WORK AND SHALL CHECK DRAWINGS OF THE OTHER TRADES TO VERIFY SPACES IN WHICH WORK WILL BE INSTALLED. 6.3. MAINTAIN MAXIMUM HEADROOM AND SPACE CONDITIONS
- AT ALL POINTS. 6.4. IF DIRECTED BY THE GENERAL CONTRACTOR, ENGINEER, AND/OR ARCHITECT, THE SUBCONTRACTOR SHALL, WITHOUT EXTRA CHARGE, MAKE REASONABLE MODIFICATIONS IN THE LAYOUT AS NEEDED TO PREVENT CONFLICT WITH OTHER OF OTHER TRADES OR BEFORE
- PROPER EXECUTION OF THE WORK. 6.5. THE SPECIFICATIONS ARE INTENDED ONLY TO COMPLEMENT THE DRAWINGS; HOWEVER, WORK DETAILED AND/OR NOTED ONLY ON THE DRAWINGS OR WORK DESCRIBED ONLY IN THE SPECIFICATIONS SHALL ALL BE CONSIDERED AS PART OF THE SCOPE OF WORK.

# 7. OBTAINING INFORMATION

7.1. OBTAIN FROM THE MANUFACTURER THE PROPER METHOD OF INSTALLATION AND CONNECTION OF THE EQUIPMENT THAT IS TO BE FURNISHED AND INSTALLED OBTAIN ALL INFORMATION THAT IS NECESSARY TO FACILITATE THE WORK AND TO COMPLETE THE PROJECT.

# 8. ELECTRICAL EQUIPMENT

- 8.1. ELECTRICAL COMPONENTS OF PLUMBING EQUIPMENT AND SYSTEMS. SHALL BE PROVIDED UNDER THE RELATED SECTION OF DIVISION 22.
- 8.2. ALL ELECTRICAL EQUIPMENT INSTALLED IN CONCEALED SPACES SHALL BE PROVIDED WITH A HARD-WIRED ELECTRICAL CONNECTION. PLUG-TYPE DISCONNECTS SHALL NOT BE ALLOWED IN CONCEALED SPACES. EQUIPMENT PROVIDED WITH PLUG-IN CORDS SHALL NOT HAVE THEIR CORDS MODIFIED.

# 9. OPENINGS IN EXTERIOR WALLS OR ROOF

9.1. OPENINGS IN EXTERIOR WALLS OR ROOF SHALL BE KEPT PROPERLY PLUGGED AND CAULKED AT ALL TIMES, EXCEPT WHEN BEING WORKED ON TO PRECLUDE THE POSSIBILITY OF FLOODING DUE TO STORM OR OTHER AFTER COMPLETION OF WORK, OPENINGS SHALL BE PERMANENTLY SEALED AND CAULKED IN A MANNER APPROVED BY THE ARCHITECT.

# 10. COOPERATION WITH OTHER TRADES

- 10.1. GIVE FULL COOPERATION TO OTHER TRADES AND FURNISH IN WRITING TO THE ARCHITECT ANY INFORMATION NECESSARY TO PERMIT THE WORK OF ALL TRADES TO BE INSTALLED SATISFACTORILY AND WITH THE LEAST POSSIBLE INTERFERENCE OR DELAY
- 10.2. FINAL LOCATION OF PLUMBING FIXTURES AND OTHER PIECES OF EQUIPMENT, WHETHER OR NOT FURNISHED BY THE PLUMBING SUBCONTRACTOR, REQUIRING PLUMBING SERVICES SHALL BE COORDINATED WITH THE ARCHITECTURAL PLANS. ADDITIONAL OFFSETS, FITTINGS, ETC., SHALL BE PROVIDED AS NEEDED TO MEET THIS REQUIREMENT AT NO EXTRA COST TO THE OWNER.
- 10.3. IF DISCREPANCIES EXIST IN THE SCOPE OF WORK AS TO WHAT TRADE PROVIDES ITEMS THEY SHALL BE REPORTED TO THE ARCHITECT/ENGINEER PRIOR TO SIGNING CONTRACT. IF DISCREPANCIES ARE NOT REPORTED, THE PLUMBING SUBCONTRACTOR SHALL FURNISH SUCH ITEMS AS NEEDED FOR A COMPLETE AND OPERABLE SYSTEM.
- 10.4. DISTRIBUTION SYSTEMS WHICH REQUIRE PITCH OR SLOPE SUCH AS PLUMBING DRAINS, STEAM AND CONDENSATE PIPING SHALL HAVE THE RIGHT OF WAY OVER THOSE WHICH DO NOT.
- 10.5. IN ALL SPACES, PRIOR TO INSTALLATION OF VISIBLE MATERIAL AND EQUIPMENT, INCLUDING ACCESS PANELS, REVIEW ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND WHERE NOT DEFINITELY INDICATED. REQUEST INFORMATION FROM ARCHITECT.
- 10.6. WHERE PLUMBING WORK SHALL INTERFERE WITH THE WORK OF OTHER TRADES, ASSIST IN WORKING OUT THE SPACE CONDITIONS TO MAKE SATISFACTORY ADJUSTMENTS BEFORE INSTALLATION. WITHOUT EXTRA COST TO OWNERS, MAKE REASONABLE MODIFICATIONS TO THE WORK AS REQUIRED BY NORMAL STRUCTURAL INTERFERENCES. PAY THE GENERAL CONTRACTOR FOR ADDITIONAL OPENINGS, OR RELOCATING AND/OR ENLARGING EXISTING OPENING THROUGH CONCRETE FLOORS, WALLS, BEAMS AND ROOF REQUIRED FOR ANY

WORK WHICH WAS NOT PROPERLY COORDINATED. ALI PIPING AND ASSOCIATED COMPONENTS TO BE AS TIGHT TO UNDERSIDE OF STRUCTURE AS POSSIBLE. 10.7. WHERE CONFLICTS OR POTENTIAL CONFLICTS EXIST AND ENGINEERING GUIDANCE IS DESIRED, SUBMIT SKETCH OF PROPOSED RESOLUTION TO ARCHITECT AND ENGINEER

# 11. EXISTING CONDITIONS:

11.1. EXISTING PIPING, EQUIPMENT, ETC. AS SHOWN ON PLAN, IS GENERALLY DIAGRAMMATIC 11.2. EXISTING LAYOUT SHOWN IS BASED ON A COMBINATION

FOR REVIEW AND APPROVAL.

EXISTING DRAWINGS. 11.3. CONTRACTOR IS TO VERIFY EXISTING CONDITIONS PRIOR TO BEGINNING WORK

OF FIELD OBSERVATION AND, WHERE AVAILABLE,

11.4. CONTRACT DRAWINGS MAKE THE ASSUMPTION THAT ALL

- EXISTING PIPING, EQUIPMENT, WET COLUMNS, ETC. ARE FULLY FUNCTIONAL AND CAN BE REUSED FOR THIS PROJECT, WHERE REQUIRED. 11.4.1. WHERE EXISTING PIPING EQUIPMENT, ETC. IS TO BE REUSED, CONTRACTOR IS TO VERIFY ITS
- FUNCTIONALITY PRIOR TO MAKING FINAL CONNECTIONS. 11.4.2. NOTIFY ENGINEER AND ARCHITECT IF EXISTING
- PIPING, EQUIPMENT, ETC. CAN NOT BE USED AS PART OF THIS PROJECT. 11.5. EXISTING SANITARY PIPING
- 11.5.1. CONTRACTOR IS TO CLEAN, JET FLUSH, AND SCOPE EXISTING TO REMAIN SANITARY PIPING WITHIN THE AREA OF WORK. PROVIDE REPORT TO ENGINEER AND ARCHITECT WITH PIPING CONDITION.
- 11.5.2. CONTRACTOR TO VERIFY EXISTING LOCATION. INVERT, DIRECTION OF FLOW, ETC. PRIOR TO INSTALLATION OF NEW SANITARY PIPING. 11.6. IF NOT ALREADY INDICATED ON THE CONTRACT DRAWINGS, EXISTING ABOVE GRADE PVC/ABS SANITARY
- VENT, OR STORM WATER PIPING LOCATED IN A RETURN AIR PLENUM WITHIN THE SCOPE OF WORK IS TO BE FIRE WRAPPED OR REPLACED WITH CAST IRON OR COPPER DWV PIPING. 11.3. NOTIFY ENGINEER AND ARCHITECT IF EXISTING

CONDITIONS DIFFER SIGNIFICANTLY FROM THOSE SHOWN

#### ON PLAN, OR IF EXISTING CONDITIONS DO NOT PERMIT PROPOSED PLUMBING PLAN.

12. BIDDER'S REPRESENTATION:

- 12.1. BY THE ACT OF SUBMITTING A BID FOR THE PROPOSED CONTRACT, THE BIDDER REPRESENTS THAT: 12.1.1. THE BIDDER AND ALL SUBCONTRACTORS HAVE CAREFULLY AND THOROUGHLY REVIEWED THE DRAWINGS, SPECIFICATIONS, AND OTHER
- CONSTRUCTION CONTRACT DOCUMENTS. 12.1.2. THE BIDDER INTENDS TO USE CONTRACTORS WHO ARE LICENSED, SKILLED AND EXPERIENCED IN THE TYPE OF CONSTRUCTION REPRESENTED BY THE CONSTRUCTION CONTRACT DOCUMENTS BID UPON. 12.1.3. NEITHER THE BIDDER NOR ANY OF THE BIDDER'S
- EMPLOYEES, AGENTS, INTENDED SUPPLIERS, OR SUBCONTRACTORS HAVE RELIED UPON ANY VERBAL REPRESENTATIONS 12.1.4. THE BID FIGURE IS BASED SOLELY UPON THE CONSTRUCTION CONTRACT DOCUMENTS AND PROPERLY ISSUED WRITTEN ADDENDA AND NO

UPON OTHER WRITTEN REPRESENTATION.

# 13. PROTECTION

13.1. PROTECT ALL WORK AND MATERIAL FROM DAMAGE BY WORK AND WORKMEN, AND ACCEPT LIABILITY FOR ALL DAMAGE THUS CAUSED.

13.2. BE RESPONSIBLE FOR WORK AND EQUIPMENT UNTIL

- FINALLY INSPECTED, TESTED, AND ACCEPTED. PROTECT WORK AGAINST THEFT, INJURY OR DAMAGE: AND CAREFULLY STORE MATERIAL AND EQUIPMENT RECEIVED ON SITE, WHICH IS NOT IMMEDIATELY INSTALLED. 13.3. CLOSE OPEN ENDS OF WORK WITH TEMPORARY COVERS OR PLUGS DURING STORAGE AND CONSTRUCTION TO
- PREVENT ENTRY OF OBSTRUCTING MATERIAL 13.4. ALL OPENINGS IN STORED & INSTALLED PIPING SHALL BE COVERED & SEALED WHEN NOT IN USE TO PREVENT CONTAMINATION FROM DUST & DEBRIS.

# 14. MATERIALS AND WORKMANSHIP

- 14.1. ALL MATERIALS AND APPARATUS REQUIRED FOR THE WORK, EXCEPT AS SPECIFICALLY SPECIFIED OTHERWISE, SHALL BE NEW, OF FIRST-CLASS QUALITY, AND SHALL BE FURNISHED, DELIVERED, ERECTED, CONNECTED AND FINISHED IN EVERY DETAIL, AND SHALL BE SO SELECTED AND ARRANGED AS TO FIT PROPERLY INTO THE BUILDING SPACES. WHERE NO SPECIFIC KIND OR QUALITY OF MATERIAL IS GIVEN, A FIRST-CLASS STANDARD ARTICLE AS APPROVED BY THE ARCHITECT SHALL BE FURNISHED
- 14.2. FURNISH THE SERVICES OF AN EXPERIENCED FOREMAN WHO SHALL BE CONSTANTLY IN CHARGE OF THE INSTALLATION OF THE WORK, TOGETHER WITH ALL SKILLED WORKMEN, FITTERS, METAL WORKERS, WELDER, HELPERS, AND LABOR REQUIRED TO UNLOAD, TRANSFER ERECT, CONNECT, ADJUST, START, OPERATE, AND TEST EACH SYSTEM.
- 14.3. ALL EQUIPMENT AND MATERIALS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED INSTALLATION INSTRUCTIONS AS WELL AS UL LISTING INSTRUCTIONS AND ALL LOCAL, STATE AND NATIONAL CODES.

# 15. ACCESSIBILITY

- 15.1. ASSURE AND BE RESPONSIBLE FOR THE ADEQUACY OF SHAFTS AND CHASES, THE ADEQUATE CLEARANCE IN DOUBLE PARTITIONS AND HUNG CEILINGS FOR THE PROPER INSTALLATION OF THE WORK.
- 15.2. COOPERATE WITH ALL OTHER TRADES WHOSE WORK IS IN THE SAME SPACE. SUCH SPACES AND CLEARANCES SHALL, HOWEVER, BE KEPT TO THE MINIMUM SIZE
- 15.3. LOCATE ALL EQUIPMENT, WHICH MUST BE SERVICED, OPERATED. ADJUSTED OR MAINTAINED IN FULLY ACCESSIBLE POSITIONS. EQUIPMENT SHALL INCLUDE. BUT NOT BE LIMITED TO. VALVES, TRAPS, CLEANOUTS MOTORS, CONTROLLERS, STRAINERS, RPZS, TRAP PRIMERS, WATER HAMMER ARRESTORS, AND DRAINS, REQUIRED FOR BETTER ACCESSIBILITY, FURNISH ACCESS DOORS FOR THIS PURPOSE, MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE TO ALLOW FOR BETTER ACCESSIBILITY, AND THE ENGINEER SHALL APPROVE ANY CHANGE. 15.4. ACCESS PANELS:
- 15.4.1. PROVIDE ACCESS PANELS FOR INSTALLATION IN CONCRETE BLOCK WALLS OR GYPSUM WALLBOARD CEILINGS AND PARTITIONS IN LOCATIONS, WHICH REQUIRE ACCESS FOR SERVICE TO THE ITEMS LOCATED BEHIND THE PERMANENT GYPSUM WALLBOARD OR CONCRETE BLOCK FINISH.

15.4.2. ACCESS PANELS SHALL BE INSTALLED WHERE

PRIMERS, WATER HAMMER ARRESTORS, CLEANOUTS, 15.4.3. PANELS SHALL BE FLUSH, INSULATED, CONTAIN CONTINUOUS STEEL HINGE AND SCREWDRIVER

REQUIRED TO GAIN ACCESS TO VALVES, TRAP

15.4.4. PANELS SHALL BE RATED EQUAL TO THE ASSEMBLY THAT THEY ARE BEING INSTALLED IN. 15.4.5. PANELS SHALL BE UL LISTED.

OPFRATED.

- 15.4.6. ACCESS PANELS LOCATED IN FIRE RATED PARTITIONS SHALL BE FIRE PANELS. THE FRAME AND PANEL ASSEMBLY OF THESE FIRE PANELS SHALL BE MANUFACTURED UNDER THE FACTORY INSPECTION SERVICE OF THE UNDERWRITERS' LABORATORIES, INC., AND SHALL BEAR A LABEL READING: "FRAME AND FIRE PANEL ASSEMBLY, RATING 2 HOURS. (B) TEMPERATURE RISE 30 MINUTES, 250° F. MAXIMUM." RATED PANELS SHALL BE EQUIPPED WITH AUTOMATIC CLOSING
- MECHANISM AND BE SELF-LATCHING. 15.4.7. PANELS SHALL BE PROVIDED WITH SCREWDRIVER OPERATED FLUSH CAM LOCKS. 15.4.8. PANEL SIZE SHALL BE 12 INCHES X 12 INCHES
- EXCEPT FURNISH A LARGER SIZE IF REQUIRED TO SERVICE A PARTICULAR ITEM. 15.4.9. THE EXACT LOCATION AND SIZE OF EACH ACCESS

PANEL SHALL BE REVIEWED WITH, AND APPROVED BY, THE ENGINEER.

### 16. CUTTING AND PATCHING

- 16.1. PROVIDE ALL CUTTING AND PATCHING NECESSARY TO INSTALL THE WORK SPECIFIED IN THIS DIVISION. PATCHING SHALL MATCH ADJACENT SURFACES. AT FLOOR SLABS & WALL OPENINGS TO BE CORED DRILLED OR CUT, CONTRACTOR SHALL FIND AND MARK ON BOTH FACES ALL REINFORCING, REBAR, CONDUITS, UTILITIES, ETC. BY MEANS OF X-RAY, PACH-OMETER OR PROF-OMETER. SUBMIT SKETCH SHOWING LOCATIONS OF ALL FINDINGS AND PROPOSED CUTS OR CORES.
- 16.2. NO STRUCTURAL MEMBERS SHALL BE CUT WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER, AND ALL SUCH CUTTING SHALL BE ACCOMPLISHED IN A MANNER DIRECTED BY THE STRUCTURAL ENGINEER.

# 17. GROUNDING

17.1. ALL COMPONENTS OF PLUMBING PIPING SYSTEMS SHALL BE PROPERLY GROUNDED TO BUILDING GROUND. WHERE GROUND PATH IS INTERRUPTED BY NON-CONDUCTIVE MATERIALS, APPROPRIATE BONDING OR GROUNDING TO BUILDING GROUND SHALL BE PROVIDED.

### 18. DEMOLITION

- 18.1. PRIOR TO SUBMITTING BID. VISIT SITE AND IDENTIFY EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT WORK OF THIS SECTION. DEMOLITION WORK WILL REQUIRE CAREFUL SITE EXAMINATION PRIOR TO
- 18.2. NO COMPENSATION WILL BE GRANTED FOR ADDITIONAL WORK CAUSED BY UNFAMILIARITY WITH SITE CONDITIONS THAT ARE VISIBLE OR READILY CONSTRUED BY EXPERIENCED OBSERVERS.
- 18.3. PRIOR TO COMMENCING DEMOLITION, CONTRACTOR SHALL IDENTIFY WITH OWNER ANY EQUIPMENT TO BE RETURNED TO THE OWNER AFTER DEMOLITION. ALL OTHER DEBRIS SHALL BE DISPOSED OF BY THIS CONTRACTOR IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.
- 18.4. ANY SHUTDOWNS REQUIRED FOR DEMOLITION SHALL BE COORDINATED WITH BUILDING OWNER TO AVOID IMPACT TO OPERATIONS.
- 18.5. DURING DEMOLITION, ANY EQUIPMENT, DUCTWORK, PIPING, ETC. FOUND TO BE ABANDONED SHALL BE DEMOLISHED. EXISTING UNUSED CONNECTIONS TO EXISTING PIPING SHALL BE CUT BACK TO THE MAINS AND CAPPED ACCORDINGLY 18.6. UNDER DEMOLITION, THE FOLLOWING IS, IN BRIEF, THE
- EXTENT OF THE WORK TO BE PERFORMED BY THE PLUMBING CONTRACTOR UNDER THIS CONTRACT. 18.6.1. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISCONNECTION AND REMOVAL OF THE EXISTING PLUMBING EQUIPMENT
- PIPING, VALVES, ETC., IN DESIGNATED CUT & CAP PIPING BACK TO MAINS. 18.6.2. PATCH ALL ROOF AND WALL PENETRATIONS TO MATCH EXISTING. 18.6.3. THIS CONTRACTOR SHALL PROTECT WORK AGAINST
- INJURY OR DAMAGE; AND CAREFULLY STORE MATERIAL AND EQUIPMENT TO BE RELOCATED. 18.6.4. OPEN ENDS OF WORK SHALL BE CLOSED WITH TEMPORARY COVERS OR PLUGS DURING STORAGE AND CONSTRUCTION TO PREVENT ENTRY OF

OBSTRUCTING MATERIAL.

