

COUNTY OF UNION

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

MEMORANDUM

 KIMBERLY PALMIERI-MOUDED

 Chairwoman

 LOURDES LEON
 TO:

 Vice-Chairwoman

 JAMES E. BAKER, JR.

 JOSEPH C. BODEK

 MICHÈLE S. DELISFORT

 SERGIO GRANADOS

DATE:

RE:

BETTE JANE KOWALSKI

BOARD OF

COUNTY COMMISSIONERS

ALEXANDER MIRABELLA

REBECCA WILLIAMS

EDWARD T. OATMAN County Manager

AMY CRISP WAGNER Deputy County Manager

BRUCE H. BERGEN, ESQ. County Counsel

JAMES E. PELLETTIERE Clerk of the Board

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

Ricardo S. Matias, PE, CME, CFM, County Engineer Director / Division of Engineering

October 11, 2024

ADDENDUM NUMBER 1

Asbestos Abatement and Fire Sprinkler Installation within the New Annex Building, City of Elizabeth, County of Union, New Jersey, BA#54-2024; UC Eng Project #2020-005

Attached is Addendum Number 1 dated October 11, 2024 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.

DIVISION OF ENGINEERING

2325 South Avenue

Scotch Plains, NJ 07076 (908)789-3675 We're Connected to You! fax(908)789-3674

www.ucnj.org



ADDENDUM NUMBER ONE

for

Asbestos Abatement and Fire Sprinkler Installation within the New Annex Building

at the

City of Elizabeth

for the

County of Union, New Jersey

County Project No. BA#54-2024 USA Project No. 2020-047

Dated: October 11, 2024

USA ARCHITECTS, PLANNERS AND INTERIOR DESIGNERS, LTD

20 N. Doughty Avenue Somerville, NJ 08876

1 S. 3rd Street, Alpha Building, Seventh Fl Easton, PA 18042 This Addendum is issued for the purpose of amending certain requirements of the Bidding Documents and is hereby made an integral part of the Contract Documents for this project. Statements made herein shall amend, supersede, and take precedence over any conflicting and contrary information contained in previously issued documents including previously issued addenda, if any. Bidders shall acknowledge receipt of this addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

CHANGES TO PRIOR ADDENDA:

None

CHANGES TO PROCUREMENT AND CONTRACTING REQUIREMENTS (DIVISION 00):

None

CHANGES TO CONDITIONS OF THE CONTRACT:

None

CHANGES TO GENERAL REQUIREMENTS (DIVISION 01):

None

CHANGES TO SPECIFICATIONS:

- **Item 01:** ADD, Section 02 41 00.1, 2nd Floor Furniture Removal, Storage, and Re-Installation.
- **Item 02:** ADD, Section 02 41 00.2, 5th Floor Furniture Relocation.

CHANGES TO DRAWINGS:

Item 03: Architectural, Demolition Note 8A, Delete and Replace with the following:

At the 5th Floor, remove existing ceiling system, light fixtures, electrical devices, and accessories in their entirety. New ceiling system, light fixtures, electrical devices, and accessories will be installed by current contractor working on this floor.

Item 04:Architectural, 2nd Floor Men's Toilet Room, remove existing wall and floor
finishes to substrate and replace with the following:

Wall Tile: USCERA 0410 Biscuit Cove Tile: USCERA Covebiscu Floor Tile: DAL D201

- Item 05:Electric, 2nd Floor and 5th Floor, Contractor shall replace all wiring above ceiling,
including low voltage. New wiring shall be hung on 'J' hooks from ceiling.
- **Item 06:** Mechanical, 2nd Floor, Contractor shall clean all existing to remain ductwork.

CONTRACTOR QUESTIONS

- **Q1:** Given that this is a rebid project, we kindly request access to the previous bid pricing, if this information is publicly available.
- A1: The previous bid was canceled prior to the bid opening, therefore bids were never received by the County of Union.

ATTACHMENTS:

- Section 02 41 00.1, "2nd Floor Furniture Removal, Storage, and Re-Installation"
- Section 02 41 00.2, "5th Floor Furniture Relocation"
- Pre-Bid Sign In Sheet, October 2, 2024
- Pre-Bid Meeting Agenda, October 2, 2024

END OF ADDENDUM NUMBER ONE

02 41 00.1 2ND FLOOR FURNITURE REMOVAL, STORAGE, AND RE-INSTALLATION

PART 1 GENERAL

1.1 EXISTING CONDITIONS

- A. The photos Included therein, were prepared solely for the use of the Bidder to understand the extent of the quantity of items required to be moved, stored off-site, and reinstalled at the same locations. These Items Include, but are not limited to furniture, file cabinets (assume full) boxes, loose books, IT equipment (printers, copiers, computers, TV's, etc).
- B. Photos of the 2nd floor are provided only as examples of the Items within each room and do not represent a complete quantity of Items. It Is the Bidder's responsibility to visit the site to Identify the complete scope of work.
- C. Items on this floor must be removed, stored off-site, and reinstalled In the same condition and at the same locations.

END OF SECTION 02 41 00.1

02 41 00.1 2ND FLOOR FURNITURE REMOVAL, STORAGE, AND RE-INSTALLATION

PART 1 GENRAL

- 1.1 EXISTING CONDITIONS
 - A. PHOTOS
 - a. Room numbers corespond to architectrual drawings



2nd Floor, Open Office 13





2nd Floor, Open Office 13



2nd Floor, Office 15





2nd Floor, Office 17



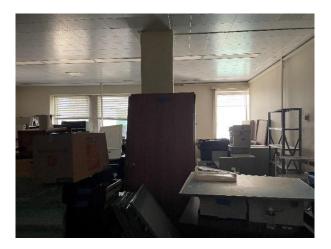
2nd Floor, Office 18



2nd Floor, Office/ Storage 21



2nd Floor, Open Office 20



2nd Floor, Open Office 20





2nd Floor, Open Office 20



2nd Floor, Office 22 & Office 23





2nd Floor, Office 25



2nd Floor, Office 27





2nd Floor, Office 30 & Office 31



2nd Floor, Office 26





2nd Floor, Office 33



2nd Floor, Office 34



2nd Floor, Corridor 32



2nd Floor, Courtroom 1



2nd Floor, Courtroom 1



2nd Floor, Courtroom 1



2nd Floor, Courtroom 1



2nd Floor, Courtroom 1



2nd Floor, Jury Room 38



2nd Floor, Judge's Chamber 2



2nd Floor, Judge's Chamber 2



2nd Floor, Confrence/ Library 3



2nd Floor, Confrence/ Library 3



2nd Floor, Confrence/ Library 3



2nd Floor, Hall 4



2nd Floor, Secretary 8



2nd Floor, Secretary 8



2nd Floor, Security Corridor 9



2nd Floor, Security Corridor 9



2nd Floor, Security Corridor 9



2nd Floor, Security Corridor 9



2nd Floor, Security Corridor 10



2nd Floor, Security Corridor 12



2nd Floor, Security Corridor 12



2nd Floor, Public Cooridor 41



2nd Floor, Public Cooridor 41





2nd Floor, Office 51



2nd Floor, Mechanical Room (No Room #)



2nd Floor, Genral Electric/ Store Room 52/53



2nd Floor, Mecahnical Room 50



2nd Floor, Mecahnical Room 54

END OF SECTION 02 41 00.1

02 41 00.2 5th FLOOR FURNITURE RELOCATION

PART 1 GENERAL

- 1.1 EXISTING CONDITIONS
 - A. The photos Included therein, were prepared solely for the use of the Bidder to understand the extent of the quantity of items required to be relocated to facilitate work. These Items Include, but are not limited to furniture, file cabinets (assume full) boxes, loose books, IT equipment (printers, copiers, computers, TV's, etc).
 - B. Photos of the 5th floor are provided only as examples of the Items within each room and do not represent a complete quantity of Items. It Is the Bidder's responsibility to visit the site to Identify the complete scope of work.
 - C. Items on this floor may be relocated on the same floor to facilitate work.

END OF SECTION 02 41 00.2

02 41 00.1 5TH FLOOR FURNITURE RELOCATION

PART 1 GENRAL

1.1 EXISTING CONDITIONS

A. PHOTOS

a. Room numbers corespond to architectrual drawings



5th Floor, Room CR#3



5th Floor, Room CR#2



5th Floor, Room CR#1



5th Floor, Courtroom 522



5th Floor, Courtroom 522



5th Floor, Judge's Chamber 521



5th Floor, Jury Room 523



5th Floor, Jury Room 523 (Adjacent No Room #)



5th Floor, Jury Room 523 (Adjacent No Room #)



5th Floor, Confernce & Library 520



5th Floor, Secretary 516



5th Floor, Security Cooridor 514



5th Floor, Security Cooridor 514



5th Floor, Security Cooridor 508



5th Floor, Security Cooridor 508



5th Floor, Security Cooridor 542



5th Floor, Waiting Room 541



5th Floor, Room 5N3



5th Floor, Room 5N2



5th Floor, Room 5N1



5th Floor, Juvenile Court 543



5th Floor, Juvenile Court 543



5th Floor, Security Room 534



5th Floor, General Office Juvenile & Domestic Relations 533



5th Floor, File Room 540



5th Floor, JC 539



5th Floor, Public Waiting 536



5th Floor, Interview Room 531 (Adjacent No Room #)



5th Floor, Interview Room 531



5th Floor, Court Reporter 530



5th Floor, Court Clerk 529



5th Floor, Room 546



5th Floor, Elect Room 545



5th Floor, Mech Room 544



5th Floor, Jury Room 528B (Adjacent Room No #)

Renovations, Elevator Modernization, Asbestos Abatement and Fire Sprinkler Installation at the New Annex Building for the County of Union



5th Floor, Jury Room 528B



5th Floor, Public Cooridor 537



5th Floor, Public Cooridor 537

Renovations, Elevator Modernization, Asbestos Abatement and Fire Sprinkler Installation at the New Annex Building for the County of Union



5th Floor, Judge's Chamber 501



5th Floor, Secretary 505



5th Floor, Clerk 506

Renovations, Elevator Modernization, Asbestos Abatement and Fire Sprinkler Installation at the New Annex Building for the County of Union



5th Floor, Waiting Room 522A

END OF SECTION 02 41 00.2

USA				SI	GN-IN SHEET	
Architects	Project:	Asbestos Abatement and Sprinkler Installation with New Annex Building		USA Project No. County Project No.		
	RE:	Pre-Bid Meeting		Date:	October 2, 2024 - 10:00AM	21 0
				Location:	1 st Floor Lobby of New Annex Bldg	•
NAME Andrew Adornate		COMPANY USA Architects		PHONE 22-2300	EMAIL/FAX a.adornato@usaarchitects.com	
Matt Ferraro	TANE	County of Union	(908) 3	58-6942	mferraro@ucnj.org	e R
Ricardo Matias		County of Union			Ricardo.matias@ucnj.org	
4Aqqie Dre	jarðva i 11	Drill Construct	on 9	734766918	hazmat 862@adi Maggic DDIillcom	true-C
	-					
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20 N. Doughty Avenue Somerville, NJ 08876 t 908.722.2300 f 908.722.7201

usaarchitects.com

ASBESTOS ABATEMENT AND FIRE SPRINKLER INSTALLATION WITHIN THE NEW ANNEX BUILDING COUNTY OF UNION USA PROJECT #2020-047 UNION COUNTY PROJECT #2020-005

DATE/TIME: October 2, 2024 @ 10:00 AM

- LOCATION: 1st Floor Lobby of The New Annex Building City of Elizabeth
- REGARDING: Pre-Bid Meeting

Introductions

- County of Union; Owner
- USA Architects; Architect

Sign-In Sheet

All bidders must sign the Sign-In Sheet. This will be the sole record of attendance.

Bidders Questions

• Any explanation desired by a bidder regarding the meaning or interpretation of the Contract Documents must be requested in writing to <u>ucbids@ucnj.org</u> and with reasonable time allowed for a reply to reach bidders before submission of their bids. Any interpretation or instruction made by the County 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, 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. Deadline for receipt of questions is October 9, 2024 at 5:00pm.

Addenda

- All Addenda issued through the Offices of the County 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 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.

Due Date for Bids

Proposals will be received by the County of Union Wednesday, October 23, 2023 at 10:30 A.M. prevailing time, 3rd floor conference room at the UC Administration Building, 10 Elizabethtown Plaza, Elizabeth, New Jersey and then publicly opened and read.

Time of Completion

 Completion (issuance of Certificate of Occupancy/Certificate of Final Approval) shall be completed within 300 calendar days from Notice To Proceed.

Summary of Work

The project consists of Asbestos abatement on the 2nd and 5th floors, new sprinkler system on the 2nd and 5th floors, interior renovations and alterations on the 2nd floor and elevator modernization for the three elevators at the New Annex Building for the County of Union. This project will require a Project Labor Agreement (PLA) to be signed.

Bid Documents

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

In closing, anyone taking exception to any statement as recorded herein shall register that exception in writing within three (3) days of receipt, or the record shall stand as indicated herein.

Respectfully submitted,

Andrew P. Adornato, AIA, LEED AP, CDT, CPHC Principal

SPECIFICATIONS

FOR

Asbestos Abatement and Fire Sprinkler

Installation within the New Annex Building,

City of Elizabeth,

County of Union, New Jersey

BA#54-2024; Union County Engineering Project #2020-005

August 2024

UNION COUNTY BOARD OF COUNTY COMMISSIONERS

Kimberly Palmieri-Mouded, Chairwoman Lourdes M. Leon, Vice Chairwoman James E. Baker, Jr., Commissioner Joseph C. Bodek, Commissioner Michele S. Delisfort, Commissioner Sergio Granados, Commissioner Bette Jane Kowalski, Commissioner Alexander Mirabella, Commissioner Rebecca Williams, Commissioner

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> > COUNTY MANAGER Edward T. Oatman

DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND FACILITIES MANAGEMENT

Joseph J. Policay Jr., CPWM Acting Director, Department of Engineering, Public Works and Facilities Management

COUNTY ENGINEER DIVISION OF ENGINEERING Ricardo Matias, PE, CME, CFM

Prepared by:

USA Architects 20 North Doughty Avenue Somerville, New Jersey Andrew P. Adornato, AIA

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 23, 2024 at 10:30 a.m**., prevailing time, in the **3rd Floor Conference Room**, U.C. Administration Building, 10 Elizabethtown Plaza, Elizabeth, New Jersey for:

Asbestos Abatement and Fire Sprinkler Installation within the New Annex Building, City of Elizabeth, County of Union, New Jersey BA#54-2024; Union County Engineering Project #2020-005

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

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.

Please note the successful bidder will be required to sign a *PROJECT LABOR AGREEMENT (PLA)* for this project. A form PLA is included in the bid package for your review. Further, take note of all documents referring to the PLA and any action required on same.

A **pre-bid meeting will be held on October 2, 2024 at 10:00 am.** The meeting will be located in the 1st floor lobby of the New Annex Building, Elizabeth, New Jersey. Specific questions regarding the project will be addressed at the pre-bid meeting.

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.

MICHELLE HAGOPIAN, ASSISTANT DIRECTOR OF PURCHASING

Union County Board of County Commissioners We're Connected to You!

NB-1

Asbestos Abatement and Fire Sprinkler Installation within the New Annex Building, City of Elizabeth, County of Union, New Jersey BA#54-2024; Union County Engineering Project #2020-005

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- Section 4: INTERPRETATIONS AND ADDENDA
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- Section 56: STATEMENT OF EQUIPMENT TO BE USED IN CONSTRUCTION
- Section 57: NEW JERSEY SALES AND USE TAX REQUIREMENTS
- Section 58: RESOLUTION No. 2014-408
- Section 59: FEDERAL TERMS

BIDDING DOCUMENTS

- **Bid Document Submission Checklist Bidding Documents** Bid Form Consent of Surety **Bidder Signature Page Bidder Disclosure Statement** Subcontractor Identification Statement: List of Subcontractors 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**
- Affidavit Regarding List of Disbarred, Suspended or Disqualified Bidders

TOC-2

Revised: 2024.01.22

Prior Negative Experience Questionnaire-Certification Contractor's Certification of Compliance - New Jersey Prevailing Wage Act Uncompleted Contracts Affidavit Certificate of Insurance Statement Collection of Use Tax on Sales to Local Governments Statement Time of Completion Disclosure of Investment Activities in Iran Disclosure of Non-Involvement in Activities in Russia or Belarus Federal Non-Debarment Certification Byrd Anti-Lobbying Amendment Certification Certification regarding lobbying Disclosure of lobbying activities (LLL Form)

SS - STANDARD SPECIFICATIONS SS-1

INSURANCE AND BONDS AIA DOCUMENT A-101/2017 EXHIBIT A

(Sample form until contract is awarded)

<u>GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION AIA DOCUMENT A-201/2017</u> (Sample form until contract is awarded)

(Sample form until contract is awarded)

NEW JERSEY PREVAILING WAGE DETERMINATION DOCUMENTS

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- A-3 Second Floor Demolition Plan
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- A-7 Second Floor Finish Plan, Schedule and Legend

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FP-11 Fire Protection Floor Plan New Work

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P-12 Plumbing Elevator Part Plan

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- E-13 Electrical First Thru Fifth Floor Elevator Part Plan
- E-14 Electrical Penthouse Machine Room Plan

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, 6th Floor 10 Elizabethtown Plaza Elizabeth, New Jersey 07207

ADDRESS INQUIRIES TO:

Union County Division of Purchasing UC Administration Building, 3rd Floor 10 Elizabethtown Plaza Elizabeth, NJ 07207 Attn: Michelle Hagopian, Assistant Director, Division of Purchasing Telephone: 908-527-4130 Facsimile: 908-558-2548 <u>ucbids@ucnj.org</u>

ADDRESS BIDS AND SUBMIT TO:

Union County Division of Purchasing UC Administration Building, 3rd 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:

Asbestos Abatement and Fire Sprinkler Installation within the New Annex Building, City of Elizabeth, County of Union, New Jersey, BA#54-2024; UC Eng Project #2020-005

BIDDER: Bidder shall be a single overall contract bidder

ARCHITECT: USA Architects Planners & Interior Designers 20 N Doughty Avenue Somerville, NJ 08876

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

COUNTY ENGINEER:

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

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.

<u>Bids will be accepted only on the Bid Form supplied. Bids on forms other than the</u> <u>original supplied herein will be rejected</u>. 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.

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

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.

2 2024.01.22 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** <u>or</u> 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 Assistant Director, Division of Purchasing at <u>ucbids@ucnj.org</u> 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 Assistant Director, Division of Purchasing at ucbids@ucnj.org, 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 Office of the Division of Purchasing 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 Assistant Director, Division of Purchasing 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

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.

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

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 greater interest in that partnership, 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

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 AND, WHERE NOTED, SUBJECT TO A PROJECT LABOR AGREEMENT TO BE EXECUTED BY THE CONTRACTOR AND CONSTRUCTION MANAGER <u>PRIOR</u> TO COMMENCEMENT OF THE WORK. FAILURE OF ANY CONTRACTOR TO COMPLY WITH THIS PROVISION CONSTITUTES A DEFAULT, RESULTING IN IMMEDIATE STOPPAGE OF THE WORK. ANY LOSSES OR OTHER DAMAGES INCURRED BY OTHER PARTIES AS A RESULT OF SAID DEFAULT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

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:
 - 1. The County, in its sole discretion, determines that: (i) the goods conform substantially, even with deviations, to the brand name goods specified herein; (ii) the goods are equal to or greater than the brand name goods specified herein in terms of quality, durability, functionality, appearance, strength and design; (iii) the goods are capable, at least as well as the brand name goods

specified herein, or performing with existing equipment; and (iv) the goods do not cost the County more than the brand name goods specified herein costs the County.

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

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

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.

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". (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

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.

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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

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 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

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

<u>N.J.A.C.</u> 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, 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

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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 <u>N.J.A.C.</u> 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 $\underline{N.J.S.A.}$ 10:5-31 et. seq., as supplemented and amended from time to time and the Americans with Disabilities Act. If the contractor or subcontractor is unable to obtain said assurances from the construction trade union at least five business days prior to the commencement of construction work, the contractor or subcontractor agrees to afford equal employment opportunities minority and women workers directly, consistent with this chapter. If the contractor's or subcontractor's prior experience with a construction trade union, regardless

of whether the union has provided said assurances, indicates a significant possibility that the trade union will not refer sufficient minority and women workers consistent with affording equal employment opportunities as specified in this chapter, the contractor or subcontractor agrees to be prepared to provide such opportunities to minority and women workers directly, consistent with this chapter, by complying with the hiring or scheduling procedures prescribed under (B) below; and the contractor or subcontractor further agrees to take said action immediately if it determines that the union is not referring minority and women workers consistent with the equal employment opportunity goals set forth in this chapter.

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

(1) To notify the public agency compliance officer, the Dept. of LWD, Construction EEO Monitoring Program, and minority and women referral organizations listed by the Division pursuant to <u>N.J.A.C.</u> 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 <u>N.J.A.C.</u> 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. NON-INVOLVEMENT ACTIVIES IN RUSSIA OR BELARUS

Pursuant to N.J.S.A. 52:32-60.1 et seq., Pursuant to N.J.S.A. 52:32-60.1, et seq. (L. 2022, c. 3) any person or entity (hereinafter "Vendor") that seeks to enter into or

renew a contract with a State agency for the provision of goods or services, or the purchase of bonds or other obligations, must complete the certification below indicating whether or not the Vendor is identified on the Office of Foreign Assets Control (OFAC) Specially Designated Nationals and Blocked Persons list, available here:

https://sanctionssearch.ofac.treas.gov/. If the Department of the Treasury finds that a Vendor has made a certification in violation of the law, it shall take any action as may be appropriate and provided by law, rule or contract, including but not limited to, imposing sanctions, seeking compliance, recovering damages, declaring the party in default and seeking debarment or suspension of the party.

46. 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.

47. UTILITIES

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

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

When pipes or other structures are encountered or when the removal, relocation or protection of these utilities are necessary in carrying out the Project as planned, the Contractor will cooperate with the owner of said utilities and will permit the owners or their agents access to the site of the Work in order to relocate or protect their facilities and not hinder or delay unnecessarily the Work of the owners in moving same. No extra allowance of payment will be made to the Contractor for the use of any materials, equipment, etc., or for the performance of any Work in connection with the moving of said structures unless the Contractor is specifically ordered by the County Engineer to furnish such materials, equipment, or services. If directed by the County Engineer to do any Work or furnish any materials or equipment, payment will be allowed the Contractor in accordance with the unit prices bid for such Work, or, if such items are not scheduled in the proposal, such Work shall be allowed "Supplemental Work" as provided in Section 39 of these general The corporations, companies, agencies or municipalities owning or specifications. controlling the utilities, and the name, and telephone numbers are listed in the beginning of the Technical Specifications.

48. 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.

49. 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.

50. 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.

51. 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.

52. PROJECT LABOR AGREEMENT (To be signed where the overall project cost exceeds \$5 Million, irrespective of Phasing)

An Executive Order of Governor James E. McGreevey dated January 17, 2002, requires the use of a Project Labor Agreement in public construction contracts. This Executive Order was codified as N.J.S.A. 52:38-1 et seq. as a result of P.L. 2002, Chapter 44. Contractor must be prepared to abide by the terms of the within Project Labor Agreement, including obtaining the necessary and applicable Letters of Assent from subcontractors (of any tier). Through said Letters of Assent the subcontractors (of any tier) also must be prepared to abide by the terms of the Project Labor Agreement.

Contractor's failure to enter into this Project Labor Agreement shall result in the County's valid refusal to enter into a contract, for the performance of the Work with Contractor and shall constitute a default under the Contract. In addition, Contractor will be required to submit the completed Letters of Assent to the County with the executed Project Labor Agreement. The Project Labor Agreement is to be executed only where the total Project cost is \$5 Million or more, irrespective of Phasing.

PROJECT LABOR AGREEMENT

ARTICLE 1 - PREAMBLE

WHEREAS, as the General Contractor and the Project Management Firm, on behalf of themselves, and reflecting the objectives of the County of Union as Owner, desire to provide for the efficient, safe, quality, and timely completion of (the "Project"), in a manner designed to afford lower reasonable costs to the County of Union, (hereinafter referred to as the "County" or "Owner"), and the public it represents, and the advancement of public policy objectives;

WHEREAS, this Project Labor Agreement will foster the achievement of these goals, inter alia by:

(1) ensuring a reliable source of skilled and experienced labor;

(2) standardizing the terms and conditions governing the employment of labor on the Project;

(3) permitting wide flexibility in work scheduling and shift hours and times from those which otherwise might obtain;

(4) receiving negotiated adjustments as to work rules and staffing requirements from those which otherwise might obtain;

(5) providing comprehensive and standardized mechanisms for the settlement of work disputes, including those relating to jurisdiction;

(6) avoiding the costly delays of potential strikes, slowdowns, walkouts, picketing and other disruptions arising from work disputes, and promote labor harmony and peace for the duration of the Project.

(7) furthering public policy objectives as to improved employment opportunities for minorities, women, and the economically disadvantaged in the construction industry and expediting the construction process; and

WHEREAS, the signatory Unions desire the stability, security and work opportunities

afforded by a Project Labor Agreement; and

WHEREAS, the Parties desire to maximize Project safety conditions for both workers and the public.

NOW, THEREFORE, the Parties enter into this Agreement:

SECTION 1. PARTIES TO THE AGREEMENT

This is a Project Labor Agreement (this "Agreement") entered into by and between (the "GC" or "General Contractor") and (the "PMF" or "Project Management Firm"), and their successors and assigns, for the Project's construction work to be performed on the property of the County in the State of New Jersey and by the Union County Building and Construction Trades Council, AFL-CIO, on behalf of itself and its affiliates and members, and the signatory Local Unions on behalf of themselves and their members.

ARTICLE 2 - GENERAL CONDITIONS

SECTION 1. DEFINITIONS

Throughout this Agreement, the Union party and the Building Trades Council are referred to singularly and collectively as "the Union(s)" where specific reference is made to "Local Unions" that phrase is sometimes used; the term "Contractor(s)" shall include the General Contractor ("GC"), Project Management Firm ("PMF"), and all signatory contractors, and their subcontractors of whatever tier, engaged in on-site Project construction work within the scope of this Agreement as defined in Article 3; the County of Union is referenced as "Owner"; the Union County Building and Construction Trades Council, AFL-CIO is referenced as the "BTC", and the work covered by this Agreement (as defined in Article 3) is referred to as the "Project".

SECTION 2. CONDITIONS FOR AGREEMENT TO BECOME EFFECTIVE

This Agreement shall not become effective unless executed by the BTC and the GC and/or PMF and will remain in effect until the final completion of the Project.

SECTION 3. ENTITIES BOUND & ADMINISTRATION OF AGREEMENT

This Agreement shall be binding on all signatory Unions and the General Contractor and the Project Management Firm and all signatory Contractors performing on-site Project work, including site preparation and staging areas, as defined in Article 3. The Contractors shall include in any subcontract that they let, for performance during the term of this Agreement, a requirement that their subcontractors, of whatever tier, become signatory and bound by this Agreement with respect to subcontracted work performed within the scope of Article 3 and execute the Letter of Assent attached as Schedule B. This Agreement shall be administered by the GC and/or PMF on behalf of all Contractors.

SECTION 4. SUPREMACY CLAUSE

This Agreement, together with the local Collective Bargaining Agreements appended hereto as Schedule A represents the complete understanding of all signatories and supersedes any national agreement, local agreement or other collective bargaining agreement of any type which would otherwise apply to this Project, in whole or in part, except for all work performed under the NTD Articles of Agreement, the National Stack/Chimney Agreement, the National Cooling Tower Agreement, all instrument calibration work and loop checking shall be performed under the terms of the UA/IBEW Joint National Agreement for Instrument an Control Systems Technicians, and the National Agreement of the International Union of Elevator Constructors, with the exception of Article 7, 9, and 10 of this Agreement, which shall apply to such work. Where a subject covered by the provisions, explicit or implicit, of this Agreement is also covered by a Schedule A, the provisions of this Agreement shall prevail. It is further understood that neither the GC nor any Contractor shall be required to sign any other trade agreement as a condition of performing work on this Project. No practice, understanding or agreement between a Contractor and Local Union, which is not explicitly set forth in this Agreement, shall be binding on this Project unless endorsed in writing by the GC.

SECTION 5. LIABILITY

The liability of any Contractor and the liability of any Union under this Agreement shall be several and not joint. The GC and/or PMF and any Contractor shall not be liable for any violations of this Agreement by any other Contractor and the BTC and Local Unions shall not be liable for any violations of this Agreement by any other by any other Union.

SECTION 6. THE GENERAL CONTRACTOR OR PROJECT MANAGEMENT FIRM

The GC and PMF shall require in its bid specifications for all work within the scope of Article 3 that all successful bidders, and their subcontractors of whatever tier, become bound by, and signatory to, this Agreement. The County is not a party to and shall not be liable in any manner under this Agreement. It is understood that nothing in this Agreement shall be construed as limiting the sole discretion of the County in determining which Contractors shall be awarded contracts for Project work. It is further understood that the County has sole discretion at any time to terminate, delay, or suspend the work, in whole or part, on this Project.

SECTION 7. AVAILABILITY AND APPLICABILITY TO ALL SUCCESSFUL BIDDERS

32 2024.01.22 The Unions agree that this Agreement will be made available to, and will fully apply to any successful bidder for Project work who becomes signatory thereto, without regard to whether that successful bidder performs work at other sites on either a union or non-union basis and without regard to whether employees of such successful bidder are, or are not, members of any unions. This Agreement shall not apply to the work of any Contractor or GC or PMF, which is performed at any location other than the Project site, as defined in Article 3, Section 1.

ARTICLE 3 - SCOPE OF THE AGREEMENT

The Project work covered by this Agreement shall be as defined and limited by the following sections of this Article.

SECTION 1: THE WORK

This Agreement shall apply to all on-site public construction work, including site preparation, demolition and hazardous waste remediation, for the Owner performed on the Project. The scope of work is confined to the on-site Project work contained in the scope of the final construction contract of the General Contractor and/or PMF awarded work on the Project.

SECTION 2. EXCLUDED EMPLOYEES

The following persons are not subject to the provisions of this Agreement, even though performing work on the Project:

A. Superintendents, supervisors (excluding superintendents and general supervisors and forepersons specifically covered by a craft's Schedule A), engineers, inspectors and testers (excluding divers specifically covered by a craft's Schedule A), quality control/assurance personnel, timekeepers, mail carriers, clerks, office workers, messengers, guards, non-manual employees, and all professional, engineering, administrative and management persons;

B. Employees of Owner or any State agency, authority or entity or employees of any municipality or other public employer;

C. Employees and entities engaged in off-site manufacture, modifications, repair, maintenance, assembly, painting, handling or fabrication of project components, materials, equipment or machinery, unless such offsite operations are covered by the New

Jersey Prevailing Wage Act (for example, by being dedicated exclusively to the performance of the public works contract or building project and are adjacent to the site of work), or involved in deliveries to and from the Project site, excepting local deliveries of all major construction materials including fill, ready mix concrete and cement, asphalt and other items which are covered by this Agreement. Provided, however, local deliveries of ready mix, concrete, cement and asphalt shall not be contracted except to a subcontractor who pays wages and benefits not less than the economic equivalent of the wages and benefits set forth in Exhibit A.