# 19. EXCAVATION AND BACKFILL

- 19.1. WORK UNDER THIS SECTION SHALL COMMENCE ONLY AFTER PROPER BEDDING MATERIAL HAS BEEN PROVIDED, GRADED AND PROPERLY COMPACTED. EXCAVATION SHALL BE KEPT OPEN UNTIL SYSTEM HAS BEEN INSPECTED, TESTED AND APPROVED.
- 19.2. THE PLUMBING CONTRACTOR SHALL OBSERVE ALL EXCAVATION, BACKFILLING AND COMPACTION OF ALL UNDERGROUND PIPING ASSOCIATED WITH WORK UNDER THIS SECTION.

# 20. EQUIPMENT CONNECTIONS:

- 20.1. MAKE ALL FINAL PLUMBING CONNECTIONS TO ALL NEW AS WELL AS EXISTING TO BE RELOCATED FOUIPMENT INCLUDING, BUT NOT LIMITED TO, SUCH EQUIPMENT: 20.1.1. KITCHEN EQUIPMENT 20.1.2. WATER HEATERS
- 20.1.3. TOILET ROOM FIXTURES. 20.2. PROVIDE ALL ROUGH PLUMBING SYSTEMS TO THESE SAME ITEMS OF EQUIPMENT 20.3. REFER TO EQUIPMENT SHOP DRAWINGS AND

# 21. TESTING PIPING SYSTEMS

ANY WORK.

21.1. TEST ALL WORK IN THE PRESENCE OF THE ARCHITECT/ENGINEER AND/OR OWNER, OWNER'S REPRESENTATIVE, AND PLUMBING INSPECTOR AS CALLED FOR IN LOCAL CODES. 21.2. AFTER SOIL, WASTE AND VENT PIPING IS IN PLACE AND

MANUFACTURES REQUIREMENTS FOR FINAL LOCATIONS

OF CONNECTION PRIOR TO LAYING OUT OR INSTALLING

- BEFORE BEING FURRED IN, PLUG LOWER ENDS AND FILL THE SYSTEM SHALL BE LEFT UNDER THESE CONDITIONS AND WATER LEVEL SHALL BE MAINTAINED INTACT FOR A PERIOD OF AT LEAST FOUR HOURS. 21.3. TEST DOMESTIC WATER PIPING AND SERVICE BY APPLYING A HYDROSTATIC PRESSURE OF 125 PSI USING A PUMP FOR THIS PURPOSE. MAKE SURE THAT ALL LINES ARE PROPERLY PLUGGED OR CAPPED AND THAT AIR HAS BEEN VENTED BEFORE APPLYING PRESSURE
- WHICH SHALL REMAIN CONSTANT WITHOUT PUMPING FOR AT LEAST ONE HOUR. 21.4. GAS SYSTEM PIPING SHALL BE TESTED AT A PRESSURE OF 50 PSIG AND PRESSURE SHALL BE HELD FOR TWO HOURS MINIMUM.
- 21.5. THIS CONTRACTOR SHALL FURNISH ALL EQUIPMENT, LABOR AND MATERIALS, REQUIRED FOR THESE TESTS 21.6. ANY LEAKS IN JOINTS OR EVIDENCE OF DEFECTIVE PIPE OR FITTINGS DISCLOSED BY TEST SHALL BE IMMEDIATELY CORRECTED BY REPLACING DEFECTIVE PARTS WITH NEW JOINTS OR CORRECTED MATERIALS NO MAKESHIFT REPAIRS EFFECTED BY CAULKING THREADED PIPE WITH LEAD WOOL, APPLICATION OF WICKING OR PATENTED COMPOUNDS BEING PERMITTED.

PERFORM SMOKE TEST AS REQUIRED BY LOCAL CODE

# 22.PROTECTION AND CLEANING

OR BY THE ARCHITECT/ENGINEER.

- 22.1. EACH SUBCONTRACTOR SHALL BE RESPONSIBLE FOR HIS WORK AND FOUIPMENT UNTIL FINALLY INSPECTED. TEST AND ACCEPTED. CAREFULLY STORE MATERIALS WHICH ARE NOT IMMEDIATELY INSTALLED AFTER DELIVERY ON SITE. CLOSE OPEN ENDS OR WORK WITH TEMPORARY COVERS OR PLUG DURING CONSTRUCTION TO PREVENT
- ENTRY OF OBSTRUCTING MATERIAL. 22.2. EACH SUBCONTRACTOR SHALL PROTECT WORK AND MATERIALS OF OTHER TRADES FROM DAMAGE THAT MIGHT BE CAUSED BY THIS WORK OR WORKMAN AND MAKE GOOD DAMAGE THUS CAUSED. 22.3. THE PREMISES SHALL BE KEPT REASONABLY CLEAN AT
- ALL TIMES, AND RUBBISH SHALL BE REMOVED AS DIRECTED BY THE GENERAL CONTRACTOR. 22.4. UPON COMPLETION OF THIS WORK, THE CONTRACTOR SHALL CLEAN ALL FIXTURES AND EQUIPMENT AND REPLACE DAMAGED PARTS. UPON FAILURE OF THIS CONTRACTOR TO FULFILL THEIR OBLIGATION, THIS WORK

WILL BE TAKEN CARE OF AT THEIR EXPENSE.

# 23. CHLORINATION

- 23.1. EACH WATER PIPING SYSTEM (COLD, HOT, RECIRCULATION, TEPID, ETC.) SHALL BE CLEANED AND DISINFECTED BY THIS CONTRACTOR. CLEANING AND DISINFECTION SHALL BE PERFORMED AFTER ALL PIPES, VALVES, FIXTURES, AND OTHER COMPONENTS OF THE SYSTEM ARE INSTALLED, TESTED AND READY FOR OPERATION.
- 23.2. ALL WATER PIPING SYSTEMS SHALL BE THOROUGHLY FLUSHED WITH CLEAN POTABLE WATER PRIOR TO DISINFECTION TO REMOVE DIRT AND OTHER

#### CONTAMINANTS. 23.3. DISINFECTION SHALL BE DONE USING SODIUM

23.3.1. A SERVICE COCK SHALL BE PROVIDED AND LOCATED AT THE WATER SERVICE ENTRANCE 23.3.2. THE DISINFECTING AGENT SHALL BE INJECTED BY A PROPORTIONING PUMP OR DEVICE THROUGH THE SERVICE COCK SLOWLY AND CONTINUOUSLY AT AN EVEN RATE. DURING DISINFECTION, FLOW OF

HYPOCHLORITE IN THE FOLLOWING MANNER.

- DISINFECTING AGENT INTO MAIN WATER SUPPLY IS NOT PERMITTED. 23.3.3. ALL SECTIONAL VALVES SHALL BE OPENED DURING DISINFECTION. ALL OUTLETS SHALL BE FULLY
- OPENED DURING INJECTION AND THE RESIDUAL CHECKED WITH ORTHOTOLIDIN SOLUTION. 23.3.4. WHEN THE CHLORINE RESIDUAL CONCENTRATION. CALCULATED ON THE VOLUME OF WATER THE PIPING WILL CONTAIN INDICATED NOT LESS THE 50
- PPM (PARTS PER MILLION) AT ALL OUTLETS THEN ALL VALVES SHALL BE CLOSED AND SECURED. 23.3.5. THE RESIDUAL CHLORINE SHALL BE RETAINED IN THE PIPING SYSTEM FOR A PERIOD OF NOT LESS

THAN 24 HOURS.

23.3.6. AFTER THE RETENTION, THE RESIDUAL SHALL BE NOT LESS THEN 5 PPM. IF LESS THEN THE PROCESS SHALL BE REPEATED AS DESCRIBED 23.3.7. IF SATISFACTORY, THEN ALL FIXTURES SHALL BE

FLUSHED WITH CLEAN POTABLE WATER UNTIL

RESIDUAL CHLORINE BY ORTHOTOLIDIN TEST SHALL

- BE NOT GREATER THAN THE INCOMING WATER 23.4. ALL WORK AND CERTIFICATION OF PERFORMANCE SHALL BE PERFORMED BY APPROVED APPLICATORS OR QUALIFIED PERSONNEL WITH CHEMICAL AND
- LABORATORY EXPERIENCE. CERTIFICATION OF PERFORMANCE SHALL INDICATE: 23.4.1. NAME AND LOCATION OF THE JOB AND DATE WHEN
- 23.4.2. MATERIAL USED FOR DISINFECTION. 23.4.3. RETENTION PERIOD OF DISINFECTANT IN PIPING

DISINFECTION WAS PERFORMED.

MATFRIAL 23.4.4. PPM CHLORINE DURING RETENTION. 23.4.5. PPM CHLORINE AFTER FLUSHING.

23.4.6. STATEMENT THAT DISINFECTION WAS PERFORMED

AS SPECIFIED. 23.4.7. SIGNATURE AND ADDRESS OF COMPANY OR PERSON PERFORMING DISINFECTION. 23.5. UPON COMPLETION OF FINAL FLUSHING THE PLUMBING SUBCONTRACTOR SHALL OBTAIN A MINIMUM OF ONE WATER SAMPLE FROM EACH WATER PIPING SYSTEM AND SUBMIT SAMPLES TO A STATE APPROVED LABORATORY.

SAMPLES SHALL BE TAKEN FROM FAUCETS LOCATED AT

HIGHEST FLOOR AND FURTHEST FROM METER OR MAIN WATER SUPPLY. 23.6. IF ANALYSIS DOES NOT SATISFY THE ABOVE MINIMUM REQUIREMENTS, THE DISINFECTION PROCEDURE SHALL

BE REPEATED.

ABBRV ABBREVIATION

CONTRACTOR SHALL SUBMIT TO THE PROJECT MANAGER AND CLERK OF WORKS FOR HIS/HER REVIEW, THREE (3) COPIES OF CERTIFICATION OF PERFORMANCE AS SPECIFIED ABOVE. 23.8. UNDER NO CIRCUMSTANCES SHALL THIS CONTRACTOR

23.7. BEFORE ACCEPTANCE OF THE SYSTEMS, THIS

# **ABBREVIATIONS**

PERMIT THE USE OF ANY PORTION OF DOMESTIC WATER

SYSTEM UNTIL PROPERLY DISINFECTED FLUSHED AND

1	
,	FOOT (FEET) (0.3048 METERS)
"	INCH(S) (25.4 MILLIMETERS)
DFU	DRAINAGE FIXTURE UNIT
(X)DCW	(EXISTING) DOMESTIC COLD WATER
(X)DHW	(EXISTING) DOMESTIC HOT WATER
(X)DW	(EXISTING) DISHWASHER
DP	DOWN PIPE
EST.	ESTIMATE
(X)FCO	(EXISTING) FLOOR CLEAN OUT
(X)FD	(EXISTING) FLOOR DRAIN
(X)GWH	(EXISTING) GAS WATER HEATER
GPM	GALLONS PER MINUTE
(X)(H)WC	
(X)(H)SH	, , , ,
(X)IWH	(EXISTING) INSTANTANEOUS WATER HEATER
(X)(H)LAV	, , , ,
(X)PS	(EXISTING) PANTRY SINK
PSI	POUNDS PER SQUARE INCH. (6.89 KILOPASCAL)
(X)REF	(EXISTING) REFRIGERATOR
(X)SS	(EXISTING) SERVICE SINK
(X)(E)TP	(EXISTING) (ELECTRONIC) TRAP PRIMER
(X)(H)U	(EXISTING) (ADA) URINAL
USG	U.S. GALLON (3.785 LITERS)
(X)VTR	(EXISTING) VENT THROUGH ROOF
(X)WCO	(EXISTING) WALL CLEAN OUT

(EXISTING) WATER HAMMER ARRESTOR

X)WSOB (EXISTING) WALL RECESSED WATER SUPPLY OUTLET BOX

# 220040 SUBSTITUTIONS

**PLUMBING SPECIFICATIONS:** 

1. ALL SUBSTITUTIONS MUST BE APPROVED PRIOR TO BIDDING PROVIDE SUBSTITUTION INFORMATION DURING THE BID-PHASE QUESTION AND ANSWER PERIOD. INCLUDE DETAILED DATA ON THE PROPOSED SUBSTITUTION INCLUDING DOLLAR AMOUNT OF PROPOSED SAVINGS. ENGINEER SHALL REVIEW THE INFORMATION AND DETERMINE WHETHER THE SUBSTITUTION WILL BE ALLOWED. 2. ANY CHANGES TO THE CONTRACT DOCUMENTS DUE TO THE SUBSTITUTION SHALL BE COORDINATED BY THE GENERAL CONTRACTOR AND ANY ADDITIONAL COST TO MODIFY THE DESIGN OR MODIFY THE SCOPE OF OTHER TRADES SHALL BE INCLUDED IN THE PROPOSED SAVINGS. THIS SHALL INCLUDE MODIFICATIONS TO THE STRUCTURAL SCOPE FOR EQUIPMENT SUPPORT AS WELL AS MODIFICATIONS TO ELECTRICAL BRANCH CIRCUITRY OR FEEDERS FOR EQUIPMENT.

# 220050 SUBMITTALS

CONTRACT DOCUMENTS.

ARCHITECT AND ENGINEER.

WITH THE DATA AS .PDFS.

- 1. ALL SUBMITTALS SHALL BE ROUTED TO THE ARCHITECT FOR DISTRIBUTION TO ALL DESIGN PROFESSIONALS. 2. ALL SUBMITTALS SHALL BEAR A COVER-SHEET FROM THE GENERAL CONTRACTOR INDICATING THEY HAVE REVIEWED THE SUBMITTAL AND FIND IT TO CONFORM TO THE
- 3. SHOP DRAWING SUBMISSIONS CONSISTING OF PRODUCT DATA CUT-SHEETS MAY BE SUBMITTED ELECTRONICALLY. 4. SHOP DRAWING SUBMISSIONS CONSISTING OF COORDINATION PLANS, LAYOUT DRAWINGS, FIRE PROTECTION SHOP DRAWINGS, FIRE ALARM SHOP DRAWINGS, SHEET METAL SHOP DRAWINGS, ETC. SHALL BE SUBMITTED IN LARGE FORMAT. ORIGINAL SIZE ON PAPER. PROVIDE FIVE COPIES OF THE SHOP DRAWINGS. THE ENGINEER SHALL KEEP A
- GENERAL CONTRACTOR. 5. REQUESTS FOR INFORMATION (RFIS) SHALL INCLUDE THE QUESTION, THE REFERENCED PORTION OF THE CONTRACT DOCUMENTS, AND THE CONTRACTOR'S RECOMMENDED

COPY. THE ARCHITECT SHALL KEEP A COPY. THE

REMAINING THREE COPIES WILL BE RETURNED TO THE

- SUGGESTION FOR REMEDY 6. DELEGATED-DESIGN SUBMISSIONS SHALL BE PROVIDED WITH A COVER-SHEET INDICATING THE PROFESSIONAL OF RECORD THAT WILL SIGN AND SEAL THE DOCUMENT. ORIGINAL SIGNED AND SEALED DOCUMENTS DO NOT NEED TO BE SUBMITTED UNTIL THE DOCUMENTS ARE APPROVED BY THE
- 7. REFER TO THE INDIVIDUAL SPECIFICATION SECTIONS FOR THE REQUIRED SUBMITTALS. 8. COMPILE OPERATION AND MAINTENANCE (O&M) MANUALS AND SUBMIT ELECTRONICALLY FOR APPROVAL. AFTER APPROVAL OF ALL MANUALS, PROVIDE TWO COPIES OF A

PRINTED, BOUND SET TO THE OWNER AND A COMPACT DISC

### 220100 EXECUTION

- 1. ALL CUTTING AND PATCHING OF THE BUILDING SHALL BE PERFORMED BY THE CONTRACTOR. REMOVAL OF EXISTING SYSTEMS, COMPONENTS, SUPPORTS, ETC. SHALL HAVE ALL EXISTING HOLES OR PENETRATIONS PATCHED TO MATCH THE FXISTING ADJACENT CONSTRUCTION.
- 2. REMOVE AND DISPOSE OF IN A LEGAL MANNER ALL CONSTRUCTION DEBRIS IDENTIFIED TO BE REMOVED. THE CONSTRUCTION AREA SHALL BE BROOM SWEPT EACH NIGHT. DO NOT LET RUBBISH ACCUMULATE 3. ALL CONSTRUCTION MATERIAL THAT CAN BE RECYCLED

# THE QUANTITIES OF THE RECYCLED MATERIAL.

220110 O&M DATA 1. PROVIDE OPERATION AND MAINTENANCE MANUALS. REFER TO THE INDIVIDUAL SPECIFICATION SECTIONS FOR REQUIREMENTS.

SHALL BE RECYCLED. MAINTAIN ALL RECEIPTS AND SUBMIT

COPIES OF THE RECEIPT TO THE ARCHITECT TO DOCUMENT

2. THE O&M MANUALS SHALL INCLUDE AS-BUILT 4.1.2. COPPER UNIONS - MSS SP-123 DOCUMENTATION. AS-BUILT DOCUMENTATION SHALL CONSIST OF CONTRACTOR RED-LINED CONTRACT MANUFACTURED BY ELKHART, NIBCO, OR VIEGA. DOCUMENTS. INCLUDE THE AS-BUILT DOCUMENTATION WITH

# 220400 PLUMBING COMMON REQUIREMENTS

1. SCOPE

1.1. SLEEVES

THE O&M SUBMITTALS

- 1.2. ESCUTCHEONS 1.3. IDENTIFICATION SUBMITTALS
- 2.1. SUBMIT SHOP DRAWINGS FOR ALL PRODUCTS INCLUDING PRODUCT DATA. 2.2. VALVE TAG CHART LISTING ALL OF THE VALVES KEYED TO THE TAG NUMBER.
- KEYED TO THE VALVE TAG CHART. SLEEVES 3.1. GALVANIZED STEEL-PIPE SLEEVES: ASTM A 53, TYPE

2.3. A FLOOR PLAN SHOWING THE LOCATION OF ALL VALVES

E, GRADE B, SCHEDULE 40 ZINC COATED WITH PLAIN 3.2. INSTALL SLEEVES FOR PIPING PENETRATING PARTITIONS OR WALLS.

3.3. PROVIDE APPROPRIATE FIRESTOPPING/JOINT SEALANT IN

- ALL PENETRATIONS. 4. ESCUTCHEONS 4.1. SPLIT-CASTING BRASS TYPE WITH POLISHED CHROME-PLATED FINISH AND CONCEALED HINGE AND
- AND CEILINGS. INSTALL TO CLOSELY FIT AROUND PIPING AND INSULATION WITH AN OUTER DIAMETER TO COMPLETELY COVER THE OPENING. 5. IDENTIFICATION 5.1. PROVIDE SELF-ADHESIVE PIPE LABELS THAT INCLUDES

4.2. INSTALL ESCUTCHEONS FOR PIPES PENETRATING WALLS

- COLOR-CODING FOR EACH SYSTEM, FLOW DIRECTION ARROWS, AND LETTERING AT LEAST 1/2" HIGH. 5.2. PROVIDE VALVE TAGS THAT ARE STAMPED BRASS. 5.3. PROVIDE VALVE TAG CHART LISTING EACH VALVE AND CORRESPONDING TAG NUMBER. ALSO PROVIDE A FULL SCALE SET OF PLANS IDENTIFYING THE LOCATION OF
- THE VALVE TAG CHART. 5.4. PROVIDE SELF-ADHESIVE PIPE LABELS EVERY 50 FEET NEAR EACH VALVE, BRANCH CONNECTION, AND PENETRATIONS OF WALLS OR FLOORS. PROVIDE LABELS WHERE VISIBLE FROM ACCESS PANELS THAT PROVIDE

EACH VALVE AND KEYING THE VALVE TAG NUMBER TO

# ACCESS TO SPACES ABOVE CEILINGS OR WITHIN WALLS.

- 220500 PLUMBING VALVES 1. SCOPE
- 1.1. BALL VALVES 2. SUBMITTALS 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA. 2.2. SUBMIT OPERATION AN MAINTENANCE DATA.
- 3. VALVES SHALL BE MANUFACTURED BY MILWAUKEE VALVE, NIBCO, OR WATTS REGULATOR. BALL VALVES 4.1. PROVIDE TWO PIECE STANDARD-PORT, BRONZE BALL VALVES WITH STAINLESS STEEL TRIM. FOR VALVES USED IN POTABLE WATER SYSTEMS, PROVIDE LOW LEAD VALVES FOR POTABLE WATER. 600 WOG WITH SOLDER
- OR PRESS ENDS. 4.2. CONFORM TO MSS SP-110. 4.3. CONFORM TO NSF/ANSI 372 FOR POTABLE WATER APPLICATIONS.

4.4. PROVIDE EXTENSION STEM WHEN INSTALLED IN PIPING

- WITH INSULATION. 5. INSTALL VALVES IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. 6. INSTALL VALVES IN HORIZONTAL PIPING WITH STEM AT OR ABOVE CENTER OF PIPE.
- 7. INSTALL VALVES IN POSITIONS TO ALLOW FULL STEM MOVEMENT. 8. PROVIDE BALL VALVES FOR SHUT-OFF DUTY ON PIPING

### 220700 PLUMBING INSULATION 1. SCOPE

1.1. PIPING INSULATION SUBMITTALS

- 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA. 3. PIPING INSULATION 3.1. INSULATION SHALL BE MANUFACTURED BY JOHNS MANVILLE, KNAUF, OR OWENS CORNING.
- 3.2. INSULATION SHALL BE MINERAL-FIBER, PREFORMED PIPE INSULATION. TYPE I, RATED UP TO 850°F. COMPLY WITH ASTM C 547, TYPE I, GRADE A WITH FACTORY-APPLIED ASJ-SSL. ASJ-SSL SHALL BE FACTORY APPLIED, SELF-SEALING, PRESSURE SENSITIVE ACRYLIC BASED ADHESIVE COVERED BY A REMOVABLE
- PROTECTIVE STRIP COMPLYING WITH ASTM C1136, TYPE 3.3. INSULATION SURFACE SHALL MEET ASTM E 84 FLAME SPREAD AND SMOKE DEVELOPED RATINGS OF 25/50.
- 3.4. FLEXIBLE ELASTOMERIC INSULATION SHALL COMPLY WITH ASTM C 534. 3.5. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- 3.6. INSTALL LONGITUDINAL SEAMS FACING UP. 3.7. INSTALL INSULATION ON ALL PIPING LISTED AND OVER ALL FITTINGS, VALVES, AND SPECIALTIES. FOR SPECIALTIES THAT REQUIRE REGULAR MAINTENANCE SUCH AS DRAIN VALVES, STRAINERS, AND BALANCING VALVES PROVIDE PRE-FORMED INSULATION COMPONENTS THAT PERMIT MAINTENANCE WITHOUT
- DAMAGING THE INSULATION. 3.8. REFER TO PIPING MATERIALS AND INSULATION SCHEDULE
- PLUMBING PIPING 1. SCOPE

1.1. DOMESTIC WATER PIPING

- 1.2. SANITARY AND VENT PIPING 1.3. PIPE FITTINGS
- 1.4. PIPING SUPPORTS SUBMITTALS 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA.
- 2.2. SUBMIT FIELD QUALITY CONTROL REPORTS. 2.2.1. HYDROSTATIC TEST REPORTS 2.2.2. DISINFECTING ACTIVITIES REPORTS
- 3.1. HARD COPPER TUBE: ASTM B 88, TYPE L WATER TUBE. 3.2. SOFT COPPER TUBE: ASTM B 88, TYPE K WATER TUBE.
- 3.3. SCHEDULE 40 PVC PIPE, ASTM D2665, DRAIN, WASTE, 3.3. PROVIDE DIELECTRIC FITTINGS ON ALL PIPING JOINING
- DISSIMILAR METALS. 3.3.1. TRANSITION FROM PVC SCHEDULE 40 SOLID WALL PIPE TO CAST IRON SHALL UTILIZE HUSKY SD4000

(ORANGE) (BASIS OF DESIGN). A STANDARD TWO

BAND RUBBER "FERNCO" FITTING WILL NOT BE

- APPROVED AS AN EQUAL. 3.4. INSTALL PIPING WITH APPROPRIATE PITCH AND PARALLEL TO BUILDING WALLS.
- 3.5. INSTALL PIPING TO CONSERVE SPACE IN THE BUILDING. ENSURE PIPING IS LOCATED TO ALLOW FOR OPENING OF CEILINGS OR ACCESS PANELS 3.6. INSTALL PIPING TO ALLOW FOR SERVICING OF

EQUIPMENT AND MAINTAIN REQUIRED CLEARANCES. IF

- PIPING NEEDS TO IMPEDE SERVICE CLEARANCE NOTIFY ARCHITECT/ENGINEER. 3.7. DO NOT INSTALL PIPING ABOVE ELECTRICAL PANELS OR EQUIPMENT WITHOUT APPROVAL FROM
- ARCHITECT/ENGINEER. 3.8. INSTALL UNIONS OR FLANGES ON ALL PIPING CONNECTING TO EQUIPMENT

3.9. PROVIDE IDENTIFICATION ON ALL PIPING AS SPECIFIED.

3.10. ARRANGE FOR ALL REQUIRED INSPECTIONS PRIOR TO CONCEALING PIPING. 3.11. INSTALL SLEEVES AS SPECIFIED

3.12. INSULATE PIPING AS SPECIFIED

- 4. PIPE FITTINGS 4.1. DOMESTIC WATER: 4.1.1. WROUGHT-COPPER, SOLDER JOINT FITTINGS ASME
- B16.22 WROUGHT COPPER PRESSURE FITTINGS. 4.1.3. COPPER PRESSURE SEAL JOINT FITTINGS AS
- 4.2. SANITARY, VENT 4.2.1. PVC SOCKET FITTINGS ASTM D2665 MADE TO ASTM D3311 DRAIN, WASTE, AND VENT PATTERNS AND TO FIT SCHEDULE 40 PVC.
- 4.2.2. COPPER DRAINAGE FITTINGS: ASME B16.23. CAST COPPER OR ASME B16.29, WROUGHT COPPER, SOLDER-JOINT FITTINGS 4.2.3. HEAVY-DUTY, HUBLESS-PIPING COUPLINGS AS

MANUFACTURED BY MIFAB, TYLER, OR DALLAS.

- SUPPORTS 5.1. REFER TO SCHEDULE ON PO2 — PLUMBING SCHEDULES. 6. REFER TO PLUMBING PIPING MATERIAL/INSULATION
- SCHEDULE FOR APPLICATION DETAILS. 7. DOMESTIC WATER PIPING 7.1. TEST FOR LEAKS AND DEFECTS OF THE PIPING SYSTEM. 7.1.1. PROVIDE HYDROSTATIC PRESSURE TEST 50 PSIG IN
- EXCESS OF OPERATING PRESSURE 7.1.2. PREPARE TEST REPORTS 7.1.3. CLEAN AND DISINFECT POTABLE PIPING SYSTEMS AND PROVIDE REPORTS OF DISINFECTING ACTIVITIES.

7.1.4. PROVIDE TESTS AND CLEANING PRIOR TO TURNING

OVER EACH PHASE OF CONSTRUCTION. 8. SANITARY PIPING 8.1. INSTALL ALL PIPING 3" AND UP WITH A 1/8" PER FOOT SLOPE IN DIRECTION OF FLOW.

8.2. INSTALL ALL PIPING LESS THAN 3" WITH A ¼" PER

8.3. TEST PIPING FOR LEAKS WITH HYDROSTATIC TESTS. PROVIDE TEST REPORTS. VENT PIPING

#### 9.2. TEST PIPING FOR LEAKS WITH HYDROSTATIC TESTS. PROVIDE TEST REPORTS.

221119 DOMESTIC WATER PIPING SPECIALTIES

3. TRAP PRIMER

- 1. SCOPE 1.1. TRAP PRIMER
- 1.2. WATER HAMMER ARRESTOR 2. SUBMITTALS 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA.

3.1. TRAP PRIMERS SHALL BE MANUFACTURED BY MIFAB,

- JAY R. SMITH, PRECISION PLUMBING PRODUCTS, OR 3.2. SUPPLY-TYPE TRAP PRIMER STANDARD: ASSE 1018. 3.3. DRAINAGE-TYPE AND ELECTRIC TRAP PRIMER
- 3.5. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS. 4. WATER HAMMER ARRESTORS 4.1. WATER HAMMER ARRESTORS SHALL BE MANUFACTURED

#### INSTALLATION INSTRUCTIONS. 4.4. STANDARD ASSE 1010 OR PDI-WH 201.

221319 SANITARY WASTE PIPING SPECIALTIES

STANDARD: ASSE 1044.

3.4. REFER TO SCHEDULE FOR DETAILS.

BY MIFAB, JAY R. SMITH, OR WATTS,

4.2. REFER TO SCHEDULE AND DETAIL FOR DETAILS

4.3. INSTALL IN ACCORDANCE WITH MANUFACTURER'S

- 1. SCOPE 1.1. FLOOR DRAINS
- SUBMITTALS 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA. FLOOR DRAINS

3.1. DRAINS SHALL BE MANUFACTURED BY MIFAB, JAY R.

SMITH OR WATTS. 3.2. STANDARD: ASME A112.6.3. 3.3. REFER TO SCHEDULE FOR DETAILS.

3.4. INSTALL IN ACCORDANCE WITH MANUFACTURER'S

1.1. COMMERCIAL, ELECTRIC, STORAGE DOMESTIC-WATER

223300 ELECTRIC. DOMESTIC-WATER HEATERS 1. SCOPE

HEATER, EWH.

INSTALLATION INSTRUCTIONS.

- 1.2. EXPANSION TANK, EXP. 1.3. COMMERCIAL, ELECTRIC, INSTANTANEOUS WATER HEATER,
- SUBMITTALS 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA
- 3.1. PROVIDE A WATER HEATER MANUFACTURED BY AO SMITH, LOCHINVAR, OR BRADFORD WHITE.
- 3.2. REFER TO THE SCHEDULE FOR PERFORMANCE REQUIREMENTS. 3.3. WATER HEATER SHALL BE LISTED BY UL AND APPROVED TO NSF STANDARD 5.
- 3.4. TANKS SHALL HAVE 150 PSI WORKING PRESSURE AND SHALL BE EQUIPPED WITH HIGH DENSITY ANODE. 3.5. ALL INTERNAL SURFACES OF THE HEATER EXPOSED TO WATER SHALL BE GLASSLINED WITH AN ALKALINE
- FUSED-TO-STEEL. 3.6. PROVIDE THREE YEAR WARRANTY.

BOROSILICATE COMPOSITION THAT HAS BEEN

- 3.7. INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. 3.8. SUPPORT WATER HEATER FROM ABOVE AND MOUNT
- 3.9. PIPE P&T RELIEF TO THE JANITOR'S SERVICE SINK. 3.10. PROVIDE A WELDED SEAM DRAIN PAN BELOW THE WATER HEATER AND PIPE THE PAN TO THE JANITOR'S SERVICE SINK SEPARATE FROM THE RELIEF PIPING. 3.11. PROVIDE A LEAK DETECTOR IN THE WELDED SEAM DRAIN PAN THAT WILL DETECT WATER IN THE DRAIN PAN. IN THE EVENT OF WATER IN THE DRAIN PAN,

THE LEAK DETECTOR SHALL HAVE AN AUDIBLE ALERT

AND THREE SOLENOID VALVES SHALL CLOSE TO ISOLATE

THE WATER HEATER AND PREVENT WATER OUTSIDE OF

- THE WATER HEATER FROM FLOODING THE ROOM. 4. EXP
- 4.1. PROVIDE EXPANSION TANK MANUFACTURED BY AMTROL, AO SMITH, OR TACO. 4.2. REFER TO SCHEDULE FOR PRODUCT BASIS FOR DESIGN.
- ASME B1.20.1 PIPE THREAD. 4.4. INTERIOR FINISH: COMPLY WITH NSF 61 BARRIER MATERIALS FOR POTABLE-WATER TANK LININGS, INCLUDING EXTENDING FINISH INTO AND THROUGH TANK

4.3. TAPPINGS: FACTORY-FABRICATED STEEL, WELDED TO

TANK BEFORE TESTING AND LABELING. INCLUDE

FITTINGS AND OUTLETS. 4.5. AIR-CHARGING VALVE: FACTORY INSTALLED

# 224000 PLUMBING FIXTURES

HIGH IN ROOM.

- 1. SCOPE 1.1. (H)WC
- 1.2. (H)U 1.3. (H)LAV 1.4. PS

1.5. SS

- SUBMITTALS 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA. FIXTURES
- SPECIFICATION INFORMATION. 3.2. ALL FIXTURES SHALL BE INSTALLED IN ACCORDANCE WITH ALL STATE BARRIER FREE REQUIREMENTS. 3.3. INSTALL ALL FIXTURES IN ACCORDANCE WITH

MANUFACTURER'S RECOMMENDATIONS

3.1. REFER TO SCHEDULE FOR BASIS OF DESIGN AND

### SYMBOL LEGEND DESCRIPTION SYMBOL OMESTIC COLD WATER PIPING \_\_\_\_\_ \_\_\_\_\_ DOMESTIC COLD WATER PIPING (BELOW GRADE)

LUMBING EQUIPMENT \_\_\_\_\_ss\_\_\_\_ ANITARY PIPING ABOVE VISIBLE FLOOR. SANITARY PIPING BELOW VISIBLE FLOOR.

DOMESTIC HOT WATER PIPING (120°F)

VENT PIPING. \_\_\_\_\_ QUIPMENT OR PIPING TO BE REMOVED. \_\_\_\_\_ EXISTING DOMESTIC COLD WATER PIPING. PIPING TURNING DOWN.

FLOOR CLEAN OUT

WALL CLEANOUT

SHUT OFF VALVE.

LECTRONIC TRAP PRIMER

FOOT SLOPE IN DIRECTION OF FLOW. PIPING TEE. 9.1. INSTALL ALL PIPING WITH A 1/16" PER FOOT SLOPE TO PIPING TURNING UP. DRAIN TO SANITARY PIPING FLOOR DRAIN  $\infty$ DRAIN AND TRAP ASSEMBLY.

 $\odot$ 

\_\_\_\_\_

 $\bowtie$ POINT OF CONNECTION TO EXISTING.  $\sim$ (#) $\sim$ EYNOTE TAG

> ENGINEERING DRIVEN DESIGN PC 555 Route One South Suite 100 Iselin, New Jersey 08830 (848) 247-6150 www.engineerdriven.com

SHEET NUMBER

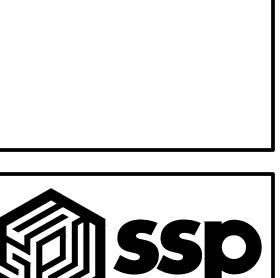
PLUMBING SPECIFICATIONS AND SYMBOLS PLUMBING PLANS - MATTANO PARK

SHEET TITLE

**PLUMBING DRAWING LIST** 

Project # 22-0080

REVIEW:



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ISSUED FOR BID ISSUE DATE: AUGUST 31, 2023 **REVISIONS:** MARK DATE DESCRIPTION NJ SDA PACKAGE #: NJ SDA #: NJ DOE# SSP#: 22-8845 © SSP ARCHITECTS

PHASE / SUBMISSION:

THE COUNTY OF UNION

2325 SOUTH AVENUE

SCOTCH PLAINS, NEW JERSEY 07076

INTERIOR RESTROOM FACILITIES **RENOVATIONS AT:** 

360-484 5TH AVE

ELIZABETH, NEW JERSEY 07202

UNION COUNTY

SHEET NAME:

CITY OF ELIZABETH

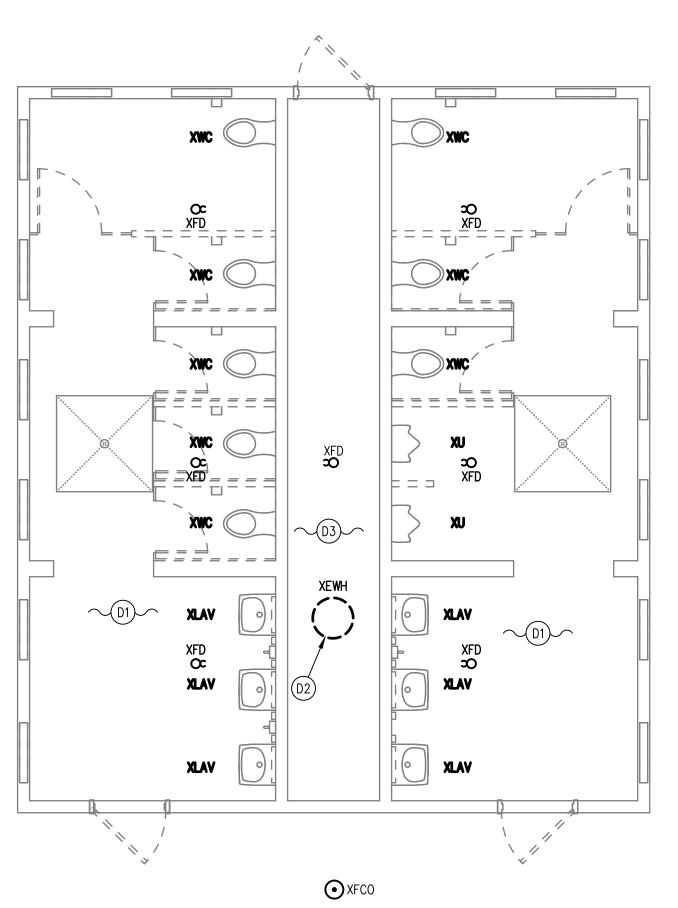
SHEET NUMBER:

Jeffrey N. Beeden Professional Engineer NJ License 24GE04746800

PARKS MATTANO PARK

**PLUMBING SPECIFICATIONS** AND SYMBOLS

MARCUS M. ROSENAU, AIA NJ:21AI01045270 CONSULTANT:



# PLUMBING DEMOLITION PLAN - MATTANO PARK 1/4"=1'-0"

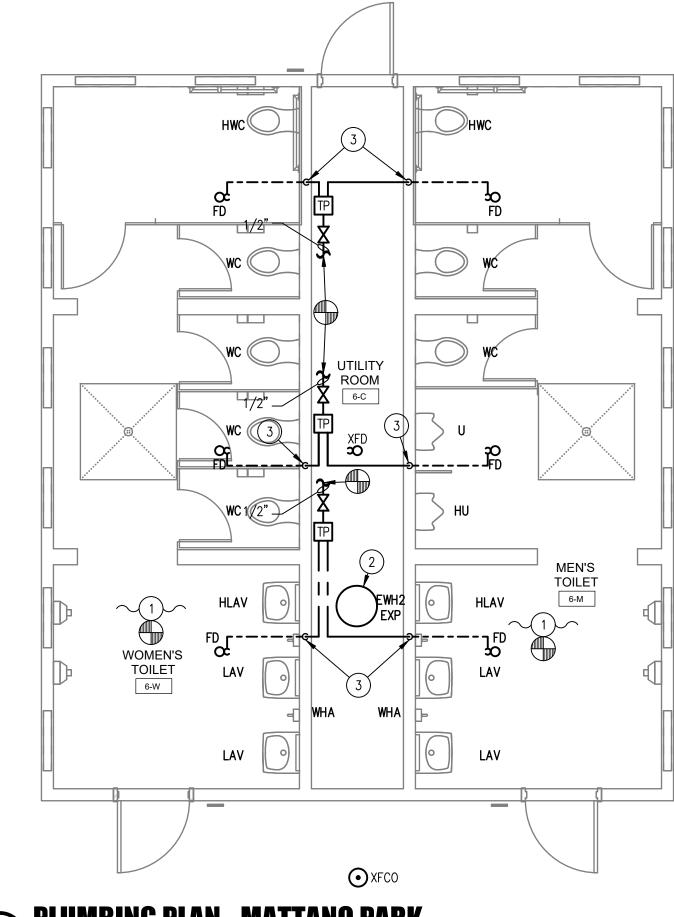
# **DRAWING KEYED NOTES:**

- D1) REMOVE EXISTING PLUMBING FIXTURES. MAINTAIN ROUTING FOR USE WITH NEW FIXTURES.
- P) REMOVE EXISTING WATER HEATER AND EXPANSION TANK. MAINTAIN PIPING FOR USE WITH NEW WATER HEATER.
- (D3) REMOVE EXISTING WATER HAMMER ARRESTORS AND TRAP PRIMERS, AS REQUIRED.