D. Employees of the GC and/or PMF, excepting those performing manual, on-site construction labor who will be covered by this Agreement;

E. Employees engaged in on-site equipment warranty.

F. Employees engaged in geophysical testing (whether land or water) other than boring for core samples;

G. Employees engaged in laboratory or specialty testing or inspections;

H. Employees engaged in ancillary Project work performed by third parties such as electric utilities, gas utilities, telephone utility companies, and railroads.

SECTION 3. NON-APPLICATION TO CERTAIN ENTITIES

This Agreement shall not apply to the parents, affiliates, subsidiaries, or other joint or sole ventures of any Contractor or of GC and/or PMF, which do not perform work at this Project. It is agreed, for the purposes of this Agreement only, that this Agreement does not have the effect of creating any joint employment, single employer or alter ego status among the Owner, the GC and/or PMF and/or any Contractor. The Agreement shall further not apply to the Owner or any other state or county agency, authority, or other municipal or public entity and nothing contained herein shall be construed to prohibit or restrict the Owner or its employees of any other state authority, agency or entity and its employees from performing on or off-site work related to the Project. As the contracts which comprise the Project work are completed and accepted, the Agreement shall not have further force or effect on such items or areas except where inspections, additions, repairs, modifications, check-out and/or warranty work are assigned in writing (copy to Local Union involved) by the General Contractor and/or Project Management Firm for performance under the terms of this Agreement.

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ARTICLE 4 - UNION RECOGNITION AND EMPLOYMENT

SECTION 1. PRE-HIRE RECOGNITION

The Contractors recognize the signatory Unions as the sole and exclusive bargaining representatives of all craft employees who are performing on-site Project work within the scope of this Agreement as defined in Article 3.

SECTION 2. UNION REFERRAL

The Contractors agree to hire Project, craft employees covered by this Agreement Α. through the job referral systems and hiring halls (where the referrals meet the gualifications set forth in items 1.2, and 4 subparagraph B) established in the Local Unions' area collective bargaining agreements (attached as Schedule A to this Agreement), subject to the goals of any applicable local ordinances or agreements pertaining to hiring and apprenticeship goals for minorities, women, residents of disadvantaged communities, and local residents. Notwithstanding this, the Contractors shall have sole rights to determine the competency of all referrals; the number of employees required (except with regard to pile driving and cranes); the selection of employees to be laid-off (subject to the applicable procedures in Schedule A for permanent and/or temporary layoffs and except as provided in Article 5, Section 3); and the sole right to reject any applicant referred by a Local Union, subject to the show-up payments required in the applicable Schedule A. In the event that a Local Union is unable to fill any request for qualified employees within a 48-hour period after such requisition is made by the Contractor (Saturdays, Sundays, and holidays excepted), the Contractor may employ qualified applicants from another competent source. In the event that the Local Union does not have a job referral system, the Contractor shall give the Local Union first preference to refer applicants, subject to the other provisions of this Article. The Contractor shall notify the Local Union of the Project, craft employees hired within its jurisdiction from any source other than referral by the Union.

B. A Contractor may request by name, and the Local will honor, referral of persons who have applied to the Local for Project work and who meet the following qualifications as determined by a Committee of 3 designated, respectively, by the applicable Local Union, the GC and/or PMF and a mutually selected third party or, in the absence of agreement, the permanent arbitrator (or designee) designated in Article 7:

(1) possess any license required by New Jersey law for the Project work to be performed;

(2) have worked a total of at least 1000 hours in the Construction craft during the prior 3 years;

(3) were on the Contractor's active payroll for at least 60 out of the 180 calendar days prior to the contract award;

(4) have demonstrated ability to safely perform the basic function of the applicable trade.

Following the employment of the first employee in each craft under Schedule A or the procedure set forth above in paragraph A, no more than twelve (12%) per centum of the employees covered by this Agreement, per Contractor by craft, shall be hired through the special provisions above which, consistent with N.J.S.A. 52:38-4, permit contractors and subcontractors working on the public works project to retain a percentage of their current workforce (any fraction shall be rounded to the next highest whole number).

C. A certified MBE/WBE contractor may request from the Workforce Coordinator, through the GC and/or PMF, an exception to, and waiver of, the above per centum limitation upon the number of its employees to be hired through the special provision of Section 2.B above. This exception is based upon hardship and demonstration by the contractor that the Project work would be the contractor's only job and that it would be obliged to lay off qualified minority and female employees in its current workforce moving from the last job. The exception and waiver are also conditioned upon the employees meeting the qualifications as set forth in Section 2.B above.

SECTION 3. NON-DISCRIMINATION IN REFERRALS

The Unions represent that their hiring halls and referral systems will be operated in a nondiscriminatory manner and in full compliance with all applicable federal, state and local laws and regulations, which require equal employment opportunities. Referrals shall not be affected in any way by the rules, regulations, bylaws, constitutional provisions or any other aspects or obligations of union membership, policies or requirements and shall be subject to such other conditions as are established in this Article. No employment applicant shall be discriminated against by any referral system or hiring hall because of the applicant's union membership, or lack thereof.

SECTION 4. WORKFORCE DIVERSITY

To the extent applicable, the parties hereby agree that each will implement and abide by the requirements of the Owner with regard to workforce diversity. Furthermore, General

36 2024.01.22 Contractor, Contractors and the Unions will comply with such affirmative action plan, including but not limited to: (1) the parties will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status, sex or any other protected category used by government regulation; (2) the parties will endeavor to include in any solicitations or advertisements for employees or subcontractors, a notice that all qualified applicants will receive consideration for employment, and contractors and subcontractors for work, without regard to age, race, creed, color, national origin, ancestry, marital status, sex or any other protected category used by government regulation; and (3) the parties agree to utilize the best efforts to ensure that minority business enterprises and women-owned business enterprises shall have the maximum practicable opportunity to provide Construction Work under this Agreement.

The Local Unions agree and support the importance the Owner places on having and maintaining a diverse workforce. The Unions agree to refer any and all Union County resident journeymen and apprentices who are registered on the Out-of-Work list of the local union referral systems at the time of a contractor's request. The Local Unions will cooperate with Contractor requests for residents of Union County, residents of disadvantaged communities, minority or women referrals to meet the requirements of the Owner.

In the event a Union either fails, or is unable, to refer qualified minority or female applicants in percentages equaling Project affirmative action goals as set forth in the Owners bid specifications, the Contractor may employ qualified minority or female applicants from any other available source as Apprentice Equivalents. Apprentice Equivalents will have completed a DOL approved training program, applied to take a construction Apprenticeship test, and will be paid at not less than the applicable equivalent Apprentice rate. With the approval of the Local Administrative Committee ("LAC"), experience in construction related areas may be accepted as meeting the above requirements.

SECTION 5. CROSS AND QUALIFIED REFERRALS

The Unions shall not knowingly refer to a Contractor an employee then employed by another Contractor working under this Agreement. The Local Unions will exert their utmost efforts to recruit sufficient numbers of skilled and qualified craft employees to fulfill the requirements of the Contractor.

SECTION 6. UNION DUES / WORKING ASSESSMENTS

The union security provisions contained in the applicable Schedule A local agreements, shall not apply to the employees covered by this Agreement as for the period of time during which they are performing on-site Project work. No employee shall be

discriminated against at the Project site because of the employee's union membership or lack thereof. In the case of unaffiliated employees who have voluntarily executed dues checkoff authorization cards provided in a Schedule A local agreement, the dues payment can be received by the Unions as a working assessment fee.

SECTION 7. CRAFT FOREPERSONS AND GENERAL FOREPERSONS

The selection of craft forepersons and/or general forepersons and the number of forepersons required shall be solely the responsibility of the Contractor except where otherwise provided by specific provisions of an applicable Schedule A. All forepersons shall take orders exclusively from the designated Contractor representatives. Craft foreperson shall be designated as working forepersons at the request of the Contractor, except when an existing local Collective Bargaining Agreement prohibits a foreperson from working when the craftsperson he is leading exceed a specified number.

ARTICLE 5 - UNION REPRESENTATION

SECTION 1. LOCAL UNION REPRESENTATIVE

Each Local Union representing on-site Project employees shall be entitled to designate in writing (copy to General Contractor involved and/or Project Management Firm) representatives, including the Business Manager, who shall be afforded access to the Project.

SECTION 2. STEWARDS

A. Each Local Union shall have the right to designate a working journey person as a Steward and an alternate, and shall notify the Contractor and GC and/or PMF of the identity of the designated Steward (and alternate) prior to the assumption of such duties. Stewards shall not exercise supervisory functions and will receive the regular rate of pay for their craft classifications. There will be no non-working Stewards on the Project.

B. In addition to their work as an employee, the Steward shall have the right to receive complaints or grievances and to discuss and assist in their adjustment with the Contractor's appropriate supervisor. Each Steward shall be concerned with the employees of the Steward's Contractor and, if applicable, subcontractors of that Contractor, but not with the employees of any other Contractor. The Contractor will not discriminate against the Steward in the proper performance of Union duties.

C. The Stewards shall not have the right to determine when overtime shall be worked, or who shall work overtime, except pursuant to a Schedule A provision providing procedures for the equitable distribution of overtime.

SECTION 3. LAYOFF OF A STEWARD

Contractors agree to notify the appropriate Union 24 hours prior to the layoff of a Steward, except in cases of discipline or discharge for just cause. If a Steward is protected against layoff by a Schedule A, such provisions shall be recognized to the extent the Steward possesses the necessary qualifications to perform the work required. In any case in which a Steward is discharged or disciplined for just cause, the Local Union involved shall be notified immediately by the Contractor.

ARTICLE 6 - MANAGEMENT'S RIGHTS

SECTION 1. RESERVATION OF RIGHTS

Except as expressly limited by a specific provision of this Agreement, Contractors retain full and exclusive authority for the management of their Project operations including, but not limited to: the right to direct the work force, including determination as to the number to be hired and the qualifications therefore; the promotion, transfer, layoff of its employees; or the discipline or discharge for just cause of its employees; the assignment and schedule of work; the promulgation of reasonable Project work rules; and, the requirement, timing and number of employees to be utilized for overtime work. No rules, customs, or practices, which limit or restrict productivity or efficiency of the individual, as determined by the Contractor, GC and/or PMF, and/or joint working efforts with other employees shall be permitted or observed.

SECTION 2. MATERIALS, METHODS & EQUIPMENT

There shall be no limitations or restriction upon the contractors' choice of materials, techniques, methods, technology or design, or, regardless of source or location, upon the use and installation of equipment, machinery, package units, pre-cast, pre-fabricated, prefinished, or pre-assembled materials, tool, or other labor-saving devices. Contractors may, without restriction, install or use materials, supplies or equipment regardless of their source. The on-site installation or application of such items shall be performed by the craft having jurisdiction over such work; provided, however, it is recognized that other personnel having special qualifications may participate, in a supervisory capacity, in the installation, check-out or testing of specialized or unusual equipment or facilities as designated by the Contractor. Notwithstanding the foregoing statement of contractor rights, prefabrication issues relating to work traditionally performed at the job site shall be governed pursuant to the terms of the applicable Schedule A. There shall be no restrictions as to work, which is performed off-site for the Project, except for 1) offsite operations work covered under the New Jersey Prevailing Wage Act or 2) done in a fabrication center, tool yard, or batch plant dedicated exclusively to the performance of work on the Project, and located adjacent to the "site of work". Where available locally,

offsite operations work covered under the New Jersey Prevailing Wage Act shall be performed within the territorial jurisdiction of the local unions signatory to this Agreement.

ARTICLE 7 - WORK STOPPAGES AND LOCKOUTS

SECTION 1. NO STRIKES-NO LOCKOUT

There shall not be strikes, sympathy strikes, picketing, work stoppages, slowdowns, hand billing, demonstrations or other disruptive activity at the Project for any reason by any Union or employee against any Contractor or employer while performing work at the Project. There shall be no other Union, or concerted or employee activity which disrupts or interferes with the operation of the existing free flow of traffic in the project area. Failure of any Union or employee to cross any picket line established by any union, signatory or non-signatory to this Agreement, or the picket or demonstration line of any other organization, at or in proximity to the Project site is a violation of this Article. There shall be no lockout at the Project by any signatory Contractor. Contractors and Unions shall take all steps necessary to ensure compliance with this Section 1 and to ensure uninterrupted construction and the free flow of traffic in the project area for the duration of this Agreement.

SECTION 2. DISCHARGE FOR VIOLATION

A Contractor may discharge any employee violating Section 1, above, and any such employee will not be eligible thereafter for referral under this Agreement for a period of 100 days.

SECTION 3. NOTIFICATION

If a Contractor contends that any Union has violated this Article, it will notify the appropriate district or area council of the Local Union involved advising of such fact, with copies of the notification to the Local Union and the BTC. The district or area council, and the BTC shall each instruct, order and otherwise use their best efforts to cause the employees, and/or the Local Unions to immediately cease and desist from any violation of this Article. A district or area council, or the BTC complying with these obligations shall not be liable for the unauthorized acts of a Local Union or its members.

SECTION 4. EXPEDITED ARBITRATION

Any Contractor or Union alleging a violation of Section 1 of this Article may utilize the expedited procedure set forth below (in lieu of, or in addition to, any actions at law or equity) that may be brought.

A. A party invoking this procedure shall notify J.J. Pierson, Esq., FCIArb., The

Arbitration Centre, 51 JFK Parkway, First Floor West, Short Hills, New Jersey 07078, telephone number (973) 359-8100, fax number (973) 359-8161, or e-mail jjpierson@jjpierson.com, who shall serve as Arbitrator under this expedited arbitration procedure. In the event that J.J. Pierson is unable to serve, a party invoking this procedure shall notify Louis Verrone, who shall serve as arbitrator under this expedited procedure. Copies of such notification will be simultaneously sent to the alleged violator and, if a Local Union is alleged to be in violation, it's International, the GC and/or PMF, and the BTC.

B. The Arbitrator shall thereupon, after notice as to time and place to the Contractor, the GC and/or PMF, the Local Union involved, and the BTC, hold a hearing within 48 hours of receipt of the notice invoking the procedure it is contended that the violation still exists. The hearing will not, however, be scheduled for less than 24 hours after the notice to the district or area council required by Section 3 above. Hearings shall be held at the jobsite or at the Newark office of the New Jersey State Board of Mediation, as directed by the Arbitrator.

C. All notices pursuant to this Article may be by telephone, telegraph, hand delivery, or fax, confirmed by overnight delivery, to the arbitrator, Contractor or Union involved. The hearing may be held on any day including Saturdays or Sundays. The hearing shall be completed in one session, which shall not exceed 8 hours duration (no more than 4 hours being allowed to either side to present their case, and conduct their cross examination) unless otherwise agreed. A failure of any Union or Contractor to attend the hearing shall not delay the hearing of evidence by those present or the issuance of an award by the Arbitrator.

D. The sole issue at the hearing shall be whether a violation of Section 1, above, occurred. If a violation is found to have occurred, the Arbitrator shall issue a Cease and Desist Award restraining such violation and serve copies on the Contractor and Union involved. The Arbitrator shall have no authority to consider any matter in justification, explanation or mitigation of such violation or to award damages, which issue is reserved solely for court proceedings, if any. The Award shall be issued in writing within 3 hours after the close of the hearing, and may be issued without an Opinion. If any involved party desires an Opinion, one shall be issued within 15 calendar days, but its issuance shall not delay compliance with, or enforcement of, the Award.

E. An Award issued under this procedure may be enforced by any court of competent jurisdiction upon the filing of this Agreement together with the Award. Notice of the filing of such enforcement proceedings shall be given to the Union or Contractor involved. In any court proceeding to obtain a temporary or preliminary order enforcing the arbitrator's Award as issued under this expedited procedure, the involved Union and Contractor waive their right to a hearing and agree that such proceedings may be ex parte, provided notice is given to opposing counsel. Such agreement does not waive any party's right to participate in a hearing for a final court order of enforcement or in any contempt

proceeding.

F. Any rights created by statue or law governing arbitration proceedings which are inconsistent with the procedure set forth in this Article, or which interfere with compliance thereto, are hereby waived by the Contractors and Unions to whom they accrue.

G. The fees and expenses of the Arbitrator shall be equally divided between the involved Contractor and Union.

SECTION 5. ARBITRATION OF DISCHARGES FOR VIOLATION

Procedures contained in Article 9 shall not be applicable to any alleged violation of this Article, with the single exception that an employee discharged for violation of Section 1, above, may have recourse to the procedures of Article 9 to determine only if the employee did, in fact, violate the provisions of Section 1 of this Article; but not for the purpose of modifying the discipline imposed where a violation is found to have occurred.

ARTICLE 8. - LOCAL ADMINISTRATIVE COMMITTEE ("LAC")

SECTION 1. MEETINGS

The Local Administrative Committee ("LAC") will meet on a regular basis to: 1) Implement and oversee this Agreement's procedures and initiatives; 2) monitor the effectiveness of this Agreement; and 3) identify opportunities to improve efficiency and work execution.

SECTION 2. COMPOSITION

The LAC will be co-chaired by the President of the Union County Building and Construction Trades Council or his designee, and designated official of the GC and/or PMF. It will be comprised of representatives of the local unions signatory to this Agreement and representatives of the GC and/or PMF and other contractors on the project.

ARTICLE 9 - GRIEVANCE & ARBITRATION PROCEDURE

SECTION 1. PROCEDURE FOR RESOLUTION OF GRIEVANCES

Any question, dispute or claim arising out of, or involving the interpretation or application of this Agreement (other than jurisdictional disputes or alleged violations of Article 7, Section 1) shall be considered a grievance and shall be resolved pursuant to the exclusive

42 2024.01.22 procedure of the steps described below; provided, in all cases, that the question, dispute or claim arose during the term of this Agreement.

Step 1:

When any employee covered by this Agreement feels aggrieved by a claimed Α. violation of this Agreement, the employee shall, through the Local Union business representative or job steward give notice of the claimed violation to the work site representative of the involved Contractor. To be timely, such notice of the grievance must be given within 7 calendar days after the act, occurrence, or event giving rise to the grievance, or after the act, occurrence or event became known or should have become known to the Union. The business representative of the Local Union or the job steward and the work site representative of the involved Contractor shall meet and endeavor to adjust the matter within 7 calendar days after timely notice has been given. If they fail to resolve the matter within the prescribed period, the grieving party, may, within 7 calendar days thereafter, pursue Step 2 of the grievance procedure by serving the involved Contractor and the General Contractor and/or Project Management Firm with written copies of the grievance setting forth a description of the claimed violation, the date on which the grievance occurred, the provisions of this Agreement alleged to have been violated. Grievances and disputes settled at Step 1 are non-precedential except as to the specific Local Union, employee and Contractor directly involved, unless the settlement is accepted in writing, by the General Contractor and/or Project Management Firm, as creating a precedent.

B. Should any signatory to this Agreement have a dispute (excepting jurisdictional disputes or alleged violations of Article 7, Section 1) with any other signatory to this Agreement and, if after conferring, a settlement is not reached within 7 calendar days, the dispute shall be reduced to writing and proceed to Step 2 in the same manner as outlined in subparagraph (a) for the adjustment of employee grievances.

Step 2:

The Business Manager or designee of the involved Local Union, together with representatives of the BTC, the involved Contractor, and the General Contractor and/or Project management Firm shall meet in Step 2 within 5 calendar days of the written grievance to arrive at a satisfactory settlement.

Step 3:

A. If the grievance shall have been submitted but not resolved in Step 2, any of the participating Step 2 entities may, within 14 calendar days after the initial Step 2 meeting, submit the grievance in writing (copies to other participants) to J.J. Pierson, Esq., FCIArb., The Arbitration Centre, 51 JFK Parkway, First Floor West, Short Hills, New Jersey 07078,

telephone number (973) 359-8100, fax number (973) 359-8161, who shall act as the Arbitrator under this procedure. In the event that J.J. Pierson is unable to serve, a party invoking this procedure shall notify Louis Verrone, who shall serve as arbitrator under this expedited procedure. The Labor Arbitration Rules of the American Arbitration Association shall govern the conduct of the arbitration hearing, at which all Step 2 participants shall be parties. Hearings shall be held at the jobsite or at the Newark office of the New Jersey State Board of Mediation, as directed by the Arbitrator.

The decision of the Arbitrator shall be final and binding on the involved Contractor, Local Union and employees and the fees and expenses of such arbitration's shall be borne equally by the involved Contractor and Local Union.

B. Failure of the grieving party to adhere to the time limits set forth in this Article shall render the grievance null and void. These time limits may be extended only by written consent of the GC and/or PMF, involved Contractor and involved Local Union at the particular step where the extension is agreed upon. The Arbitrator shall have authority to make decisions only on the issues presented to him and shall not have the authority to change, add to, delete or modify any provision of this Agreement.

SECTION 2. LIMITATION AS TO RETROACTIVITY

No arbitration decision or award may provide retroactivity of any kind exceeding 30 calendar days prior to the date of service of the written grievance on the construction Project Manager and the involved Contractor or Local Union.

SECTION 3. PARTICIPATION BY GENERAL CONTRACTOR AND/OR PROJECT MANAGEMENT FIRM

The General Contractor and/or Project Management Firm shall be notified by the involved Contractor of all actions at Steps 2 and 3 and, at its election, may participate in full in all proceedings at these Steps, including Step 3 arbitration.

ARTICLE 10 - JURISDICTIONAL DISPUTES

SECTION 1. NO DISRUPTIONS

There will be no strikes, sympathy strikes, work stoppages, slowdowns, picketing or other disruptive activity of any kind arising out of any jurisdictional dispute. Pending the resolution of the dispute, the work shall continue uninterrupted and as assigned by the Contractor. No jurisdictional dispute shall excuse a violation of Article 7.

SECTION 2. ASSIGNMENT

A. There shall be a mandatory pre-job markup / assignment meeting prior to the commencement of any work. Attending such meeting shall be designated representatives of the Union signatories to this Agreement, the GC, and the involved Contractors. Best efforts will be made to schedule the pre-job meeting in a timely manner after Notice to Proceed is issued but not later than 30 days prior to the start of the Project.

B. All Project construction work assignments shall be made by the Contractor according to criteria set forth in Section 3, Subsection D 1-3.

C. When a Contractor has made an assignment of work, he shall continue the assignment without alteration unless otherwise directed by an arbitrator or there is agreement between the National or International Unions involved. Claims of a change of original assignment shall be processed in accordance with Article I of the Procedural Rules of the Plan for the Settlement of Jurisdictional Disputes in the Construction Industry ("the Plan").

D. In the event that a Union involved in the change of original assignment dispute is an affiliate of a National or International Union that is not affiliated with the Building and Construction Trades Department and does not wish to process a case through the Plan, the parties shall mutually select one of the following Arbitrators: Arbitrator J.J. Pierson, Arbitrator Paul Greenberg or Arbitrator Richard K. Hanft and submit the dispute directly to the Arbitrator. The selected Arbitrator shall determine whether the case requires a hearing or may be decided upon written submissions. In rendering his determination on whether there has been a change of original assignment, the Arbitrator shall be governed by the following:

1. The contractor who has the responsibility for the performance and installation shall make a specific assignment of the work which is included in his contract to a particular union(s). For instance, if contractor A subcontracts certain work to contractor B, then contractor B shall have the responsibility for making the specific assignments for the work included in his contract. If contractor B, in turn, shall subcontract certain work to contractor C, then contractor C shall have the responsibility for making the specific assignment for the work included in his contract. After work has been so assigned, such assignment will be maintained even though the assigning contractor is replaced and such work is subcontracted to another contractor. It is a violation of the Agreement for the contractor to hold up disputed work or shut down a project because of a jurisdictional dispute.

2. When a contractor has made an assignment of work, he shall continue the assignment without alteration unless otherwise directed by an arbitrator or there is agreement between the National or International Unions involved.

3. Unloading and/or handling of materials to stockpile or storage by a trade for the convenience of the responsible contractor when his employees are not on the job site, or in an emergency situation, shall not be considered to be an original assignment to that

trade.

4. Starting of work by a trade without a specific assignment by an authorized representative of the responsible contractor shall not be considered an original assignment to that trade, provided that the responsible contractor, or his authorized representative, promptly, and, in any event, within eight working hours following the start of work, takes positive steps to stop further unauthorized performance of the work by that trade.

SECTION 3. PROCEDURE FOR SETTLEMENT OF DISPUTES

A. Any Union having a jurisdictional dispute with respect to Project work assigned to another Union will submit through its International the dispute in writing to the Administrator of the Plan within 72 hours and send a copy of the letter to the other Union involved, the Contractor involved, the General Contractor, the BTC, and the district or area councils of the unions involved. Upon receipt of a dispute letter from any Union, the Administrator will invoke the procedures set forth in the Plan to resolve the jurisdictional dispute. The jurisdictional dispute letter shall contain the information described in Article IV of the Procedural Rules of the Plan.

B. Within 5 calendar days of receipt of the dispute letter, there shall be a meeting of the General Contractor, the Contractor involved, the Local Unions involved and designees of the BTC and the district or area councils of the Local Unions involved for the purpose of resolving the jurisdictional dispute.

C. In order to expedite the resolution of jurisdictional disputes, the parties have agreed in advance to mutually select one of the following designated Arbitrators: Arbitrator J. J. Pierson, Arbitrator Paul Greenberg or Arbitrator Richard K. Hanft to hear all unresolved jurisdictional disputes arising under this Agreement. All other rules and procedures of the Plan shall be followed. If none of the three Arbitrators is available to hear the dispute within the time limits of the Plan, the Plan's arbitrator selection process shall be utilized to select another arbitrator.

D. In the event that a Union involved in the dispute is an affiliate of a National or International Union that is not affiliated with the Building and Construction Trades Department and does not wish to process a case through the Plan as described in paragraphs A-C above, the parties to the dispute shall mutually select one of the following Arbitrators: Arbitrator J. J. Pierson, Arbitrator Paul Greenberg or Arbitrator Richard K. Hanft to hear the dispute and shall submit the dispute directly to the selected arbitrator. The time limits for submission and processing disputes shall be the same as provided elsewhere in this Section. The selected Arbitrator shall schedule the hearing within seven business days from the date of submission. If he cannot hear the case within the required timeframe, one of the other Arbitrators will be selected to hear the case unless all parties to the dispute agree to waive the seven (7) day time limit. In rendering his decision, the Arbitrator shall determine: 1. First whether a previous agreement of record or applicable agreement, including a disclaimer agreement, between the National and International Unions to the dispute governs;

2. Only if the Arbitrator finds that the dispute is not covered by an appropriate or applicable agreement of record or agreement between the crafts to the dispute, he shall then consider the established trade practice in the industry and prevailing practice in the locality. Where there is a previous decision of record governing the case, the Arbitrator shall give equal weight to such decision of record, unless the prevailing practice in the locality in the past ten years favors one craft. In that case, the Arbitrator shall base his decision on the prevailing practice in the locality. Except, that if the Arbitrator finds that a craft has improperly obtained the prevailing practice in the locality through raiding, the undercutting of wages or by the use of vertical agreements, the Arbitrator shall rely on the decision of record and established trade practice in the industry rather than the prevailing practice in the locality.

3. Only if none of the above criteria is found to exist, the Arbitrator shall then consider that because efficiency, cost or continuity and good management are essential to the wellbeing of the industry, the interests of the consumer or the past practices of the employer shall not be ignored.

The Arbitrator shall set forth the basis for his decision and shall explain his findings regarding the applicability of the above criteria. If lower-ranked criteria are relied upon, the Arbitrator shall explain why the higher-ranked criteria were not deemed applicable. The Arbitrator's decision shall only apply to the job in dispute.

Each party to the arbitration shall bear its own expense for the arbitration and agrees that the fees and expenses of the Arbitrator shall be borne by the losing party or parties as determined by the Arbitrator.

E. The Arbitrator shall render a short-form decision within 5 days of the hearing based upon the evidence submitted at the hearing, with a written decision to follow within 30 days of the close of hearing.

F. This Jurisdictional Dispute Resolution Procedure will only apply to work performed by Local Unions that represent workers employed on the Project.

G. Any Local Union involved in a jurisdictional dispute on this Project shall continue working in accordance with Section 2 above and without disruption of any kind.

SECTION 4. AWARD

Any award rendered pursuant to this Article and the Plan shall be final and binding on the disputing Local Unions and the involved Constructor on this Project only and may be enforced in accordance with the provisions of Article VII of the Plan. Any award rendered pursuant to the alternate procedures of this Article shall be final and binding on the disputing Local Unions and the involved Contractor on this Project only, and may be enforced in any court of competent jurisdiction. Such award or resolution shall not

establish a precedent on any other construction work not covered by this Agreement. In all disputes under this Article, the General Contractor and the involved Contractors shall be considered parties in interest.

SECTION 5. LIMITATIONS

The Arbitrator shall have no authority to assign work to a double crew, that is, to more employees than the minimum required by the Contractor to perform the work involved; nor to assign work to employees who are not qualified to perform the work involved; nor to assign work being performed by non-union employees to union employees. This does not prohibit the establishment, with the agreement of the involved Contractor, of composite crews where more than 1 employee is needed for the job. The aforesaid determinations shall decide only to whom the disputed work belongs.

SECTION 6. NO INTERFERENCE WITH WORK

A. There shall be no interference or interruption of any kind with the work of the Project while any jurisdictional dispute is being resolved. The work shall proceed as assigned by the Contractor until finally resolved under the applicable procedure of this Article. The award shall be confirmed in writing to the involved parties. There shall be no strike, work stoppage or interruption in protest of any such award. Any claims of a violation of this section shall be submitted and processed in accordance with the impediment to job progress provisions of the Plan.

In the event a Union alleged to have engaged in an impediment to job progress is Β. an affiliate of a National or International Union that is not affiliated with the Building and Construction Trades Department and does not wish to have the impediment to job progress charge processed through the Plan, the parties to the dispute shall mutually select one of the three Arbitrators designated in this Article to hear the dispute. The selected Arbitrator shall schedule the hearing within two business days from the date of submission. If he cannot hear the case within the required timeframe, one of the other Arbitrators shall be selected by the parties to hear the case unless all parties to the dispute agree to waive the two day time limit. The sole issue at the hearing shall be whether or not a violation of this Section has in fact occurred, and the Arbitrator shall have no authority to consider any matter in justification, explanation or mitigation of such violation or to award damages. The Arbitrator's decision shall be issued in writing within 3 hours after the close of the hearing, and may be issued without an opinion. If any party desires an opinion, one shall be issued within 15 days, but its issuance shall not delay compliance with, or enforcement of, the decision. The Arbitrator may order cessation of the violation of this Section and other appropriate relief, and such decision shall be served on all parties by facsimile upon issuance. Each party to the arbitration shall bear its own expense for the arbitration and agrees that the fees and expenses of the Arbitrator shall be borne by the losing party or parties as determined by the Arbitrator.

ARTICLE 11 - WAGES AND BENEFITS

SECTION 1. CLASSIFICATION AND BASE HOURLY RATE

All employees covered by this Agreement shall be classified in accordance with the work performed and paid the base hourly wage rates for those classifications as specified in the attached Schedules A, as amended during this Agreement. Recognizing, however, that special conditions may exist or occur on the Project, the parties, by mutual agreement may establish rates and/or hours for one or more classifications, which may differ from Schedules A. Parties to such agreements shall be the General Contractor and/or Project Management Firm, the Contractor involved, the involved Local Unions and the BTC.

SECTION 2. EMPLOYEE BENEFIT FUNDS

A. The Contractors agree to pay contributions on behalf of all employees covered by this Agreement to the established employee benefit funds in the amounts designated in the appropriate Schedule A. Bona fide jointly trusted fringe benefit plans established or negotiated through collective bargaining during the life of this Agreement may be added. However, if a defined benefit pension fund covered by the terms and conditions of this Agreement has not adopted the building and construction industry exemption authorized by subsection (b) of Section 4203 of the Employee Retirement Income Security Act of 1974, the Contractor shall not be obligated to hire employees covered by that fund.

B. The Contractor agrees to be bound by the written terms of the legally established Trust Agreements specifying the detailed basis on which payments are to be paid into, and benefits paid out of, such Trust Funds but only with regard to work done on this Project and only for those employees to whom this Agreement requires such benefit Payments.

C. Should any contractor or sub-contractor become delinquent in the payment of contributions to the fringe benefit funds, then the subcontractor at the next higher tier, or upon notice of the delinquency claim from the Union or the Funds, agrees to withhold from the subcontractor such disputed amount from the next advance, or installment payment for work performed and the amount claimed and owed will be paid within thirty (30) days after receipt of the notification by the General Contractor and/or Project Management Firm, if not paid prior to said date by the delinquent contractor/subcontractor.

ARTICLE 12 - HOURS OF WORK, PREMIUM PAYMENTS, SHIFTS AND HOLIDAYS

SECTION 1. WORK WEEK AND WORK DAY

A. The standard work week shall consist of 40 hours of work at straight time rates per one of the following schedules:

1) Five-Day Work Week: Monday-Friday, 5 days, 8 hours plus 1/2 hour unpaid lunch period each day.

B. The Day Shift shall commence between the hours of 6:00 a.m. and 9:00 a.m. and shall end between the hours of 2:30 p.m. and 5:30 p.m. Starting and quitting times shall occur at the employees' place of work as may be designated by the Contractor in accordance with area practice.

C. Notice - Contractors shall provide not less than 5 days prior notice to the Local Union involved as to the work week and work hours schedules to be worked or such lesser notice as may be mutually agreed upon.

SECTION 2. OVERTIME

Overtime pay for hours outside of the standard work week and work day, described in paragraph A above, shall be paid in accordance with the applicable Schedule A. There will be no restriction upon the Contractor's scheduling of overtime or the non-discriminatory designation of employees who shall be worked, except as noted in Article 5, Section 2. There shall be no pyramiding of overtime pay under any circumstances. The Contractor shall have the right to schedule work so as to minimize overtime.

SECTION 3. SHIFTS

A. Flexible Schedules - Scheduling of shift work shall remain flexible in order to meet Project schedules and existing Project conditions including the minimization of interference with traffic. It is not necessary to work a day shift in order to schedule a second shift. Shifts must be worked a minimum of five consecutive work days, must have prior approval of the Construction Project Manager and must be scheduled with not less than five work days' notice to the Local Union.

B. Second/Shift - The second shift (starting between 2 p.m. and 8p.m.) shall consist of 8 hours work (or 10 hours of work) for an equal number of hours pay at the straight time rate plus 15% in lieu of overtime and exclusive of a 1/2 hour unpaid lunch period.

C. Flexible Starting Times – Shift starting times will be adjusted by the Contractor as necessary to fulfill Project requirements subject to the notice requirements of Paragraph A.

D. It is agreed that when project circumstances require a deviation from the above shifts, the involved unions, contractors and the General Contractor and/or Project Management Firm shall adjust the starting times of the above shifts or establish shifts which meet the project requirements. It is agreed that neither party will unreasonably withhold their agreement.

SECTION 4. HOLIDAYS

A. Schedule - There shall be 8 recognized holidays on the Project:

New Year's Day	Labor Day
Presidents Day	Veterans Day
Memorial Day	Thanksgiving Day
Fourth of July	Christmas Day

* Presidential Election Day shall be observed as a holiday in a general election year. Work shall be scheduled on Good Friday pursuant to the craft's Schedule A. Columbus Day and the Friday after Thanksgiving shall be observed as a holiday for Elevator Constructors Local 1 only.

All said holidays shall be observed on the dates designated by New Jersey State Law. In the absence of such designations, they shall be observed on the calendar date except those holidays which occur on Sunday shall be observed on the following Monday. Holidays falling on Saturday are to be observed on the preceding Friday.

B. Payment - Regular holiday pay, if any, and/or premium pay for work performed on such a recognized holiday shall be in accordance with the applicable Schedule A.

C. Exclusivity - No holidays other than those listed in Section 4-A above shall be recognized nor observed.

SECTION 5. REPORTING PAY

A. Employees who report to the work location pursuant to regular schedule and who are not provided with work or whose work is terminated early by a Contractor, for whatever reason, shall receive minimum reporting pay in accordance with the applicable Schedule A.

B. When an employee, who has completed their scheduled shift and left the Project site, is "called back" to perform special work of a casual, incidental or irregular nature, the employee shall receive pay for actual hours worked with a minimum guarantee, as may be required by the applicable Schedule A.

C. When an employee leaves the job or work location of their own volition or is discharged for cause or is not working as a result of the Contractor's invocation of Section 7 below, they shall be paid only for the actual time worked.

D. Except as specifically set forth in this Article there shall be no premiums, bonuses, hazardous duty, high time or other special payments of any kind.

E. There shall be no pay for time not actually worked except as specifically set forth in this Agreement or except where specifically provided in an applicable Schedule A.

SECTION 6. PAYMENT OF WAGES

A. Payday - Payment shall be made by check, drawn on a New Jersey bank with branches located within commuting distance of the job site. Paychecks shall be issued by the Contractor at the job site by 10 a.m. on Thursdays. In the event that the following Friday is a bank holiday, paychecks shall be issued on Wednesday of that week. Not more than 3 days wages shall be held back in any pay period. Paycheck stubs shall contain the name and business address of the Contractor, together with an itemization of deductions from gross wages.

B. Termination-Employees who are laid-off or discharged for cause shall be paid in full for that which is due them at the time of termination. The Contractors shall also provide the employee with a written statement setting forth the date of lay off or discharge.

SECTION 7. EMERGENCY WORK SUSPENSION

A Contractor or GC and/or PMF may, if considered necessary for the protection of life and /or safety of employees or others, suspend all or a portion of Project work. In such instances, employees will be paid for actual time worked; provided, however, that when a Contractor request that employees remain at the job site available for work, employees will be paid for "stand-by" time at their hourly rate of pay.

SECTION 8. INJURY/DISABILITY

An employee who, after commencing work, suffers a work-related injury or disability while performing work duties, shall receive no less than 8 hours wages for that day. Further, the employee shall be rehired at such time as able to return to duties provided there is still work available on the Project for which the employee is qualified and able to perform.

SECTION 9. TIME KEEPING

A Contractor may utilize brassing or other systems to check employees in and out. Each employee must check in and out. The Contractor will provide adequate facilities for checking in and out in an expeditious manner.

SECTION 10. MEAL PERIOD

A Contractor shall schedule an unpaid period of not more than 1/2 hour duration at the work location between the 3rd and 5th hour of the scheduled shift. A Contractor may, for efficiency of operation, establish a schedule which coordinates the meal periods of two or more crafts. If an employee is required to work through the meal period, the employee shall be compensated in a manner established in the applicable Schedule A.

SECTION 11. BREAK PERIODS

There will be no rest periods, organized coffee breaks or other non-working time established during working hours. Individual coffee containers will be permitted at the employee's work location. Local area practice will prevail for coffee breaks that are not organized.

ARTICLE 13 - APPRENTICES

SECTION 1. RATIOS

Recognizing the need to maintain continuing supportive programs designed to develop adequate numbers of competent workers in the construction industry and to provide craft entry opportunities for minorities, women and economically disadvantaged non-minority males, Contractors will employ apprentices in their respective crafts to perform such work as is within their capabilities and which is customarily performed by the craft in which they are indentured. Contractors may utilize apprentices and such other appropriate classifications as are contained in the applicable Schedule A in a ratio not to exceed the ratio provided in the applicable Schedule A collective bargaining agreements providing prevailing wage and fringe benefits as defined in N.J.S.A. 34:11-56.26(9) for the classifications in Union County, New Jersey. Apprentices and such other classifications as are appropriate shall be employed in a manner consistent with the provisions of the appropriate collective bargaining agreement listed in Schedule A.

SECTION 2. DEPARTMENT OF LABOR

To assist the Contractors in attaining a maximum effort on this Project, the Unions agree to work in close cooperation with, and accept monitoring by, the New Jersey State and Federal Departments of Labor to ensure that minorities, women, or economically disadvantaged are afforded opportunities to participate in apprenticeship programs which result in the placement of apprentices on this Project. To further ensure that this Contractor effort is attained, up to 50% of the apprentices placed on this Project should be first year, minority, women or economically disadvantaged apprentices. The Local Unions will cooperate with Contractor request for minority, women or economically disadvantaged referrals to meet this Contractor effort.

SECTION 3. HELMETS TO HARDHATS

The Employers and the Unions recognize a desire to facilitate the entry into the building and construction trades of veterans who are interested in careers in the building and construction industry. The Employers and Unions agree to utilize the services of the Center for Military Recruitment, Assessment and Veterans Employment (hereinafter "Center") and the Center's "Helmets to Hardhats" program to serve as a resource for preliminary orientation, assessment of construction aptitude, referral to apprenticeship programs or hiring halls, counseling and mentoring, support network, employment opportunities and other needs as identified by the parties.

The Unions and Employers agree to coordinate with the Center to create and maintain an integrated database of veterans interested in working on the Project and of apprenticeship and employment opportunities for the Project. To the extent permitted by law, the Unions will give credit to such veterans for bona fide, provable past experience.

ARTICLE 14 - SAFETY PROTECTION OF PERSON AND PROPERTY

SECTION 1. SAFETY REQUIREMENTS

Each Contractor will ensure that applicable OSHA requirements and other requirements set forth in the contract documents are at all times maintained on the Project and the employees and Unions agree to cooperate fully with these efforts. Employees must perform their work at all times in a safe manner and protect themselves and the property of the Contractor and the Owner from injury or harm. Failure to do so will be grounds for discipline, including discharge.

SECTION 2. CONTRACTOR RULES

Employees covered by this Agreement shall at all times be bound by the reasonable safety, security, and visitor rules as established by the Contractors and the GC and/or PMF for this Project. Such rules will be published and posted in conspicuous places throughout the Project.

SECTION 3. INSPECTIONS

The Contractors and GC and/or PMF retain the right to inspect incoming shipments of equipment, apparatus, machinery, and construction materials of every kind.

ARTICLE 15 - NO DISCRIMINATION

SECTION 1. COOPERATIVE EFFORTS

The Contractors and Unions agree that they will not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin or age in any manner prohibited by law or regulation. It is recognized that special procedures

54 2024.01.22 maybe established by Contractors and Local Unions and the New Jersey State Department of Labor for the training and employment of persons who have not previously qualified to be employed on construction projects of the type covered by this Agreement. The parties to this Agreement will assist in such programs and agree to use their best efforts to ensure that the goals for female and minority employment are met on this Project.

SECTION 2. LANGUAGE OF AGREEMENT

The use of the masculine or feminine gender in this Agreement shall be construed as including both genders.

ARTICLE 16 - GENERAL TERMS

SECTION 1. PROJECT RULES

The Project Management Firm and the Contractors shall establish such reasonable Project rules as are appropriate for the good order of the Project, provided they do not violate the terms of this Agreement. These rules will be explained at the pre-job conference and posted at the Project site and may be amended thereafter as necessary. Failure of an employee to observe these rules and regulations shall be grounds for discipline, including discharge. The fact that no order was posted prohibiting a certain type of misconduct shall not be a defense to an employee disciplined or discharged for such misconduct when the action taken is for cause.

SECTION 2. TOOLS OF THE TRADES

The welding/cutting torch and chain fall are tools of the trade having jurisdiction over the work performed. Employees using these tools shall perform any of the work of the trade. There shall be no restrictions on the emergency use of any tools or equipment by any qualified employee, or on the use of any tools or equipment for the performance of work within the employee's jurisdiction.

SECTION 3. SUPERVISION

Employees shall work under the supervision of the craft foreperson or general foreperson.

SECTION 4. TRAVEL ALLOWANCES

There shall be no payments for travel expenses, travel time, subsistence allowance or other such reimbursements or special pay except as expressly set forth in this Agreement and in Schedule A.

SECTION 5. FULL WORK DAY

Employees shall be at their staging area at the starting time established by the Contractor and shall be returned to their staging area by quitting time after performing their assigned functions under the supervision of the Contractor. The signatories reaffirm their policy of a fair day's work for a fair day's wage.

SECTION 6. COOPERATION

The Project Management Firm and/or General Contractor and the Unions will cooperate in seeking any New Jersey State Department of Labor approvals that may be required for implementation of any terms of this Agreement.

ARTICLE 17 - SAVINGS AND SEPARABILITY

SECTION 1. THIS AGREEMENT

In the event that the application of any provision of this Agreement is enjoined, on either an interlocutory or permanent basis, or otherwise found in violation of law, the provision involved shall be rendered, temporarily or permanently, null and void but the remainder of the Agreement shall remain in full force and effect. In such event, this Agreement shall remain in effect for contracts already bid and awarded or in construction where the Contractor voluntarily accepts this Agreement. The parties to this Agreement will enter into negotiations for a substitute provision in conformity with the law and the intent of the parties for contracts to be let in the future.

SECTION 2. THE BID SPECIFICATIONS

In the event that the General Contractor's and/or Project Management Firm's bid specifications, or other action, requiring that a successful bidder become signatory to this Agreement is enjoined, on either an interlocutory or permanent basis, or otherwise found in violation of law such requirement shall be rendered, temporarily or permanently, null and void but this Agreement shall remain in full force and effect to the extent allowed by law. In such event, this Agreement shall remain in effect for contracts already bid and awarded or in constructions where the Contractor voluntarily accepts this Agreement. The parties will enter into negotiations as to modifications to this Agreement to reflect the court action taken and the intent of the parties for contracts to be let in the future.

SECTION 3. NON-LIABILITY

In the event of an occurrence referenced in Section 1 or Section 2 of this Article, neither the Owner, the Project Management Firm and/or General Contractor, or any Contractor, or any signatory Union shall be liable, directly or indirectly, for any action taken, or not taken, to comply with any court order, injunction or determination. Project bid specifications will be issued in conformance with court orders in effect and no retroactive payments or other action will be required if the original court determination is ultimately reversed.

SECTION 4. NON-WAIVER

Nothing in this Article shall be construed as waiving the prohibitions of Article 7 as to signatory Contractors and signatory Unions.

ARTICLE 18 - FUTURE CHANGES IN SCHEDULE A AREA CONTRACTS

SECTION 1. CHANGES TO AREA CONTRACTS

A. Schedules A to this Agreement shall continue to full force and effect until the Contractor and/or Union parties to the Area Collective Bargaining Agreements, which are the basis for Schedules A, notify the General Contractor and/or Project Management Firm in writing of the mutually agreed upon changes in provisions of such agreements which are applicable to the Project, and their effective dates.

B. It is agreed that any provisions negotiated into Schedules A collective bargaining agreements will not apply to work on this Project if such provisions are less favorable to this Project than those uniformly required of contractors for construction work normally covered by those agreements; nor shall any provisions be recognized or applied on this Project if it may be construed to apply exclusively, or predominantly, to work covered by this Project Agreement.

C. Any disagreement between signatories to this Agreement over the incorporation into Schedules "A" of provisions agreed upon in the renegotiations of Area Collective Bargaining Agreements shall be resolved in accordance with the procedure set forth in Article 9 of this Agreement.

SECTION 2. LABOR DISPUTES DURING AREA CONTRACT NEGOTIATIONS

The Unions agree that there will be no strikes, work stoppages, sympathy actions, picketing, slowdowns or other disruptive activity or other violations of Article 7 affecting the

Project by any Local Union involved in the renegotiations of Area Local Collective Bargaining Agreements nor shall there by any lock-out on the Project affective a Local Union during the course of such renegotiations.

IN WITNESS WHEREOF the parties have caused this Agreement to be executed and effective as of ______, 202____.

ATTEST:

County of Union

JAMES E. PELLETTIERE, Clerk Board of County Commissioners EDWARD T. OATMAN County Manager

APPROVED AS TO FORM:

BRUCE H. BERGEN, ESQ. County Counsel

Affirmative Action Compliant

ATTEST:

Union County Building and Construction Trades Council AFL-CIO

Corporate Secretary/Notary Public

Authorized Signatory

Print Name

Print Title

58 2024.01.22 ATTEST:

(General Contractor)

Corporate Secretary/Notary Public

Authorized Signatory

Print Name

Print Title

ATTEST:

(Project Management Firm)

Corporate Secretary/Notary Public

Authorized Signatory

Print Name

Print Title

UNION AFFILIATES	<u>SIGNATURES</u>
ASBESTOS WORKER LOCAL 32	
BOILER MAKERS LOCAL 28	
BRICKLAYERS AND ALLIED CRAFTS LOCAL 4	
CARPENTERS LOCAL 254	
DOCKBUILDERS LOCAL 1556	
ELECTRICAL WORKERS LOCAL 102	
ELECTRICAL WORKERS LOCAL 164 (TELECOM)	
ELEVATOR CONSTRUCTORS LOCAL 1	
OPERATING ENGINEERS LOCAL 825	
IRONWORKERS LOCAL 11	
STEAMFITTERS LOCAL 475	
LABORERS LOCAL 3	
HEAVY CONSTRUCTION LABORERS LOCAL 472	
PAINTERS AND ALLIED TRADES, DISTRICT COUNCIL 21	
PLUMBERS LOCAL 24	
RESILIENT FLOORING LOCAL 251	
ROOFERS LOCAL 4	

SHEET METAL WORKERS LOCAL 22

SHEET METAL WORKERS LOCAL 25

SPRINKLER FITTERS LOCAL 696

TILE/MARBLE/TERRAZO WORKERS LOCAL 7

TEAMSTERS LOCAL 560

OPERATIVE PLASTERER LOCAL 29

MILLWRIGHTS LOCAL 715

PROJECT LABOR AGREEMENT

TELE-DATA ADDENDUM

The parties hereby agree that all Tele-data work and associated electrical work performed on any of the sites during construction shall be done by employees represented by the signatory unions. For the purpose of this Agreement, Tele-data work shall include, but not limited to, the following: All receiving, placement, installation, operation, testing, inspection, maintenance, repair and service of radio, television, video, data, voice, sound, emergency call, microwave and visual production and reproduction apparatus, equipment and appliances used for domestic, commercial, education and entertainment purposes; all installation and erection of equipment, apparatus or appliance, cables and/or wire, emergency power (batteries) and all directly related work which becomes an integral part of the telecommunication and/or telecommunications related systems repair and service maintenance work of telecommunications systems and devices including, but not limited to, Private Branch Exchanges (PBX-PABX), Key equipment-owned, CCTV, CATV, card access, Systems RS 232 ethernet and/or any local area network system associated with computer installation.

SIGNATORY UNIONS

BY:_____

BY:_____

PROJECT LABOR AGREEMENT

SHEET METAL ADDENDUM

(General Contractor) and (Project Management Firm) agrees that when subcontracting for prefabrication of H.V.A.C. duct and other related sheet metal, such prefabrication shall be subcontracted to fabricators who pay their employees engaged in such fabrication not less than the prevailing wage for comparable sheet metal fabrication as established under agreements between local affiliates of Sheet Metal Workers' International Association and local sheet metal fabricators.

General Contractor and Project Management Firm and the Sheet Metal Workers' International Association agree to work with fabrication shops referenced in the Addendum. This joint effort will be directed at improving fabricators' competitiveness through the application of continuous improvement principles.

(General Contractor)

Sheet Metal Workers' International Assoc. Local #25

(Project Management Firm)

Sheet Metal Workers' International Assoc. Local #22

TEAMSTERS LOCAL 560 ADDENDUM

1. Notwithstanding the provisions of Article 11, Section 2 of the Project Labor Agreement, a Contractor who becomes signatory to this Project Labor Agreement who is not already a participating and contributing employer to the pension fund(s) specified in the Exhibit A collective bargaining agreement (currently the Trucking Employees of North Jersey Pension Fund;, hereinafter the "TENJ Pension Fund," and the Teamsters Local No. 408 Pension Fund), shall make direct all contributions required by the Exhibit A collective bargaining agreement exclusively to the Trucking Employees of North Jersey Annuity Fund, a defined contribution plan. Any such Contractor shall not participate in nor contribute to the TENJ or Local 408 Pension Funds, and shall have no obligation to the TENJ or Local 408 Pension Funds.

2. Any Contractor who is already participating in and contributing to the TENJ or Local 408 Pension Fund, separately from this Project Labor Agreement, shall pay contributions as provided for in Article 11, Section 2 of this Project Labor Agreement.

Agreed to and accepted this _____ day

of _____, 202__:

For the General Contractor:

For Teamsters Local 560

PROJECT LABOR AGREEMENT

LETTER OF ASSENT

Re: Project Labor Agreement The Union County Building & Trades Council, AFL-CIO and

dated ______ (the "Agreement')

The undersigned, as a General Contractor and/or Project Management Firm, Contractor(s) or Subcontractor(s) on a Contract which is part of the Construction of the Project in ______, New Jersey (the "Project"), for and in consideration of the award of a Contract to perform work on said Project, and in further consideration of the mutual promises made in the Project Labor Agreement, a copy of which was received and is acknowledged, hereby:

(1) On behalf of itself and all its employees, accepts and agrees to be bound by the terms and conditions of the Project Labor Agreement, together with any and all amendments and supplements now existing or which are later made thereto, and understands that any act of non-compliance with all such terms and conditions will subject the non-complying Contractor or employee(s) to being prohibited from the Project Site until full compliance is obtained.

(2) Certifies that it has no commitments or agreements that would preclude its full compliance with the terms and conditions of said Projects Labor Agreement.

(3) Agrees to secure from any Contractor(s) (as defined in said Project Labor Agreement) which is or becomes a Subcontractor(s) (of any tier), a duly executed Letter of Assent in form identical to this document prior to commencement of any work.

Company Name	
By:	_ Contract Number
Title:	General Contractor
Date:	_

cc: (Unions employed by Contractor)

SCHEDULE A

SCHEDULE B

EXHIBIT A

53. 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.

54. AMERICAN GOODS AND PRODUCTS WHERE POSSIBLE

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.

55. 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.

56. 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.

57. NEW JERSEY SALES AND USE TAX REQUIREMENTS,

Contractors are required to comply with the following:

New Jersey Sales and Use Tax Requirements: All contractors with subcontractors, or any of their affiliates, who enter into contracts for the provision of goods or services with or for New Jersey local government entities, are required to collect and remit to the New Jersey Director of Taxation in the Department of the Treasury the use tax due on all of their

sales of tangible personal property delivered into the State of New Jersey pursuant to the "Sales and Use Tax Act," (N.J.S.A. 54:32B-1 et seq.), regardless of whether the tangible personal property is intended for a contract with the contracting agency. This tax shall be remitted for the term of the Contract.

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

58. 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, 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 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.

59. 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,</u> <u>WOMEN'S BUSINESS ENTERPRISES, AND LABOR SURPLUS AREA</u> <u>FIRMS</u>

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 EPAdesignated items, is available at EPA's Comprehensive Procurement Guidelines web site, https://www.epa.gov/smm/comprehensiveprocurement-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.

6. 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

- 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. § 180.940) or disgualified (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 (i) facilities, physical security surveillance of critical infrastructure, and security purposes, video surveillance other national and telecommunications equipment produced Hytera bv 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 affected 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.

Bidders name _____

EDWARD T. OATMAN COUNTY MANAGER

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 **BOTH** of the following documents:

- Bidder Signature Page
- Bidder Disclosure Statement (Fill out 2 pages completely)
- SUBCONTRACTOR IDENTIFICATION. Pursuant to N.J.S.A. 40A:11-16, which includes **<u>BOTH</u>** of the following documents:
- Subcontractor Identification Statement: List of Subcontractors (only for certain types of work)
- Subcontractor Identification Certification
- Acknowledgement of Addendum form: (This form is to be used only when an addendum has been added to the specifications).
- A copy of the State of New Jersey Department of the Treasury, Division of Revenue, Business Registration Certificate ("BRC") should be included with the bids as it must be received by the County prior to the award of the contract. The BRC provided <u>must show</u> that the Bidder was registered at the time of receipt of bids or the bid will be rejected.

Bidders name

A copy of the State of New Jersey Department of the Treasury, Division of Revenue, Business Registration Certificate ("BRC") of all named or listed subcontractors (List of Subcontractors) in a Construction bid should be included with the bid as the BRC(s) must be received by the County prior to the award of the contract. Each subcontractor's certificate provided must show that the subcontractor was registered at the time of the receipt of bids or the bid will be rejected. Affirmative Action Requirement Experience Statement Certificate of Bidder showing ability to perform Contract __ Non-Collusion Affidavit – Fill out completely and notarize Certificates from New Jersey Department of Labor and Workforce and Workforce Development - Public Works Contractor Registration Act. (Only for 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 ____ Acknowledgement of Project Labor Agreement (PLA) Time of Completion Disclosure of Investment Activities in Iran ---- Disclosure of non-involvement activities in Russia or Belarus 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 ucbids@ucnj.org.

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

Asbestos Abatement and Fire Sprinkler Installation within the New Annex Building, City of Elizabeth, County of Union, New Jersey, BA#54-2024; UC Eng Project #2020-005

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.

LUMP SUM BID:

Written

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

Five-Hundred Fifty Thousand

Written

TOTAL LUMP SUM PLUS BID CONTINGENCY AMOUNT:

Written

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

Figures

Figures

550,000.00 Figures

CONSENT OF SURETY TO ACCOMPANY PROPOSAL (BID)

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

NAME	OF	INSURAN	CE C	OMPA	٨NY
------	----	---------	------	------	-----

NOTE: Expiration date Needed if Annual Surety

ORIGINAL SIGNATURE

ATTORNEY-IN-FACT FOR INSURANCE CO.

ADDRESS:

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

Bidders name _____

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>.
- 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</u> <u>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 own signature.

NAME OF BIDDER

ADDRESS OF BIDDER

ORIGINAL SIGNATURE CORPORATE SECRETARY

PRINT NAME AND TITLE CORPORATE SECRETARY TEL: _____ FAX: _____ E-Mail: _____

BY:

ORIGINAL SIGNATURE

Corporate Seal

PRINT OR TYPE NAME AND TITLE

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

Bid	ders	name	

STATEMENT OF OWNERSHIP DISCLOSURE

<u>N.J.S.A</u>. 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:
<u>Part I</u> Check the box that represents the type of business organization:
Sole Proprietorship (skip Parts II and III, execute certification in Part IV)
Non-Profit Corporation (skip Parts II and III, execute certification in Part IV)
For-Profit Corporation (any type)
Partnership Limited Partnership Limited Liability Partnership (LLP)
Other (be specific):

<u>Part II</u>

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

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

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

Name of Individual or Business Entity	Address

$\underline{Part~III}$ DISCLOSURE OF 10% OR GREATER OWNERSHIP IN THE STOCKHOLDERS, PARTNERS OR LLC MEMBERS LISTED IN PART II

Bidders name

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

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

Please list the names and addresses of each stockholder, partner or member owning a 10 percent or greater interest in any corresponding corporation, partnership and/or limited liability company (LLC) listed in Part II **other than for any publicly traded parent entities referenced above**. The disclosure shall be continued until names and addresses of every noncorporate stockholder, and individual partner, and member exceeding the 10 percent ownership criteria established pursuant to <u>N.J.S.A.</u> 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).

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

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

Company Name:	
Address:	
Telephone:	Subcontract Amount: \$
License No	_
Company Name:	
Address:	
Telephone:	
Specific Scope of Work Subcontracted:	
License No	_
Company Name:	
Address:	
Telephone:	Subcontract Amount: \$
Specific Scope of Work Subcontracted:	

License No.

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

(Continued on following page)

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

By:

ORIGINAL SIGNATURE ONLY

PRINT NAME AND TITLE

Bidders name _____

ACKNOWLEDGMENT OF ADDENDUM

COUNTY OF UNION

(Name of Construction /Public Works Project)

(Project or Bid Number)

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

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

ACKNOWLEDGMENT BY BIDDER:

NAME OF BIDDER:

ORIGINAL SIGNATURE:

PRINTED NAME AND TITLE:

DATE: _____

Bidders name

CONTRACTOR BUSINESS REGISTRATION CERTIFICATE

Pursuant to <u>N.J.S.A.</u> 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, (<u>N.J.S.A.</u> 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 <u>N.J.S.A.</u> 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.

BUSI FOR STATE AGE	NCY AND CASINO SERVICE CONTRACTORS		STATE OF NEV BUSINESS REGISTRAT		CATE
TAXPAYER NAME: TAX REGISTRATION TEST ACCOUNT TAXPAYER IDENTIFICATION#: \$70-037-352/500	TRACE NAME: CLIENT REDISTRATION SEQUENCE NUMBER: 0107310	Taxpayer Nor Trade Name: Address:		r	
ADDRESS: M7 ROEBLING AVE TRENTON NJ 08011 EFFECTIVE DATE:	ISSUANCE DATE:	Certificate Nu Date of Jasuan			(
01/01/01 FORM-BRC(0# 01) This Cannot	Act Diverse He is NOT assignable or transformed in most be compositively a	For Office Liss 200410141128	•		

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 <u>non-responsive and award the contract to the next lowest responsible bidder</u>.

NAME OF BIDDER

ORIGINAL SIGNATURE

PRINT OR TYPE NAME AND TITLE

DATE THIS FORM IS COMPLETED

EXPERIENCE STATEMENT

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

Witness	NAME OF BIDDER	
Date		
	ADDRESS	
	By: 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 / _)
COUNTY OF	Specify, if Other)) SS:
I,		, of the (City, Town, Borough, etc.) of
State of	, of full age, being duly	/ sworn according to law on my oath depose and say that:
l am	of the firm of	, the Bidder making
the proposal for the above na	med Project ("Contractor'), and	that I executed said proposal with full authority to do so; and
that said Contractor, pursuant	t to <u>N.J.S.A.</u> 40A:11-20, certifies	s that it owns, leases or controls all the necessary equipment
required by the Plans, Specifi	cations and Advertisements und	der this Bids are asked for.