NOTE: ALL PIPING SHOWN IS

DIAGRAMMATIC ONLY.

(D4) REMOVE EXISTING FLOOR DRAIN. MAINTAIN PIPING FOR USE WITH NEW FLOOR DRAIN.



# PLUMBING PLAN - MATTANO PARK 1/4"=1'-0"

# **DRAWING KEYED NOTES:**

- 1) MODIFY EXISTING ROUGHING, AS REQUIRED, FOR USE WITH NEW FIXTURE/FLOOR DRAINS. 2) MODIFY EXISTING PIPING, AS REQUIRED, FOR INSTALLATION OF NEW WATER HEATER AND EXPANSION TANK.
- 3 1/2" PIPE DROPS BELOW FLOOR TO SERVE FLOOR DRAIN.

# — BALL VA ---- WATER SUPPLY TRAP PRIMER VALVE UNIT AS REQ'D 2 TO 4 OPN'G 12" MIN ── CONNECTION L\_\_\_\_ TO FL DR TRAP (TYPICAL)

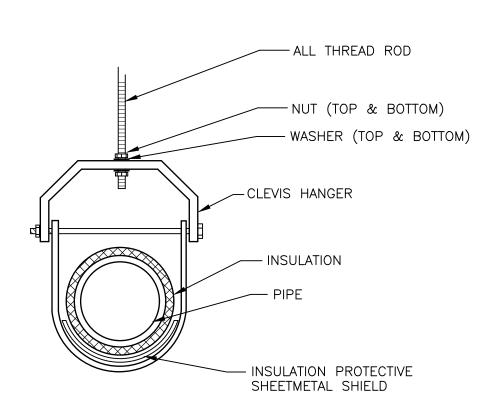
# TRAP PRIMER CONNECTION DETAIL NOT TO SCALE \_\_\_\_\_ 3-1/2" ——— ∠COMPRESSION CHAMBER

WAIŁK	HAMM	ER ARRES	<u>i uk Ci</u>	KI I EKI <i>k</i>
FIGURE NO.	P.D.I. SYMBOL	FIXTURE UNIT RATINGS	A SIZE	B SIZE
5005	Α	1 - 11	3/4"	3.18"
5010	В	12 - 32	1"	3.93"
5020	С	33 - 60	1"	4.30"
5030	D	61 - 113	1"	5.25"
5040	Е	114 - 154	1"	5.57"
5050	F	155 - 330	1"	6.53"

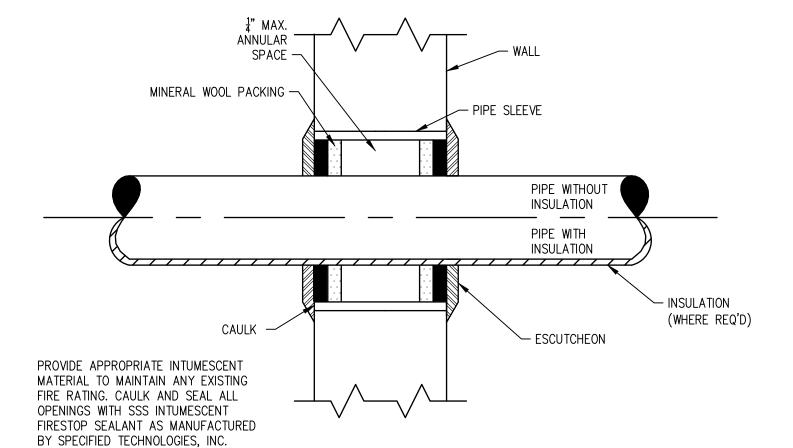
# REFER TO MANUFACTURER'S SPECIFICATIONS FOR ALTERNATE PRODUCT DIMENSIONS. WATER HAMMER ARRESTOR DETAIL NOT TO SCALE

# ALL PIPING SHALL BE ROUTED IN FIELD TO MEET ACTUAL CONDITIONS.

# **EWH SUSPENEDED FROM EXISTING BUILDING STRUCTURE**NOT TO SCALE



PIPING SUPPORT CRITERIA											
COPPER PIPE SIZE	MAX. HORIZ. SPACING	MIN. ROD SIZE	PVC PIPE SIZE	MAX. HORIZ. SPACING	MIN. ROD SIZE						
3/4" AND SMALLER	5-FEET	3/8"	1-1/2" TO 2"	4-FEET	3/8"						
1" TO 1-1/4"	6-FEET	3/8"	3"	4-FEET	1/2"						
1-1/2" TO 2"	8-FEET	3/8"	4" TO 5"	4-FEET	5/8"						
2-1/2"	9-FEET	1/2"	6" TO 8"	4-FEET	3/4"						
3" TO 5"	10-FEET	1/2"	10" TO 12"	4-FEET	7/8"						
6"	10-FEET	5/8"		•	•						
8"	10-FEET	3/4"									
SUPPORT VERTICAL PIF	PING EVERY 10-F	EET.	SUPPORT VERTICAL	PIPING EVERY 4-FE	ET.						



# PIPE THROUGH INTERIOR WALL PARTITION NOT TO SCALE

# **GENERAL NOTES:**

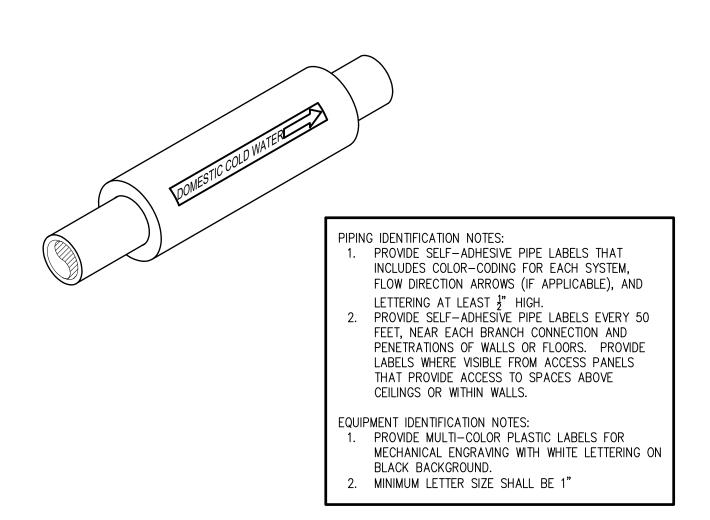
- 1. PATCH EXISTING PIPING WHERE DEMO PIPING IS REMOVED. 2. PATCH ALL OPENINGS FROM REMOVED PIPING TO MATCH EXISTING ADJACENT
- REMOVE ALL INSULATION, SUPPORTS, ETC. FROM PIPING TO BE REMOVED. 4. TAKE DOWN AND REINSTALL ALL CEILING AND CEILING-MOUNTED DEVICES REQUIRED TO CONSTRUCT THIS SCOPE.
- CONTRACTOR TO TRENCH, AS REQUIRED, TO ACCOMMODATE SCOPE OF WORK. INSULATE ALL DOMESTIC HOT AND COLD WATER PIPING.
- PROVIDE ALL PIPE LABELS AND VALVE TAGS, REFER TO SPECIFICATIONS. PROVIDE ACCESS PANELS FOR ALL WATER HAMMER ARRESTORS.
- CONTRACTOR TO CONFIRM FUNCTIONALITY OF EXISTING PIPING, EQUIPMENT, WET COLUMNS, ETC. PRIOR TO MAKING CONNECTIONS. NOTIFY ENGINEER AND ARCHITECT IF ANY EXISTING PIPING, EQUIPMENT, WET COLUMNS, ETC. SPECIFIED TO BE USED AS PART OF THIS PROJECT ARE NO LONGER FUNCTIONAL.

	ELECTRIC WATER HEATER SCHEDULE															
TAG	DESCRIPTION	CAPACITY	TEMP. RISE	SET TEMP.	MEC	MFG. MODEL		MODEL	ELECTRICAL REQUIREMENTS			CONNECTION SIZE (")				NOTES
IAG	DESCRIPTION	(GALLONS)	(GPH @ 100°F)	(°F)	MrG.	MODEL	LOCATION	VOLTAGE	PHASE	POWER (KW)	S	CW	HW	ACCESSOREIS	NUIES	
EWH2 STORAGE TYPE ELECTRIC WATER HEATER WITH GLASS LINED TANK. TANK RATED FOR 150 PSI WORKING PRESSURE 10 8 140 A.O. SMITH DEL-10 MATTANO P							MATTANO PARK	120	1ø	2	3/4	3/4	3/4	1,2,3	a	
ACCESSO	RIES:						•	NOTES:	-							
1. PROVID	1. PROVIDE EXPANSION TANK. REFER TO EXPANSION TANK SCHEDULE FOR MORE INFORMATION.								TO INSTAI	LATION DETAIL	•					
2. PROVI	2. PROVIDE DI-ELECTRIC FITTINGS, AS NEEDED.															
3. PROVI	PROVIDE HOUSE KEEPING PAD, DRIP PAN, AND ALL REQUIRED COMPONENTS FOR COMPLETE INSTALLATION.															

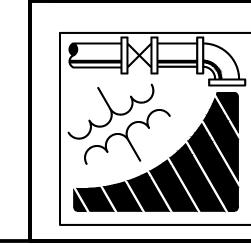
TAG	DESCRIPTION	MAKE	MODEL	ELEC. REQ.	ACCESSORIES		CONNECTION SIZE			NOTEC	
IAG	DESCRIPTION	MARL	MODEL	ELEC. REQ.	ACCESSORIES	S	٧	CW	HW	NG	NOTES
EXP	ASME RATED DIAPHRAGM EXPANSION TANK. 2.1 GALLONS WITH 0.9 GALLON ACCEPTANCE.	AMTROL	ST-5C	-	_			3/4"			_
FD	CAST IRON BODY FLOOR DRAIN. 8" SQUARE STRAINER. NICKEL-BRONZE FINISH. 3" OUTLET. SUPPLY WITH P-TRAP.	JAY R. SMITH	FIG. 2005Y	-	1,2	3"	2"	1/2"			-
TP	PRESSURE DROP ACTIVATED TRAP PRIMER. BRASS BODY, 3 PSI PRESSURE DROP REQUIRED.	PRECISION PLUMBING PRODUCTS	PR-500	-	3			1/2"			-
TMV	THERMOSTATIC MIXING VALVE. MIN 1.0 GPM, 10 PSI PRESSURE DROP AT 18 GPM. SET TO 110°F	LEONARD	TM-26-LF	-	_						_
WHA	ENGINEERED WATER HAMMER ARRESTOR. ALL STAINLESS STEEL CONSTRUCTION.	JAY R. SMITH	FIG. 5010	-	-			NOTE a			а

TAG	DESCRIPTION	MAKE	MODEL	FLOW RATE	ACCESSORIES		CONNECT	TION SIZE		NOTES
IAG	DESCRIPTION	MARL	MODEL	I LOW KAIL	ACCESSORIES	S	٧	CW	HW	NOTES
(H)U	BARRIER FREE WALL-HUNG VITREOUS CHINA URINAL.	AMERICAN STANDARD	6590.001.020	0.5 GPF	8	2"	1-1/2"	1-1/2"		b,c
(H)WC	BARRIER FREE WALL-HUNG FLUSHOMETER TOILET WITH ELONGATED OPEN FRONT SEAT.	AMERICAN STANDARD	2634.101	1.28 GPF	9,10	4"	2"	1-1/2"		b,c
(H)LAV	WALL-HUNG VITREOUS CHINA LAVATORY.	0355.012	0.5 GPM	1,2,3,4,5,6,7	1-1/2"	1-1/2"	1/2"	1/2"	a,b,c	
1. 2. 3. 4. 5. 6. 7. 8. 9.	SORIES:  PROVIDE P-TRAP.  PROVIDE SLOAN FAUCET MODEL: EAF-350.  PROVIDE BELOW-DECK MECHANICAL WATER MIXING VALVE, POWERS LFE4  PROVIDE MCGUIRE 155WC OPEN GRID DRAIN.  PROVIDE FAUCET SUPPLIES CHROME PLATED ANGLE VALVE.  PROVIDE WATTS WCA-411 BASIN CARRIER.  PROVIDE TRUBRO LAVGUARD2 INSULATION PRODUCT ON ALL EXPOSED P  PROVIDE SLOAN ROYAL 195 ESS-0.5 -HW CONCEALED SENSOR FLUSHOI  PROVIDE SLOAN ROYAL 152 ESS-1.28-TMO-SWB-2-10-3/4-LDIM-HW  HARDWIRED FLUSHVALVE WITH MECHANICAL OVER RIDE.  PROVIDE HEAVY DUTY FOR ELONGATED BOWL TOILET SEAT.	b. PROVIDE WHI	, ADAPTERS, AND TE COLOR FIXTUR TURE WILL WORK	E, CONFIRM WITH	ARCHITE	CT DURII	NG SHOP	DRAWING		

	1	<del></del>		RIALS/INSULATION S		_		
SERVICE	SIZES	LOCATION	MATERIAL	FITTINGS	INSULATION	JACKET	THICKNESS	NOTES
DOMESTIC WATER	ALL	ABOVE GROUND	TYPE L COPPER	SOLDER OR PRESSURE SEAL	MINERAL-FIBER	ASJ	1"	-
DOMESTIC WATER	ALL	BELOW GROUND	TYPE K COPPER	NONE	ELASTOMERIC	_	1/2"	_
SANITARY WASTE	ALL	ALL	PVC	SOLVENT WELD	-	_	_	-
SANITARY VENT	ALL	ALL	PVC	SOLVENT WELD	_	_	_	_



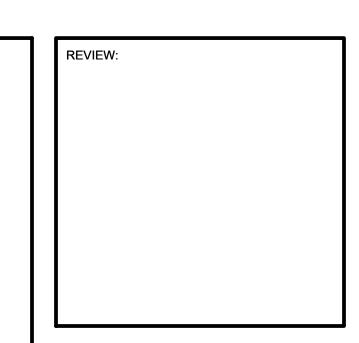




# **ENGINEERING DRIVEN DESIGN PC**

555 Route One South Suite 100 Iselin, New Jersey 08830 (848) 247-6150 www.engineerdriven.com Project # 22-0080

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CONSULTANT:

PHASE / SUBMISSION: ISSUED FOR BID

ISSUE DATE: AUGUST 31, 2023

MARK DATE DESCRIPTION

NJ SDA PACKAGE #: NJ SDA #: NJ DOE #: SSP#: © SSP ARCHITECTS



THE COUNTY OF UNION

2325 SOUTH AVENUE SCOTCH PLAINS, NEW JERSEY 07076

INTERIOR RESTROOM **FACILITIES RENOVATIONS AT:** 

UNION COUNTY PARKS -MATTANO PARK

> 360-484 5TH AVE ELIZABETH, NEW JERSEY 07202

> > UNION COUNTY

SHEET NAME:

CITY OF ELIZABETH

**PLUMBING PLANS -MATTANO PARK** 

SHEET NUMBER:

8 TYPICAL PIPING INDENTIFICATION
NOT TO SCALE

# **MECHANICAL SPECIFICATIONS:**

#### 230000 SUMMARY

- 1. THE SCOPE OF THIS PROJECT IS TO PROVIDE REPLACEMENT HEATING AND MECHANICAL EXHAUST SYSTEMS FOR AN EXISTING PUBLIC RESTROOM BUILDING.
- 2. ALL BUILDINGS ARE A SEISMIC DESIGN CATEGORY OF B. WHICH MEANS THAT MECHANICAL SYSTEMS ARE EXEMPT FROM SEISMIC BRACING REQUIREMENTS.

#### 230030 DEFINITIONS

- 1. FURNISH: TO PURCHASE AND DELIVER AN ITEM TO THE
- 3.2. EQUIPMENT STAGING AREA COMPLETE WITH ALL REQUIRED APPURTENANCES.
- 2. INSTALL: TO MOVE THE ITEM FROM THE STAGING AREA AND FASTEN TO THE STRUCTURE.
- 3. PROVIDE: TO FURNISH AND INSTALL. 4. OWNER: UNION COUNTY OF NEW JERSEY

# 230040 SUBSTITUTIONS

- 1. ALL SUBSTITUTIONS MUST BE APPROVED PRIOR TO BIDDING. PROVIDE SUBSTITUTION INFORMATION DURING THE BID-PHASE QUESTION AND ANSWER PERIOD. INCLUDE DETAILED DATA ON THE PROPOSED SUBSTITUTION INCLUDING DOLLAR AMOUNT OF PROPOSED SAVINGS. ENGINEER SHALL REVIEW THE INFORMATION AND DETERMINE
- WHETHER THE SUBSTITUTION WILL BE ALLOWED. 2. ANY CHANGES TO THE CONTRACT DOCUMENTS DUE TO THE SUBSTITUTION SHALL BE COORDINATED BY THE GENERAL CONTRACTOR AND ANY ADDITIONAL COST TO MODIFY THE DESIGN OR MODIFY THE SCOPE OF OTHER TRADES SHALL BE INCLUDED IN THE PROPOSED SAVINGS. THIS SHALL INCLUDE MODIFICATIONS TO THE STRUCTURAL SCOPE FOR EQUIPMENT SUPPORT AS WELL AS MODIFICATIONS TO ELECTRICAL BRANCH CIRCUITRY OR FEEDERS FOR EQUIPMENT.

#### 230050 SUBMITTALS

- 1. ALL SUBMITTALS SHALL BE ROUTED TO THE ARCHITECT FOR DISTRIBUTION TO ALL DESIGN PROFESSIONALS.
- 2. ALL SUBMITTALS SHALL BEAR A COVER-SHEET FROM THE GENERAL CONTRACTOR INDICATING THEY HAVE REVIEWED THE SUBMITTAL AND FIND IT TO CONFORM TO THE
- CONTRACT DOCUMENTS. 3. SHOP DRAWING SUBMISSIONS CONSISTING OF PRODUCT DATA CUT-SHEETS MAY BE SUBMITTED ELECTRONICALLY.
- 4. SHOP DRAWING SUBMISSIONS CONSISTING OF COORDINATION PLANS, LAYOUT DRAWINGS, FIRE PROTECTION SHOP DRAWINGS, FIRE ALARM SHOP DRAWINGS, SHEET METAL SHOP DRAWINGS, ETC. SHALL BE SUBMITTED IN LARGE FORMAT, ORIGINAL SIZE ON PAPER. PROVIDE FIVE COPIES OF THE SHOP DRAWINGS. THE ENGINEER SHALL KEEP A COPY, THE ARCHITECT SHALL KEEP A COPY, THE REMAINING THREE COPIES WILL BE RETURNED TO THE
- GENERAL CONTRACTOR. 5. REQUESTS FOR INFORMATION (RFIS) SHALL INCLUDE THE QUESTION, THE REFERENCED PORTION OF THE CONTRACT DOCUMENTS, AND THE CONTRACTOR'S RECOMMENDED
- SUGGESTION FOR REMEDY. 6. DELEGATED-DESIGN SUBMISSIONS SHALL BE PROVIDED WITH A COVER-SHEET INDICATING THE PROFESSIONAL OF RECORD THAT WILL SIGN AND SEAL THE DOCUMENT. ORIGINAL SIGNED AND SEALED DOCUMENTS DO NOT NEED TO BE SUBMITTED UNTIL THE DOCUMENTS ARE APPROVED BY THE
- 7. REFER TO THE INDIVIDUAL SPECIFICATION SECTIONS FOR THE REQUIRED SUBMITTALS.
- 8. COMPILE OPERATION AND MAINTENANCE (O&M) MANUALS AND SUBMIT ELECTRONICALLY FOR APPROVAL. AFTER APPROVAL OF ALL MANUALS, PROVIDE TWO COPIES OF A PRINTED, BOUND SET TO THE OWNER AND A COMPACT DISC WITH THE DATA AS .PDFS.

# 230060 TEMPORARY REQUIREMENTS DURING CONSTRUCTION

PROVIDE TEMPORARY HEAT FOR THE DURATION OF THE CONSTRUCTION OF THE PROJECT. PROVIDE TEMPORARY HEATERS AS REQUIRED TO KEEP THE SPACE ABOVE 55 DEGREES FAHRENHEIT. IF EXISTING OR PROPOSED EQUIPMENT IS USED, THE CONTRACTOR SHALL PROVIDE TEMPORARY FILTERS ON THE RETURN AIR INLETS AND IN THE UNIT. ALL CONSTRUCTION FILTERS SHALL BE REMOVED AFTER CONSTRUCTION AND THE UNIT FILTERS SHALL BE REPLACED WITH NEW FILTERS.

1. IN THE CONSTRUCTION AREAS, THE CONTRACTOR SHALL

# 230070 QUALITY ASSURANCE

- 1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH INDUSTRY STANDARDS AND SHALL CONFORM TO THE NEW JERSEY UNIFORM CONSTRUCTION CODE. THIS PROJECT IS AN ALTERATION IN ACCORDANCE WITH THE REHABILITATION SUBCODE. AS SUCH, ONLY THE REFERENCED SECTIONS OF THE ADOPTED SUBCODES ARE FOLLOWED. THE CURRENTLY ADOPTED SUBCODES WITH AMENDMENTS ARE AS FOLLOWS:
- 1.1. INTERNATIONAL BUILDING CODE 2021 1.2. NATIONAL STANDARD PLUMBING CODE 2021
- 1.3. INTERNATIONAL MECHANICAL CODE 2021 1.4. INTERNATIONAL FUEL GAS CODE 2021
- 1.5. NATIONAL ELECTRIC CODE 2020 1.6. ASHRAE 90.1-2019
- 1.7. ICC A117.1-2017
- WARRANTY 2.1. CONTRACTOR TO PROVIDE ONE YEAR WARRANTY ON ALL EQUIPMENT AND PARTS AS WELL AS INSTALLATION. CONTRACT SHALL INCLUDE ONE YEAR OF ON-SITE

# 230100 EXECUTION

- 1. ALL CUTTING AND PATCHING OF THE BUILDING SHALL BE PERFORMED BY THE CONTRACTOR. REMOVAL OF EXISTING SYSTEMS, COMPONENTS, SUPPORTS, ETC. SHALL HAVE ALL EXISTING HOLES OR PENETRATIONS PATCHED TO MATCH THE EXISTING ADJACENT CONSTRUCTION.
- 2. REMOVE AND DISPOSE OF IN A LEGAL MANNER ALL CONSTRUCTION DEBRIS IDENTIFIED TO BE REMOVED. TH CONSTRUCTION AREA SHALL BE BROOM SWEPT EACH NIGHT. DO NOT LET RUBBISH ACCUMULATE.
- 3. ALL CONSTRUCTION MATERIAL THAT CAN BE RECYCLED SHALL BE RECYCLED. MAINTAIN ALL RECEIPTS AND SUBMIT COPIES OF THE RECEIPT TO THE ARCHITECT TO DOCUMENT THE QUANTITIES OF THE RECYCLED MATERIAL.

# 230110 O&M DATA

REQUIREMENTS.

- 1. PROVIDE OPERATION AND MAINTENANCE MANUALS. REFER TO THE INDIVIDUAL SPECIFICATION SECTIONS FOR
- 2. THE O&M MANUALS SHALL INCLUDE AS-BUILT DOCUMENTATION. AS-BUILT DOCUMENTATION SHALL CONSIST OF CONTRACTOR RED-LINED CONTRACT DOCUMENTS. INCLUDE THE AS-BUILT DOCUMENTATION WITH THE O&M SUBMITTALS.

1. PROVIDE TRAINING ON ALL REQUIRED SYSTEMS. REFER TO THE INDIVIDUAL SPECIFICATION SECTIONS FOR REQUIREMENTS. ALL TRAINING SHALL BE VIDEO-RECORDED. THE VIDEO RECORDING SHALL HAVE CLEAR AUDIO AND VIDEO RECORDING, THE QUALITY OF THE RECORDING SHALL BE DETERMINED BY THE ARCHITECT AND ENGINEER. ANY RECORDING THAT IS NOT ACCEPTED SHALL BE RE-RECORDED.

# 230300 ROOFING

1. ALL ROOF PENETRATIONS SHALL BE WEATHERPROOF IN ALL RESPECTS. ANY WORK DONE ON THE ROOF SHALL BE PERFORMED BY A CONTRACTOR CERTIFIED BY THE ROOF MANUFACTURER TO MAINTAIN THE EXISTING ROOF

# 230500 MECHANICAL COMMON REQUIREMENTS

- SCOPE 1.1. IDENTIFICATION 2. SHOP DRAWINGS
- 2.1. SUBMIT SHOP DRAWINGS FOR ALL ITEMS INCLUDING PRODUCT DATA AND DETAILS. 3. IDENTIFICATION

#### 3.1. DUCTWORK

- 3.1.1. PROVIDE MULTI-COLOR PLASTIC LABELS FOR 240000 LOUVERS MECHANICAL ENGRAVING WITH WHITE LETTERING ON BLUE BACKGROUND.
- 3.1.3. IDENTIFY THE DUCTWORK SERVICE AS WELL AS FLOW DIRECTION. 3.1.4. INSTALL DUCTWORK LABELS DIRECTLY TO
- DUCTWORK INSULATION EVERY 15' OR AT EACH WALL PENETRATION.
- 3.2.1. PROVIDE MULTI-COLOR PLASTIC LABELS FOR MECHANICAL ENGRAVING WITH WHITE LETTERING ON

# 3.2.2. MINIMUM LETTER SIZE SHALL BE 1"

BLACK BACKGROUND.

230593 TESTING, ADJUSTING, AND BALANCING

3.1.2. MINIMUM LETTER SIZE SHALL BE ½".

# SCOPE

- 1.1. CONSTANT VOLUME AIR HANDLING SYSTEMS
- SUBMITTALS
- 2.1. SUBMIT TAB CONTRACTOR QUALIFICATIONS. 2.2. SUBMIT CERTIFIED TAB REPORTS
- 3. QUALITY ASSURANCE 3.1. TESTING, ADJUSTING, AND BALANCING CONTRACTOR SHALL BE CERTIFIED BY THE NEBB OR AABC. 4. FOLLOW PROCEDURES IN ACCORDANCE WITH AABC'S NATIONAL STANDARDS FOR TOTAL SYSTEM BALANCING OR
- NEBB'S PROCEDURAL STANDARDS FOR TESTING, ADJUSTING, AND BALANCING OF ENVIRONMENTAL SYSTEMS. 5. CUT INSULATION AND DUCTWORK AS REQUIRED TO OBTAIN
- MEASUREMENTS. PATCH AND REPAIR ALL COMPONENTS. 6. PRIOR TO BALANCING ENSURE THAT AIR FILTERS ARE IN
- 7. EXAMINE ALL DUCTWORK AND DAMPERS TO ENSURE THE INSTALLATION IS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- 8. DESIGN AIRFLOWS ARE STANDARD CUBIC FEET PER MINUTE. ENSURE ALL OF THE DATA IS CONVERTED TO SCFM. 9. ADJUST AIRFLOWS TO BE WITHIN +/- 10% OF THE DESIGN VALUES.
- 10. DOCUMENT ANY ITEMS OUT OF TOLERANCE WITH POSSIBLE CONTRIBUTING FACTORS. DOCUMENT OTHER DEFICIENCIES SUCH AS NOISE AND OTHER INSTALLATION ISSUES.
- 11. PREPARE AND SUBMIT FINAL REPORT TO ARCHITECT. 12. WORK WITH THE CONTROL VENDOR TO PROVIDE ANY VALUES THAT WOULD BE USEFUL FOR SETTING STATIC PRESSURE SETPOINTS AND PROVIDE TIME AS NECESSARY. 13. AFTER SUBSTANTIAL COMPLETION OF THE ENTIRE PROJECT,
- PROVIDE FOR ONE ADDITIONAL VISIT TO THE SITE TO SPOT CHECK AIRFLOW VALUES TO ENSURE THE SYSTEM IS OPERATING AS IT WAS BALANCED.

#### 233113 DUCTWORK

- SCOPE 1.1. SINGLE-WALL DUCTWORK
- 1.2. DUCT LINER SUBMITTALS
- 2.1. SUBMIT SHOP DRAWINGS INCLUDING DUCTWORK SHOP
- 2.2. PROVIDE SHEET METAL SHOP DRAWINGS PREPARED AT LEAST  $\frac{1}{4}$ " = 1'-0" SCALE COORDINATED WITH THE
- EXISTING CONDITIONS. 3. COMPLY WITH SMACNA STANDARDS FOR DUCT
- CONSTRUCTION. 4. COMPLY WITH SMACNA STANDARDS FOR DUCT SUPPORTS FOR STRAP AND ROD SIZING.
- 5. HANGER RODS SHALL BE CADMIUM PLATED STEEL RODS AND NUTS. 6. INSTALL DUCTWORK AS INDICATED ON APPROVED SHOP DRAWINGS.
- 7. COMPLY WITH SMACNA STANDARDS FOR DUCT INSTALLATION. 8. SUPPORT DUCTWORK IN ACCORDANCE WITH SMACNA STANDARDS.
- 8.1. DELEGATED DESIGN: PROVIDE DESIGN OF DUCT CONSTRUCTION, REINFORCEMENTS, HANGERS AND SUPPORTS. DESIGN SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER.
- 8.2. DUCT HANGERS AND SUPPORTS SHALL WITHSTAND THE EFFECTS OF GRAVITY LOADS AND STRESSES; EXTERIOR HANGERS AND SUPPORTS SHALL WITHSTAND THE
- EFFECTS OF WIND LOADS AND STRESSES. 9. ALL BRANCH TAKE-OFFS SHALL HAVE MANUAL VOLUME
- 10. ALL BRANCH TAKE-OFFS SHALL BE 45-DEGREE TAKE-OFFS. 11. REFER TO DUCT/INSULATION SCHEDULE FOR DUCT SEAL CLASSES AND PRESSURE SEAL CLASSES.
- 12. SEALANT SHALL BE A MAXIMUM FLAME—SPREAD INDEX OF 25 AND A MAXIMUM SMOKE-DEVELOPED INDEX OF 50 WHEN TESTED ACCORDING TO UL 723; CERTIFIED BY AN NRTL. 13. SEALANT SHALL BE A WATER-BASED JOINT AND SEAM SEALANT; BRUSH ON APPLICATION METHOD; MINIMUM 65 PERCENT SOLIDS CONTENT; MINIMUM 20 SHORE A HARDNESS; WATER RESISTANT; MOLD AND MILDEW
- RESISTANT; MAXIMUM 75 G/L (LESS WATER) VOC; AND COMPATIBLE WITH GALVANIZED SHEET STEEL. 14. ALL SIZES SHOWN ON THE DRAWINGS ARE CLEAR INSIDE DIMENSIONS. FOR INTERNALLY LINED DUCTWORK, INCREASE THE SIZE OF THE SHEET METAL.
- 15. PROVIDE INTERNALLY LINED DUCTWORK ON ALL RETURN AIR TRANSFER DUCTWORK. 16. ELBOWS SHALL BE LONG-RADIUS TYPE RATHER THAN RECTANGULAR WHERE INSTALLATION PERMITS.
- 17. DUCT LINER SHALL COMPLY WITH ASTM C 1071 AND SHALL BE MANUFACTURED BY JOHNS MANVILLE, KNAUF, OR OWENS
- 17.1. LINER SHALL HAVE ANTIMICROBIAL EROSION—RESISTANT COATING. 17.2. LINER SHALL BE 1" THICK.

# 233423 HVAC POWER VENTILATORS

# 1.2. CEILING MOUNTED VENTILATORS (EF-A)

- SUBMITTALS 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA AND
- 3. UL COMPLIANCE: POWER VENTILATORS SHALL COMPLY WITH
- 4. CEILING MOUNTED VENTILATORS 4.1. SHALL BE MANUFACTURED BY LOREN COOK, GREENHECK, OR TWIN CITY FAN.
- 4.2. REFER TO SCHEDULE FOR PERFORMANCE AND BASIS OF 4.3. PROVIDE EQUIPMENT SUPPORTS FOR CEILING MOUNTED
- 4.4. PROVIDE ACCESS DOORS WHERE REQUIRED TO SERVICE AND MAINTAIN THE FANS WHERE ACCESS IS OTHERWISE
- NOT POSSIBLE: COORDINATE WITH ARCHITECT. 4.5. INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- 4.6. MAKE FINAL DUCT CONNECTION WITH FLEXIBLE DUCT CONNECTION.

# 239617 ELECTRIC UNIT HEATERS

1.1. ELECTRIC UNIT HEATERS (EUH-A,B)

BASIS OF DESIGN.

- SUBMITTALS 2.1. PROVIDE SHOP DRAWINGS INCLUDING PRODUCT DATA. 2.2. PROVIDE OPERATIONS AND MAINTENANCE MANUAL.
- 3. ELECTRIC UNIT HEATERS 3.1. SHALL BE MANUFACTURED BY BRASCH, QMARK, OR
- 3.2. ALL HEATERS SHALL PROVIDE A MINIMUM OF TWO STAGES OF HEATING. 3.3. PROVIDE EQUIPMENT SUPPORTS FOR CEILING AND WALL
- MOUNTING CONFIGURATIONS. 3.4. REFER TO SCHEDULE FOR PERFORMANCE DATA AND
- 3.5. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.

- 1. SCOPE
- SUBMITTALS 2.1. PROVIDE SHOP DRAWINGS INCLUDING PRODUCT DATA.
- LOUVERS 3.1. SHALL BE MANUFACTURED BY RUSKIN OR GREENHECK.
- 3.2. PROVIDE EQUIPMENT AND BUILDING SUPPORTS. 3.3. REFER TO SCHEDULE FOR PERFORMANCE DATA AND
- BASIS OF DESIGN. 3.4. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.

#### **DESIGN CRITERIA** SUMMER OUTDOOR DESIGN CONDITIONS | DRY BULB: 94.3°F (0.4% COOLING DRY BULB) (PER ASHRAE FUNDAMENTALS - 2021) WET BULB: 74.4°F (0.4% EVAPORATION WET BULB) WINTER OUTDOOR DESIGN CONDITIONS DRY BULB: 12.8°F (99.6% HEATING DRY BULB) 1.1. STATIONARY DRAINABLE LOUVERS (L-A) (PER ASHRAE FUNDAMENTALS - 2021) WINTER INDOOR DESIGN CONDITIONS INDOOR AIR TEMPERATURE: 70°F (DB) 2.2. PROVIDE OPERATIONS AND MAINTENANCE MANUAL. DESIGN CITY NEWARK, NJ

	EXHAUS <sup>1</sup>	T SCHED	ULE						
UNIT SERVED	SPACE	AREA (FT²)	EXHAUST REQUIRED (CFM)	EXHAUST PROVIDED (CFM)					
MATTANO PARK									
EF-A	WOMEN'S ROOM	300	250	250					
EF-A	MEN'S ROOM	300	250	250					
1. FROM IMC 2021 TABEL 403.3.1.1: TOILET ROOMS — PUBLIC REQUIRE 50 CFM PER FIXTURE WHEN CONTINUOUS EXHAUST IS PROVIDED. ALL FANS ARE TO RUN CONTINUOUSLY DURING OCCUPIED PERIODS.									

		<b>DUCT/IN</b>	ISULATIO	DN SCHEDI	JLE			
DUCT SERVICE		PRESSU	RE CLASS	DUC	DUCTWORK MINIMUM INSULATIO			
	SMACNA SEAL CLASS	PRESSURE	INCHES W.C.	MATERIAL	CODE COMPLIANCE	EXTERIOR	UNCONDITIONED SPACE OR BURIED DUCT	
EXHAUST	A	NEGATIVE	1" W.C.	GALV. STEEL G60	ASTM A653/A653M	NONE	NONE	

CLIMATE ZONE

ا ۵۸	DESCRIPTION	FLOW	STATIC	DRIVE	ELECTRICAL		BASIS	BASIS OF DESIGN		
١	DESCRIP HON	(CFM)	PRESSURE	DRIVE	V/ø/Hz	MOTOR HP	MOTOR RPM	MAKE	MODEL	NOTES
-A	CEILING SURFACE MOUNTED EXHAUST VENTILATOR	0.35"	DIRECT	115/1/60	0.05 (BHP)	938	GREENHECK	SP-A510-VG	1-9	
1. P 2. P 3. P	ST FAN SCHEDULE NOTES: PROVIDE ELECTRONICALLY COMMUTATED MOTOR WITH 0-10 PROVIDE REMOTE WALL-MOUNTED SPEED DIAL. PROVIDE DISCONNECT SWITCH. PROVIDE STANDARD GRILLE.	OVDC INPUT	SIGNAL.	6. F 7. F 8. F	PROVIDE HANI	OC CONTROLS D/OFF/AUTO TROLLER WITH	TRANSFORM CONTROLLER SCHEDULING	AND 3RD PA	ARTY TIME CLOCK	

**CENTRIFUGAL FAN SCHEDULE** 

	LOUVER SCHEDULE								
TAG	AG DESCRIPTION		DIMENSION	S	FREE AREA	BASIS	NOTES		
170	DESCRIPTION	HEIGHT	WIDTH	DEPTH	(SQ. FT.)	MAKE	MODEL	NOTES	
L-A	L-A STATIONARY DRAINABLE BLADE LOUVER 12" 12" 6" 0.30 GREENHECK ESD-635 1,2								
	LOUVER SCHEDULE NOTES:  1. PROVIDE ALUMINUM INSECT & BIRD SCREEN.								

	ELECTRIC UNIT HEATER SCHEDULE									
TAG	DESCRIPTION	AIRFLQW	BTU/HR	ELECTRICAL BASIS OF DESIGN			CTRICAL BASIS OF DESIGN			
IAG	DESCRIPTION	(CFM)	(CEM)   DIU/IIK		MAKE	MODEL	NOTES			
EUH-A	ELECTRIC UNIT HEATER	350	11,942	240/1/60	2,500	10.7	BRASCH	BH-240-U1025J	1-8	
FUH-R	FLECTRIC LINIT HEATER	650	25,590	240/1/60	7.500	32.0	BRASCH	BH-240-U2075J	1_8	

2. PROVIDE MINIMUM TWO-COAT 70% PVDF PAINT; COORDINATE COLOR WITH ARCHITECT.

3. PROVIDE POLYESTER POWDER COAT FINISH. COORDINATE ENCLOSURE COLOR WITH ARCHITECT PRIOR TO ORDERING.

- ELECTRIC UNIT HEATER SCHEDULE NOTES:
- . PROVIDE TWO-STAGE HEATER. PROVIDE DIRECTIONAL LOUVERS.
- 3. PROVIDE DISCONNECT SWITCH. PROVIDE BUILT—IN 24V TRANSFORMER AND CONTACTOR.
- PROVIDE MANUAL RESET CUTOUT (IN ADDITION TO AUTOMATIC CUTOUT). PROVIDE REMOTE, WALL MOUNTED, LOW VOLTAGE, 2-STAGE THERMOSTAT PROVIDE UNIVERSAL WALL & CEILING MOUNTING BRACKET. UNIT TO BE MOUNTED FROM CEILING.