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

(Also type or print name of affiant under signature)

Ву:_____

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

, in the County of, and the State of ig to law, on my oath depose and say that: I am, the bidder making the proposal for the above above named project, and that I executed the said proposal r indirectly, entered into any agreement, participation in any ompetitive bidding in connection with the above named d in this Affidavit are true and correct, and made with full es upon the truth of the statements contained in said warding the contract for the said project. mployed or retained to solicit or secure such contract upon e, brokerage or contingent fee, except bona fide employees tained by (N.J.S.A. 52:34-15).
, the bidder making the proposal for the above above named project, and that I executed the said proposal r indirectly, entered into any agreement, participation in any ompetitive bidding in connection with the above named d in this Affidavit are true and correct, and made with full es upon the truth of the statements contained in said warding the contract for the said project. mployed or retained to solicit or secure such contract upon e, brokerage or contingent fee, except bona fide employees
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e, brokerage or contingent fee, except bona fide employees
NAME OF BIDDER
ORIGINAL SIGNATURE ONLY
TE: The person who signed the bidder signature page the bidder should sign this form also.
AND COMPLETELY FILL OUT THIS AFFIDAVIT OF NON ED.
t ⁄

Bidders name

Contractor Registration Advisement

For Public Works Projects

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

It is important to note that the term "contractor," is defined in the, Act as, "a person, partnership, association, joint stock company, trust, corporation or other legal business entity or successor thereof who enters into a contract which is subject to the provision of the "New Jersey Prevailing Wage Act," P.L. 1963, c.150 (C.34:11-56.25, et seq.) for the construction, reconstruction, demolition, alteration, repair or maintenance of a public building regularly open to and used by the general public or a public institution, and includes any subcontractor or lower tier subcontractor as defined herein: except that, for the purposes of the act, no pumping station, treatment plant or other facility associated with utility and environmental construction, reconstruction, demolition, alteration, repair or maintenance shall be regarded as a public building regularly open to and used by the general public or a public 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 present firm trade name?
How many years of experience in construction work has your organization had (a) as a general contractor? And/o (b) As a subcontractor?
Contracts on hand: (Attach a list or table showing gross amounts of each Contract and the appropriate dates of completion)
General character of work performed by you
General character of work performed by you Have you ever failed to complete any work awarded to you?

STATEMENT OF BIDDER'S QUALIFICATIONS - (continued)

- 11. Has any officer or partner of your organization ever failed to complete a construction contract handled in its own name? If so, state name of individual, name of owner, location and type of project, and reason for the failure to complete._____
- 12. List your major equipment available for this Contract.
- 13. Experience in the construction work similar in importance to this Project.
- 14. Have you had any material adverse changes from the trades as listed in NJ Notice of Classification within last five (5) years? ______. If so, list prior classification.
- 15. Background and experience of the principal members of your organization, including the officers.

Individual's Name	Present Position or Office	Yrs. of Construction Experience	Magnitude & Type of Work	In What Capacity

16. Bank Reference. (Name, Address, Phone, Representative) _____

- 17. Will you, upon request, fill out a detailed financial Statement?
- 18. The undersigned hereby authorizes and requests any person, firm or corporation to furnish any information requested by the proper agency in verification of the responses comprising this Statement of Bidder's Qualifications.
- 19. Bidder's telephone number, fax number and e-mail address (if applicable).

Phone			
Fax			
E-mail			
Mobile			
Dated at	this	day of	, 20
BIDDER (Signature)			
BIDDER (Print Name)			
Subscribed and sworn to before me this day of	, 20		
(Seal) Notary Public of New Jersey/ Specify Other State My Commission Expires	, 20		

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

CONTRACTOR PERFORMANCE RECORD

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

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

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

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

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 _____ day of _____, 20___.

(Seal) Notary Public of New Jersey/ Specify Other State My Commission Expires_____, 20___.

AFFIDAVIT REGARDING LIST OF DEBARRED, SUSPENDED OR DISQUALIFIED BIDDERS

STATE OF NEW JERSEY /)	
STATE OF NEW JERSEY /	Specify, if Other) SS:	
		/	
I, State of		, of the (City, Town, Boroug	h, etc.) of
State of	, of full age, being duly s	sworn according to law on my	oath depose and say that:
I am	of the firm of		, the Bidder making
the Proposal for the above named not at the time of the making this b Debarred, Suspended or Disqualit	pid included on the New Jerse	ey State Treasurer's or the Fe	deral Government's List of
		Name of Contractor	
	By: (Signature	of Authorized Representative)
Subscribed and sworn to before m this day of			
(Seal) Notary Public of New Jerse Specify Other State My Commission Expires	-		

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

PRIOR NEGATIVE EXPERIENCE QUESTIONNAIRE

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

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

_____yes _____no If yes, please provide full, detailed explanation.

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

yes	no	If yes, please provide full, detailed explanation.

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

yes	no	If yes, please provide full, detailed explanation.
Within the past top (10) years have you be	on debarred or suspended from contracting with any

4. Within the past ten (10) years, have you been debarred or suspended from contracting with any of the agencies or department of the executive branch of the State of New Jersey at the time of the contract award, where the action was based on failure to perform a contact for 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 ______day of ______ ____, 20___.

Name of Contractor

By_

(Signature of Authorized Representative)

Subscribed and sworn to before me This _____ day of _____, 20__.

(Seal) Notary Public of New Jersey/ Specify Other State My Commission Expires_____, 20__.

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

TO BE COMPLETED ONLY WHEN FINAL PAYMENT IS REQUESTED

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

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

PROJECT:

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

COUNTY OF UNION

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

CONTRACTOR: ADDRESS:

/KE33.

BY:

ORIGINAL SIGNATURE ONLY

STATE OF NEW JERSEY COUNTY OF _____

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

Subscribed and sworn before me this _____day of _____, 20____.

Notary Public:

My Commission Expires: _____

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

y Prevailing wage Act^{**} N.J.S.A. 34:11-56 et al.

CONTRACT:

at he/she has con

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

TOTAL AMOUNT OF UNCOMPLETED CONTRACTS \$_____

Sworn and Subscribed to Before me

This _____day of _____20___

(Signature)

BIDDER:

Notary Public

(Print Name)

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

CERTIFICATE OF INSURANCE STATEMENT

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

BIDDER (Signature)

BIDDER (Print Name)

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

Bidders name

COLLECTION OF USE TAX ON SALES TO LOCAL GOVERNMENTS STATEMENT

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

BIDDER (Signature)

BIDDER (Print Name)

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

ACKNOWLEDGEMENT OF PROJECT LABOR AGREEMENT (Projects of \$5 Million of more irrespective of Phasing)

Contractor	, hereby acknowledges that the
within Project, upon which the undersigned h	as submitted a Bid Proposal, requires the
execution of a Project Labor Agreement and	the utilization of union employees. The
undersigned agrees to execute the PLA and	comply with all terms and conditions of
same in the performance of the Work.	

Attest:

Contractor:_____

Ву:_____

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 **300 calendar days** from the date of the notice to proceed.

I, NAME (Print or type)	_of COMPANY
Agree to complete work in the time frame speci	fiedSIGNATURE
SITE VISIT – GENERAL CONTRACTOR	
I,ofof	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:

PART 1 CERTIFICATION

VENDOR/BIDDER MUST COMPLETE PART 1 BY CHECKING ONE OF THE BOXES FAILURE TO CHECK ONE OF THE BOXES WILL RENDER THE PROPOSAL NON-RESPONSIVE

Pursuant to Public Law 2012, c. 25, any person or entity that submits a bid or proposal or otherwise proposes to enter into or renew a contract must complete the certification below to attest, under penalty of perjury, that neither the person nor entity, nor any of its parents, subsidiaries, or affiliates, is identified on the State of New Jersey, Department of the Treasury's Chapter 25 list as a person or entity engaged in investment activities in Iran. The Chapter 25 list is found on the Department's website at http://www.nj.gov/treasury/purchase/pdf/Chapter25List.pdf. Vendors/Bidders **must** review this list prior to completing the below certification. **Failure to complete the certification will render a Vendor's/Bidder's proposal non-responsive.** If the Director of the Division of Purchase and Property finds a person or entity to be in violation of the law, s/he shall take action as may be appropriate and provided by law, rule or contract, including but not limited to, imposing sanctions, seeking compliance, recovering damages, declaring the party in default and seeking debarment or suspension of the party.

CHECK THE APPROPRIATE BOX

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

OR

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

<u>PART 2</u>

PLEASE PROVIDE ADDITIONAL INFORMATION RELATED TO INVESTMENT ACTIVITIES IN IRAN If you checked Box "B" above, provide a detailed, accurate and precise description of the activities of the Vendor/Bidder, or one of its parents, subsidiaries or affiliates, engaged in investment activities in Iran by completing the information below.

ENTITY NAME:	
RELATIONSHIP TO VENDOR/BIDDER:	
DESCRIPTION OF ACTIVITIES:	
DURATION OF ENGAGEMENT:	
ANTICIPATED CESSATION DATE:	
VENDOR/BIDDER CONTACT NAME:	
VENDOR/BIDDER CONTACT PHONE#:	
Attach Additional Sheets If Necessary	

CERTIFICATION

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

Signature

Print Name and Title

Date

Revised 10/19/17



Bidders name

CERTIFICATION OF NON-INVOLVEMENT IN PROHIBITED ACTIVITIES IN RUSSIA OR BELARUS

Pursuant to N.J.S.A. 52:32-60.1, et seq. (L. 2022, c. 3) any person or entity (hereinafter "Vendori") that seeks to enter into or renew a contract with a State agency for the provision of goods or services, or the purchase of bonds or other obligations, must complete the certification below indicating whether or not the Vendor is identified on the Office of Foreign Assets Control (OFAC) Specially Designated Nationals and Blocked Persons list, available here: https://sanctionssearch.ofac.treas.gov/. If the Department of the Treasury finds that a Vendor has made a certification in violation of the law, it shall take any action as may be appropriate and provided by law, rule or contract, including but not limited to, imposing sanctions, seeking compliance, recovering damages, declaring the party in default and seeking debarment or suspension of the party.

I, the undersigned, certify that I have read the definition of "Vendor" below, and have reviewed the Office of Foreign Assets Control (OFAC) Specially Designated Nationals and Blocked Persons list, and having done so certify: (Check the Appropriate Box)

	That the Vendor is not identified on the OFAC Specially Designated Nationals and Blocked Persons list on account of a		
	A. related to Russia		nd/or Belarus.
		<u>OR</u>	
	<u>B.</u>	<u>That I am unable to certify as to "A" above, because the Vendor is</u> <u>Blocked Persons list on account of activit</u>	
		<u>OR</u>	
	<u>C.</u>	<u>That I am unable to certify as to "A" above, because the Vendor is</u> <u>Blocked Persons list.</u> However, the Vendor is engaged in activity r regulation, license or exemption. A detailed description of how <u>consistent with federal la</u>	elated to Russia and/or Belarus consistent with federal law, v the Vendor's activity related to Russia and/or Belarus is
(Attach Additional Sheets If Necessary.)			f Necessary.)
	Signature of Vendor's Authorized Representative		Date
	<u>Print</u>	Name and Title of Vendor's Authorized Representative	Vendor's FEIN
	Vendor's Name		Vendor's Phone Number
		Vendor's Address (Street Address)	Vendor's Fax Number
		Vendor's Address (City/State/Zip Code)	Vendor's Email Address

i Vendor means: (1) A natural person, corporation, company, limited partnership, limited liability partnership, limited liability company, business association, sole proprietorship, joint venture, partnership, society, trust, or any other nongovernmental entity, organization, or group; (2) Any governmental entity or instrumentality of a government, including a multilateral development institution, as defined in Section 1701(c)(3) of the International Financial Institutions Act, 22 U.S.C. 262r(c)(3); or (3) Any parent, successor, subunit, direct or indirect subsidiary, or any entity under common ownership or control with, any entity described in paragraph (1) or (2).

Diduers name	Bidders	name
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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		
Physical Address of		
Individual or		
Organization		
Unique Entity ID		
(if applicable)		
CAGE/NCAGE Code		
(if applicable)		
Check the box that represents the type of business organization:		

□Sole Proprietorship (skip Parts III and IV) □Non-Profit Corporation (skip Parts III and IV)

□For-Profit Corporation (any type) □Limited Liability Company (LLC) □Partnership

Limited Partnership Limited Liability Partnership (LLP)

Other (be specific): _____

PART II – CERTIFICATION OF NON-DEBARMENT: Individual or Organization

I hereby certify that the **individual or organization listed above in Part I** is not debarred by the federal government from contracting with a federal agency. I further acknowledge: that I am authorized to execute this certification on behalf of the above-named organization; that the 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 date of contract award by the County of Union to notify the County of Union in writing of any changes to the information contained herein; that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, 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 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 III – CERTIFICATION OF NON-DEBARMENT: Individual or Entity Owning Greater than 50 Percent of
Organization

Section A (Check the Box that a	pplies)		
	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

I hereby certify that no individual or organization that is debarred by the federal government from contracting with a federal agency owns greater than 50 percent of the **Organization listed above in Part I** or, if applicable, owns greater than 50 percent of a parent entity of **<name of organization>**

________. I further acknowledge: that I am authorized to execute this certification on behalf of the above-named organization; that the 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 date of contract award by the County of Union to notify the County of Union in writing of any changes to the information contained herein; that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, 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 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					
Section A					
 Below is the name and address of the corporation(s) in which the Organization listed in Part I owns more than 50 percent of voting stock, or of the partnership(s) in which the Organization listed in Part I owns more than 50 percent interest therein, or of the limited liability company or companies in which the Organization listed above in Part I owns more than 50 percent interest therein, as the case may be. 					
Name of Business Entity		Physical Address			
Add additional sheets if necessary					
OR					
•	The Organization listed above in Part I does not own greater than 50 percent of the voting stock in any corporation and does not own greater than 50 percent interest in any partnership or any limited liability company.				

	Bidders name					
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		Physical Address				
Add additional She	eets if necessary					
OR						
D	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						
I hereby certify that the Organization listed above in Part I does not own greater than 50 percent of any entity that that is debarred by the federal government from contracting with a federal agency and, if applicable, does not own greater than 50 percent of any entity that in turns owns greater than 50 percent of any entity debarred by the federal government from contracting with a federal agency. I further acknowledge: that I am authorized to execute this certification on behalf of the above-named organization; that the 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 date of contract award by the County of Union to notify the County of Union in writing of any changes to the information contained herein; that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, 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 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:			

Bidders name

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 paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an 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 contract, the making 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 in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form - LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, 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 31, U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). 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.

The Contractor, [Company]_____, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. § 3801 et seq., apply to this certification and disclosure, if any.

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.

Organization: _____

Street address: _____

City, State, Zip:

CERTIFIED BY: (type or print)

TITLE:

(signature)

(date)

Bidders name 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 **1. Type of Federal Action:** 2. Status of Federal Action: 3. Report Type: a. bid/offer/application a. contract a. initial filing b. material change b. grant b. Initial award c. cooperative agreement c. Post-award For Material Change Only: d. loan e. loan guarantee year f. loan insurance quarter date of last report 4. Name and Address of Reporting Entity: 5. If Reporting Entity in NO.4 is a Subawardee, enter Name Subawardee and Address of Prim: Prime Tier _____ ,if known:

Congressional District, *if known*:

9. Award Amount, *if known*:

Print Name: _____

\$

Title:

Date:

7. Federal Program Name/Description:

CDFA NUMBER, if applicable

b. Individuals Performing Services (including address if

different from No. 10a) (las name, first name, MI):

Telephone NO.: _____

Federal Use Only:

each such failure.

Congressional District, *if known:*

6. Federal Department/Agency:

8. Federal Action Number, *if known*:

10. a. Name and address of Lobbying Registrant *(if individual, last 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

> Authorized for Local Reproduction Standard Form LLL (Rev. 7-97)

Signature:

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 1st 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.

STANDARD SPECIFICATIONS

The Standard Specifications for Road and Bridge Construction of New Jersey Department of Transportation, 2019 Edition; is added to and/or amended elsewhere herein by the Notice to Contractors (Advertisement), Proposal, Information for Bidders, General Conditions, Supplemental Conditions, Project Plans, and Supplementary Specifications; shall, insofar as technical requirements are involved, govern in the execution of this project.

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

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

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

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

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

AIA® Document A101® – 2017

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

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

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

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

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

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

The parties should complete A101°–2017, Exhibit A, Insurance and Bonds, contemporaneously with this Agreement.

AIA Document A201°–2017, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

1

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

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.)

(Check one of the following boxes

The date of this Agreement.

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

Established as follows:

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

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

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

§ 3.3 Substantial Completion

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

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

□ Not later than

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

2

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By the following date:

§ 3.3.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work are to be completed prior to Substantial Completion of the entire Work, the Contractor shall achieve Substantial Completion of such portions by the following dates:

Portion of Work

Substantial Completion Date

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

ARTICLE 4 CONTRACT SUM

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

§ 4.2 Alternates

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

ltem

Price

§ 4.2.2 Subject to the conditions noted below, the following alternates may be accepted by the Owner following execution of this Agreement. Upon acceptance, the Owner shall issue a Modification to this Agreement. (Insert below each alternate and the conditions that must be met for the Owner to accept the alternate.)

Item

Price

Conditions for Acceptance

§ 4.3 Allowances, if any, included in the Contract Sum: (Identify each allowance.)

ltem

Price

§ 4.4 Unit prices, if any:

Item

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

Units and Limitations

Price per Unit (\$0.00)

3

§ 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.)

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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[™]-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:

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

§ 5.1.7 Retainage

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

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

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§ 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 $3_{7}3.2$, 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

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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.)

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§ 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.

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§ 8.5 Insurance and Bonds

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

§ 8.5.2 The Contractor shall provide bonds as set forth in AIA Document A101TM_2017 Exhibit A, and elsewhere in the Contract Documents.

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

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

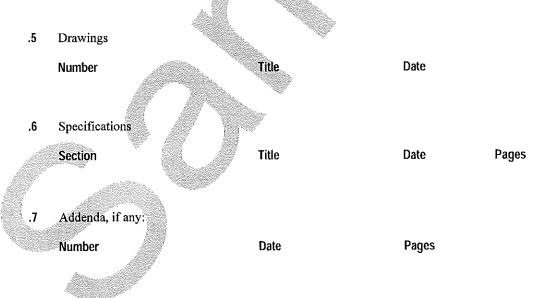
§ 8.7 Other provisions:

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 This Agreement is comprised of the following documents:

- .1 AIA Document A101[™]-2017, Standard Form of Agreement Between Owner and Contractor
- .2 AIA Document A101TM-2017, Exhibit A, Insurance and Bonds
- .3 AIA Document A201TM–2017, General Conditions of the Contract for Construction
- .4 AIA Document E203[™]-2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:

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



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.)

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

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	The Sustainability	y Plan:		
	Title	Date	Pages	
	Supplementary and other Conditions of the Contract:			
	Document	Title	Date	Pages
	Document A201 TM , sample forms, the Co requirements, and or proposals, are not p documents should be	onal documents that are inter 2017 provides that the advert ontractor's bid or proposal, p ther information furnished by art of the Contract Documen e listed here only if intended t the day and year first written	isement or invitation to b portions of Addenda relat the Owner in anticipation is unless enumerated in the o be part of the Contract above.	id, Instructions to Bidders, ing to bidding or proposal n of receiving bids or iis Agreement. Any such
OWNER (Si	gnature)	C(ONTRACTOR (Signature)	
(Printed na	me and title)		rinted name and title)	

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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) 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.

THE CONTRACTOR: (Name, legal status and address)

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[™]–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

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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.)

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- § 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.
- S 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.

§ A.2.5 Other Optional Insurance.

The Owner shall purchase and maintain the insurance selected 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.)

S 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.)

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§ 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 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.)

§ A.3.2.2 Commercial General Liability

§ A.3.2.2.1 Commercial General Liability insurance for the Project written on an occurrence form with policy limits of not less than _____(\$___) each occurrence, _____(\$___) general aggregate, and _____(\$___) aggregate for products-completed operations 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
- .5 the Contractor's indemnity obligations under Section 3.18 of the General Conditions.

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- .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.3.2.5 Workers' Compensation at statutory limits.

§ A.3.2.6 Employers' Liability with policy limits not less than _____ (\$__) each accident, _____ (\$__) each employee, and _____ (\$__) policy limit.

§ A.3.2.7 Jones Act, and the Longshore & Harbor Workers' Compensation Act, as required, if the Work involves hazards arising from work on or near navigable waterways, including vessels and docks

§ A.3.2.8 If the Contractor is required to furnish professional services as part of the Work, the Contractor shall procure Professional Liability insurance covering performance of the professional services, with policy limits of not less than _____(\$__) per claim and _____(\$__) in the aggregate.

§ A.3.2.9 If the Work involves the transport, dissemination, use, or release of pollutants, the Contractor shall procure Pollution Liability insurance, with policy limits of not less than _____(\$___) per claim and _____(\$___) in the aggregate.

§ A.3.2.10 Coverage under Sections A.3.2.8 and A.3.2.9 may be procured through a Combined Professional Liability and Pollution Liability insurance policy, with combined policy limits of not less than _____(\$___) per claim and ______(\$___) in the aggregate.

§ 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.

§ A.3.2.12 Insurance for the use or operation of manned or unmanned aircraft, if the Work requires such activities, with policy limits of not less than _____ ($\$) per claim and _____ ($\$) in the aggregate.

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§ 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 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.)

S 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.)

- § A.3.3.2.2 Railroad Protective Liability Insurance, with policy limits of not less than _____(\$___) per claim and _____(\$___) in the aggregate, for Work within fifty (50) feet of railroad property.
- § A.3.3.2.3 Asbestos Abatement Liability Insurance, with policy limits of not less than _____(\$___) per claim and _____(\$___) in the aggregate, for liability arising from the encapsulation, removal, handling, storage, transportation, and disposal of asbestos-containing materials.
- **§ A.3.3.2.4** Insurance for physical damage to property while it is in storage and in transit to the construction site on an "all-risks" completed value form.
- S A.3.3.2.5 Property insurance on an "all-risks" completed value form, covering property owned by the Contractor and used on the Project, including scaffolding and other equipment.

§ A.3.3.2.6 Other Insurance

(List below any other insurance coverage to be provided by the Contractor and any applicable limits.)

Coverage

Limits

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§ 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 Payment Bond Performance Bond Penal Sum (\$0.00)

Payment and Performance Bonds shall be AIA Document A312TM, Payment Bond and Performance Bond, or contain provisions identical to AIA Document A312TM, 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:



for the following PROJECT: (Name and location or address)

THE OWNER: (Name, legal status and address)

THE ARCHITECT: (Name, legal status and address)

TABLE OF ARTICLES

- 1 GENERAL PROVISIONS
- 2 OWNER
- 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
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- 11 INSURANCE AND BONDS
- 12 UNCOVERING AND CORRECTION OF WORK
- 13 MISCELLANEOUS PROVISIONS
- 14 TERMINATION OR SUSPENSION OF THE CONTRACT
- 15 CLAIMS AND DISPUTES

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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[™]_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 $E203^{TM}$ —2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document $G202^{TM}$ —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 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 be solely responsible for the jobsite safety of 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.

§ 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
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.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.

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§ 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 certifications, and approval 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

§ 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

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time and in the form specified by the Architect.

§ 3.13 Use of Site

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

§ 3.14 Cutting and Patching

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

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

§ 3.15 Cleaning Up

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

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

§ 3.16 Access to Work

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

§ 3.17 Royalties, Patents and Copyrights

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

§ 3.18 Indemnification

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§ 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

AIA Document A201^e - 2017. Copyright © 1911, 1915, 1918, 1925, 1937, 1951, 1958, 1961, 1963, 1966, 1970, 1976, 1987, 1997, 2007 and 2017 by The American Institute of Architects. All rights reserved. The "American Institute of Architects," "AIA," the AIA Logo, "A201," and "AIA Contract Documents" are registered trademarks and may not be used without permission. To report copyright violations, e-mail copyright@aia.org. 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 to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

§ 5.4 Contingent Assignment of Subcontracts

§ 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

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

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

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS § 6.1 Owner's Right to Perform Construction and to Award Separate Contracts

§ 6.1.1 The term "Separate Contractor(s)" shall mean other contractors retained by the Owner under separate agreements. The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

§ 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each Separate

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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 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 constructor 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:

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

§ 7.3 Construction Change Directives

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

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 As provided in Section 7.3.4.

§ 7.3.4 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.4 shall be limited to the following:

- .1 Costs of labor, including applicable payroll taxes, fringe benefits required by agreement or custom, workers' compensation insurance, and other employee costs approved by the Architect;
- .2 Costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed;
- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes, directly related to the change, and
- .5 Costs of supervision and field office personnel directly attributable to the change.

§ 7.3.5 If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.

§ 7.3.6 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

§ 7.3.7 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

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

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The

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

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

§ 7.4 Minor Changes in the Work

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

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§ 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 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

AIA Document A201° – 2017. Copyright © 1911, 1915, 1918, 1925, 1937, 1951, 1958, 1961, 1963, 1966, 1970, 1976, 1987, 1997, 2007 and 2017 by The American Institute of Architects. All rights reserved. The "American Institute of Architects," "AIA," the AIA Logo, "A201," and "AIA Contract Documents" are registered trademarks and may not be used without permission. To report copyright violations, e-mail copyright@ala.org. foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion, and to specific qualifications expressed by the Architect. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 Decisions to Withhold Certification

§ 9.5.1 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims, unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a Separate Contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 repeated failure to carry out the Work in accordance with the Contract Documents.

§ 9.5.2 When either party disputes the Architect's decision regarding a Certificate for Payment under Section 9.5.1, in whole or in part, that party may submit a Claim in accordance with Article 15.

§ 9.5.3 When the reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.5.4 If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or supplier to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Contractor shall reflect such payment on its next Application for Payment.

§ 9.6 Progress Payments

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

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

§ 9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors and suppliers

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

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

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

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

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

§ 9.7 Failure of Payment

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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.

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§ 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

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§ 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

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- .1 liens, Claims, security interests, or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents;
- .3 terms of special warranties required by the Contract Documents; or
- .4 audits performed by the Owner, if permitted by the Contract Documents, after final payment.

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

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 Safety Precautions and Programs

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

§ 10.2 Safety of Persons and Property

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

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

§ 10.2.2 The Contractor shall comply with, and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities, bearing on safety of persons or property or their protection from damage, injury, or loss.

§ 10.2.3 The Contractor shall implement, erect, and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards.

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

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3. The Contractor may make a Claim for the cost to remedy the damage or loss to the extent such damage or loss is attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

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

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

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§ 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

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

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

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

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

§ 11.2 Owner's Insurance

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

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

§ 11.2.3 Notice of Cancellation or Expiration of Owner's Required Property Insurance. Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any property insurance required by the Contract Documents, the Owner shall provide notice to the Contractor of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice from the Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and 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

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§ 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.

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§ 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 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.

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§ 13.3 Rights and Remedies

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

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

§ 13.4 Tests and Inspections

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

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

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

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

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

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

§ 13.5 Interest

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

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Termination by the Contractor

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

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

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor, a Subcontractor, a 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.

§ 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

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

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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

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§ 15.4.4 Consolidation or Joinder

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

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

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

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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:

$\mathbf{W} = $ Wage Rate per Hour	$\mathbf{B} = Fringe Benefit Rate per Hour^*$	$\mathbf{T} = \text{Total Rate per Hour}$

* 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.

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 *www.nj.gov/labor* (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.

County - UNION

Craft: Air Conditioning & Refrigeration - Service and Repair

PREVAILING WAGE RATE

	03/01/24	
Journeyman (Mechanic)	W45.23 B30.03 T75.26	
	170.20	

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.

County - UNION

Craft: Boilermaker

PREVAILING WAGE RATE

	01/12/24
Foreman	W54.11
	B47.08
	T101.19
General Foreman	W56.11
	B48.14
	T104.25
Journeyman	W49.11
	B45.31
	T94.42

Craft: Boilermaker

APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES										
1000 Hours	65%	70%	75%	80%	85%	90%	95%					
Benefit =	38.33	39.30	40.32	41.31	42.32	43.32	44.30					

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 7? 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.

County - UNION

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.

County - UNION

Craft: Boilermaker - Minor Repairs

PREVAILING WAGE RATE

	01/12/24
Foreman	W35.88
	B17.89
	T53.77
General Foreman	W36.38
	B17.89
	T54.27
Mechanic	W34.38
	B17.89
	T52.27

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 preceding Friday, Sunday holidays observed the following Monday.

County - UNION

Craft: Bricklayer, Stone Mason

PREVAILING WAGE RATE

	05/09/24
Deputy Foreman	W51.60
	B37.68
	T89.28
Foreman	W56.35
	B37.68
	T94.03
Journeyman	W48.60
	B37.68
	T86.28

Craft: Bricklayer, Stone Mason

APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES										
6 Months	40%	50%	55%	60%	65%	70%	75%	80%				
Benefits	5.61	6.88	7.50	8.13	28.95	30.86	32.78	34.67				

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. Any additional overtime shall be paid at double 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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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.

County - UNION

Craft: Carpenter

PREVAILING WAGE RATE

	05/09/24
Foreman	W64.41
	B38.73
	T103.14
Journeyman	W56.01
	B33.76
	T89.77

Craft: Carpenter APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES										
Yearly	40%	55%	65%	80%	90%							
Benefit	59.25% of	Appren	tice	Wage Rate	for all	intervals	+ \$0.57					

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 59.25% of apprentice wage rate for all intervals + \$0.57

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.

- All time worked before and after a regularly established shift shall be paid at the applicable overtime rate. When a portion of the regularly established shift works into Saturday, Sunday or a holiday, that time worked shall be paid at the established shift rate.

OVERTIME:

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- 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 observed the following Monday. Veterans' Day may be substituted for the day after Thanksgiving.

County - UNION

Craft: Carpenter - Resilient Flooring

PREVAILING WAGE RATE

	05/01/24
Foreman	W64.41
	B38.64
	T103.05
Journeyman	W56.01
	B33.67
	T89.68

Craft: Carpenter - Resilient Flooring

APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES										
Yearly	40%	55%	65%	80%	90%							
Benefit	59.25%	of	Appren	tice	Wage Rate	for all	intervals	+ \$0.48				

Ratio of Apprentices to Journeymen - *

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

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 59.25% of apprentice wage rate for all intervals + \$0.48.

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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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.

County - UNION

Craft: Carpenter-Residential Construction

PREVAILING WAGE RATE

	05/09/24
Foreman	W54.29
	B11.99
	T66.28
Journeyman	W47.21
	B11.14
	T58.35

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	+ \$5.48			

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 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

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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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Craft: Cement Mason

PREVAILING WAGE RATE

See "Bricklayer, Stone Mason" Rates

Craft: Cement Mason

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES								

Ratio of Apprentices to Journeymen - 1:4

Craft: Cement Mason

COMMENTS/NOTES

See "Bricklayer, Stone Mason" Rates

County - UNION

Craft: Commercial Painter

PREVAILING WAGE RATE

	05/29/24
Foreman	W48.90
	B30.71
	T79.61
General Foreman	W53.34
	B30.71
	T84.05
Journeyman	W44.45
	B30.71
	T75.16

Craft: Commercial Painter

APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
6 Months	40%	45%	55%	65%	70%	75%	80%	80%		
Benefits	9.40	9.40	11.90	11.90	13.00	13.00	15.90	15.90		

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.

County - UNION

Craft: Diver PREVAILING WAGE RATE

	05/01/24
Diver	W64.72
	B52.74 T117.46
Tender	W52.98
	B52.74
	T105.72

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:
0-59 feet: No additional wage	0-74 feet: No additional wage
60-74 feet: + \$0.25 per foot	75-125 feet: + \$1.00 per foot
75-125 feet: + \$0.78 per foot	126-200 feet: + \$2.00 per foot

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.

County - UNION

Craft: Dockbuilder/Pile Driver

PREVAILING WAGE RATE

	05/01/24
Foreman	W60.93
	B52.74
	T113.67
Foreman (Concrete Form	W59.82
Work)	B39.39
	T99.21
Journeyman	W52.98
	B52.74
	T105.72
Journeyman (Concrete	W52.02
Form Work)	B39.39
	T91.41
	1

Craft: Dockbuilder/Pile Driver

APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
Yearly	21.19	26.49	34.44	42.38						
Benefits	34.70	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:

INTERVALPERIOD AND RATESYearly20.8126.0133.8141.62Benefits26.73 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.

County - UNION

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.

County - UNION

Craft: Drywall Finisher

PREVAILING WAGE RATE

	05/29/24
Foreman	W47.75
	B31.11
	T78.86
General Foreman	W49.92
	B31.11
	T81.03
Journeyman	W43.41
	B31.11
	T74.52

Craft: Drywall Finisher

APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
6 Months	40%	50%		60%	70%		80%	90%		
Benefits	Intervals	1 to 2 =	11.90	Intervals	3 to 4 =	15.03	Intervals	5 to 6 =	18.84	

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.

County - UNION

Craft: Electrician

PREVAILING WAGE RATE

	06/03/24
Cable Splicer	W69.72
	B44.96
	T114.68
Foreman (11-20	W74.15
Journeymen)	B47.84
	T121.99
Foreman (1-3	W69.72
Journeymen)	B44.96
	T114.68
Foreman (4-10	W72.89
Journeymen)	B47.02
	T119.91
General Foreman (21-30	W76.06
Journeymen)	B49.06
	T125.12
General Foreman (31-60	W82.39
Journeymen)	B53.15
	T135.54
General Foreman (61+	W83.66
Journeymen)	B53.97
	T137.63
Journeyman	W63.38
-	B40.89
	T104.27
Sub-Foreman	W72.25
	B46.61
	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.

County - UNION

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

PREVAILING WAGE RATE

	12/04/23	12/02/24
Journeyman Technician	W47.08	W48.21
(1-2 Workers on Job)	B27.78	B28.45
	T74.86	T76.66
Master Tech/General	W61.20	W62.67
Foreman	B36.12	B36.99
(26 + Workers on Job)	T97.32	T99.66
Senior Technician/Lead	W56.03	W57.37
Foreman	B33.05	B33.86
(16-25 Workers on Job)	T89.08	T91.23
Technician A/Foreman	W53.67	W54.96
(9-15 Workers on Job)	B31.67	B32.43
	T85.34	T87.39
Technician B/Working	W51.32	W52.55
Foreman	B30.28	B31.01
(4-8 Workers on Job)	T81.60	T83.56
Technician C/Foreman	W48.96	W50.14
(3 Workers on Job)	B28.89	B29.59
	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:

County - UNION

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.

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

County - UNION

Craft: Electrician- Outside Commercial

PREVAILING WAGE RATE

	06/03/24
Cable Splicer	W70.04 B44.66 T114.70
Certified Welder	W66.86 B42.62 T109.48
Equipment Operator	W63.67 B40.60 T104.27
Foreman (11-20 Journeymen workers on job)	W74.50 B47.50 T122.00
Foreman (1-3 Journeymen workers on job)	W70.04 B44.66 T114.70
Foreman (4-10 Journeymen workers on job)	W73.23 B46.70 T119.93
General Foreman (21-30 Journeymen workers on job)	W76.41 B48.71 T125.12
General Foreman (31-60 Journeymen workers on job)	W82.78 B52.76 T135.54
General Foreman (61+ Journeymen workers on job)	W84.05 B53.58 T137.63
Groundman	W38.21 B24.35 T62.56
Journeyman Lineman/Technician	W63.67 B40.60 T104.27
Sub-Foreman	W72.59 B46.27 T118.86

County - UNION

Craft: Electrician- Outside Commercial

APPRENTICE RATE SCHEDULE

<u>INTERVAL</u>		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,

County - UNION

Thanksgiving Day and Christmas Day.

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Craft: Electrician-Utility Work (North)

PREVAILING WAGE RATE

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.

* The apprentice wage rate is paid at the percentage of the Journeyman Lineman wage rate located in the "Statewide" rate package.

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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	32.52	35.23	37.94	40.65	43.36	46.07	48.78					
Benefits	28.97	30.65	32.31	33.98	35.69	37.36	39.02					

Craft: Electrician-Utility Work (South)

COMMENTS/NOTES

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

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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.

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

	05/09/24
* Leadman	W53.43
	B31.98
	T85.41
Foreman	W55.43
	B32.22
	T87.65
General Foreman	W57.43
	B32.47
	T89.90
Journeyman	W51.43
	B31.74
	T83.17

Craft: Glazier

APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES										
6 Months	46%	46%	55%	55%	61%	61%	70%	70%				
Benefits	12.44	12.44	14.76	14.76	18.16	18.16	19.79	19.79				

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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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.

County - UNION

Craft: Heat & Frost Insulator

PREVAILING WAGE RATE

	09/19/23
Foreman	W60.97
	B37.97
	T98.94
General Foreman	W63.31
	B39.08
	T102.39
Journeyman	W58.69
	B37.41
	T96.10

Craft: Heat & Frost Insulator

APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES									
Yearly	27.51	32.64	39.31	45.91							
Benefits	21.73	25.78	28.63	31.61							

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.

County - UNION

Craft: Heat & Frost Insulator - Asbestos Worker

PREVAILING WAGE RATE

	09/19/23
Asbestos Helper Abatement	W36.89 B24.92 T61.81

Craft: Heat & Frost Insulator - Asbestos Worker

APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES									
	SEE	HEAT &	FROST	INSULAT							
				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.

County - UNION

Craft: Industrial Painter-Bridges

PREVAILING WAGE RATE

	03/21/24	02/01/25	02/01/26
Foreman	W64.29	W0.00	W0.00
	B35.91	B0.00	B0.00
	T100.20	T102.20	T104.20
General Foreman	W66.79	W0.00	W0.00
	B35.91	B0.00	B0.00
	T102.70	T104.70	T106.70
Journeyman	W59.29	W0.00	W0.00
	B35.91	B0.00	B0.00
	T95.20	T97.20	T99.20

Craft: Industrial Painter-Bridges

APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES									
6 Months	50%	70%	90%								
Benefits	14.10	21.26	27.88								

Ratio of Apprentices to Journeymen - 1:3

Craft: Industrial Painter-Bridges

COMMENTS/NOTES

* Industrial Painters perform work on all industrial structures, such as bridges.

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.

County - UNION

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.

County - UNION

Craft: Industrial Painter- Structural Steel

PREVAILING WAGE RATE

	03/21/24	02/01/25	02/01/26
Foreman	W53.03	W0.00	W0.00
	B33.56	B0.00	B0.00
	T86.59	T88.59	T90.59
General Foreman	W55.53	W0.00	W0.00
	B33.56	B0.00	B0.00
	T89.09	T91.09	T93.09
Journeyman	W48.03	W0.00	W0.00
-	B33.56	B0.00	B0.00
	T81.59	T83.59	T85.59

Craft: Industrial Painter- Structural Steel

APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES										
	SEE	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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Craft: Industrial Painter- Water Tanks

PREVAILING WAGE RATE

	03/21/24	02/01/25	02/01/26
Foreman	W54.08	W0.00	W0.00
	B33.21	B0.00	B0.00
	T87.29	T89.29	T91.29
General Foreman	W56.58	W0.00	W0.00
	B33.21	B0.00	B0.00
	T89.79	T91.79	T93.79
Journeyman	W49.08	W0.00	W0.00
	B33.21	B0.00	B0.00
	T82.29	T84.29	T86.29
		1	

Craft: Industrial Painter- Water Tanks

APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES									
6 Months	50%	70%	90%								
Benefits	14.10	21.26	27.88								

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.

County - UNION

Craft: Ironworker

PREVAILING WAGE RATE

	07/03/24
Rod /Fence Foreman	W53.29
	B50.87
	T104.16
Rod/Fence Journeyman	W48.44
	B50.87
	T99.31
Structural Foreman	W55.82
	B50.87
	T106.69
Structural Journeyman	W50.74
	B50.87
	T101.61

Craft: Ironworker

APPRENTICE RATE SCHEDULE

<u>INTERVAL</u>		PERIOD AND RATES									
6 Months	50%	60%		Yearly	70%	80%	90%				
Benefits		journeyma n	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:

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.

County - UNION

Craft: Laborer - Asbestos & Hazardous Waste Removal

PREVAILING WAGE RATE

APPRENTICE RATE SCHEDULE

	08/21/24
Foreman	W45.88
	B26.21
	T72.09
Journeyman (Handler)	W40.78
	B26.21
	T66.99

Craft: Laborer - Asbestos & Hazardous Waste Removal

INTERVAL PERIOD AND RATES Yearly 22.47 28.55 32.62 36.70 Image: Constraint of the second seco

Ratio of Apprentices to Journeymen - *

* 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.

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).

County - UNION

Craft: Laborer - Building

PREVAILING WAGE RATE

	08/28/24
Class A Journeyman	W39.25
	B33.17
	T72.42
Class B Journeyman	W38.25
	B33.17
	T71.42
Class C Journeyman	W32.51
	B33.17
	T65.68
Foreman	W44.16
	B33.17
	T77.33
General Foreman	W49.06
	B33.17
	T82.23

Craft: Laborer - Building

APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES										
6 Months	60%	70%	80%	90%	of Class B	wage rate						
Benefit	29.92	29.92	29.92	29.92								

Ratio of Apprentices to Journeymen - *

* 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.

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 gunite 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

County - UNION

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.

County - UNION

Craft: Laborer - Heavy & General

PREVAILING WAGE RATE

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	25.08	for	all	intervals								

Ratio of Apprentices to Journeymen - *

* No more than 1 apprentice for the first journeyman and no more than 1 apprentice for each additional 3 journeymen.

As of 3-1-25, benefits shall be 26.13. As of 3-1-26, benefits shall be 27.13.

Craft: Laborer - Heavy & General

COMMENTS/NOTES

Heavy & General Laborer rates are located in the "Statewide" rate package.

County - UNION

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

<u>INTERVAL</u>		PERIOD AND RATES										
As shown	800 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. An attic is an unfinished space located immediately below the roof. Such space is not used in determining a 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

County - UNION

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.

County - UNION

Craft: Millwright

PREVAILING WAGE RATE

	05/01/24
Foreman	W66.04
	B39.75
	T105.79
Journeyman	W57.43
	B34.65
	T92.08

Craft: Millwright APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES										
6 Months	40%	55%	65%	80%	90%							
Benefits	59.25% of	Appren	tice	Wage	Rate	for all	intervals	+ \$0.62				

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.

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%	70%	80%	90%								

Ratio of Apprentices to Journeymen - *

* 1 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.

Craft: Operating Engineer

COMMENTS/NOTES

Operating Engineer rates are located in the "Statewide" rate package.

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				

Ratio of Apprentices to Journeymen - *

* No more than 1 Field Engineer Apprentice per Survey Crew.

Craft: Operating Engineer - Field Engineer

COMMENTS/NOTES

Operating Engineer - Field Engineer rates are located in the "Statewide" rate package.

County - UNION

Craft: Painter - Line Striping

PREVAILING WAGE RATE

	12/01/23
Apprentice (1st year)	W29.89
	B15.70
	T45.59
Apprentice (2nd year)	W34.10
	B26.65
	T60.75
Foreman (Charge Person)	W43.10
	B27.43
	T70.53
Journeyman 1 (at least 1	W38.33
year of working exp. as a	B27.43
journeyman)	T65.76
Journeyman 2 (at least 2	W42.10
years of working exp. as a	B27.43
journeyman)	T69.53
	1

Craft: Painter - Line Striping

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES											

Ratio of Apprentices to Journeymen - 1:1

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.

County - UNION

Craft: Paperhanger

PREVAILING WAGE RATE

	05/29/24
Foreman	W53.79 B30.71 T84.50
Journeyman	W48.90 B30.71 T79.61

Craft: Paperhanger APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
	SEE	COMME P	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

County - UNION

Craft: Pipefitter

PREVAILING WAGE RATE

	05/01/24
Foreman	W59.34
	B52.02
	T111.36
Journeyman	W55.09
	B48.30
	T103.39

Craft: Pipefitter APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
Yearly	35%	45%	55%	65%	75%					
Benefit	27.62	30.78	33.95	37.12	40.29					

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

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.

County - UNION

Craft: Plasterer PREVAILING WAGE RATE

See Bricklayer, Stone Mason Rates

Craft: Plasterer COMMENTS/NOTES

See BRICKLAYER, STONE MASON Rates

County - UNION

Craft: Plumber PREV

PREVAILING WAGE RATE

	05/01/24
Foreman	W65.33
	B43.22
	T108.55
General Foreman	W69.56
	B43.22
	T112.78
Journeyman	W60.49
	B43.22
	T103.71

Craft: Plumber

APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES								
Yearly	30%	45%	55%	65%	75%					
Benefits	18.23	24.72	27.02	29.31	31.60					

Ratio of Apprentices to Journeymen - *

* 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.

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.

County - UNION

Craft: Roofer

PREVAILING WAGE RATE

	06/01/24
Foreman	W47.52
	B32.34
	T79.86
Journeyman	W44.52
	B32.34
	T76.86

Craft: Roofer APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES									
6 Months	17.80	22.26	26.71	28.94	31.16	33.39	35.62	40.07			
Benefits	2.19	2.19	28.34	28.34	28.34	28.34	28.34	28.34			

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.

County - UNION

Craft: Sheet Metal Sign Installation

PREVAILING WAGE RATE

	04/17/24
Foreman	W44.19
	B43.87
	T88.06
Journeyman	W41.69
	B43.87
	T85.56

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	14.62	16.66	18.72	20.79	23.33	25.43	27.52	29.62	31.73	33.82	

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.

County - UNION

Craft: Sheet Metal Worker

PREVAILING WAGE RATE

	06/13/24
Foreman	W61.90
	B50.32
	T112.22
General Foreman	W62.90
	B50.32
	T113.22
Journeyman	W57.90
	B50.32
	T108.22

Craft: Sheet Metal Worker

APPRENTICE RATE SCHEDULE

INTERVAL		PERIOD AND RATES									
Yearly	45%	48%	52%	65%	of	Journey	man	Wage	Rate		
Benefit	45%	48%	52%	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.

County - UNION

Craft: Sprinkler Fitter

PREVAILING WAGE RATE

	07/01/24
Foreman	W73.06
	B39.71
	T112.77
General Foreman	W76.79
	B39.71
	T116.50
Journeyman	W68.56
	B39.71
	T108.27

Craft: Sprinkler Fitter

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
1000 Hours								80%	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

 1000 Hrs. 25%
 30%
 40%
 45%
 55%
 60%
 70%
 75%
 85%
 90%

 Ben.
 14.31
 14.31
 29.86
 29.86
 29.86
 Intervals
 7-10
 Journy. Ben.

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.
 14.31
 14.31
 29.86
 29.86
 29.86
 Intervals
 7-10 Journy. Ben.

APPRENTICE RATE SCHEDULES AS OF 7-1-24:

Apprentice rate schedule for those apprentices registered as of 7-1-13:

 Interval
 Period and Rates

 1000 Hrs. 25%
 30%
 40%
 45%
 55%
 60%
 70%
 75%
 85%
 90%

 Ben.
 14.41
 14.41
 30.71
 30.71
 30.71
 30.71
 Journy. Ben.

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.
 14.41
 14.41
 30.71
 30.71
 30.71
 30.71
 Journy. Ben.

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

County - UNION

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.

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

County - UNION

Craft: Tile Finisher-Marble

PREVAILING WAGE RATE

	07/01/24
Finisher	W49.99
	B37.54
	T87.53

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.

County - UNION

Craft: Tile Setter - Ceramic

PREVAILING WAGE RATE

	06/03/24
Finisher	W49.08
	B32.98
	T82.06
Setter	W63.91
	B36.26
	T100.17

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 COM

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.

County - UNION

Craft: Tile Setter - Marble

PREVAILING WAGE RATE

	07/01/24
Tile Setter	W63.92
	B40.20
	T104.12

Craft: Tile Setter - 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 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.

County - UNION

Craft: Tile Setter - Mosaic & Terrazzo

PREVAILING WAGE RATE

	07/01/24
Grinder or Assistant	W59.37
	B41.48
	T100.85
Mechanic	W60.98
	B41.49
	T102.47
Terrazzo Resinous	W50.76
Worker	B33.86
	T84.62

Craft: Tile Setter - Mosaic & Terrazzo

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES							
1500 Hours	35%	45%	60%	70%	80%	90%		

Ratio of Apprentices to Journeymen - 1:5

Craft: Tile Setter - Mosaic & Terrazzo

COMMENTS/NOTES

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.

County - UNION

Craft: Truck Driver

PREVAILING WAGE RATE

	05/01/24
Bucket, Utility,	W45.41
Pick-up, Fuel	B43.28
Delivery trucks	T88.69
Dump truck, Asphalt	W45.41
Distributor, Tack	B43.28
Spreader	T88.69
Euclid-type vehicles	W45.51
(large, off-road	B43.28
equipment)	T88.79
Helper on Asphalt	W45.41
Distributor truck	B43.28
	T88.69
Low Boy Driver	W47.01
	B43.28
	T90.29
Slurry Seal,	W45.41
Seeding/Fertilizing/	B43.28
Mulching truck	T88.69
Straight 3-axle truck	W45.41
	B43.28
	T88.69
Tractor Trailer	W45.51
(all types)	B43.28
	T88.79
Vacuum or Vac-All	W45.41
truck (entire unit)	B43.28
	T88.69
Winch Trailer	W45.61
	B43.28
	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.

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.

County - UNION

Craft: Truck Driver-Material Delivery Driver

PREVAILING WAGE RATE

	05/01/24
Driver	W37.62
	B43.28
	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.

County - UNION

Craft: Welder PREVAILING WAGE RATE

Welder

Craft: Welder COMMENTS/NOTES

Welders rate is the same as the craft to which the welding is incidental.

STATEWIDE RATES

ENTIRE STATE

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.

ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

OPERATING ENGINEERS Rates Expiration Date :

Effective Dates:

	07/01/202	07/01/2025	
Rate	Fringe	Total	Total
58.88	39.15	98.03	100.53

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. total height, and an additional \$2.00 per hour on 200 ft. and over total height.

Hydraulic Crane (10 tons & under)

Hydraulic Dredge

Hydro-Axe

Hydro-Blaster

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

OPERATING ENGINEERS Rates Expiration Date :

Effective Dates:

	07/01/202	07/01/2025	
Rate	Fringe	Total	Total
58.88	39.15	98.03	100.53

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

OPERATING ENGINEERS Rates Expiration Date :

Effective Dates:

	07/01/202	4	07/01/2025
Rate	Fringe	Total	Total
56.97	39.15	96.12	98.62

CLASSIFICATIONS:

Asphalt Curbing Machine

Asphalt Plant Engineer

Asphalt Spreader

Autograde Curb Trimmer & Sidewalk Shoulder Slipform (CMI & similar types)

Autograde Curecrete Machine (CMI & similar types)

Autograde Tube Finisher & Texturing Machine (CMI & similar types)

Bar Bending Machines (Power)

Batcher, Batching Plant, & Crusher [On Site]

Belt Conveyor System

Boom-Type Skimmer Machine

Bridge Deck Finisher

Bulldozer (all sizes)

Captain (Power Boats)

Car Dumper (railroad)

Compressor & Blower unit for loading/unloading of concrete, cement, fly ash, or similar type materials (used independently or truck-mounted)

Compressor (2 or 3 battery)

Concrete Breaking Machine

Concrete Cleaning/Decontamination Machine

Concrete Finishing Machine

Concrete Saw or Cutter (ride-on type)

Concrete Spreader (Hetzel, Rexomatic & similar types)

Concrete Vibrator

ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

OPERATING ENGINEERS Rates Expiration Date :

Effective Dates:

	07/01/202	4	07/01/2025
Rate	Fringe	Total	Total
56.97	39.15	96.12	98.62

CLASSIFICATIONS:

Conveyors - under 125 feet

Crane Signalman

Crushing Machine

Directional Boring Machine

Ditching Machine - Small (Ditchwitch, Vermeer or similar types)

Dope Pot - Mechanical (with or without pump)

Dumpster

Elevator

Fireman

Fork Lift (Economobile, Lull & similar types)

Front End Loader (1 cu. yd. and over but less than 2 cu. yds.)

Generator (2 or 3 battery)

Giraffe Grinder

Goldhofer/Hydraulic Jacking Trailer

Grader & Motor Patrols

Grout Pump

Gunnite Machine (Excluding nozzle)

Hammer - Vibratory (in conjunction with generator)

Heavy Equipment Robotics - Operator/Technician

Hoist (roof, tugger, aerial platform hoist, house car)

Hopper

Hopper Doors (power operated)

Ladder (motorized)

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

OPERATING ENGINEERS Rates Expiration Date :

Effective Dates:

07/01/2024			07/01/2025
Rate	Fringe	Total	Total
56.97	39.15	96.12	98.62

CLASSIFICATIONS:

- Laddervator
- Locomotive (Dinky-type)
- Maintenance Utility Man

Master Environmental Maintenance Technician

Mechanic

Mixer (Except paving mixers)

Pavement Breaker (truck-mounted or small self-propelled ride-on type)

Pavement Breaker - maintenance of compressor or hydraulic unit

Pipe Bending Machine (power)

Pitch Pump

Plaster Pump (regardless of size)

Post Hole Digger (post pounder, auger)

Rod Bending Machines

Roller (black top)

Scale (power)

Seamen Pulverizing Mixer

Shoulder Widener

Silo

Skimmer Machine (boom type)

Steel Cutting Machine (service & maintenance)

Tamrock Drill

Tractor

Transfer Machines

ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

OPERATING ENGINEERS Rates Expiration Date :

Effective Dates:

07/01/2024			07/01/2025
Rate	Fringe	Total	Total
56.97	39.15	96.12	98.62

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:

07/01/2024			07/01/2025
Rate	Fringe	Total	Total
51.63	39.15	90.78	93.28

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:

07/01/2024			07/01/2025
Rate	Fringe	Total	Total
49.05	39.15	88.20	90.70

CLASSIFICATIONS:

Field Engineer - Rodman or Chainman

ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

OPERATING ENGINEERS Rates Expiration Date :

Effective Dates:

07/01/2024			07/01/2025
Rate	Fringe	Total	Total
59.21	39.15	98.36	100.86

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 :

Effective Dates:

07/01/2024			07/01/2025
Rate	Fringe	Total	Total
60.47	39.15	99.62	102.12

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)

Mucking Machine

ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

OPERATING ENGINEERS Rates Expiration Date :

Effective Dates:

07/01/2024			07/01/2025
Rate	Fringe	Total	Total
60.47	39.15	99.62	102.12

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

ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

OPERATING ENGINEERS Rates Expiration Date :

Effective Dates:

07/01/2024			07/01/2025
Rate	Fringe	Total	Total
55.34	39.15	94.49	96.99

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

ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

OPERATING ENGINEERS Rates Expiration Date :

Effective Dates:

07/01/2024			07/01/2025
Rate	Fringe	Total	Total
55.34	39.15	94.49	96.99

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:

07/01/2024			07/01/2025
Rate	Fringe	Total	Total
62.29	39.15	101.44	103.94

CLASSIFICATIONS:

Helicoptor Pilot/Engineer

Effective Dates:

07/01/2024			07/01/2025
Rate	Fringe	Total	Total
66.97	39.15	106.12	108.62

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:

07/01/2024			07/01/2025
Rate	Fringe	Total	Total
65.97	39.15	105.12	107.62

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.

ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

OPERATING ENGINEERS Rates Expiration Date :

Effective Dates:

07/01/2024			07/01/2025
Rate	Fringe	Total	Total
62.47	39.15	101.62	104.12

CLASSIFICATIONS:

Cranes, Derricks, Pile Driver (all types), under 100 tons with a boom (including jib and/or leads) 140 ft. and over **Effective Dates:**

07/01/2024			07/01/2025
Rate	Fringe	Total	Total
64.97	39.15	104.12	106.62

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:

07/01/2024			07/01/2025
Rate	Fringe	Total	Total
61.47	39.15	100.62	103.12

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

ENTIRE STATE

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:

07/01/2024			07/01/2025
Rate	Fringe	Total	Total
64.10	39.15	103.25	105.75

CLASSIFICATIONS:

Helicopter Co-Pilot & Communications Engineer

ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

STRUCTURAL STEEL ERECTION Rates Expiration Date :

Effective Dates:

07/01/2024			07/01/2025
Rate	Fringe	Total	Total
60.04	39.15	99.19	101.69

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

ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

STRUCTURAL STEEL ERECTION Rates Expiration Date :

Effective Dates:

07/01/2024			07/01/2025
Rate	Fringe	Total	Total
57.38	39.15	96.53	99.03

CLASSIFICATIONS:

Aerial Platform Used On Hoists

Apprentice Engineer/Oiler with Compressor or Welding Machine

Captain (Power Boats)

Compressor (2 or 3 in battery)

Concrete Cleaning/Decontamination Machine Operator

Conveyor or Tugger Hoist

Directional Boring Machine

Elevator or House Car

Fireman

Forklift

Generator (2 or 3)

Heavy Equipment Robotics, Operator/Technician

Maintenance Utility Man

Master Environmental Maintenance Technician

Tug Master (Power Boats)

Ultra High Pressure Waterjet Cutting Tool System Operator/Maintenance Technician

Vacuum Blasting Machine Operator/Maintenance Technician

Welding Machines, Gas or Electric Converters on any type-2 or 3 in battery including diesels

ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

STRUCTURAL STEEL ERECTION Rates Expiration Date :

Effective Dates:

07/01/2024			07/01/2025
Rate	Fringe	Total	Total
55.85	39.15	95.00	97.50

CLASSIFICATIONS:

Compressor (Single)

Generators

Welding Machines, Gas, Diesel, Or Electric Converters of any type-single

Welding System, Multiple (Rectifier Transformer Type)

Effective Dates:

07/01/2024			07/01/2025
Rate	Fringe	Total	Total
52.09	39.15	91.24	93.74

CLASSIFICATIONS:

Assistant Engineer/Oiler

Drillers Helper

Field Engineer - Transit/Instrument Man

Maintenance Apprentice (Deckhand)

Maintenance Apprentice (Oiler)

Off Road Back Dump

Effective Dates:

07/01/2024			07/01/2025
Rate	Fringe	Total	Total
59.66	39.15	98.81	101.31

CLASSIFICATIONS:

Lead Engineer, Foreman Engineer, Safety Engineer (Minimum) Effective Dates:

07/01/2024			07/01/2025
Rate	Fringe	Total	Total
49.05	39.15	88.20	90.70

CLASSIFICATIONS:

Field Engineer - Rodman or Chainman

STRUCTURAL STEEL ERECTION Rates Expiration Date :

Effective Dates:

07/01/2024			07/01/2025
Rate	Fringe	Total	Total
60.80	39.15	99.95	102.45

CLASSIFICATIONS:

Field Engineer-Chief of Party

Vacuum Truck

Effective Dates:

07/01/2024			07/01/2025
Rate	Fringe	Total	Total
68.99	39.15	108.14	110.64

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:

07/01/2024			07/01/2025
Rate	Fringe	Total	Total
67.33	39.15	106.48	108.98

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:

07/01/2024			07/01/2025
Rate	Fringe	Total	Total
64.49	39.15	103.64	106.14

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:**

07/01/2024			07/01/2025
Rate	Fringe	Total	Total
62.83	39.15	101.98	104.48

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

ENTIRE STATE

STRUCTURAL STEEL ERECTION Rates Expiration Date :

Effective Dates:

07/01/2024			07/01/2025
Rate	Fringe	Total	Total
64.49	39.15	103.64	106.14

CLASSIFICATIONS:

Helicopter Pilot & Engineer

ENTIRE STATE

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:

07/01/2024			07/01/2025
Rate	Fringe	Total	Total
60.47	39.15	99.62	102.12

CLASSIFICATIONS:

Driller

Effective Dates:

	07/01/2025		
Rate	Fringe	Total	Total
53.63	39.15	92.78	95.28

CLASSIFICATIONS:

Driller's Helper

ENTIRE STATE

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: + \$5.00/hr -other Hazardous Waste site: + \$1.00/hr

Traffic Control Coordinator: When either of the work classifications found below are working as a Traffic Control Coordinator they are to receive \$.75 above their current rate of pay.