	SYMBOL LEGEND
SYMBOL	DESCRIPTION
$\boxtimes$	CEILING MOUNTED SUPPLY AIR DIFFUSER. REFER TO SCHEDULE.
	CEILING MOUNTED RETURN AIR GRILLE OR REGISTER. REFER TO SCHEDULE.
	CEILING MOUNTED EXHAUST AIR GRILLE OR REGISTER. REFER TO SCHEDULE.
尺	45° BRANCH TAKE-OFF WITH MANUAL VOLUME DAMPER.
XXX ##	MECHANICAL EQUIPMENT TAG FOR EQUIPMENT REQUIRING POWER.
XXX ##	MECHANICAL EQUIPMENT TAG FOR EQUIPMENT THAT DOES NOT REQUIRE POWER.
XX—X ###¢	DIFFUSER, REGISTER, OR GRILLE TAG. REFER TO SCHEDULE. ### INDICATES THE MAXIMU AIRFLOW THE DEVICE WILL SEE IN STANDARD CFM.
0	TEMPERATURE SENSOR.
(Ē)	FAN SPEED DIAL/CONTROLLER.
(M)	24VAC MOTOR ACTUATOR FOR DAMPER.
$\boxtimes$	SUPPLY DUCTWORK TURNING UP.
[×]	SUPPLY DUCTWORK TURNING DOWN.
<b>→</b>	AIRFLOW UNDER NEGATIVE PRESSURE.
=	FLEXIBLE DUCTWORK CONNECTION.
	POINT OF CONNECTION TO EXISTING.
	MECHANICAL EQUIPMENT/DUCTWORK TO BE REMOVED.
	EXISTING MECHANICAL EQUIPMENT.
	MECHANICAL EQUIPMENT/DUCTWORK.

					ABBREVIATIONS
BASIS	OF DESIGN	NOTES		ABBRV	ABBREVIATION
MAKE	MODEL	INOILS		AFF	ABOVE FINISHED FLOOR
ENHECK	ESD-635	1,2	1	AHRI	AMERICAN HEATING REFRIGERATING INSTITUTE
		<u> </u>	1	CD	CEILING DIFFUSER
				CFM	CUBIC FEET PER MINUTE
				EAT	ENTERING AIR TEMPERATURE
			J	EWT	ENTERING WATER TEMPERATURE
				EF	EXHAUST FAN
			_	EG	EXHAUST GRILLE
	·			FH	FLECTRIC HEATER

-C- CONDENSATE DRAIN PIPING.

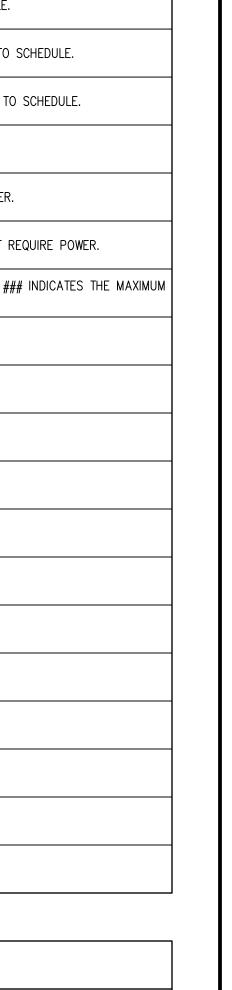
ESP EXTERNAL STATIC PRESSURE FULL LOAD AMPS GUH GAS UNIT HEATER HOA HAND/OFF/AUTO HP HORSEPOWER ∣ kW ∣KILOWATT

| MAN | MANUAL MAU MAKEUP AIR UNIT MBH THOUSAND BRITISH THERMAL UNITS PER HOUR MCA MINIMUM CIRCUIT AMPACITY

> N.G. NATURAL GAS PL PILOT LIGHT RG RETURN AIR GRILLE

> > RTU ROOFTOP UNIT SEER | SEASONAL ENERGY EFFICIENCY RATIO SD SUPPLY DIFFUSER SSPB START-STOP PUSH BUTTON

> > > **MECHANICAL DRAWING LIST** SHEET NUMBER MECHANICAL SPECIFICATIONS, SCHEDULES, AND LEGENDS



REVIEW:

50 DIVISION STREET, SUITE 503

WWW.SSPARCHITECTS.COM

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CONSULTANT:

PHASE / SUBMISSION:

ISSUE DATE:

**REVISIONS:** 

MARK DATE

NJ SDA PACKAGE #:

© SSP ARCHITECTS

NJ SDA #:

NJ DOE #:

SSP#:

ISSUED FOR BID

AUGUST 31, 2023

DESCRIPTION

22-8845

SOMERVILLE, NJ 08876

PHONE: 908-725-7800

LAT | LEAVING AIR TEMPERATURE LD | LINEAR DIFFUSER LWT LEAVING WATER TEMPERATURE MOCP MAXIMUM OVERCURRENT PROTECTION NEMA NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION RPM | REVOLUTIONS PER MINUTE UNDERWRITER'S LABORATOR' "WC | INCHES OF WATER COLUMN XT TRANSFORMER

MECHANICAL PLANS - MATTANO PARK



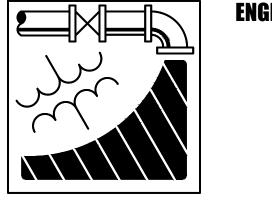
THE COUNTY OF UNION

360-484 5TH AVE ELIZABETH, NEW JERSEY 07202 CITY OF ELIZABETH UNION COUNTY

SHEET NAME: **MECHANICAL** SPECIFICATIONS,

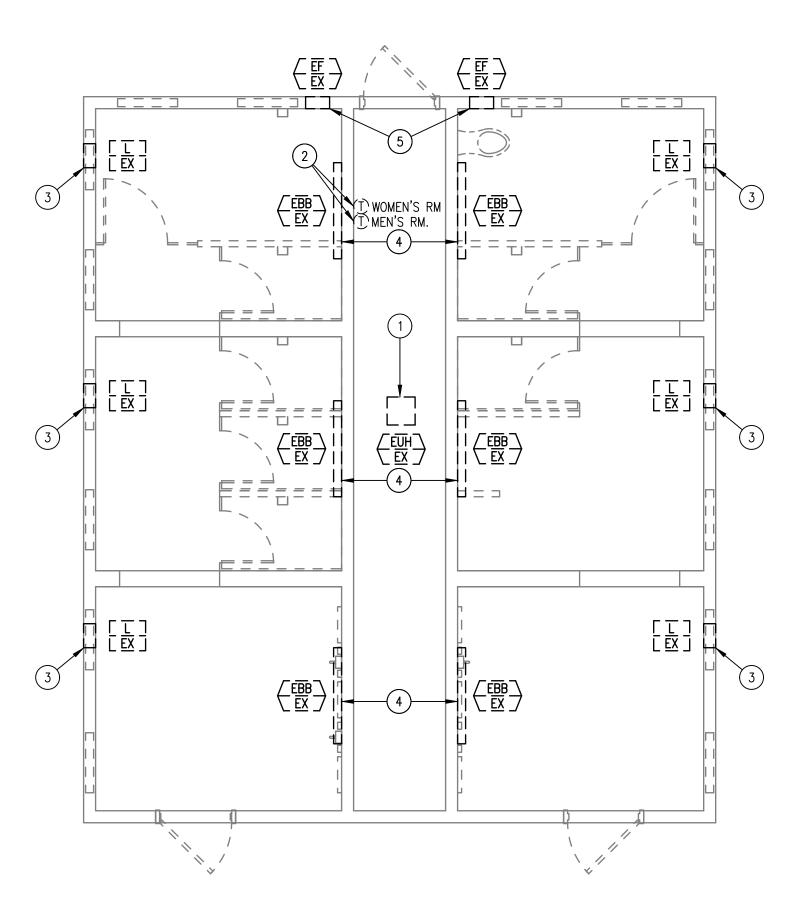
**LEGENDS** SHEET NUMBER:

**SCHEDULES, AND** 





NJ License 24GE04746800



# MECHANICAL PLAN - MATTANO PARK 1/4"=1'-0"

# **PLAN KEYED NOTES:**

MECHANICAL DEMOLITION PLAN - MATTANO PARK

- ( 1 ) REMOVE EXISTING ELECTRIC UNIT HEATER, SUPPORTS, WIRING, CONTROLS, ETC.
- (2) REMOVE EXISTING THERMOSTAT.
- (3) REMOVE EXISTING EXTERIOR LOUVER, WALL SLEEVE, ETC.
- REMOVE EXISTING ELECTRIC BASEBOARD HEATER, SUPPORTS, WIRING, CONTROLS, ETC.
- (5) REMOVE EXISTING EXTERIOR WALL MOUNTED EXHAUST FAN, SUPPORTS, WIRING, CONTROLS, AIR DIRECTIONAL DEVICES, ETC.

# **PLAN KEYED NOTES:**

WOMEN'S TOILET

- (1) PROVIDE CEILING MOUNTED EXHAUST FAN. TERMINATE DUCTWORK NO LESS THAN 14" ABOVE ADJACENT ROOF LEVEL OUTDOORS. REFER TO DETAIL 3/M31.
- 2 PROVIDE ELECTRIC UNIT HEATER.
- (3) PROVIDE LOUVER, ALUMINUM WALL SLEEVE, ETC.
- (4) PROVIDE REMOTE WALL-MOUNTED THERMOSTAT WITH VENTED LOCKBOX.
- (5) PROVIDE REMOTE WALL-MOUNTED FAN SPEED DIAL AND CONTROLLER.

# **COM***check* **Software Version COM***check***Web Mechanical Compliance Certificate**

# **Project Information**

90.1 (2019) Standard Energy Code: Project Title: 22-0080 UNION COUNTY - MATTANO

Location: Elizabeth, New Jersey Climate Zone:

Project Type: Alteration

Construction Site:

# **Mechanical Systems List**

Quantity System Type & Description

2 TOILET ROOMS Heating: 1 each - Unit Heater, Electric, Capacity = 26 kBtu/h

No minimum efficiency requirement applies Fan System: TOILET ROOM | TOILET ROOMS -- Compliance (Motor nameplate HP and fan efficiency method): Passes

Owner/Agent:

EUH-B Supply, Constant Volume, 650 CFM, 0.3 motor nameplate hp, 0.00 fan energy index , fan exception: Single

EF-A Exhaust, Constant Volume, 250 CFM, 0.1 motor nameplate hp, 0.00 fan energy index , fan exception: Single

Designer/Contractor:

SYSTEM VERIFICATION REQUIRED.

fan < 1 HP or < 0.89 kW

Heating: 1 each - Unit Heater, Electric, Capacity = 12 kBtu/h

No minimum efficiency requirement applies Fan System: CHASE | PLUMBING CHASE -- Compliance (Motor nameplate HP and fan efficiency method): Passes

EUH-A Supply, Constant Volume, 350 CFM, 0.1 motor nameplate hp, 0.00 fan energy index , fan exception: Single fan < 1 HP or < 0.89 kW

SYSTEM VERIFICATION REQUIRED.

# **Mechanical Compliance Statement**

Compliance Statement: The proposed mechanical alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 90.1 (2019) Standard requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

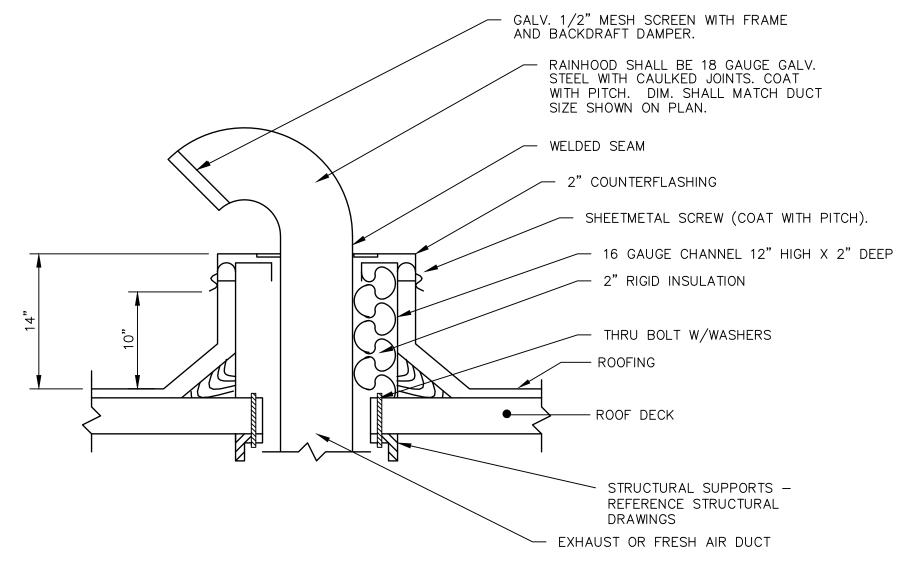
Name - Title

Project Title: 22-0080 UNION COUNTY - MATTANO Data filename:

Report date: 08/29/23 Page 1 of 9

# **DRAWING GENERAL NOTES:**

- REMOVE ALL MISCELLANEOUS SUPPORTS, CONTROLS, WIRING, TUBING, ETC. FOR EXISTING EQUIPMENT, DUCTWORK, AND PIPING SPECIFIED TO BE REMOVED.
- 2. PATCH AND SEAL EXISTING OPENINGS THAT ARE OBSOLETE FROM THE DEMOLITION.
- IF THE EXISTING STRUCTURE HAS SPRAY FIREPROOFING. REPAIR ANY FIREPROOFING DISTURBED DURING CONSTRUCTION.
- 4. TAKE DOWN CEILING, LIGHTS, SPRINKLERS, ETC. AS REQUIRED TO INSTALLATION OF EQUIPMENT, PIPING, AND DUCTWORK.



# GOOSENECK DETAIL - EXHAUST AIR DUCTWORK NOT TO SCALE

# EF-A SEQUENCE OF OPERATION

RUN CONDITIONS — SCHEDULED: THE FAN SHALL RUN ACCORDING TO A USER DEFINABLE SCHEDULE, THE OCCUPANCY

SCHEDULE.

THE FAN SHALL HAVE A USER DEFINABLE (ADJ.) MINIMUM RUNTIME.

THE CONTROLLER SHALL MONITOR THE FAN STATUS.

#### EUH-A,B SEQUENCE OF OPERATION RUN CONDITIONS — SCHEDULED:

THE UNIT SHALL RUN ACCORDING TO A USER DEFINABLE TIME SCHEDULE IN THE FOLLOWING

OCCUPIED MODE: THE UNIT SHALL MAINTAIN A 70°F (ADJ.) HEATING SETPOINT.

UNOCCUPIED MODE (NIGHT SETBACK): THE UNIT SHALL MAINTAIN

 A 55°F (ADJ.) HEATING SETPOINT. THE FAN SHALL HAVE A USER DEFINABLE (ADJ.) MINIMUM RUNTIME.

THE CONTROLLER SHALL MONITOR THE FAN STATUS.

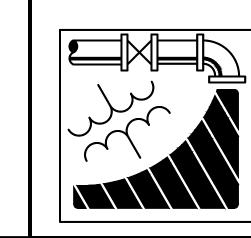
ZONE SETPOINT ADJUST: THE OCCUPANT SHALL BE ABLE TO ADJUST THE ZONE TEMPERATURE HEATING SETPOINT AT

THE ZONE SENSOR.

ELECTRIC HEATING:
THE CONTROLLER SHALL MEASURE THE ZONE TEMPERATURE AND MODULATE THE ELECTRIC HEATING COIL TO MAINTAIN ITS SETPOINT. TO PREVENT SHORT CYCLING, THE STAGE SHALL HAVE A USER DEFINABLE (ADJ.) MINIMUM RUNTIME.

THE REHEATING SHALL BE ENABLED WHENEVER:

 THE ZONE TEMPERATURE IS BELOW SETPOINT. AND SUFFICIENT AIRFLOW IS PROVIDED.



# **ENGINEERING DRIVEN DESIGN PC**

555 Route One South Suite 100 Iselin, New Jersey 08830 (848) 247-6150 www.engineerdriven.com

Project # 22-0080 Jeffrey N. Beeden Professional Engineer NJ License 24GE04746800



PHASE / SUBMISSION:

ISSUE DATE:

**REVISIONS:** 

MARK DATE

NJ SDA PACKAGE #:

© SSP ARCHITECTS

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DESCRIPTION

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CONSULTANT:

SHEET NAME:

CITY OF ELIZABETH

**MECHANICAL PLANS** - MATTANO PARK

360-484 5TH AVE ELIZABETH, NEW JERSEY 07202

UNION COUNTY

# **ELECTRICAL SPECIFICATIONS:**

#### 260000 SUMMARY

- 1. THE SCOPE OF THIS PROJECT IS TO UPGRADE ALL MECHANICAL AND PLUMBING SYSTEMS, EQUIPMENT, AND FIXTURES AS WELL AS TO PROVIDE UPGRADES AND MODIFICATIONS TO THE EXISTING ELECTRICAL SYSTEMS FOR
- RESTROOMS IN UNION COUNTY PUBLIC PARKS... 2. THE BUILDING IS A SEISMIC DESIGN CATEGORY OF B, WHICH MEANS THAT ELECTRICAL SYSTEMS ARE EXEMPT FROM

### 260010 DEFINITIONS

- 1. FURNISH: TO PURCHASE AND DELIVER AN ITEM TO THE STAGING AREA COMPLETE WITH ALL REQUIRED
- APPURTENANCES. 2. INSTALL: TO MOVE THE ITEM FROM THE STAGING AREA
- AND FASTEN TO THE STRUCTURE. 3. PROVIDE: TO FURNISH AND INSTALL.

SEISMIC BRACING REQUIREMENTS.

# 260040 SUBSTITUTIONS

- 1. ALL SUBSTITUTIONS MUST BE APPROVED PRIOR TO BIDDING. PROVIDE SUBSTITUTION INFORMATION DURING THE BID-PHASE QUESTION AND ANSWER PERIOD. INCLUDE DETAILED DATA ON THE PROPOSED SUBSTITUTION INCLUDING DOLLAR AMOUNT OF PROPOSED SAVINGS. ENGINEER SHALL REVIEW THE INFORMATION AND DETERMINE WHETHER THE SUBSTITUTION
- 2. ANY CHANGES TO THE CONTRACT DOCUMENTS DUE TO THE SUBSTITUTION SHALL BE COORDINATED BY THE GENERAL CONTRACTOR AND ANY ADDITIONAL COST TO MODIFY THE DESIGN OR MODIFY THE SCOPE OF OTHER TRADES SHALL BE INCLUDED IN THE PROPOSED SAVINGS. THIS SHALL INCLUDE MODIFICATIONS TO THE STRUCTURAL SCOPE FOR EQUIPMENT SUPPORT AS WELL AS MODIFICATIONS TO ELECTRICAL BRANCH CIRCUITRY OR FEEDERS FOR EQUIPMENT.