Effective Dates:

04/17/2024			03/01/2025	03/01/2026
Rate	Fringe	Total	Total	Total
65.06	37.33	102.39	106.26	109.94

CLASSIFICATIONS:

Walking Boss & Superintendent

Effective Dates:

	04/17/202	24	03/01/2025	03/01/2026
Rate	Fringe	Total	Total	Total
64.69	37.33	102.02	105.88	109.57

CLASSIFICATIONS:

Heading Foreman, Shaft Foreman, Rod Foreman, Electrician Foreman, Rigging Foreman

ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

FREE AIR TUNNEL JOBS Rates Expiration Date :

Effective Dates:

	04/17/202	24	03/01/2025	03/01/2026
Rate	Fringe	Total	Total	Total
64.06	37.33	101.39	105.26	108.94

CLASSIFICATIONS:

Iron Foreman, Caulking Foreman, Form Foreman, Cement Finishing Foreman, Concrete Foreman, Track Foreman, Cleanup Foreman, Grout Foreman

Effective Dates:

04/17/2024		03/01/2025	03/01/2026	
Rate	Fringe	Total	Total	Total
67.19	37.33	104.52	108.38	112.07

CLASSIFICATIONS:

Blaster

Effective Dates:

04/17/2024			03/01/2025	03/01/2026
Rate	Fringe	Total	Total	Total
63.38	37.33	100.71	104.57	108.26

CLASSIFICATIONS:

Top Labor Foreman

Effective Dates:

04/17/2024			03/01/2025	03/01/2026
Rate	Fringe	Total	Total	Total
62.94	37.33	100.27	104.13	107.82

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:

04/17/2024			03/01/2025	03/01/2026
Rate	Fringe	Total	Total	Total
62.75	37.33	100.08	103.94	107.63

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)

ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

FREE AIR TUNNEL JOBS Rates Expiration Date :

Effective Dates:

04/17/2024		03/01/2025	03/01/2026	
Rate	Fringe	Total	Total	Total
62.25	37.33	99.58	103.44	107.13

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:

07/01/2024			07/01/2025
Rate	Fringe	Total	Total
59.22	39.15	98.37	100.87

CLASSIFICATIONS:

Driller

Effective Dates:

	07/01/202	4	07/01/2025
Rate	Fringe	Total	Total
52.38	39.15	91.53	94.03

CLASSIFICATIONS:

Driller's Helper

ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

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:**

	10/01/2023	3
Rate	Fringe	Total
45.26	15.22	60.48

CLASSIFICATIONS:

Lead Dredgerman, Operator, Leverman

Licensed Tug Operator (over 1000 HP)

Effective Dates:

10/01/2023

Rate	Fringe	Total
39.14	14.79	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:

10/01/2023

Rate	Fringe	Total
36.84	14.63	51.47

CLASSIFICATIONS:

Certified Welder

ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

OPERATING ENGINEERS MARINE-DREDGING Rates Expiration Date :

Effective Dates:

10/01/2023

Rate	Fringe	Total
35.83	14.31	50.14

CLASSIFICATIONS:

Mate, Drag Barge Operator, Steward, Assistant Fill Placer

Welder

Effective Dates:

10/01/2023

Rate	Fringe	Total
34.68	14.23	48.91

CLASSIFICATIONS:

Boat Operator

Effective Dates:

10/01/2023

Rate	Fringe	Total
28.81	13.82	42.63

CLASSIFICATIONS:

Shoreman, Deckhand, Rodman, Scowman

Effective Dates:

10/01/2023

Rate	Fringe	Total
40.33	14.87	55.20

CLASSIFICATIONS:

Crane Operator

ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

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:**

	00/01/201	
Rate	Fringe	Total
36.50	21.27	57.77

03/01/2017

CLASSIFICATIONS:

Foreman

Effective Dates:

	03/01/2017	1
Rate	Fringe	Total
33.80	21.27	55.07

CLASSIFICATIONS:

Box man

Effective Dates:

	03/01/2017	7
Rate	Fringe	Total
31.75	21.27	53.02

CLASSIFICATIONS:

Microsurface/Slurry Preparation

Effective Dates:

03/01/2017

Rate	Fringe	Total
31.75	21.27	53.02

CLASSIFICATIONS:

Squeegee man

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

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ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

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:**

03/21/2024		03/01/2025	03/01/2026	
Rate	Fringe	Total	Total	Total
53.55	37.33	90.88	94.33	97.58

CLASSIFICATIONS:

Paving Foreman

Effective Dates:

03/21/2024		03/01/2025	03/01/2026	
Rate	Fringe	Total	Total	Total
50.10	37.33	87.43	90.88	94.13

CLASSIFICATIONS:

Head Raker

Effective Dates:

03/21/2024		03/01/2025	03/01/2026	
Rate	Fringe	Total	Total	Total
50.25	37.33	87.58	91.03	94.28

CLASSIFICATIONS:

Screedman

ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ASPHALT LABORERS - SOUTH Rates Expiration Date :

Effective Dates:

03/21/2024		03/01/2025	03/01/2026	
Rate	Fringe	Total	Total	Total
49.70	37.33	87.03	90.48	93.73

CLASSIFICATIONS:

Tampers, Smoothers, Kettlemen, Painters, Shovelers, Roller Boys Effective Dates:

03/21/2024			03/01/2025	03/01/2026
Rate	Fringe	Total	Total	Total
49.80	37.33	87.13	90.58	93.83

CLASSIFICATIONS:

Milling Controller

Effective Dates:

03/21/2024			03/01/2025	03/01/2026
Rate	Fringe	Total	Total	Total
50.00	37.33	87.33	90.78	94.03

CLASSIFICATIONS:

Traffic Control Coordinator

Effective Dates:

03/21/2024		03/01/2025	03/01/2026	
Rate	Fringe	Total	Total	Total
49.95	37.33	87.28	90.73	93.98

CLASSIFICATIONS:

Raker, Luteman

ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

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:

12/01/2023

Rate	Fringe	Total
36.28	33.49	69.77

CLASSIFICATIONS:

Helper (4th year helper)

Effective Dates:

12/01/2023

Rate	Fringe	Total
46.25	33.49	79.74

CLASSIFICATIONS:

Driller

Effective Dates:

	12/01/2023	3
Rate	Fringe	Total
52.66	33.49	86.15

CLASSIFICATIONS:

Foreman

ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

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:

04/17/2024			03/01/2025	03/01/2026
Rate	Fringe	Total	Total	Total
49.30	37.33	86.63	90.08	93.33

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:

04/17/2024			03/01/2025	03/01/2026
Rate	Fringe	Total	Total	Total
50.00	37.33	87.33	90.78	94.03

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; asphalt raker or lute man

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

HEAVY & GENERAL LABORERS - NORTH Rates Expiration Date :

Effective Dates:

04/17/2024			03/01/2025	03/01/2026
Rate	Fringe	Total	Total	Total
50.25	37.33	87.58	91.03	94.28

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:

04/17/2024			03/01/2025	03/01/2026
Rate	Fringe	Total	Total	Total
53.80	37.33	91.13	94.58	97.83

CLASSIFICATIONS:

"A" Rate: blaster Effective Dates:

04/17/2024			03/01/2025	03/01/2026
Rate	Fringe	Total	Total	Total
53.55	37.33	90.88	94.33	97.58

CLASSIFICATIONS:

"FOREMAN" Rate:

labor foreman, asphalt foreman, drill foreman, pipe foreman, grade foreman, finisher foreman, concrete foreman Effective Dates:

04/17/2024			03/01/2025	03/01/2026
Rate	Fringe	Total	Total	Total
54.55	37.33	91.88	95.33	98.58

CLASSIFICATIONS:

"GENERAL FOREMAN" Rate

Effective Dates:

	04/17/202	4	03/01/2025	03/01/2026
Rate	Fringe	Total	Total	Total
50.75	37.33	88.08	91.53	94.78

CLASSIFICATIONS:

TRAFFIC CONTROL COORDINATOR Rate

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:

03/21/2024		03/01/2025	03/01/2026	
Rate	Fringe	Total	Total	Total
49.30	37.33	86.63	90.08	93.33

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:**

03/21/2024			03/01/2025	03/01/2026
Rate	Fringe	Total	Total	Total
49.30	37.33	86.63	90.08	93.33

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

HEAVY & GENERAL LABORERS - SOUTH Rates Expiration Date :

Effective Dates:

03/21/2024		03/01/2025	03/01/2026	
Rate	Fringe	Total	Total	Total
50.00	37.33	87.33	90.78	94.03

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:**

03/21/2024		03/01/2025	03/01/2026	
Rate	Fringe	Total	Total	Total
50.00	37.33	87.33	90.78	94.03

CLASSIFICATIONS:

wagon or directional drill operator; drill master

Effective Dates:

03/21/2024		03/01/2025	03/01/2026	
Rate	Fringe	Total	Total	Total
53.80	37.33	91.13	94.58	97.83

CLASSIFICATIONS:

blaster

Effective Dates:

	03/21/202	4	03/01/2025	03/01/2026
Rate	Fringe	Total	Total	Total
53.55	37.33	90.88	94.33	97.58

CLASSIFICATIONS:

labor foreman, drill foreman, pipe foreman, grade foreman, finisher foreman, concrete foreman

Effective Dates:

03/21/2024		03/01/2025	03/01/2026	
Rate	Fringe	Total	Total	Total
54.55	37.33	91.88	95.33	98.58

CLASSIFICATIONS:

general foreman

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

HEAVY & GENERAL LABORERS - SOUTH Rates Expiration Date :

Effective Dates:

	03/21/202	4	03/01/2025	03/01/2026
Rate	Fringe	Total	Total	Total
50.25	37.33	87.58	91.03	94.28

CLASSIFICATIONS:

concrete finisher; setter of brick or stone pavers; stone cutter; form setter; manhole, catch basin, or inlet builder; rammer; gunite nozzle man

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

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:

06/13/2024				
Rate	Fringe	Total		
57.34	35.90	93.24		

CLASSIFICATIONS:

Pipeline Journeyman Welder

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

PIPELINE - MAINLINE TRANSMISSION Rates Expiration Date :

Effective Dates:

06/13/2024

Rate	Fringe	Total
57.34	35.90	93.24

CLASSIFICATIONS:

Pipeline Journeyman

Effective Dates:

06/13/2024

Rate	Fringe	Total
33.84	25.02	58.86

CLASSIFICATIONS:

Pipeline Helper

ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

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:

	11/01/2023	
Rate	Fringe	Total
64.70	31.84	96.54

CLASSIFICATIONS:

Pipeline Journeyman Welder

Effective Dates:

Rate	Fringe	Total
64.70	31.84	96.54

CLASSIFICATIONS:

Pipeline Journeyman

Effective Dates:

11/01/2023

Rate	Fringe	Total
41.00	23.56	64.56

CLASSIFICATIONS:

Pipeline Helper

ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

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:**

	04/17/202	4	03/01/2025	03/01/2026
Rate	Fringe	Total	Total	Total
53.55	37.33	90.88	94.33	97.58

CLASSIFICATIONS:

Asphalt Foreman

Effective Dates:

	04/17/202	4	03/01/2025	03/01/2026
Rate	Fringe	Total	Total	Total
50.25	37.33	87.58	91.03	94.28

CLASSIFICATIONS:

Asphalt Screedman

Effective Dates:

	04/17/202	4	03/01/2025	03/01/2026
Rate	Fringe	Total	Total	Total
50.00	37.33	87.33	90.78	94.03

CLASSIFICATIONS:

Asphalt Raker or Lute Man

ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ASPHALT LABORERS- NORTH Rates Expiration Date :

Effective Dates:

	04/17/202	4	03/01/2025	03/01/2026
Rate	Fringe	Total	Total	Total
49.30	37.33	86.63	90.08	93.33

CLASSIFICATIONS:

Asphalt Laborer

ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

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:

12/03/2023		12/01/2024	
Rate	Fringe	Total	Total
62.94	43.42	106.36	109.56

CLASSIFICATIONS:

Chief Lineman

Effective Dates:

12/03/2023			12/01/2024
Rate	Fringe	Total	Total
59.38	40.97	100.35	103.36

CLASSIFICATIONS:

Journeyman Lineman

ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ELECTRICIAN- UTILITY WORK (NORTH) Rates Expiration Date :

Effective Dates:

12/03/2023		12/01/2024	
Rate	Fringe	Total	Total
59.38	40.97	100.35	103.36

CLASSIFICATIONS:

Special License Operator

Effective Dates:

12/03/2023			12/01/2024
Rate	Fringe	Total	Total
58.79	40.56	99.35	102.32

CLASSIFICATIONS:

Transit Man

Effective Dates:

12/03/2023			12/01/2024
Rate	Fringe	Total	Total
57.00	39.33	96.33	99.21

CLASSIFICATIONS:

Line Equipment Operator

Effective Dates:

12/03/2023			12/01/2024
Rate	Fringe	Total	Total
49.88	34.41	84.29	86.81

CLASSIFICATIONS:

Dynamite Man

Effective Dates:

12/03/2023			12/01/2024
Rate	Fringe	Total	Total
74.23	51.21	125.44	129.20

CLASSIFICATIONS:

General Foreman

Effective Dates:

12/03/2023			12/01/2024
Rate	Fringe	Total	Total
68.29	47.12	115.41	118.85

CLASSIFICATIONS:

Assistant General Foreman

ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ELECTRICIAN- UTILITY WORK (NORTH) Rates Expiration Date :

Effective Dates:

12/03/2023			12/01/2024
Rate	Fringe	Total	Total
66.51	45.89	112.40	115.76

CLASSIFICATIONS:

Line Foreman

Effective Dates:

12/03/2023			12/01/2024
Rate	Fringe	Total	Total
48.10	33.18	81.28	83.72

CLASSIFICATIONS:

Street Light Mechanical Leader

Effective Dates:

12/03/2023			12/01/2024
Rate	Fringe	Total	Total
45.72	31.54	77.26	79.58

CLASSIFICATIONS:

Groundman Winch Operator

Effective Dates:

12/03/2023			12/01/2024
Rate	Fringe	Total	Total
45.72	31.54	77.26	79.58

CLASSIFICATIONS:

Groundman Truck Operator

Effective Dates:

12/03/2023			12/01/2024
Rate	Fringe	Total	Total
45.13	31.13	76.26	78.55

CLASSIFICATIONS:

Street Light Mechanic

Effective Dates:

12/03/2023			12/01/2024
Rate	Fringe	Total	Total
45.13	31.13	76.26	78.55

CLASSIFICATIONS:

Line Equipment Mechanic

ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ELECTRICIAN- UTILITY WORK (NORTH) Rates Expiration Date :

Effective Dates:

12/03/2023			12/01/2024
Rate	Fringe	Total	Total
38.60	26.63	65.23	67.17

CLASSIFICATIONS:

Groundman 2nd Year

Effective Dates:

12/03/2023			12/01/2024
Rate	Fringe	Total	Total
35.63	24.58	60.21	62.02

CLASSIFICATIONS:

Groundman 1st Year

Effective Dates:

	12/03/202	3	12/01/2024
Rate	Fringe	Total	Total
58.79	40.56	99.35	102.32

CLASSIFICATIONS:

Line Equipment Foreman

ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

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:**

12/03/2023

Rate	Fringe	Total
69.38	57.15	126.53

CLASSIFICATIONS:

General Foreman

ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ELECTRICIAN- UTILITY WORK (SOUTH) Rates Expiration Date :

Effective Dates:

12/03/2023

Rate	Fringe	Total
61.79	52.45	114.24

CLASSIFICATIONS:

Foreman

Effective Dates:

12/03/2023	
E	

Rate	Fringe	Total
58.54	50.46	109.00

CLASSIFICATIONS:

Small Job Foreman

Effective Dates:

12/03/2023

Rate	Fringe	Total
54.20	47.78	101.98

CLASSIFICATIONS:

Heavy Equipment Operator

Effective Dates:

Rate	Fringe	Total
54.20	47.78	101.98

CLASSIFICATIONS:

Cable Splicer

Effective Dates:

12/03/2023

Rate	Fringe	Total
54.20	47.78	101.98

CLASSIFICATIONS:

Journeyman Lineman

Effective Dates:

12/03/2023

Rate	Fringe	Total
54.20	47.78	101.98

CLASSIFICATIONS:

Journeyman Welder

ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ELECTRICIAN- UTILITY WORK (SOUTH) Rates Expiration Date :

Effective Dates:

12/03/2023

Rate	Fringe	Total
54.20	47.78	101.98

CLASSIFICATIONS:

Journeyman Painter

Effective Dates:

	12/03/2023	
Rate	Fringe	Total

Rute	Timge	Iotui
43.36	41.09	84.45

CLASSIFICATIONS:

Light Equipment Operator

Effective Dates:

12/03/2023

Rate	Fringe	Total
37.94	37.71	75.65

CLASSIFICATIONS:

Groundman Truck Driver

Effective Dates:

	12/03/2023	3
Rate	Fringe	Total
35.23	36.05	71.28

CLASSIFICATIONS:

Groundman 3rd Year

Effective Dates:

12/03/2023

Rate	Fringe	Total
32.52	34.37	66.89

CLASSIFICATIONS:

Groundman 2nd Year

Effective Dates:

12/03/2023

Rate	Fringe	Total
29.81	32.69	62.50

CLASSIFICATIONS:

Groundman 1st Year

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT PREVAILING WAGE RATE DETERMINATION

ELECTRICIAN- UTILITY WORK (SOUTH) Rates Expiration Date :

Effective Dates:

	12/03/2023	3
Rate	Fringe	Total
23.85	29.03	52.88

CLASSIFICATIONS:

Flagman

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: + \$5.00/hr -other Hazardous Waste site: + \$1.00/hr

Traffic Control Coordinator: When either of the work classifications found below are working as a Traffic Control Coordinator they are to receive \$.75 above their current rate of pay.

Effective Dates:

04/17/2024		03/01/2025	03/01/2026	
Rate	Fringe	Total	Total	Total
78.08	37.33	115.41	119.68	123.81

CLASSIFICATIONS:

Walking Boss & Superintendent

Effective Dates:

04/17/2024		03/01/2025	03/01/2026	
Rate	Fringe	Total	Total	Total
77.63	37.33	114.96	119.23	123.36

CLASSIFICATIONS:

Heading Foreman, Shaft Foreman, Rod Foreman, Electrical Foreman, Rigging Foreman

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:

04/17/2024		03/01/2025	03/01/2026	
Rate	Fringe	Total	Total	Total
76.88	37.33	114.21	118.48	122.61

CLASSIFICATIONS:

Iron Foreman, Caulking Foreman, Form Foreman, Cement Finishing Foreman, Concrete Foreman, Track Foreman, Clean-up Foreman, Grout Foreman

Effective Dates:

04/17/2024		03/01/2025	03/01/2026	
Rate	Fringe	Total	Total	Total
80.63	37.33	117.96	122.23	126.36

CLASSIFICATIONS:

Blaster

Effective Dates:

04/17/2024		03/01/2025	03/01/2026	
Rate	Fringe	Total	Total	Total
76.05	37.33	113.38	117.66	121.78

CLASSIFICATIONS:

Top Labor Foreman

Effective Dates:

04/17/2024		03/01/2025	03/01/2026	
Rate	Fringe	Total	Total	Total
75.53	37.33	112.86	117.13	121.26

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:

04/17/2024		03/01/2025	03/01/2026	
Rate	Fringe	Total	Total	Total
75.30	37.33	112.63	116.91	121.03

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)

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:

04/17/2024		03/01/2025	03/01/2026	
Rate	Fringe	Total	Total	Total
74.70	37.33	112.03	116.31	120.43

CLASSIFICATIONS:

All others (including Powder Watchman, Change House Attendant, Top Laborer, Job Steward)

From:	<u>no-reply@dol.nj.gov</u>
То:	MaryAnn Brennan
Subject:	Prevailing Wage Rate Determination Confirmation No. 81243
Date:	Friday, September 6, 2024 11:13:58 AM

*** CAUTION ***

This message came from an EXTERNAL address. DO NOT click on links or attachments unless you know the sender and the content is safe. If suspicious forward the message to pcsupport@ucnj.org

Thank you for requesting an Official Prevailing Wage Rate Determination from the New Jersey Department of Labor and Workforce Development, Division of Wage and Hour Compliance.

The official prevailing wage rate determination details are displayed below. You may also view these details at any time by visiting <u>WageRatesConf.shtml</u> and entering the confirmation number.

Confirmation No.: 81243 Date of Determination: 09/06/2024 11:13:55

Below is the list of attachm	ents included in the official wage rate	
determination:		
UNION	241103828-union-8-28-24.pdf	
STATE WIDE RATES	185095718-statewide-7-3-24.pdf	
PWConfirmation.PDF	PWConfirmation.pdf	
Public Body Awarding the	Contract	
Name:County of Union FEI	N: XXXXX2481	
Street: 2325 south ave		
City: Scotch Plains State &	Zip: NJ 07076	
Project No.:		
Requesting Officer		
First Name: Maryann		
Last Name: Brennan		
Title:		
Company Name: County of	Union	
Phone No.: 908-789-3652 Ext. Email: maryann.brennan@ucnj.org		
Street: 2325 south ave		
City: Scotch Plains State &	Zip: NJ 07076	

Contractor Who is Being Awarded the Contract
Company Name: tbd
FEIN:
Contact First Name:
Contact Last Name:
Street:
City: State & Zip: NJ
Contract Amount: \$
Location Where Work Will Be Performed
Street:
City: Elizabeth
Description of Work: abatement and fire sprinkers installation

If any of the links/attachments are not working, please forward this email to PWRIssues@dol.nj.gov and explain which of the links/attachments are not working. Please note that this email address is for online technical issues only; any law or wage rate questions sent to this email address cannot be answered and will be deleted.

For additional information about Prevailing Wage Rate Determinations, please go online at <u>Prevailing Wage Rates on Construction-Related Public Works Projects.</u>

Sincerely,

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

Tel. (609) 292-2259 Fax (609) 695-1174

ADVISORY: 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 work requiring the payment of the prevailing wage, unless the contractor or subcontractor is registered pursuant to that act. To verify a contractor/sub-contractor's registration, go online at <u>www.nj.gov/labor</u> (click on Worker Protections, then Wage & Hour Compliance, then Looking for a Registered Public Works Contractor?).

SECTION 01 10 00 - SUMMARY

PART 1 GENERAL

1.1 PROJECT

- A. Project Name: Second Floor Annex Asbestos Abatement and Renovations for the County of Union.
- B. Owner's Name: County of Union.
- C. Architect's Name: USA Architects Planners and Interior Designers, Ltd.
- D. The Project consists of Asbestos Abatement, Fire Sprinkler Installation and Renovations at the Second Floor New Annex Building at Union County.
- 1.2 CONTRACT DESCRIPTION
 - A. Contract Type: A single prime contract based on a Stipulated Price.
- 1.3 OWNER OCCUPANCY
 - A. Owner intends to continue to occupy adjacent portions of the existing building during the entire construction period.
 - B. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.
 - C. Schedule the Work to accommodate Owner occupancy.
- 1.4 CONTRACTOR USE OF SITE AND PREMISES
 - A. Construction Operations: Limited to areas noted on Drawings.
 - 1. Locate and conduct construction activities in ways that will limit disturbance to site.
 - B. Arrange use of site and premises to allow:
 - 1. Owner occupancy.
 - 2. Work by Others.
 - 3. Work by Owner.
 - 4. Use of site and premises by the public.
 - C. Provide access to and from site as required by law and by Owner:
 - 1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.

Renovations, Elevator Modernization, Asbestos Abatement and Fire Sprinkle Installation at the New Annex Building for the County of Union

- 2. Do not obstruct roadways, sidewalks, or other public ways without permit.
- D. Existing building spaces may not be used for storage.
- E. Smoking is prohibited within the building and within 25 feet of entries, outdoor air intakes, and operable windows.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 21 00 - ALLOWANCES

PART 1 GENERAL

- 1.1 SECTION INCLUDES
 - A. Contingency allowance.
- 1.2 CONTINGENCY ALLOWANCE
 - A. Contractor's costs for products, delivery, installation, labor, insurance, payroll, taxes, bonding, equipment rental, overhead and profit will be included in Change Orders authorizing expenditure of funds from this Contingency Allowance.
 - B. Funds will be drawn from the Contingency Allowance only by Change Order using a Contract Modification form provided by the County.
 - C. At closeout of Contract, funds remaining in Contingency Allowance will be credited to Owner by Change Order.
- 1.3 ALLOWANCES SCHEDULE
 - A. Contingency Allowance: Include the stipulated sum as indicated on the Bid Form for use upon Owner's instructions.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 25 00 - SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Procedural requirements for proposed substitutions.

1.2 DEFINITIONS

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

1.3 REFERENCE STANDARDS

A. CSI/CSC Form 13.1A - Substitution Request (After the Bidding/Negotiating Phase); Current Edition.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

- A. A Substitution Request for products, assemblies, materials, and equipment constitutes a representation that the submitter:
 - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product, equipment, assembly, or system.
 - 2. Agrees to provide the same warranty for the substitution as for the specified product.
 - 3. Agrees to provide same or equivalent maintenance service and source of replacement parts, as applicable.
 - 4. Agrees to coordinate installation and make changes to other work that may be required for the work to be complete, with no additional cost to Owner.

for the County of Union

- 5. Waives claims for additional costs or time extension that may subsequently become apparent.
 - a. Waiver includes claims related to providing custom aesthetic effects, colors, or finishes to meet the intent expressed in the Contract Documents.
- 6. Agrees to reimburse Owner and Architect for review or redesign services associated with re-approval by authorities.
- B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents. Burden of proof is on proposer.
 - 1. Note explicitly any non-compliant characteristics.
- C. Content: Include information necessary for tracking the status of each Substitution Request, and information necessary to provide an actionable response.
 - 1. Contractor's Substitution Request documentation must include the following:
 - a. Project Information:
 - 1) Official project name and number.
 - 2) Owner's, Architect's, and Contractor's names.
 - b. Substitution Request Information:
 - 1) Discrete and consecutive Substitution Request number, and descriptive subject/title.
 - 2) Indication of whether the substitution is for cause or convenience.
 - 3) Issue date.
 - 4) Reference to particular Contract Document(s) specification section number, title, and article/paragraph(s).
 - 5) Description of Substitution.
 - 6) Reason why the specified item cannot be provided.
 - 7) Differences between proposed substitution and specified item.
 - 8) Description of how proposed substitution affects other parts of work.
 - c. Attached Comparative Data: Provide point-by-point, side-by-side comparison addressing essential attributes specified, as appropriate and relevant for the item:
 - 1) Physical characteristics.
 - 2) In-service performance.
 - 3) Expected durability.
 - 4) Visual effect.
 - 5) Sustainable design features.
 - 6) Warranties.
 - 7) Other salient features and requirements.
 - 8) Include, as appropriate or requested, the following types of documentation:
 - (a) Product Data:
 - (b) Samples.
 - (c) Certificates, test, reports or similar qualification data.
 - (d) Drawings, when required to show impact on adjacent construction elements.
 - d. Impact of Substitution:

- 1) Savings to Owner for accepting substitution.
- 2) Change to Contract Time due to accepting substitution.
- D. Limit each request to a single proposed substitution item.
 - 1. Submit an electronic document, combining the request form with supporting data into single document.

3.2 SUBSTITUTION PROCEDURES DURING CONSTRUCTION

- A. Submittal Form (after award of contract):
 - 1. Submit substitution requests by completing CSI/CSC Form 13.1A Substitution Request. See this form for additional information and instructions.
 - 2. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to Architect for approval.
- B. Submit request for Substitution for Cause within 14 days of discovery of need for substitution, but not later than 14 days prior to time required for review and approval by Architect, in order to stay on approved project schedule.
- C. Submit request for Substitution for Convenience within 14 days of discovery of its potential advantage to the project or the date of Commencement of the Work, whichever is later, but not later than 14 days prior to time required for review and approval by Architect, in order to stay on approved project schedule.
 - 1. In addition to meeting general documentation requirements, document how the requested substitution benefits the Owner through cost savings, time savings, greater energy conservation, or in other specific ways.
 - 2. Document means of coordinating of substitution item with other portions of the work, including work by affected subcontractors.
 - 3. Bear the costs engendered by proposed substitution of:
 - a. Owner's compensation to the Architect for any required redesign, time spent processing and evaluating the request.
 - b. Other construction by Owner.
 - c. Other unanticipated project considerations.
- D. Substitutions will not be considered under one or more of the following circumstances:
 - 1. When they are indicated or implied on shop drawing or product data submittals, without having received prior approval.
 - 2. Without a separate written request.
 - 3. When acceptance will require revisions to Contract Documents.

3.3 RESOLUTION

A. Architect may request additional information and documentation prior to rendering a decision. Provide this data in an expeditious manner.

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- B. Architect will notify Contractor in writing of decision to accept or reject request.
 - 1. Architect's decision following review of proposed substitution will be noted on the submitted form.
- 3.4 ACCEPTANCE
 - A. Accepted substitutions change the work of the Project. They will be documented and incorporated into work of the project by Change Order, Construction Change Directive, Architectural Supplementary Instructions, or similar instruments provided for in the Conditions of the Contract.
- 3.5 CLOSEOUT ACTIVITIES
 - A. Include completed Substitution Request Forms as part of the Project record.

END OF SECTION

SECTION 01 30 00 - ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. General administrative requirements.
- B. Preconstruction meeting.
- C. Site mobilization meeting.
- D. Progress meetings.
- E. Number of copies of submittals.
- F. Requests for Information (RFI) procedures.
- G. Submittal procedures.
- 1.2 RELATED REQUIREMENTS
 - A. Section 01 60 00 Product Requirements: General product requirements.
 - B. Section 01 70 00 Execution and Closeout Requirements: Additional coordination requirements.
- 1.3 GENERAL ADMINISTRATIVE REQUIREMENTS
 - A. Comply with requirements of Section 01 70 00 Execution and Closeout Requirements for coordination of execution of administrative tasks with timing of construction activities.
 - B. Make the following types of submittals to Architect:
 - 1. Requests for Interpretation (RFI).
 - 2. Requests for substitution.
 - 3. Shop drawings, product data, and samples.
 - 4. Test and inspection reports.
 - 5. Design data.
 - 6. Manufacturer's instructions and field reports.
 - 7. Applications for payment and change order requests.
 - 8. Progress schedules.
 - 9. Coordination drawings.
 - 10. Correction Punch List and Final Correction Punch List for Substantial Completion.
 - 11. Closeout submittals.

Administrative Requirements

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PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.1 PRECONSTRUCTION MEETING

- A. Attendance Required:
 - 1. Owner.
 - 2. Architect.
 - 3. Contractor.
- B. Agenda:
 - 1. Execution of Owner-Contractor Agreement.
 - 2. Submission of executed bonds and insurance certificates.
 - 3. Distribution of Contract Documents.
 - 4. Submission of schedule of values, and progress schedule.
 - 5. Designation of personnel representing the parties to Contract and <1|A/E|>.
 - 6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
 - 7. Scheduling.
- C. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.
- 3.2 SITE MOBILIZATION MEETING
 - A. Architect will schedule meeting at the Project site prior to Contractor occupancy.
 - B. Meeting may be conducted as part of the Preconstruction Meeting.
 - C. Attendance Required:
 - 1. Contractor.
 - 2. Owner.
 - 3. Architect.
 - 4. Contractor's superintendent.
 - 5. Major subcontractors.
 - D. Agenda:
 - 1. Use of premises by Owner and Contractor.
 - 2. Owner's requirements.
 - 3. Construction facilities and controls provided by Owner.
 - 4. Temporary utilities provided by Owner.