#### 260050 SUBMITTALS

1. ALL SUBMITTALS SHALL BE ROUTED TO THE ARCHITECT FOR DISTRIBUTION TO ALL DESIGN PROFESSIONALS. 2. ALL SUBMITTALS SHALL BEAR A COVER-SHEET FROM THE GENERAL CONTRACTOR INDICATING THEY HAVE REVIEWED THE

SUBMITTAL AND FIND IT TO CONFORM TO THE CONTRACT

ORIGINAL SIZE ON PAPER. PROVIDE FIVE COPIES OF THE

- 3. SHOP DRAWING SUBMISSIONS CONSISTING OF PRODUCT DATA
- CUT-SHEETS MAY BE SUBMITTED ELECTRONICALLY. 4. SHOP DRAWING SUBMISSIONS CONSISTING OF COORDINATION PLANS, LAYOUT DRAWINGS, FIRE PROTECTION SHOP DRAWINGS, FIRE ALARM SHOP DRAWINGS, SHEET METAL SHOP DRAWINGS, ETC. SHALL BE SUBMITTED IN LARGE FORMAT
- SHOP DRAWINGS. THE ENGINEER SHALL KEEP A COPY, THE ARCHITECT SHALL KEEP A COPY, THE REMAINING THREE COPIES WILL BE RETURNED TO THE GENERAL CONTRACTOR. 5. REQUESTS FOR INFORMATION (RFIS) SHALL INCLUDE THE QUESTION. THE REFERENCED PORTION OF THE CONTRACT
- DOCUMENTS, AND THE CONTRACTOR'S RECOMMENDED SUGGESTION FOR REMEDY. 6. DELEGATED-DESIGN SUBMISSIONS SHALL BE PROVIDED WITH A COVER-SHEET INDICATING THE PROFESSIONAL OF RECORD THAT WILL SIGN AND SEAL THE DOCUMENT. ORIGINAL SIGNED AND SEALED DOCUMENTS DO NOT NEED TO BE
- SUBMITTED UNTIL THE DOCUMENTS ARE APPROVED BY THE ARCHITECT AND ENGINEER. REFER TO THE INDIVIDUAL SPECIFICATION SECTIONS FOR THE
- REQUIRED SUBMITTALS. 8. COMPILE OPERATION AND MAINTENANCE (0&M) MANUALS AND SUBMIT ELECTRONICALLY FOR APPROVAL. AFTER APPROVAL OF ALL MANUALS, PROVIDE TWO COPIES OF A PRINTED, BOUND SET TO THE OWNER AND A FLASH DRIVE WITH THE DATA AS .PDFS.

# 260070 QUALITY ASSURANCE

- 1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH INDUSTRY STANDARDS AND SHALL CONFORM TO THE NEW JERSEY UNIFORM CONSTRUCTION CODE. THE CURRENTLY ADOPTED SUBCODES WITH AMENDMENTS ARE AS FOLLOWS:
- 1.1. INTERNATIONAL BUILDING CODE 2021 1.2. NATIONAL STANDARD PLUMBING CODE 2021 1.3. INTERNATIONAL MECHANICAL CODE 2021
- 1.4. INTERNATIONAL FUEL GAS CODE 2021 1.5. NATIONAL ELECTRIC CODE 2020
- 1.6. ASHRAE 90.1-2019

# 260100 EXECUTION

- 1. ALL CUTTING AND PATCHING OF THE BUILDING SHALL BE PERFORMED BY THE CONTRACTOR. REMOVAL OF EXISTING SYSTEMS, COMPONENTS, SUPPORTS, ETC. SHALL HAVE ALL EXISTING HOLES OR PENETRATIONS PATCHED TO MATCH THE EXISTING ADJACENT CONSTRUCTION.
- 2. REMOVE AND DISPOSE OF IN A LEGAL MANNER ALL CONSTRUCTION DEBRIS IDENTIFIED TO BE REMOVED. THE CONSTRUCTION AREA SHALL BE BROOM SWEPT EACH NIGHT. DO NOT LET RUBBISH ACCUMULATE.
- 3. ALL CONSTRUCTION MATERIAL THAT CAN BE RECYCLED SHALL BE RECYCLED. MAINTAIN ALL RECEIPTS AND SUBMIT COPIES OF THE RECEIPT TO THE ARCHITECT TO DOCUMENT THE QUANTITIES OF THE RECYCLED MATERIAL.

# 260110 O&M DATA

- 1. PROVIDE OPERATION AND MAINTENANCE MANUALS. REFER TO THE INDIVIDUAL SPECIFICATION SECTIONS FOR
- 2. THE O&M MANUALS SHALL INCLUDE AS-BUILT DOCUMENTATION. AS-BUILT DOCUMENTATION SHALL CONSIST OF CONTRACTOR RED-LINED CONTRACT DOCUMENTS. INCLUDE THE AS-BUILT DOCUMENTATION WITH THE O&M

# 260130 FIRESTOPPING

1. ALL PENETRATIONS THROUGH FIRE-RATED ASSEMBLIES SHALL HAVE APPROPRIATE INTUMESCENT MATERIAL FIRE STOPPING INSTALLED. ALL OPENINGS SHALL BE CAULKED AND SEALED WITH SSS INTUMESCENT FIRESTOP SEALANT AS MANUFACTURED BY SPECIFIED TECHNOLOGIES, INC.

1. ALL ROOF PENETRATIONS SHALL BE WEATHERPROOF IN ALL RESPECTS. ANY WORK DONE ON THE ROOF SHALL BE PERFORMED BY A CONTRACTOR CERTIFIED BY THE ROOF MANUFACTURER TO MAINTAIN THE EXISTING ROOF WARRANTY.

# 260500 COMMON ELECTRICAL REQUIREMENTS

- SCOPE 1.1. LOW-VOLTAGE POWER CONDUCTORS AND CABLES 1.2. GROUNDING
- 1.3. HANGERS AND SUPPORTS 1.4. RACEWAYS AND BOXES
- SUBMITTALS 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA.
- 2.3. SUBMIT TEST REPORTS. 3. LOW-VOLTAGE POWER CONDUCTORS AND CABLES

2.2. SUBMIT OPERATION AND MAINTENANCE DATA.

- 3.1. PROVIDE WIRE MANUFACTURED BY BELDEN, SOUTHWIRE, OR ALPHA WIRE. 3.2. COPPER CONDUCTORS SHALL COMPLY WITH NEMA WC
- 3.3. CONDUCTOR INSULATION SHALL BE THHN-2 OR
- 3.4. MULTI-CONDUCTOR CABLES SHALL COMPLY WITH NEMA
- WC 70. 3.5. MULTI-CONDUCTOR CABLES SHALL CONSIST OF
- METAL—CLAD CABLE (MC). 3.6. SUPPORTS SHALL BE GALVANIZED STEEL SUPPORTS AS DESCRIBED IN NECA 1 AND NECA 101.

3.7. ALL BRANCH CIRCUITS HAVE BEEN DESIGNED BASED ON

- RESISTIVITY OF COPPER CONDUCTORS. 3.8. BRANCH CIRCUIT WIRE SHALL BE SOLID CONDUCTOR FOR NO. 10 AWG AND SMALLER AND STRANDED FOR
- LARGER CONDUCTORS. 3.9. INSTALL BRANCH CIRCUITS AND FEEDERS IN
- ACCORDANCE WITH THE RACEWAY APPLICATION TABLE
- ON THE CONTRACT DOCUMENTS. 3.10. CONCEALED BRANCH CIRCUITS SERVING OTHER DEVICES

SHALL BE TYPE MC CABLE. 3.11. EXPOSED BRANCH CIRCUITS SHALL BE PULLED ENCLOSURES

SCOPE

SUBMITTALS

265100 INTERIOR LIGHTING

1.1. LUMINAIRES

BE PRORATED.

INSTALLATION INSTRUCTIONS.

6.1. INDOOR LOCATIONS, NEMA 250, TYPE 1.

6.2. OUTDOOR LOCATIONS, NEMA 250, TYPE 3R.

2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA.

2.3. PROVIDE EXTENDED SEVEN YEAR WARRANTIES FROM

THE DATE OF SUBSTANTIAL COMPLETION FOR

3. REFER TO THE LIGHTING FIXTURE SCHEDULE FOR DETAILED

4. INSTALL IN ACCORDANCE WITH MANUFACTURER'S

SELF-CONTAINED BATTERY-POWERED EMERGENCY

FIXTURES OR BALLASTS. THE FIRST YEAR SHALL BE A

FULL WARRANTY AND THE REMAINING SIX YEARS SHALL

2.2. SUBMIT OPERATION AND MAINTENANCE DATA.

- CONDUCTORS IN RACEWAY. 3.12. IDENTIFY AND COLOR-CODE CONDUCTORS IN ACCORDANCE WITH CHAPTER 2 OF THE NEC.
- 3.13. INSTALL EQUIPMENT GROUND CONDUCTORS WITH ALL
- FEEDERS AND BRANCH CIRCUITS. 4. METAL RACEWAY

4.1. PROVIDE RACEWAY MANUFACTURED BY SOUTHWIRE,

- THOMAS & BETTS, OR WESTERN TUBE AND CONDUIT. 4.2. GALVANIZED RIGID CONDUIT (GRC) SHALL COMPLY WITH ANSI C80.1 AND UL 6.
- 4.3. ELECTRIC METALLIC TUBING (EMT) SHALL COMPLY WITH ANSI C80.3 AND UL797.
- 4.4. FLEXIBLE METAL CONDUIT (FMC) SHALL COMPLY WITH UL 1 AND SHALL BE ZINC COATED.
- 4.5. LIQUID TIGHT FLEXIBLE METAL CONDUIT (LFMC) SHALL COMPLY WITH UL 360 AND SHALL BE FLEXIBLE STEEL CONDUIT WITH PVC JACKET.
- 4.6. FITTINGS SHALL COMPLY WITH NEMA FB 1 AND UL 4.7. SHEET METAL PULL, JUNCTION, OUTLET, AND DEVICE BOXES SHALL COMPLY WITH NEMA OS 1. OUTLET AND
- DEVICE BOXES SHALL ALSO COMPLY WITH UL 514A. 5. GROUNDING 5.1. INSTALL BONDING STRAPS AND JUMPERS IN AREAS
- ACCESSIBLE FOR INSPECTION AND MAINTENANCE. 5.2. BOND METAL DUCTWORK TO EQUIPMENT GROUNDING
- CONDUCTORS OF ASSOCIATED FANS. INSTALL BONDING JUMPER ACROSS FLEXIBLE DUCTWORK CONNECTIONS. 5.3. EXOTHERMICALLY WELD GROUNDING ELECTRODE
- CONDUCTORS TO GROUNDING ELECTRODES, UNLESS OTHERWISE NOTED. 5.4. PERFORM TESTS ON THE GROUNDING SYSTEM. 5.4.1. TESTS SHALL INCLUDE MEASUREMENT OF GROUND
- 5.4.2. PREPARE TEST REPORT AND SUBMIT TO OWNER FOR REVIEW. 5.4.3. IF TESTS MEASURE HIGH RESISTIVITY INCLUDE RECOMMENDATIONS FOR IMPROVING THE GROUNDING
- SYSTEM. 6. HANGERS AND SUPPORTS 6.1. INSTALL HANGERS AND SUPPORTS IN ACCORDANCE

RESISTANCES.

- WITH NECA 1 AND NECA 101. 6.2. PROVIDE MAXIMUM SUPPORT SPACING AS REQUIRED BY
- NFPA 70. MINIMUM ROD SIZE SHALL BE 3/8". 7. COLOR CODE CONDUCTORS FOR 240/120V SYSTEMS SHALL MATCH THE EXISTING COLOR CODING.
- 8. LABEL JUNCTION AND PULL BOXES WITH THE BRANCH CIRCUIT AND PANEL INFORMATION INDICATING WHICH CIRCUITS ARE ROUTED THROUGH THE BOX.
- 9. UTILIZE A CLEAR PLASTIC LABEL WITH BLACK LETTERING IDENTIFYING THE BRANCH CIRCUIT FOR EACH OUTLET. ADHERE THE LABEL TO THE DEVICE COVERPLATE. 10. PROVIDE MULTI-COLOR PLASTIC LABELS FOR MECHANICAL ENGRAVING WITH WHITE LETTERING ON BLACK BACKGROUND.
- 10.1. MINIMUM LETTER SIZE SHALL BE 1/2" 11. LABEL ALL ELECTRICAL PANELS, DISCONNECT SWITCHES, AND LIGHTING CONTROL PANELS.

#### 260923 LIGHTING CONTROL DEVICES

- SCOPE 1.1. OCCUPANCY SENSORS
- SUBMITTALS 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA.
- 2.2. SUBMIT OPERATION AND MAINTENANCE DATA. 2.3. PROVIDE TRAINING ON ALL CONTROL DEVICES WITH PROGRAMMABLE CONTROLS AND/OR DIP SWITCH
- ADJUSTMENTS. 3. PROVIDE AUTOMATIC LIGHTING CONTROLS AS SPECIFIED ON THE CONTRACT DOCUMENTS.
- 3.1. PROVIDE CONTROLS MANUFACTURED BY HUBBELL, WATTSTOPPER, LITE CONTROL, OR SENSORSWITCH.
- 3.2. PROVIDE ALL POWER PACKS AND RELAY PACKS REQUIRED TO ACHIEVE THE SEQUENCE OF OPERATION

OUTLINED ON THE CONTRACT DOCUMENTS.

# 262416 EXISTING PANELBOARDS

# SCOPE

- 1.1. PANELBOARDS 2. REFER TO PANEL SCHEDULES AND SINGLE LINE DIAGRAM FOR DETAILED INFORMATION ON EACH PANELBOARD.
- 3. PROVIDE CIRCUIT BREAKERS THAT MATCH THE INTERRUPTING CURRENT RATING OF THE PANELBOARD. 4. CIRCUIT BREAKERS SHALL BE MOLDED CASE, INVERSE TIME AND INSTANTANEOUS TRIP, QUICK MAKE/QUICK BREAK TYPE. ALL CIRCUIT BREAKERS SHALL BE BOLT-ON STYLE. MULTIPLE POLE CIRCUIT BREAKERS SHALL OPEN ALL POLES SIMULTANEOUSLY. CIRCUIT BREAKER INTERRUPTING RATING SHALL MATCH THE PANEL RATING INDICATED IN THE SCHEDULE. ALL COMPONENTS SHALL BE FULLY RATED,
- UNLESS OTHERWISE NOTED. 5. INSTALL IN ACCORDANCE WITH MANUFACTURER'S
- INSTALLATION INSTRUCTIONS. 6. FOR ANY BREAKERS DESIGNATED AT "LOCKABLE", PROVIDE POWER/BLOC BY SAFETY DESIGN PERMANENTLY-MOUNTED SYSTEM TO PANELBOARD OR EQUIVALENT PERMANENTLY MOUNTED BREAKER LOCKING SYSTEM. BREAKER SHALL BE LOCKABLE IN THE ON/OFF POSITION.
- 7. PROVIDE A TYPEWRITTEN DIRECTORY CARD IN TRANSPARENT CARD HOLDER INCORPORATING THE EXISTING DIRECTORY CARD AND THIS PROJECT'S MODIFICATIONS.
- 8. AS EXISTING BRANCH CIRCUITS ARE MADE SPARES IN EXISTING PANELBOARDS LABEL AS SUCH AND OPEN THE
- 9. AFTER SUBSTANTIAL COMPLETION, BUT NOT MORE THAN 60 DAYS AFTER FINAL ACCEPTANCE, MEASURE THE LOAD DURING A PERIOD OF NORMAL SYSTEM LOADING AND MAKE CIRCUIT CHANGES TO BALANCE THE PHASE LOADING. PROVIDE A REPORT DOCUMENTING THE CHANGES AND UPDATE THE PANEL DIRECTORY CARD.

# 262726 WIRING DEVICES

- SCOPE 1.1. RECEPTACLES
- 1.2. SWITCHES
- SUBMITTALS 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA.
- 2.2. SUBMIT OPERATION AND MAINTENANCE DATA. 3. PROVIDE DEVICES MANUFACTURED BY COOPER, HUBBELL,
- LEVITON, OR PASS & SEYMOUR. 4. REFER TO SYMBOL LEGEND AND CONTRACT DOCUMENTS FOR
- CONFIGURATION AND REQUIREMENTS. 5. DEVICE COLOR SHALL BE SELECTED BY THE ARCHITECT IN
- THE SHOP DRAWING PHASE. 6. PROVIDE WALL PLATES TO FIT THE DEVICES. WALL PLATES SHALL BE COLORED SMOOTH HIGH IMPACT THERMOPLASTIC
- TO MATCH DEVICE COLOR IN FINISHED AREAS. 7. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- 8. PROVIDE BRANCH CIRCUIT IDENTIFICATION FOR OUTLETS. 9. PRIOR TO INSTALLING SWITCHES, CONFIRM DOOR SWINGS AND
- LOCATIONS OF FURNITURE PARTITIONS. 10. INSTALL ALL DEVICES IN ACCORDANCE WITH NJ BARRIER FREE SUBCODE.

# 262816 ENCLOSED SWITCHES

- SCOPE 1.1. NONFUSIBLE SWITCHES
- SUBMITTALS 2.1. SUBMIT SHOP DRAWINGS INCLUDING PRODUCT DATA.
- 2.2. SUBMIT OPERATION AND MAINTENANCE DATA. 3. NONFUSIBLE SWITCHES
- 3.1. PROVIDE HEAVY DUTY, SINGLE THROW, 600V RATED DICONNECT.
- 3.2. PROVIDE LOCKABLE HANDLE. 3.3. PROVIDE INTERLOCK WITH COVER IN CLOSED POSITION. 4. DISCONNECT SWITCHES SHALL COMPLY WITH UL 98 AND
- 5. DISCONNECT SWITCHES SHALL HAVE MECHANICAL LUGS.

# SYMBOL LEGEND

SYMBOL DESCRIPTION AC GENERAL USE SNAP SWITCH, 20 AMP, 120-277 VOLT - SINGLE POLE. x INDICATES SWITCHING CONTROL, WHERE NONE SHOWN SERVES ENTIRE ROOM.

T DRY TYPE TRANSFORMER (PLAN VIEW). REFER TO SCHEDULE.

HEAVY DUTY DISCONNECT SWITCH. xx INDICATES RATED SWITCH AMPS, WHERE NONE SHOWN, PROVIDE 30 AMPERE SWITCH.

J WALL-MOUNTED JUNCTION BOX.

(CO) CEILING-MOUNTED CARBON MONOXIDE ALARM. MODEL: KIDDE KN-COP-IC OR EQUIVALENT.

 $\square$ | EXISTING SURFACE MOUNTED PANELBOARD. REFER TO SCHEDULE, IF USED.

| ELECTRICAL EQUIPMENT OR WIRING.

- EXISTING ELECTRICAL EQUIPMENT OR WIRING TO REMAIN. LEXISTING ELECTRICAL EQUIPMENT OR WIRING TO BE REMOVED OR RELOCATED. REFER TO

EHD | ELECTRIC HAND DRYER.

PLANS FOR SCOPE.

JUNCTION BOX FOR AUTOMATIC FAUCET OR FLUSHOMETER POWER. COORDINATE MOUNTING LOCATION AND EXACT POWER REQUIREMENTS WITH PLUMBING CONTRACTOR.

#### **ABBREVIATIONS** | ABBRV | ABBREVIATION 2P TWO POLI 3P THREE POLE 4P FOUR POLE AC ARMOR CLAD (WHEN REFERENCING CABLE) OR ALTERNATING CURRENT AMP AMPERE CONDUI CATV CABLE TELEVISION CONN. CONNECTED EMT ELECTRICAL METALLIC TUBING FMC | FLEXIBLE METAL CONDUIT G | EQUIPMENT GROUND GROUNDING ELECTRODE CONDUCTOR GFCI GROUND FAULT CIRCUIT INTERRUPTING GFP GROUND FAULT PROTECTION GRC GALVANIZED RIGID CONDUIT KAIC KILOAMPERE INTERUPPTING RATING kVA KILOVOLT-AMPERE | LFMC | LIQUID TIGHT, FLEXIBLE METAL CONDUIT

MCB MAIN CIRCUIT BREAKER MLO MAIN LUGS ONLY N NEUTRAL NEC NATIONAL ELECTRICAL CODE NEMA NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION OCP OVERCURRENT PROTECTION PIR PASSIVE INFRARED

MC | METAL CLAD CABLE

PV PHOTOVOLTAIC

VA VOLT-AMPERE

WP NEMA 3R ENCLOSURE

RGS RIGID GALVANIZED STEEL CONDUI RNC RIGID NONMETALLIC CONDUIT S SWITCHED, REFER TO PLANS FOR CONTROL US ULTRASONIC

MAINTENANCE AREAS,

MECHANICAL ROOMS.