Administrative Requirements

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- 5. Survey and building layout.
- 6. Security and housekeeping procedures.
- 7. Schedules.
- 8. Application for payment procedures.
- 9. Procedures for testing.
- 10. Procedures for maintaining record documents.
- 11. Requirements for start-up of equipment.
- 12. Inspection and acceptance of equipment put into service during construction period.
- E. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.3 PROGRESS MEETINGS

- A. Attendance Required:
 - 1. Contractor.
 - 2. Owner.
 - 3. Architect.
 - 4. Contractor's superintendent.
 - 5. Major subcontractors.
- B. Agenda:
 - 1. Review minutes of previous meetings.
 - 2. Review of work progress.
 - 3. Field observations, problems, and decisions.
 - 4. Identification of problems that impede, or will impede, planned progress.
 - 5. Review of submittals schedule and status of submittals.
 - 6. Review of RFIs log and status of responses.
 - 7. Review of off-site fabrication and delivery schedules.
 - 8. Maintenance of progress schedule.
 - 9. Corrective measures to regain projected schedules.
 - 10. Planned progress during succeeding work period.
 - 11. Coordination of projected progress.
 - 12. Maintenance of quality and work standards.
 - 13. Effect of proposed changes on progress schedule and coordination.
 - 14. Other business relating to work.
- C. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.4 PREINSTALLATION MEETINGS - SEE SECTION **01 70 00.**

3.5 **REQUESTS FOR INFORMATION (RFI)**

A. Definition: A request seeking one of the following:

- 1. An interpretation, amplification, or clarification of some requirement of Contract Documents arising from inability to determine from them the exact material, process, or system to be installed; or when the elements of construction are required to occupy the same space (interference); or when an item of work is described differently at more than one place in Contract Documents.
- 2. A resolution to an issue which has arisen due to field conditions and affects design intent.
- B. Whenever possible, request clarifications at the next appropriate project progress meeting, with response entered into meeting minutes, rendering unnecessary the issuance of a formal RFI.
- C. Preparation: Prepare an RFI immediately upon discovery of a need for interpretation of Contract Documents. Failure to submit a RFI in a timely manner is not a legitimate cause for claiming additional costs or delays in execution of the work.
 - 1. Prepare a separate RFI for each specific item.
 - a. Review, coordinate, and comment on requests originating with subcontractors and/or materials suppliers.
 - b. Do not forward requests which solely require internal coordination between subcontractors.
 - 2. Prepare in a format and with content acceptable to Owner.
 - 3. Combine RFI and its attachments into a single electronic file. PDF format is preferred.
- D. Reason for the RFI: Prior to initiation of an RFI, carefully study all Contract Documents to confirm that information sufficient for their interpretation is definitely not included.
 - 1. Include in each request Contractor's signature attesting to good faith effort to determine from Contract Documents information requiring interpretation.
 - 2. Unacceptable Uses for RFIs: Do not use RFIs to request the following::
 - a. Approval of submittals (use procedures specified elsewhere in this section).
 - b. Approval of substitutions (see Section 01 60 00 Product Requirements)
 - c. Changes that entail change in Contract Time and Contract Sum (comply with provisions of the Conditions of the Contract).
 - d. Different methods of performing work than those indicated in the Contract Drawings and Specifications (comply with provisions of the Conditions of the Contract).
 - 3. Improper RFIs: Requests not prepared in compliance with requirements of this section, and/or missing key information required to render an actionable response. They will be returned without a response, with an explanatory notation.
 - 4. Frivolous RFIs: Requests regarding information that is clearly indicated on, or reasonably inferable from, Contract Documents, with no additional input required to clarify the question. They will be returned without a response, with an explanatory notation.
- E. Content: Include identifiers necessary for tracking the status of each RFI, and information necessary to provide an actionable response.

for the County of Union

- 1. Official Project name and number, and any additional required identifiers established in Contract Documents.
- 2. Owner's, Architect's, and Contractor's names.
- 3. Discrete and consecutive RFI number, and descriptive subject/title.
- 4. Issue date, and requested reply date.
- 5. Reference to particular Contract Document(s) requiring additional information/interpretation. Identify pertinent drawing and detail number and/or specification section number, title, and paragraph(s).
- 6. Annotations: Field dimensions and/or description of conditions which have engendered the request.
- 7. Contractor's suggested resolution: A written and/or a graphic solution, to scale, is required in cases where clarification of coordination issues is involved, for example; routing, clearances, and/or specific locations of work shown diagrammatically in Contract Documents. If applicable, state the likely impact of the suggested resolution on Contract Time or the Contract Sum.
- F. Attachments: Include sketches, coordination drawings, descriptions, photos, submittals, and other information necessary to substantiate the reason for the request.

3.6 SUBMITTAL SCHEDULE

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

3.7 NUMBER OF COPIES OF SUBMITTALS

A. Electronic Documents: Submit one electronic copy in PDF format; an electronically-marked up file will be returned. Create PDFs at native size and right-side up; illegible files will be rejected.

3.8 SUBMITTAL REVIEW

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

- B. Submittals for Information: Architect will acknowledge receipt and review. See below for actions to be taken.
- C. Architect's actions will be reflected by marking each returned submittal using virtual stamp on electronic submittals.
 - 1. Notations may be made directly on submitted items and/or listed on appended Submittal Review cover sheet.
- D. Architect's and consultants' actions on items submitted for review:
 - 1. Authorizing purchasing, fabrication, delivery, and installation:
 - a. "Approved", or language with same legal meaning.
 - b. "Approved as Noted, Resubmission not required", or language with same legal meaning.
 - 1) At Contractor's option, submit corrected item, with review notations acknowledged and incorporated.
 - c. "Approved as Noted, Resubmit for Record", or language with same legal meaning.
 - 1) Resubmit corrected item, with review notations acknowledged and incorporated. Resubmit separately, or as part of project record documents.
 - 2) Non-responsive resubmittals may be rejected.
 - Not Authorizing fabrication, delivery, and installation:
 - a. "Revise and Resubmit".
 - 1) Resubmit revised item, with review notations acknowledged and incorporated.
 - 2) Non-responsive resubmittals may be rejected.
 - b. "Rejected".
 - 1) Submit item complying with requirements of Contract Documents.
- E. Architect's and consultants' actions on items submitted for information:
 - 1. Items for which no action was taken:
 - a. "Received" to notify the Contractor that the submittal has been received for record only.
 - 2. Items for which action was taken:
 - a. "Reviewed" no further action is required from Contractor.

END OF SECTION

2.

SECTION 01 32 16 - CONSTRUCTION PROGRESS SCHEDULE

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Preliminary schedule.
- B. Construction progress schedule, with network analysis diagrams and reports.

1.2 SUBMITTALS

- A. Within 10 days after date of Commencement of the Work, submit preliminary schedule defining planned operations for the first 60 days of Work, with a general outline for remainder of Work.
- B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.
- C. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
 - 1. Include written certification that major contractors have reviewed and accepted proposed schedule.
- D. Within 10 days after joint review, submit complete schedule.
- E. Submit updated schedule with each Application for Payment.

1.3 SCHEDULE FORMAT

A. Listings: In chronological order according to the start date for each activity. Identify each activity with the applicable specification section number.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

- 3.1 PRELIMINARY SCHEDULE
 - A. Prepare preliminary schedule in the form of a horizontal bar chart.

3.2 CONTENT

- A. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction.
- B. Identify each item by specification section number.
- C. Provide sufficient detail so that no activity exceeds five percent of the Contract Sum.
- D. Identify work of separate stages and other logically grouped activities.
- E. Show accumulated percentage of completion of each item, and total percentage of Work completed, as of the first day of each month.
- F. Coordinate content with schedule of values specified in Section 01 20 00 Price and Payment Procedures.
- G. Provide legend for symbols and abbreviations used.

3.3 NETWORK ANALYSIS

- A. Prepare network analysis diagrams and supporting mathematical analyses using the Critical Path Method.
- B. Illustrate order and interdependence of activities and sequence of work; how start of a given activity depends on completion of preceding activities, and how completion of the activity may restrain start of subsequent activities.
- C. Mathematical Analysis: Tabulate each activity of detailed network diagrams, using calendar dates, and identify for each activity:
 - 1. Preceding and following event numbers.
 - 2. Activity description.
 - 3. Estimated duration of activity, in maximum 15 day intervals.
 - 4. Earliest start date.
 - 5. Earliest finish date.
 - 6. Actual start date.
 - 7. Actual finish date.
 - 8. Latest start date.
 - 9. Latest finish date.
 - 10. Total and free float; float time shall accrue to Owner and to Owner's benefit.
 - 11. Monetary value of activity, keyed to Schedule of Values.
 - 12. Percentage of activity completed.
 - 13. Responsibility.

- D. Analysis Program: Capable of compiling monetary value of completed and partially completed activities, accepting revised completion dates, and recomputation of all dates and float.
- E. Required Reports: List activities in sorts or groups:
 - 1. By preceding work item or event number from lowest to highest.
 - 2. By amount of float, then in order of early start.
- 3.4 REVIEW AND EVALUATION OF SCHEDULE
 - A. Participate in joint review and evaluation of schedule with Architect at each submittal.
 - B. Evaluate project status to determine work behind schedule and work ahead of schedule.
 - C. After review, revise as necessary as result of review, and resubmit within 10 days.
- 3.5 UPDATING SCHEDULE
 - A. Save baseline schedule for comparison to future schedules.
 - B. Maintain schedules to record actual start and finish dates of completed activities.
 - C. Indicate progress of each activity to date of revision, with projected completion date of each activity.
 - D. Annotate diagrams to graphically depict current status of Work.
 - E. Identify activities modified since previous submittal, major changes in Work, and other identifiable changes.
 - F. Indicate changes required to maintain Date of Substantial Completion.
 - G. Submit reports required to support recommended changes.
 - H. Provide narrative report to define problem areas, anticipated delays, and impact on the schedule. Report corrective action taken or proposed and its effect.
- 3.6 DISTRIBUTION OF SCHEDULE
 - A. Distribute copies of updated schedules to Contractor's project site file, to subcontractors, suppliers, Architect, Owner, and other concerned parties.
 - B. Instruct recipients to promptly report, in writing, problems anticipated by projections indicated in schedules.

END OF SECTION

SECTION 01 40 00 - QUALITY REQUIREMENTS

PART 1 GENERAL

- 1.1 SECTION INCLUDES
 - A. Submittals.
 - B. Quality assurance.
 - C. References and standards.
 - D. Testing and inspection agencies and services.
 - E. Control of installation.
 - F. Mock-ups.
 - G. Tolerances.
 - H. Manufacturers' field services.
 - I. Defect Assessment.
- 1.2 RELATED REQUIREMENTS
 - A. Section 01 30 00 Administrative Requirements: Submittal procedures.
 - B. Section 01 42 16 Definitions.
 - C. Section 01 42 19 Reference Standards.
 - D. Section 01 60 00 Product Requirements: Requirements for material and product quality.
- 1.3 REFERENCE STANDARDS
 - A. ASTM C1021 Standard Practice for Laboratories Engaged in Testing of Building Sealants; 2008 (Reapproved 2023).
 - B. ASTM C1077 Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation; 2024.
 - C. ASTM C1093 Standard Practice for Accreditation of Testing Agencies for Masonry; 2023.

- D. ASTM D3740 Standard Practice for Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction; 2023.
- E. ASTM E329 Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection; 2023.
- F. ASTM E543 Standard Specification for Agencies Performing Nondestructive Testing; 2021.
- G. ASTM E699 Standard Specification for Agencies Involved in Testing, Quality Assurance, and Evaluating of Manufactured Building Components; 2016.
- H. IAS AC89 Accreditation Criteria for Testing Laboratories; 2018.

1.4 DEFINITIONS

- A. Contractor's Professional Design Services: Design of some aspect or portion of the project by party other than the design professional of record. Provide these services as part of the Contract for Construction.
 - 1. Design Services Types Required:
 - a. Construction-Related: Services Contractor needs to provide in order to carry out the Contractor's sole responsibilities for construction means, methods, techniques, sequences, and procedures.
 - b. Design-Related: Design services explicitly required to be performed by another design professional due to highly-technical and/or specialized nature of a portion of the project. Services primarily involve engineering analysis, calculations, and design, and are not intended to alter the aesthetic aspects of the design.
- B. Design Data: Design-related, signed and sealed drawings, calculations, specifications, certifications, shop drawings and other submittals provided by Contractor, and prepared directly by, or under direct supervision of, appropriately licensed design professional.

1.5 SUBMITTALS

- A. See Section 01 30 00 Administrative Requirements, for submittal procedures.
- B. Test Reports: After each test/inspection, promptly submit two copies of report to Architect and to Contractor.
 - 1. Include:
 - a. Date issued.
 - b. Project title and number.
 - c. Name of inspector.
 - d. Date and time of sampling or inspection.
 - e. Identification of product and specifications section.
 - f. Location in the Project.

- g. Type of test/inspection.
- h. Date of test/inspection.
- i. Results of test/inspection.
- j. Compliance with Contract Documents.
- k. When requested by Architect, provide interpretation of results.
- 2. Test report submittals are for Architect's knowledge as contract administrator for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents, or for Owner's information.
- C. Certificates: When specified in individual specification sections, submit certification by the manufacturer and Contractor or installation/application subcontractor to Architect, in quantities specified for Product Data.
 - 1. Indicate material or product complies with or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
 - 2. Certificates may be recent or previous test results on material or product, but must be acceptable to Architect.
- D. Manufacturer's Instructions: When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for the Owner's information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.
- E. Manufacturer's Field Reports: Submit reports for Architect's benefit as contract administrator or for Owner.
 - 1. Submit report within 30 days of observation to Architect for information.
 - 2. Submit for information for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents.
- F. Erection Drawings: Submit drawings for Architect's benefit as contract administrator or for Owner.
 - 1. Submit for information for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents.
 - 2. Data indicating inappropriate or unacceptable Work may be subject to action by Architect or Owner.

1.6 QUALITY ASSURANCE

- A. Testing Agency Qualifications:
 - 1. Prior to start of work, submit agency name, address, and telephone number, and names of full time registered Engineer and responsible officer.
 - 2. Submit copy of report of laboratory facilities inspection made by NIST Construction Materials Reference Laboratory during most recent inspection, with memorandum of remedies of any deficiencies reported by the inspection.

- 3. Qualification Statement: Provide documentation showing testing laboratory is accredited under IAS AC89.
- B. Quality-Control Personnel Qualifications. Engage a person with requisite training and experience to implement and manage quality assurance (QA) and quality control (QC) for the project.

1.7 REFERENCES AND STANDARDS

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

1.8 TESTING AND INSPECTION AGENCIES AND SERVICES

- A. Contractor shall employ and pay for services of an independent testing agency to perform other specified testing.
- B. Employment of agency in no way relieves Contractor of obligation to perform Work in accordance with requirements of Contract Documents.
- C. Contractor Employed Agency:
 - 1. Testing agency: Comply with requirements of ASTM E329, ASTM E543, ASTM E699, ASTM C1021, ASTM C1077, ASTM C1093, and ASTM D3740.
 - 2. Laboratory Qualifications: Accredited by IAS according to IAS AC89.
 - 3. Laboratory: Authorized to operate in New Jersey.
 - 4. Laboratory Staff: Maintain a full time registered Engineer on staff to review services.
 - 5. Testing Equipment: Calibrated at reasonable intervals either by NIST or using an NIST established Measurement Assurance Program, under a laboratory measurement quality

assurance program.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

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

3.3 TOLERANCES

- A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Architect before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.
- 3.4 TESTING AND INSPECTION
 - A. See individual specification sections for testing and inspection required.

B. Testing Agency Duties:

- 1. Provide qualified personnel at site. Cooperate with Architect and Contractor in performance of services.
- 2. Perform specified sampling and testing of products in accordance with specified standards.
- 3. Ascertain compliance of materials and mixes with requirements of Contract Documents.
- 4. Promptly notify Architect and Contractor of observed irregularities or non-compliance of Work or products.
- 5. Perform additional tests and inspections required by Architect.
- 6. Submit reports of all tests/inspections specified.
- C. Limits on Testing/Inspection Agency Authority:
 - 1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
 - 2. Agency may not approve or accept any portion of the Work.
 - 3. Agency may not assume any duties of Contractor.
 - 4. Agency has no authority to stop the Work.
- D. Contractor Responsibilities:
 - 1. Deliver to agency at designated location, adequate samples of materials proposed to be used that require testing, along with proposed mix designs.
 - 2. Cooperate with laboratory personnel, and provide access to the Work and to manufacturers' facilities.
 - 3. Provide incidental labor and facilities:
 - a. To provide access to Work to be tested/inspected.
 - b. To obtain and handle samples at the site or at source of Products to be tested/inspected.
 - c. To facilitate tests/inspections.
 - d. To provide storage and curing of test samples.
 - 4. Notify Architect and laboratory 24 hours prior to expected time for operations requiring testing/inspection services.
 - 5. Employ services of an independent qualified testing laboratory and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
 - 6. Arrange with Owner's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
- E. Re-testing required because of non-compliance with specified requirements shall be performed by the same agency on instructions by Architect.
- F. Re-testing required because of non-compliance with specified requirements shall be paid for by Contractor.

3.5 MANUFACTURERS' FIELD SERVICES

- A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust, and balance equipment as applicable, and to initiate instructions when necessary.
- B. Submit qualifications of observer to Architect 30 days in advance of required observations.
 - 1. Observer subject to approval of Architect.
 - 2. Observer subject to approval of Owner.
- C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.
- 3.6 DEFECT ASSESSMENT
 - A. Replace Work or portions of the Work not complying with specified requirements.
 - B. If, in the opinion of Owner, it is not practical to remove and replace the work, Owner will direct an appropriate remedy or adjust payment.

END OF SECTION

SECTION 01 42 16 - DEFINITIONS

PART 1 GENERAL

1.1 SUMMARY

A. Other definitions are included in individual specification sections.

1.2 DEFINITIONS

- 1. Architect.
- 2. Change Order.
- 3. Claim.
- 4. Construction Change Directive.
- 5. Contract.
- 6. Contract Document.
- 7. Contract Sum.
- 8. Contract Time.
- 9. Contractor.
- 10. Date of Commencement of the Work.
- 11. day.
- 12. defective.
- 13. Drawings.
- 14. Instruments of Service.
- 15. Modification.
- 16. Owner.
- 17. Product Data.
- 18. Project.
- 19. Samples.
- 20. Separate Contractor.
- 21. Shop Drawings.
- 22. Specifications.
- 23. Subcontractor.
- 24. (Date of) Substantial Completion.
- 25. Sub-subcontractor.
- 26. Work.

B. Furnish: When referring to products, means to purchase and deliver.

- C. Install: When used in connection with "furnish," includes unloading (if not provided by delivery carrier), inspecting for damage, uncrating, and other handling at the site.
- D. Product: Material, machinery, components, equipment, fixtures, and systems forming the work result. Not materials or equipment used for preparation, fabrication, conveying, or erection and

not incorporated into the work result. Products may be new, never before used, or re-used materials or equipment.

- E. Provide: When referring to products, means to furnish and install.
- F. Shall: Must; be obliged to (expressing imperative mood, not future tense).
- G. Supply: To furnish and install.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 50 00 - TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Temporary telecommunications services.
- B. Temporary sanitary facilities.
- C. Temporary Controls: Barriers and enclosures.
- D. Security requirements.
- E. Waste removal facilities and services.
- 1.2 TEMPORARY UTILITIES SEE SECTION 01 51 00
 - A. Owner will provide the following:
 - 1. Electrical power and metering, consisting of connection to existing facilities.
 - 2. Water supply, consisting of connection to existing facilities.
- 1.3 TELECOMMUNICATIONS SERVICES
 - A. Provide, maintain, and pay for telecommunications services to field office at time of project mobilization.
 - B. Telecommunications services shall include:
 - 1. Telephone Land Lines: One line, minimum; one handset per line.
 - 2. Internet Connections: Minimum of one; 100 Mbps upload and download or faster.
 - 3. Data/phone jacks: Four minimum.
 - 4. WIFI: WPA2 security.

1.4 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.
- B. New permanent facilities may be used during construction operations.
- C. Maintain daily in clean and sanitary condition.
- D. At end of construction, return facilities to same or better condition as originally found.

1.5 BARRIERS

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

1.6 INTERIOR ENCLOSURES

- A. Provide temporary partitions and ceilings as indicated to separate work areas from Owneroccupied areas, to prevent penetration of dust and moisture into Owner-occupied areas, and to prevent damage to existing materials and equipment.
- B. Construction: Framing and reinforced polyethylene sheet materials with closed joints and sealed edges at intersections with existing surfaces:

1.7 WASTE REMOVAL

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

1.8 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities, materials, prior to Date of Substantial Completion inspection.
- B. Remove underground installations to a minimum depth of 2 feet. Grade site as indicated.
- C. Clean and repair damage caused by installation or use of temporary work.

Temporary Facilities and Controls

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D. Restore new permanent facilities used during construction to specified condition.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 51 00 - TEMPORARY UTILITIES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Temporary Utilities: Provision of electricity, lighting, heat, ventilation, and water.

1.2 RELATED REQUIREMENTS

- A. Section 01 50 00 Temporary Facilities and Controls:
 - 1. Temporary telecommunications services for administrative purposes.
 - 2. Temporary sanitary facilities required by law.

1.3 REFERENCE STANDARDS

A. 29 CFR 1926 - U.S. Occupational Safety and Health Standards; current edition.

1.4 TEMPORARY ELECTRICITY

- A. Cost: By Contractor. Due to current repairs being made to the existing main electrical power distribution system within the building, it is required that the contractor and/or their subcontractors obtain and provide the necessary power as required for this project from a temporary portable generator source, inclusive of all temporary wiring and existing electrical panels. The generator power supply is intended to be temporary in nature, until the building's existing power source is repaired, inspected and operational.
- B. Connect to Owner's existing power service, only when directed by Owner/Architect if and when existing main power distribution in the building has been repaired.
 - 1. Do not disrupt Owner's need for continuous service.
 - 2. Exercise measures to conserve energy.
- C. Provide temporary electric feeder from existing building electrical service at location as directed.
- D. Complement existing power service capacity and characteristics as required.
- E. Provide power outlets for construction operations, with branch wiring and distribution boxes located as required. Provide flexible power cords as required.
- F. Provide main service disconnect and over-current protection at convenient location and meter.
- G. Permanent convenience receptacles may be utilized during construction.
- H. Provide adequate distribution equipment, wiring, and outlets to provide single phase branch

Temporary Utilities

Renovations, Elevator Modernization, Asbestos Abatement

and Fire Sprinkler Installation

at the New Annex Building

for the County of Union

circuits for power and lighting.

- 1. Provide 20 ampere duplex outlets, single phase circuits for power tools for every 5000 sq ft of active work area.
- 2. Provide 20 ampere, single phase branch circuits for lighting.

1.5 TEMPORARY LIGHTING FOR CONSTRUCTION PURPOSES

- A. Provide and maintain LED, compact fluorescent, or high-intensity discharge lighting as suitable for the application for construction operations in accordance with requirements of 29 CFR 1926 and authorities having jurisdiction.
- B. Provide and maintain 1 watt/sq ft lighting to exterior staging and storage areas after dark for security purposes.
- C. Provide and maintain 0.25 watt/sq ft H.I.D. lighting to interior work areas after dark for security purposes.
- D. Provide branch wiring from power source to distribution boxes with lighting conductors, pigtails, and lamps as required.
- E. Maintain lighting and provide routine repairs.
- F. Permanent building lighting may be utilized during construction.
- 1.6 TEMPORARY VENTILATION
 - A. Utilize existing ventilation equipment. Extend and supplement equipment with temporary fan units as required to maintain clean air for construction operations.
- 1.7 TEMPORARY WATER SERVICE
 - A. Cost of Water Used: By Owner.
 - B. Provide and maintain suitable quality water service for construction operations at time of project mobilization.
 - C. Connect to existing water source.1. Exercise measures to conserve water.
 - D. Extend branch piping with outlets located so water is available by hoses with threaded connections. Provide temporary pipe insulation to prevent freezing.

SECTION 01 60 00 - PRODUCT REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Re-use of existing products.
- B. Transportation, handling, storage and protection.
- C. Product option requirements.
- D. Substitution limitations.
- E. Maintenance materials, including extra materials, spare parts, tools, and software.
- 1.2 RELATED REQUIREMENTS
 - A. Section 01 25 00 Substitution Procedures: Substitutions made during procurement and/or construction phases.
 - B. Section 01 40 00 Quality Requirements: Product quality monitoring.

1.3 SUBMITTALS

- A. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- B. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- C. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
 - 1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

PART 2 PRODUCTS

2.1 EXISTING PRODUCTS

- A. Do not use materials and equipment removed from existing premises unless specifically required or permitted by Contract Documents.
- B. Unforeseen historic items encountered remain the property of the Owner; notify Owner promptly upon discovery; protect, remove, handle, and store as directed by Owner.
- C. Existing materials and equipment indicated to be removed, but not to be re-used, relocated, reinstalled, delivered to the Owner, or otherwise indicated as to remain the property of the Owner, become the property of the Contractor; remove from site.
- 2.2 NEW PRODUCTS
 - A. Provide new products unless specifically required or permitted by Contract Documents.
 - B. VOC: Comply with the most stringent of federal, State, and local requirements, and these specifications.
 - C. Use of products having any of the following characteristics is not permitted unless specifically indicated otherwise:
 - 1. Made outside the United States, its territories, Canada, or Mexico.
 - 2. Made using or containing CFC's or HCFC's.
 - 3. Made of wood from newly cut old growth timber.
 - 4. Containing lead, cadmium, or asbestos.

2.3 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

2.4 MAINTENANCE MATERIALS

A. Furnish extra materials, spare parts, tools, and software of types and in quantities specified in individual specification sections.

B. Deliver to Project site; obtain receipt prior to final payment.

PART 3 EXECUTION

3.1 SUBSTITUTION LIMITATIONS

A. See Section 01 25 00 - Substitution Procedures.

3.2 TRANSPORTATION AND HANDLING

- A. Package products for shipment in manner to prevent damage; for equipment, package to avoid loss of factory calibration.
- B. If special precautions are required, attach instructions prominently and legibly on outside of packaging.
- C. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.
- D. Transport and handle products in accordance with manufacturer's instructions.
- E. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.
- F. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- G. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage, and to minimize handling.
- H. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

3.3 STORAGE AND PROTECTION

- A. Provide protection of stored materials and products against theft, casualty, or deterioration.
- B. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication.
 - 1. Structural Loading Limitations: Handle and store products and materials so as not to exceed static and dynamic load-bearing capacities of project floor and roof areas.
- C. Store and protect products in accordance with manufacturers' instructions.

- D. Store with seals and labels intact and legible.
- E. Arrange storage of materials and products to allow for visual inspection for the purpose of determination of quantities, amounts, and unit counts.
- F. Store sensitive products in weathertight, climate-controlled enclosures in an environment favorable to product.
- G. For exterior storage of fabricated products, place on sloped supports above ground.
- H. Provide off-site storage and protection when site does not permit on-site storage or protection.
- I. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.
- J. Comply with manufacturer's warranty conditions, if any.
- K. Do not store products directly on the ground.
- L. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- M. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- N. Prevent contact with material that may cause corrosion, discoloration, or staining.
- O. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- P. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

END OF SECTION

SECTION 01 70 00 - EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Examination, preparation, and general installation procedures.
- B. Requirements for alterations work, including selective demolition.
- C. Pre-installation meetings.
- D. Cutting and patching.
- E. Cleaning and protection.
- F. Closeout procedures, including Contractor's Correction Punch List, except payment procedures.
- G. General requirements for maintenance service.

1.2 RELATED REQUIREMENTS

- A. Section 01 30 00 Administrative Requirements: Submittals procedures.
- B. Section 01 40 00 Quality Requirements: Testing and inspection procedures.
- C. Section 01 50 00 Temporary Facilities and Controls: Temporary interior partitions.
- D. Section 01 76 10 Temporary Protective Coverings: Materials for protection of installed work.
- E. Section 01 78 00 Closeout Submittals: Project record documents, operation and maintenance data, warranties.

1.3 SUBMITTALS

- A. See Section 01 30 00 Administrative Requirements, for submittal procedures.
- B. Cutting and Patching: Submit written request in advance of cutting or alteration that affects:
 - 1. Structural integrity of any element of Project.
 - 2. Integrity of weather exposed or moisture resistant element.
 - 3. Efficiency, maintenance, or safety of any operational element.
 - 4. Visual qualities of sight exposed elements.
 - 5. Work of Owner or separate Contractor.

C. Project Record Documents: Accurately record actual locations of capped and active utilities.

1.4 PROJECT CONDITIONS

- A. Use of explosives is not permitted.
- B. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.
- C. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere and over adjacent property.
 - 1. Provide dust-proof enclosures to prevent entry of dust generated outdoors.
 - 2. Provide dust-proof barriers between construction areas and areas continuing to be occupied by Owner.
- D. Noise Control: Provide methods, means, and facilities to minimize noise produced by construction operations.
 - 1. During Owner Occupancy: Excessively noisy tools and operations will not be tolerated inside the building; excessively noisy includes jackhammers.

1.5 COORDINATION

- A. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- B. Coordinate space requirements, supports, and installation of mechanical and electrical work that are indicated diagrammatically on drawings. Follow routing indicated for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- C. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
- D. Coordinate completion and clean-up of work of separate sections.
- E. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

PART 2 PRODUCTS

2.1 PATCHING MATERIALS

- A. New Materials: As specified in product sections; match existing products and work for patching and extending work.
- B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.
- C. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 01 60 00 Product Requirements.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.
- E. Verify that utility services are available, of the correct characteristics, and in the correct locations.
- F. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.
- 3.2 PREPARATION
 - A. Clean substrate surfaces prior to applying next material or substance.
 - B. Seal cracks or openings of substrate prior to applying next material or substance.

C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.3 PREINSTALLATION MEETINGS

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

3.4 GENERAL INSTALLATION REQUIREMENTS

- A. In addition to compliance with regulatory requirements, conduct construction operations in compliance with NFPA 241, including applicable recommendations in Appendix A.
- B. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.
- C. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
- D. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
- E. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
- F. Make neat transitions between different surfaces, maintaining texture and appearance.
- 3.5 RENOVATIONS
 - A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
 - 1. Verify that construction and utility arrangements are as indicated.
 - 2. Report discrepancies to Architect before disturbing existing installation.
 - 3. Beginning of renovation work constitutes acceptance of existing conditions.

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- B. Keep areas in which alterations are being conducted separated from other areas that are still occupied.
 - 1. Provide, erect, and maintain temporary dustproof partitions of construction specified in Section 01 50 00 .
- C. Remove existing work as indicated and as required to accomplish new work.
 - 1. Remove rotted wood, corroded metals, and deteriorated masonry and concrete; replace with new construction specified.
 - 2. Remove items indicated on drawings.
 - 3. Relocate items indicated on drawings.
 - 4. Where new surface finishes are to be applied to existing work, perform removals, patch, and prepare existing surfaces as required to receive new finish; remove existing finish if necessary for successful application of new finish.
 - 5. Where new surface finishes are not specified or indicated, patch holes and damaged surfaces to match adjacent finished surfaces as closely as possible.
- D. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications): Remove, relocate, and extend existing systems to accommodate renovated work.
 - 1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components; if necessary, modify installation to allow access or provide access panel.
 - 2. Where existing systems or equipment are not active and Contract Documents require reactivation, put back into operational condition; repair supply, distribution, and equipment as required.
 - 3. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
 - a. Disable existing systems only to make switchovers and connections; minimize duration of outages.
 - b. Provide temporary connections as required to maintain existing systems in service.
 - 4. Verify that abandoned services serve only abandoned facilities.
 - 5. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification; patch holes left by removal using materials specified for new construction.
- E. Protect existing work to remain.
 - 1. Prevent movement of structure; provide shoring and bracing if necessary.
 - 2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
 - 3. Repair adjacent construction and finishes damaged during removal work.
- F. Adapt existing work to fit new work: Make as neat and smooth transition as possible.