DAMP OR WET LOCATIONS

V VOLTS (UNLESS NEXT TO COMMUNICATION SYMBOL, THEN VOICE).

**RACEWAY APPLICATION TABLE** EXPOSED OR CONCEALED UNDERGROUND CONNECTION TO VIBRATING EQUIPMENT

> CONCEALED IN CEILINGS AND EMT (MC / AC CABLE WHERE WALLS OR PARTITIONS |SPECIFICATIONS ALLOW). CONNECTION TO VIBRATING QUIPMENT

# EXPOSED EXPOSED THE FOLLOWING LOCATIONS UP TO 20' AFF: LOADING DOCKS, WAREHOUSES,

50 DIVISION STREET, SUITE 503 SOMERVILLE, NJ 08876 PHONE: 908-725-7800 WWW.SSPARCHITECTS.COM

REVIEW:

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CONSULTANT:



ISSUED FOR BID ISSUE DATE: AUGUST 31, 2023 **REVISIONS:** MARK DATE DESCRIPTION

NJ SDA PACKAGE #:

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NJ SDA #:

NJ DOE #:

SSP #:



THE COUNTY OF UNION

SCOTCH PLAINS, NEW JERSEY 07076 INTERIOR RESTROOM

2325 SOUTH AVENUE

FACILITIES

**RENOVATIONS AT:** 

**UNION COUNTY** PARKS -

|MATTANO PARK

360-484 5TH AVE ELIZABETH, NEW JERSEY 07202

CITY OF ELIZABETH UNION COUNTY

**ELECTRICAL SPECIFICATIONS AND SYMBOL LEGEND** 

ENGINEERING DRIVEN DESIGN PC 555 Route One South Suite 100 Iselin, New Jersey 08830 (848) 247-6150 www.engineerdriven.com Project # 22-0080 Jeffrey N. Beeden Professional Engineer NJ License 24GE04746800

**ELECTRICAL DRAWING LIST** 

| ELECTRICAL PLAN - MATTANO PARK

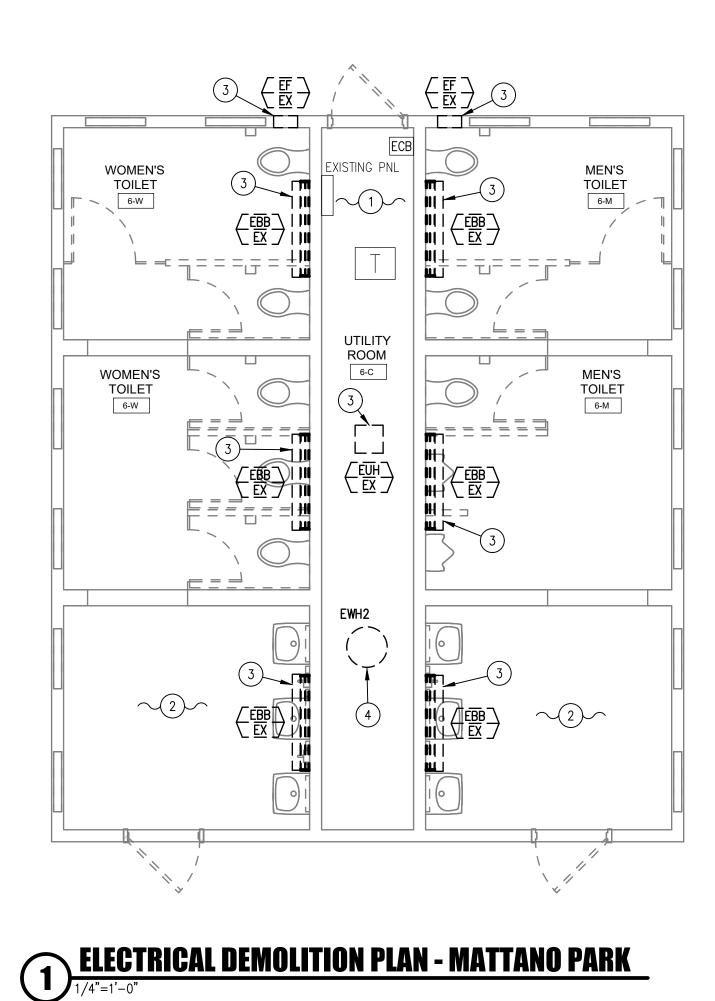
Sheet Title

ELECTRICAL SPECIFICATIONS AND SYMBOL LEGEND

SHEET NUMBER:

SHEET NAME:

NEMA KS 1.



**DEMOLITION PLAN GENERAL NOTES:** 

- 1. FOR ALL ITEMS DESIGNATED TO BE REMOVED. REMOVE THE BRANCH CIRCUIT, ASSOCIATED OBSOLETE WIRING, ANY SUPPORTS, CONTROLS, ETC FOR OBSOLETE ITEMS. UNLESS NOTED OTHERWISE.
- PATCH EXISTING GENERAL CONSTRUCTION TO REMAIN TO MATCH THE EXISTING ADJACENT CONSTRUCTION FOR ALL ITEMS DESIGNATED TO BE REMOVED.
- 3. REMOVE ALL ITEMS FROM PREMISES DAILY AND KEEP CONSTRUCTION SITE BROOM
- 4. UTILIZE EXISTING ELECTRICAL POWER FOR CONSTRUCTION POWER. COORDINATE DEMOLITION TO PROVIDE GFCI RECEPTACLE EVERY 400 SQUARE FEED DURING CONSTRUCTION. IF CONSTRUCTION POWER CAN NOT BE COORDINATED WITH DEMOLITION, PROVIDE TEMPORARY POWER FOR CONSTRUCTION ACTIVITIES.
- 5. PROVIDE TEMPORARY LIGHTING THROUGHOUT CONSTRUCTION.

WITH MECHANICAL AND PLUMBING CONTRACTOR.

6. ENSURE DEMOLITION DOES NOT AFFECT ADJACENT SPACES. THE ADJACENT SPACES WILL REMAIN OCCUPIED THROUGHOUT CONSTRUCTION.

ACCOMMODATE SCOPE OF WORK. REINSTALL UPON COMPLETION OF WORK. COORDINATE

8. TEMPORARILY REMOVE ALL ELECTRICAL ITEMS IN CEILING AS REQUIRED TO

# **DEMOLITION PLAN KEYED NOTES:**

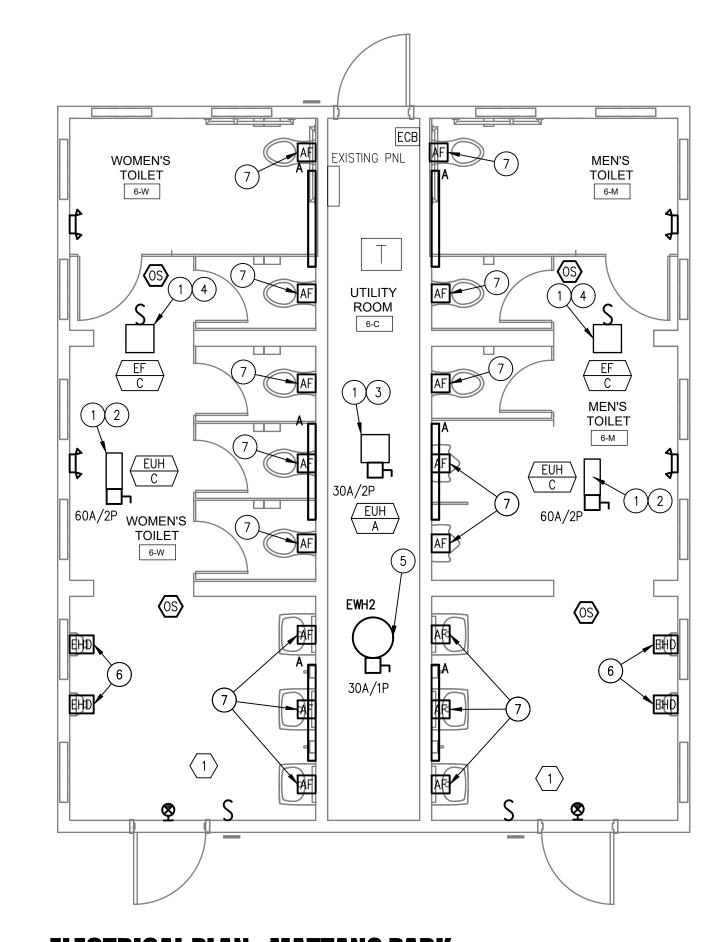
- 1) EXISTING ELECTRICAL EQUIPMENT TO REMAIN.
- (2) REMOVE EXISTING LIGHTING FIXTURES, AND LIGHTING CONTROLS. MAINTAIN ASSOCIATED BRANCH CIRCUITRY. REFER TO 2/E31 FOR MORE INFORMATION.
- 3) REMOVE EXISTING ELECTRICAL EQUIPMENT AND WIRING ASSOCIATED WITH MECHANICAL EQUIPMENT TO BE REMOVED. COORDINATE REMOVAL OF EQUIPMENT WITH MECHANICAL CONTRACTOR.
- (4) REMOVE EXISTING ELECTRICAL EQUIPMENT AND WIRING ASSOCIATED WITH WATER HEATER TO BE REMOVED. COORDINATE REMOVAL OF WATER HEATER WITH PLUMBING CONTRACTOR.

LIGHTING FIXTURE SCHEDULE  GENERAL NOTES: 3,4						ES: 3,4		
TAG/SYMBOL	BASIS OF DESIGN		- DESCRIPTION	VOLTAGE	WATTS	LUMENS	CRI/	NOTES
	MAKE	MODEL					TEMP.	
A	CURRENT	PVNT-4-4-35-35K8-D01-UNV-TR	WALL MOUNTED VANDAL RESISTANT LINEAR FIXTURE	120V	35	5154	80/3500K	NOTES -
<b>⊗</b>	LITHONIA	LV-S-W-Q-R-120/277-ELN-SD	VANDAL RESISTANT EXIT SIGN WITH INTEGRAL BATTERY PACK	120V	3.3	N/A	N/A	NOTE 1
4	DUALLITE	EV-2-D-I-VRS	WALL MOUNTED EMERGENCY LIGHTING UNIT WITH VANDAL RESISTANT SHIELD VRS	120V	1	125	70/5000K	NOTE 2

LIGHTING FIXTURE SCHEDULE NOTES: PROVIDE EXIT SIGN WITH ILLUMINATED FACES BASED ON SHADED QUADRANTS. PROVIDE ARROWS AS REQUIRED. INTEGRAL BATTERY SHALL PROVIDE FOR AT LEAST 90 MINUTE ILLUMINATION UPON FAILURE OF POWER. PROVIDE WALL-MOUNTED EMERGENCY LIGHTING UNIT WITH INTEGRAL BATTERY THAT SHALL PROVIDE FOR AT LEAST 90 MINUTE ILLUMINATION UPON FAILURE OF POWER. PROVIDE ALL NECESSARY MOUNTING HARDWARE, COMPONENTS, AND LED DRIVERS. 4. PROJECT TO INCLUDE MULTIPLE CEILING AND TILE TYPES. COORDINATE FIXTURE MOUNTING WITH CEILING SHOP DRAWINGS.

	<b>AUTOI</b>	MATIC	C LIGHTING CONTR	OL SC	HED	ULE	
TAG	BASIS OF	DESIGN	DESCRIPTION	SENSOR	VOLT.	NOTES	
	MAKE	MODEL	DESCRIPTION	SENSOR	VOL 1.		
(OS)	NX	NXSMDT- OMNI SERIES	LOW VOLTAGE DUAL TECHNOLOGY OCCUPANCY CEILING SENSOR	PIR/US	24V	1,3	
					GENERAL	<b>NOTES:</b> 1,2	
ALITO	MATIC LICHTING	C CONTROL	SCHEDIII E NOTES:	•			

AUTOMATIC LIGHTING CONTROL SCHEDULE NOTES: PROVIDE LOW VOLTAGE DIMMING POWERPACKS AS REQUIRED. NX MODEL: NXRCFX2. PROVIDE ALL LIGHTING CONTROL SWITCHES AND SENSORS WITH WHITE FINISH. 5. PROVIDE CAT6 WIRING FROM SENSORS TO POWER PACKS AS REQUIRED.



# LIGHTING CONTROL SEQUENCE OF OPERATION

$\langle X \rangle$	REQUIRED CONTROL OPERATION	DESCRIPTION
1	AUTOMATIC FULL OFF	ALL LIGHTING FIXTURES WITHIN SPACE SHALL BE AUTOMATICALLY SHUT OFF WITHIN 20 MINUTES OF ALL OCCUPANTS LEAVING SPACE.

2 ELECTRICAL PLAN - MATTANO PARK

1/4"=1'-0"

# **ELECTRICAL PLAN GENERAL NOTES:**

COMcheck Software Version COMcheckWeb

- 1. ALL POWER IN SPACE TO BE DERIVED FROM EXISTING PANELBOARD UNLESS OTHERWISE
- 2. PROVIDE BRANCH CIRCUITRY TO ALL EMERGENCY EXIT SIGNS FROM ADJACENT LIGHTING
- 3. CONNECT REPLACEMENT LIGHTING FIXTURES, LIGHTING CONTROLS, EXIT SIGNS AND EMERGENCY LIGHTING UNITS TO MAINTAINED BRANCH CIRCUITRY. MODIFY AND EXTEND

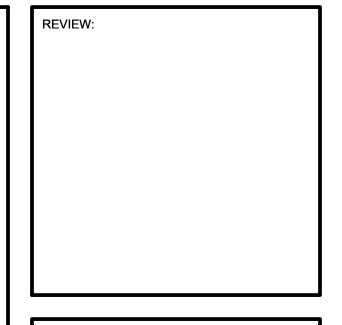
Project Information					
Energy Code: Project Title: Project Type:	90.1 (2019) Standard 22-0080 Mattano Park Alteration				
Construction Site:	Designer/Contractor:				
Allowed Interior Lighting I	Power				
A Area Category		B Floor Area (ft2)	C Allowed Watts / ft2		D Allowe Watt
1-Common Space Types:Restro	poms	604	0.63		381
		Tota	I Allowed Wat	tts =	38
Proposed Interior Lighting	g Power				
Fixture ID : Description	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	(C	
Common Space Types: Res	strooms (604 sq.ft.)				
LED: A: Other:		1	6 otal Propose	35 d Watts =	
Interior Lighting PASSES			·		

with any applicable mandatory requirements listed in the Inspection Checklist.

Project Title: 22-0080 Mattano Park Report date: 03/16/23 Page 2 of 7 Data filename:

# **ELECTRICAL PLAN KEYED NOTES:**

- 1) PROVIDE POWER FOR HVAC CONTROLS. COORDINATE EXACT REQUIREMENTS WITH MECHANICAL CONTRACTOR.
- 2 PROVIDE A 40A/2P CIRCUIT BREAKER FOR EACH BATHROOM UNIT HEATER IN EXISTING SPACE PANELBOARD. PROVIDE 2#8,#10G IN 3/4" CONDUIT FROM CIRCUIT BREAKER TO UNIT HEATER LOCATION. COORDINATE EXACT REQUIREMENTS WITH MECHANICAL CONTRACTOR.
- 3 PROVIDE A 15A/1P CIRCUIT BREAKER IN EXISTING SPACE PANELBOARD TO SERVE UTILITY ROOM UNIT HEATER. PROVIDE 2#12,#12G IN 3/4" CONDUIT FROM CIRCUIT BREAKER TO UNIT HEATER. COORDINATE EXACT REQUIREMENTS WITH MECHANICAL CONTRACTOR.
- PROVIDE A 20A/1P CIRCUIT BREAKER IN EXISTING SPACE PANELBOARD TO SERVE BATHROOM EXHAUST FANS. PROVIDE 2#12,#12G IN 3/4" CONDUIT FROM CIRCUIT BREAKER TO EXHAUST FANS.
- 5 PROVIDE A 25A/1P CIRCUIT BREAKER IN EXISTING SPACE PANELBOARD TO SERVE BATHROOM WATER HEATER. PROVIDE 2#10,#10G IN 3/4" CONDUIT FROM CIRCUIT BREAKER TO WATER HEATER. COORDINATE EXACT REQUIREMENTS WITH PLUMBING CONTRACTOR.
- (6) PROVIDE A 20A/1P CIRCUIT BREAKER FOR EACH SET OF BATHROOM HAND DRYERS IN EXISTING SPACE PANELBOARD. PROVIDE 2#12,#12G IN 3/4" CONDUIT FROM CIRCUIT BREAKER TO HAND DRYERS. COORDINATE EXACT REQUIREMENTS WITH PLUMBING CONTRACTOR. PROVIDE LOCKING MECHANISM CIRCUIT BREAKER.
- 7 PROVIDE POWER AND WIRING FOR AUTOMATIC FAUCET OR FLUSHOMETER FIXTURES. COORDINATE EXACT REQUIREMENTS WITH PLUMBING CONTRACTOR. REFER TO E01 FOR MORE INFORMATION.





JEANNE PERANTONI, AIA

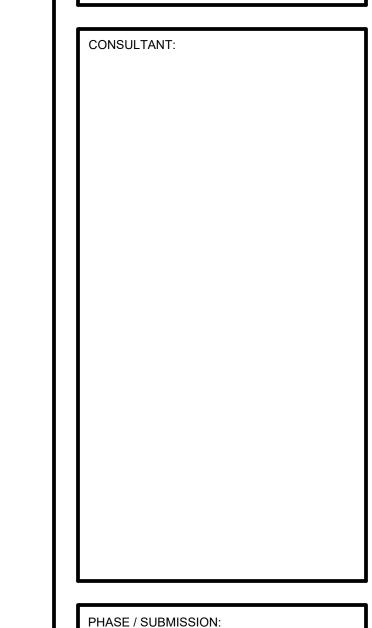
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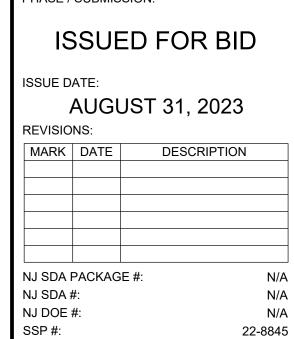
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# THE COUNTY OF UNION

2325 SOUTH AVENUE SCOTCH PLAINS, NEW JERSEY 07076

INTERIOR RESTROOM **FACILITIES RENOVATIONS AT:** 

# UNION COUNTY PARKS -MATTANO PARK

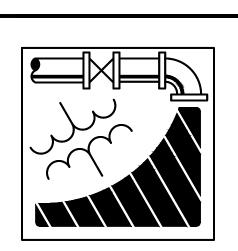
360-484 5TH AVE ELIZABETH, NEW JERSEY 07202

CITY OF ELIZABETH UNION COUNTY

SHEET NAME:

**ELECTRICAL PLAN -MATTANO PARK** 

SHEET NUMBER:



# ENGINEERING DRIVEN DESIGN PC 555 Route One South Suite 100

Iselin, New Jersey 08830 (848) 247-6150 www.engineerdriven.com Project # 22-0080 Jeffrey N. Beeden Professional Engineer NJ License 24GE04746800