- 1. When existing finished surfaces are cut so that a smooth transition with new work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendation to Architect.
- 2. Where removal of partitions or walls results in adjacent spaces becoming one, rework floors, walls, and ceilings to a smooth plane without breaks, steps, or bulkheads.
- 3. Where a change of plane of 1/4 inch or more occurs in existing work, submit recommendation for providing a smooth transition for Architect review and request instructions.
- 4. Trim existing wood doors as necessary to clear new floor finish. Refinish trim as required.
- G. Patching: Where the existing surface is not indicated to be refinished, patch to match the surface finish that existed prior to cutting. Where the surface is indicated to be refinished, patch so that the substrate is ready for the new finish.
- H. Refinish existing surfaces as indicated:
 - 1. Where rooms or spaces are indicated to be refinished, refinish all visible existing surfaces to remain to the specified condition for each material, with a neat transition to adjacent finishes.
 - 2. If mechanical or electrical work is exposed accidentally during the work, re-cover and refinish to match.
- I. Clean existing systems and equipment.
- J. Remove demolition debris and abandoned items from alterations areas and dispose of off-site; do not burn or bury.
- K. Do not begin new construction in renovatiion areas before demolition is complete.
- L. Comply with all other applicable requirements of this section.

3.6 CUTTING AND PATCHING

- A. Whenever possible, execute the work by methods that avoid cutting or patching.
- B. See Renovation article above for additional requirements.
- C. Perform whatever cutting and patching is necessary to:
 - 1. Complete the work.
 - 2. Fit products together to integrate with other work.
 - 3. Provide openings for penetration of mechanical, electrical, and other services.
 - 4. Match work that has been cut to adjacent work.
 - 5. Repair areas adjacent to cuts to required condition.
 - 6. Repair new work damaged by subsequent work.
 - 7. Remove samples of installed work for testing when requested.
 - 8. Remove and replace defective and non-complying work.

Execution and Closeout Requirements

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- D. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.
- E. Employ skilled and experienced installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
- F. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
- G. Restore work with new products in accordance with requirements of Contract Documents.
- H. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- I. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material in accordance with Section 07 84 00, to full thickness of the penetrated element.
- J. Patching:
 - 1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
 - 2. Match color, texture, and appearance.
 - 3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

3.7 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.
- C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
- D. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.
- 3.8 PROTECTION OF INSTALLED WORK
 - A. See Section 01 76 10 for temporary protective covering materials.

Execution and Closeout Requirements

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

3.9 ADJUSTING

- A. Adjust operating products and equipment to ensure smooth and unhindered operation.
- 3.10 FINAL CLEANING
 - A. Execute final cleaning after Substantial Completion but before making final application for payment.
 - B. Use cleaning materials that are nonhazardous.
 - C. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
 - D. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.
 - E. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.
 - F. Clean filters of operating equipment.
 - G. Clean debris from roofs, gutters, downspouts, scuppers, overflow drains, area drains, and drainage systems.

- H. Clean site; sweep paved areas, rake clean landscaped surfaces.
- I. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.
- 3.11 CLOSEOUT PROCEDURES
 - A. Make submittals that are required by governing or other authorities.1. Provide copies to Architect and Owner.
 - B. Accompany Project Coordinator on preliminary inspection to determine items to be listed for completion or correction in the Contractor's Correction Punch List for Contractor's Notice of Substantial Completion.
 - C. Notify Architect when work is considered ready for Architect's Substantial Completion inspection.
 - D. Submit written certification containing Contractor's Correction Punch List, that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Architect's Substantial Completion inspection.
 - E. Owner will occupy all of the building as specified in Section 01 10 00.
 - F. Conduct Substantial Completion inspection and create Final Correction Punch List containing Architect's and Contractor's comprehensive list of items identified to be completed or corrected and submit to Architect.
 - G. Correct items of work listed in Final Correction Punch List and comply with requirements for access to Owner-occupied areas.
 - H. Notify Architect when work is considered finally complete and ready for Architect's Substantial Completion final inspection.
 - I. Complete items of work determined by Architect listed in executed Certificate of Substantial Completion.
- 3.12 MAINTENANCE
 - A. Provide service and maintenance of components indicated in specification sections.
 - B. Maintenance Period: As indicated in specification sections or, if not indicated, not less than one year from the Date of Substantial Completion or the length of the specified warranty, whichever is longer.

- C. Examine system components at a frequency consistent with reliable operation. Clean, adjust, and lubricate as required.
- D. Include systematic examination, adjustment, and lubrication of components. Repair or replace parts whenever required. Use parts produced by the manufacturer of the original component.
- E. Maintenance service shall not be assigned or transferred to any agent or subcontractor without prior written consent of the Owner.

SECTION 01 76 10 - TEMPORARY PROTECTIVE COVERINGS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Temporary protective coverings for installed floors, walls, and other surfaces.
- 1.2 REFERENCE STANDARDS
 - A. ANSI A135.4 American National Standard for Basic Hardboard; 2012.
 - B. ASTM C208 Standard Specification for Cellulosic Fiber Insulating Board; 2012, with Editorial Revision (2019).
 - C. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials; 2020.
 - D. NFPA 701 Standard Methods of Fire Tests for Flame Propagation of Textiles and Films; 2019.

1.3 SUBMITTALS

- A. See Section 01 30 00 Administrative Requirements for submittal procedures.
- B. Product Data: Provide data on specified products, describing physical and performance characteristics; including sizes available; and installation instructions.
- C. Shop Drawings: Indicate existing finished surfaces to be protected.

PART 2 PRODUCTS

- 2.1 GENERAL
 - A. Provide materials that are easily removed without damage to the surfaces covered and with the following characteristics:
 - 1. Water resistant.
 - 2. Vapor permeable.
 - 3. Impact resistant.
 - 4. Slip resistant.
 - 5. Flame retardant.

2.2 MATERIALS

A. Sheet Materials:

- 1. Corrugated polypropylene sheet.
- 2. Recycled paperboard/plastic composite sheet.
- 3. Recycled paperboard sheet.
- 4. Wood Hardboard: ANSI A135.4, tempered, 1/4 inch thick nominal.
- 5. Plywood, 1/2 inch thick nominal.
- 6. Fiberboard: ASTM C208, 1/2 inch thick nominal.
- 7. Flame Retardance: Meet requirements of NFPA 701.
- 8. Surface Burning Characteristics: Maximum flame spread index of 25 and smoke developed index of 450; when system tested in accordance with ASTM E84.
- B. Rolled Materials:
 - 1. Self-adhering polyethylene film.
 - 2. Recycled cellulose fiberboard paper.
 - 3. Laminated glass fiber reinforced kraft paper.
 - 4. Rosin coated paper.
 - 5. Flame Retardance: Meet requirements of NFPA 701.
 - 6. Surface Burning Characteristics: Maximum flame spread index of 25 and smoke developed index of 450; when system tested in accordance with ASTM E84.
- C. Corner and Door Jamb Protection Materials:
 - 1. Cardboard, shaped specifically for application.
 - 2. PVC plastic.
- D. Tape: Type recommended by protective covering material manufacturer.

PART 3 EXECUTION

- 3.1 PREPARATION
 - A. Remove dirt and debris from surfaces to be protected.
- 3.2 INSTALLATION
 - A. Install in accordance with manufacturer's instructions.
 - B. Trim or overlap sheet materials to fit area to be covered.
 - C. Roll out and cut rolled materials to fit area to be covered.
 - D. Tape seams. Avoid taping directly to finished surfaces.

E. Stretch self-adhering film materials to completely cover surface.

3.3 REMOVAL

A. Remove protective coverings prior to Date of Substantial Completion. Reuse or recycle materials if possible.

SECTION 01 78 00 - CLOSEOUT SUBMITTALS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Operation and Maintenance Data.
- B. Warranties and bonds.
- 1.2 RELATED REQUIREMENTS
 - A. Section 01 30 00 Administrative Requirements: Submittals procedures, shop drawings, product data, and samples.
 - B. Section 01 70 00 Execution and Closeout Requirements: Contract closeout procedures.
 - C. Individual Product Sections: Specific requirements for operation and maintenance data.
 - D. Individual Product Sections: Warranties required for specific products or Work.

1.3 SUBMITTALS

- A. Project Record Documents: Submit documents to Architect with claim for final Application for Payment.
- B. A certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect.
- C. Operation and Maintenance Data:
 - 1. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Architect will review draft and return one copy with comments.
 - 2. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit completed documents within ten days after acceptance.
 - 3. Submit one copy of completed documents 15 days prior to final inspection. This copy will be reviewed and returned after final inspection, with Architect comments. Revise content of all document sets as required prior to final submission.
 - 4. Submit two sets of revised final documents in final form within 10 days after final inspection.
- D. Warranties and Bonds:
 - 1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within 10 days after acceptance.

- 2. Make other submittals within 10 days after Date of Substantial Completion, prior to final Application for Payment.
- 3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within 10 days after acceptance, listing the date of acceptance as the beginning of the warranty period.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

- 3.1 PROJECT RECORD DOCUMENTS
 - A. Maintain on site one set of the following record documents; record actual revisions to the Work:
 - 1. Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other modifications to the Contract.
 - 5. Reviewed shop drawings, product data, and samples.
 - 6. Manufacturer's instruction for assembly, installation, and adjusting.
 - 7. Cross references from design drawings to shop drawings.
 - B. Ensure entries are complete and accurate, enabling future reference by Owner.
 - C. Store record documents separate from documents used for construction.
 - D. Record information concurrent with construction progress.
 - E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
 - 1. Manufacturer's name and product model and number.
 - 2. Product substitutions or alternates utilized.
 - 3. Changes made by Addenda and modifications.
 - F. Record Drawingsand Shop Drawings: Legibly mark each item to record actual construction including:
 - 1. Measured depths of foundations in relation to finish first floor datum.
 - 2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - 3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 - 4. Field changes of dimension and detail.
 - 5. Details not on original Contract drawings.

Closeout Submittals

3.2 OPERATION AND MAINTENANCE DATA

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

3.3 OPERATION AND MAINTENANCE DATA FOR MATERIALS AND FINISHES

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

3.4 OPERATION AND MAINTENANCE DATA FOR EQUIPMENT AND SYSTEMS

- A. For Each Item of Equipment and Each System:
 - 1. Description of unit or system, and component parts.
 - 2. Identify function, normal operating characteristics, and limiting conditions.
 - 3. Include performance curves, with engineering data and tests.
 - 4. Complete nomenclature and model number of replaceable parts.

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

3.5 ASSEMBLY OF OPERATION AND MAINTENANCE MANUALS

- A. Assemble operation and maintenance data into durable manuals for Owner's personnel use, with data arranged in the same sequence as, and identified by, the specification sections.
- B. Where systems involve more than one specification section, provide separate tabbed divider for each system.
- C. Binders: Commercial quality, 8-1/2 by 11 inch three D side ring binders with durable plastic covers; 2 inch maximum ring size. When multiple binders are used, correlate data into related consistent groupings.
- D. Cover: Identify each binder with typed or printed title OPERATION AND MAINTENANCE INSTRUCTIONS; identify title of Project; identify subject matter of contents.
- E. Project Directory: Title and address of Project; names, addresses, and telephone numbers of Architect, Consultants, Contractor and subcontractors, with names of responsible parties.
- F. Tables of Contents: List every item separated by a divider, using the same identification as on the divider tab; where multiple volumes are required, include all volumes Tables of Contents in each volume, with the current volume clearly identified.
- G. Dividers: Provide tabbed dividers for each separate product and system; identify the contents on the divider tab; immediately following the divider tab include a description of product and major component parts of equipment.
- H. Text: Manufacturer's printed data, or typewritten data on 20 pound paper.
- I. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
- J. Arrangement of Contents: Organize each volume in parts as follows:
 - 1. Project Directory.
 - 2. Table of Contents, of all volumes, and of this volume.
 - 3. Operation and Maintenance Data: Arranged by system, then by product category.
 - a. Source data.
 - b. Product data, shop drawings, and other submittals.
 - c. Operation and maintenance data.
 - d. Field quality control data.
 - e. Photocopies of warranties and bonds.
 - 4. Design Data: To allow for addition of design data furnished by Architect or others, provide a tab labeled "Design Data" and provide a binder large enough to allow for insertion of at least 20 pages of typed text.

3.6 WARRANTIES AND BONDS

- A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within 10 days after completion of the applicable item of work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until Date of Substantial completion is determined.
- B. Verify that documents are in proper form, contain full information, and are notarized.
- C. Co-execute submittals when required.
- D. Retain warranties and bonds until time specified for submittal.
- E. Manual: Bind in commercial quality 8-1/2 by 11 inch three D side ring binders with durable plastic covers.
- F. Cover: Identify each binder with typed or printed title WARRANTIES AND BONDS, with title of Project; name, address and telephone number of Contractor and equipment supplier; and name of responsible company principal.
- G. Table of Contents: Neatly typed, in the sequence of the Table of Contents of the Project Manual, with each item identified with the number and title of the specification section in which specified, and the name of product or work item.
- H. Separate each warranty or bond with index tab sheets keyed to the Table of Contents listing. Provide full information, using separate typed sheets as necessary. List Subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.

SECTION 02 41 00 - DEMOLITION

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Selective demolition of built site elements.
- B. Selective demolition of building elements for renovation purposes.
- 1.2 RELATED REQUIREMENTS
 - A. Section 01 10 00 Summary: Limitations on Contractor's use of site and premises.
 - B. Section 01 50 00 Temporary Facilities and Controls: Site fences, security, protective barriers, and waste removal.
 - C. Section 01 70 00 Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products; temporary bracing and shoring.
- 1.3 REFERENCE STANDARDS
 - A. 29 CFR 1926 U.S. Occupational Safety and Health Standards; current edition.
- 1.4 SUBMITTALS
 - A. See Section 01 30 00 Administrative Requirements, for submittal procedures.
 - B. Demolition Plan: Submit demolition plan as specified by OSHA and local authorities.
 - 1. Indicate extent of demolition, removal sequence, bracing and shoring, and location and construction of barricades and fences.
 - 2. Identify demolition firm and submit qualifications.
 - C. Project Record Documents: Accurately record actual locations of capped and active utilities and subsurface construction.
- 1.5 QUALITY ASSURANCE
 - A. Demolition Firm Qualifications: Company specializing in the type of work required.

PART 2 PRODUCTS -- NOT USED

PART 3 EXECUTION

- 3.1 GENERAL PROCEDURES AND PROJECT CONDITIONS
 - A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
 - 1. Obtain required permits.
 - 2. Comply with applicable requirements of NFPA 241.
 - 3. Use of explosives is not permitted.
 - 4. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
 - 5. Provide, erect, and maintain temporary barriers and security devices.
 - 6. Use physical barriers to prevent access to areas that could be hazardous to workers or the public.
 - 7. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
 - 8. Do not close or obstruct roadways or sidewalks without permit.
 - 9. Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations.
 - 10. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon or limit access to their property.
 - B. Do not begin removal until receipt of notification to proceed from Owner.
 - C. Do not begin removal until built elements to be salvaged or relocated have been removed.
 - D. Protect existing structures and other elements that are not to be removed.
 - 1. Provide bracing and shoring.
 - 2. Prevent movement or settlement of adjacent structures.
 - 3. Stop work immediately if adjacent structures appear to be in danger.
 - E. Minimize production of dust due to demolition operations; do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.
 - F. Hazardous Materials: Comply with 29 CFR 1926 and state and local regulations.
 - 1. Refer to Appendix A "Asbestos Technical Specifications"
 - G. Perform demolition in a manner that maximizes salvage and recycling of materials.

- 1. Dismantle existing construction and separate materials.
- 2. Set aside reusable, recyclable, and salvageable materials; store and deliver to collection point or point of reuse.
- H. Partial Removal of Paving and Curbs: Neatly saw cut at right angle to surface.
- 3.2 EXISTING UTILITIES
 - A. Coordinate work with utility companies; notify before starting work and comply with their requirements; obtain required permits.
 - B. Protect existing utilities to remain from damage.
 - C. Do not disrupt public utilities without permit from authority having jurisdiction.
 - D. Do not close, shut off, or disrupt existing life safety systems that are in use without at least 7 days prior written notification to Owner.
 - E. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 3 days prior written notification to Owner.
 - F. Remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities.
- 3.3 SELECTIVE DEMOLITION FOR RENOVATIONS
 - A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
 - 1. Verify that construction and utility arrangements are as indicated.
 - 2. Report discrepancies to Architect before disturbing existing installation.
 - 3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.
 - B. Separate areas in which demolition is being conducted from other areas that are still occupied.
 - 1. Provide, erect, and maintain temporary dustproof partitions of construction specified in Section 01 50 00 in locations indicated on drawings.
 - C. Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; take care to prevent water and humidity damage.
 - D. Remove existing work as indicated and as required to accomplish new work.
 - 1. Remove rotted wood, corroded metals, and deteriorated masonry and concrete; replace with new construction specified.
 - 2. Remove items indicated on drawings.

- E. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications): Remove existing systems and equipment as indicated.
 - 1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components.
 - 2. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
 - 3. Verify that abandoned services serve only abandoned facilities before removal.
 - 4. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification.
- F. Protect existing work to remain.
 - 1. Prevent movement of structure; provide shoring and bracing if necessary.
 - 2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
 - 3. Repair adjacent construction and finishes damaged during removal work.
 - 4. Patch as specified for patching new work.
- 3.4 DEBRIS AND WASTE REMOVAL
 - A. Remove debris, junk, and trash from site.
 - B. Leave site in clean condition, ready for subsequent work.
 - C. Clean up spillage and wind-blown debris from public and private lands.

SECTION 03 54 00 - CAST UNDERLAYMENT

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Liquid-applied self-leveling floor underlayment.1. Use cementitious type at leveling applications.

1.2 REFERENCE STANDARDS

- A. ASTM C109/C109M Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or (50-mm) Cube Specimens); 2020a.
- B. ASTM C1602/C1602M Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete; 2012.
- C. ASTM C348 Standard Test Method for Flexural Strength of Hydraulic-Cement Mortars; 2020.
- D. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials; 2020.

1.3 SUBMITTALS

- A. See Section 01 30 00 Administrative Requirements, for submittal procedures.
- B. Product Data: Provide manufacturer's data sheets documenting physical characteristics and product limitations of underlayment materials. Include information on surface preparation, environmental limitations, and installation instructions.
- C. Manufacturer's Instructions.
- 1.4 DELIVERY, STORAGE, AND HANDLING
 - A. Store products in manufacturer's unopened packaging until ready for installation.
 - B. Keep dry and protect from direct sun exposure, freezing, and ambient temperature greater than 105 degrees F.
- 1.5 FIELD CONDITIONS
 - A. Do not install underlayment until floor penetrations and peripheral work are complete.

- B. Maintain minimum ambient temperatures of 50 degrees F 24 hours before, during and 72 hours after installation of underlayment.
- C. During the curing process, ventilate spaces to remove excess moisture.

PART 2 PRODUCTS

- 2.1 MATERIALS
 - A. Cementitious Underlayment: Blended cement mix, that when mixed with water in accordance with manufacturer's directions will produce self-leveling underlayment with the following properties:
 - 1. Compressive Strength: Minimum 4000 pounds per square inch after 28 days, tested per ASTM C109/C109M.
 - 2. Flexural Strength: Minimum 1000 psi after 28 days, tested per ASTM C348.
 - 3. Density: 125 pounds per cubic foot, nominal.
 - 4. Final Set Time: 1-1/2 to 2 hours, maximum.
 - 5. Thickness: Capable of thicknesses from feather edge to maximum 3-1/2 inch.
 - 6. Surface Burning Characteristics: Flame spread/Smoke developed index of 0/0 in accordance with ASTM E84.
 - B. Aggregate: Dry, well graded, washed silica aggregate, approximately 1/8 inch in size and acceptable to underlayment manufacturer.
 - C. Water: ASTM C1602/C1602M; clean, potable, and not detrimental to underlayment mix materials.
 - D. Primer: Manufacturer's recommended type.
 - E. Joint and Crack Filler: Latex based filler, as recommended by manufacturer.
- 2.2 MIXING
 - A. Site mix materials in accordance with manufacturer's instructions.
 - B. Add aggregate for areas where thickness will exceed 1/2 inch. Mix underlayment and water for at least two minutes before adding aggregate, and continue mixing to assure that aggregate has been thoroughly coated.
 - C. Mix to self-leveling consistency without over-watering.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that substrate surfaces are clean, dry, unfrozen, do not contain petroleum byproducts, or other compounds detrimental to underlayment material bond to substrate.

3.2 PREPARATION

- A. Concrete: Mechanically prepare steel troweled concrete to create a textured surface necessary to achieve the best bond; acceptable methods include bead blasting and scarifying. Do not use acid etching.
- B. Remove substrate surface irregularities. Fill voids and deck joints with filler. Finish smooth.
- C. Vacuum clean surfaces.
- D. Prime substrate in accordance with manufacturer's instructions. Allow to dry.
- E. Close floor openings.

3.3 APPLICATION

- A. Install underlayment in accordance with manufacturer's instructions.
- B. Pump or pour material onto substrate. Do not retemper or add water.
 - 1. Pump, move, and screed while the material is still highly flowable.
 - 2. Be careful not to create cold joints.
 - 3. Wear spiked shoes while working in the wet material to avoid leaving marks.
- C. Place to indicated thickness, with top surface level to 1/8 inch in 10 ft.
- D. For final thickness over 1-1/2 inches, place underlayment in layers. Allow initial layer to harden to the point where the material has lost its evaporative moisture. Immediately prime and begin application of the subsequent layer within 24 hours.
- E. Where additional aggregate has been used in the mix, add a top layer of neat mix (without aggregate), if needed to level and smooth the surface.
- F. If a fine, feathered edge is desired, steel trowel the edge after initial set, but before it is completely hard.

- 3.4 CURING
 - A. Once underlayment starts to set, prohibit foot traffic until final set has been reached.
 - B. Air cure in accordance with manufacturer's instructions.

3.5 PROTECTION

- A. Protect against direct sunlight, heat, and wind; prevent rapid drying to avoid shrinkage and cracking.
- B. Do not permit traffic over unprotected floor underlayment surfaces.

SECTION 06 10 00 - ROUGH CARPENTRY

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Rough opening framing for doors, windows, and roof openings.
- B. Preservative treated wood materials.
- C. Fire retardant treated wood materials.
- D. Miscellaneous wood nailers, furring, and grounds.
- 1.2 REFERENCE STANDARDS
 - A. ASTM D2898 Standard Test Methods for Accelerated Weathering of Fire-Retardant-Treated Wood for Fire Testing; 2010 (Reapproved 2017).
 - B. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials; 2020.
 - C. AWPA U1 Use Category System: User Specification for Treated Wood; 2018.
 - D. FM 1-49 Perimeter Flashing; 2016.
 - E. PS 20 American Softwood Lumber Standard; 2020.

1.3 SUBMITTALS

- A. See Section 01 30 00 Administrative Requirements, for submittal procedures.
- B. Product Data: Provide technical data on fire retardant treatment, wood preservative materials, adhesives, and application instructions.
- 1.4 DELIVERY, STORAGE, AND HANDLING
 - A. General: Cover wood products to protect against moisture. Support stacked products to prevent deformation and to allow air circulation.
 - B. Fire Retardant Treated Wood: Prevent exposure to precipitation during shipping, storage, or installation.

PART 2 PRODUCTS

2.1 GENERAL REQUIREMENTS

- A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
 - 1. If no species is specified, provide any species graded by the agency specified; if no grading agency is specified, provide lumber graded by any grading agency meeting the specified requirements.
 - 2. Grading Agency: Any grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee (www.alsc.org) and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.
- 2.2 DIMENSION LUMBER FOR CONCEALED APPLICATIONS
 - A. Sizes: Nominal sizes as indicated on drawings, S4S.
 - B. Moisture Content: S-dry or MC19.
 - C. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
 - 1. Lumber: S4S, No. 3 or Utility Grade.
 - 2. Boards: Standard or No. 3.

2.3 ACCESSORIES

- A. Fasteners and Anchors:
 - 1. Metal and Finish: Stainless steel for high humidity and preservative-treated wood locations, unfinished steel elsewhere.
 - 2. Drywall Screws: Bugle head, hardened steel, power driven type, length three times thickness of sheathing.
 - 3. Anchors: Bolt or ballistic fastener for anchorages to steel.

2.4 FACTORY WOOD TREATMENT

- A. Treated Lumber and Plywood: Comply with requirements of AWPA U1 Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.
 - 1. Fire-Retardant Treated Wood: Mark each piece of wood with producer's stamp indicating compliance with specified requirements.
 - 2. Preservative-Treated Wood: Provide lumber and plywood marked or stamped by an ALSC-accredited testing agency, certifying level and type of treatment in accordance with AWPA standards.

B. Fire Retardant Treatment:

- 1. Exterior Type: AWPA U1, Category UCFB, Commodity Specification H, chemically treated and pressure impregnated; capable of providing a maximum flame spread index of 25 when tested in accordance with ASTM E84, with no evidence of significant combustion when test is extended for an additional 20 minutes both before and after accelerated weathering test performed in accordance with ASTM D2898.
 - a. Kiln dry wood after treatment to a maximum moisture content of 19 percent for lumber and 15 percent for plywood.
 - b. Treat wood in exterior walls and parapets.
 - c. Treat wood in contact with roofing, flashing, or waterproofing.
 - d. Do not use treated wood in direct contact with the ground.
- C. Preservative Treatment:
 - 1. Preservative Pressure Treatment of Lumber Above Grade: AWPA U1, Use Category UC3B, Commodity Specification A using waterborne preservative.
 - a. Kiln dry lumber after treatment to maximum moisture content of 19 percent.
 - b. Treat lumber exposed to weather.

PART 3 EXECUTION

- 3.1 PREPARATION
 - A. Coordinate installation of rough carpentry members specified in other sections.
- 3.2 INSTALLATION GENERAL
 - A. Select material sizes to minimize waste.
 - B. Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as accessory components, including: shims, bracing, and blocking.
 - C. Where treated wood is used on interior, provide temporary ventilation during and immediately after installation sufficient to remove indoor air contaminants.
- 3.3 BLOCKING, NAILERS, AND SUPPORTS
 - A. Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty items, and trim.
 - B. Comply with FM 1-49.

3.4 SITE APPLIED WOOD TREATMENT

- A. Apply preservative treatment compatible with factory applied treatment at site-sawn cuts, complying with manufacturer's instructions.
- B. Allow preservative to dry prior to erecting members.

3.5 CLEANING

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

SECTION 07 81 00 - APPLIED FIRE PROTECTION

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Applied fire protection of interior structural steel not exposed to damage or moisture.
- B. Applied fire protection of structural steel exposed to damage or moisture.
- 1.2 REFERENCE STANDARDS
 - A. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials; 2020.
 - B. ASTM E736/E736M Standard Test Method for Cohesion/Adhesion of Sprayed Fire-Resistive Materials Applied to Structural Members; 2019.
 - C. ASTM E760/E760M Standard Test Method for Effect of Impact on Bonding of Sprayed Fire-Resistive Material Applied to Structural Members; 1992 (Reapproved 2020).
 - D. ASTM E859/E859M Standard Test Method for Air Erosion of Sprayed Fire-Resistive Material (SFRMs) Applied to Structural Members; 1993 (Reapproved 2020).
 - E. ASTM E937/E937M Standard Test Method for Corrosion of Steel by Sprayed Fire-Resistive Material (SFRM) Applied to Structural Members; 1993 (Reapproved 2020).
- 1.3 SUBMITTALS
 - A. See Section 01 30 00 Administrative Requirements, for submittals procedures.
 - B. Product Data: Provide data indicating product characteristics.
 - C. Manufacturer's Certificate: Certify that applied fireproofing products meet or exceed requirements of Contract Documents.
 - D. Test Reports: Reports from reputable independent testing agencies for proposed products, indicating compliance with specified criteria, conducted under conditions similar to those on project, as follows:
 - 1. Bond strength.
 - 2. Bond impact.
 - 3. Compressive strength.
 - 4. Fire tests using substrate materials similar those on project.

- E. Manufacturer's Installation Instructions: Indicate special procedures.
- F. Manufacturer Reports: Indicate environmental conditions that applied fireproofing materials were installed.
- 1.4 QUALITY ASSURANCE
 - A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years of experience.
 - B. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of experience

1.5 FIELD CONDITIONS

- Do not apply fireproofing when temperature of substrate material and surrounding air is below 40 degrees F or when temperature is predicted to be below said temperature for 24 hours after application.
- B. Provide ventilation in areas to receive fireproofing during application and 24 hours afterward, to dry applied material.
- C. Provide temporary enclosure to prevent spray from contaminating air.

PART 2 PRODUCTS

- 2.1 APPLIED FIRE PROTECTION ASSEMBLIES
 - A. Provide assemblies as indicated on drawings.

2.2 MATERIALS

- A. Applied Fire Protection Material for Interior Applications, Concealed: Manufacturer's standard factory mixed material, which when combined with water is capable of providing indicated fire resistance, and complying with following requirements:
 - 1. Bond Strength: 150 pounds per square foot, minimum, when tested in accordance with ASTM E736/E736M when set and dry.
 - 2. Dry Density: As required by fire resistance design.
 - 3. Compressive Strength: 8.33 pounds per square inch, minimum.
 - 4. Effect of Impact on Bonding: No cracking, spalling or delamination, when tested in accordance with ASTM E760/E760M.
 - 5. Corrosivity: No evidence of corrosion, when tested in accordance with ASTM E937/E937M.

- 6. Surface Burning Characteristics: Maximum flame spread index of 0 (zero) and maximum smoke developed index of 0 (zero), when tested in accordance with ASTM E84.
- B. Applied Fire Protection MaterialExposed to View: Manufacturer's standard factory mixed material, which when combined with water is capable of providing indicated fire resistance, and complying with following requirements:
 - 1. Dry Density: As required by fire resistance design.
 - 2. Compressive Strength: 100 psi, minimum.
 - 3. Effect of Impact on Bonding: No cracking, spalling or delamination, when tested in accordance with ASTM E760/E760M.
 - 4. Corrosivity: No evidence of corrosion, when tested in accordance with ASTM E937/E937M.
 - 5. Air Erosion Resistance: Weight loss of 0.025 g/sq ft, maximum, when tested in accordance with ASTM E859/E859M after 24 hours.
 - 6. Surface Burning Characteristics: Maximum flame spread index of 0 (zero) and maximum smoke developed index of 0 (zero), when tested in accordance with ASTM E84.

2.3 ACCESSORIES

- A. Primer Adhesive: Of type recommended by applied fire protection manufacturer.
- B. Water: Clean, potable.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that surfaces are ready to receive fireproofing.
- B. Verify that clips, hangers, supports, sleeves, and other items required to penetrate fireproofing are in place.
- C. Verify that ducts, piping, equipment, or other items that would interfere with application of fireproofing have not been installed.
- D. Verify that voids and cracks in substrate have been filled.
- E. Verify that projections have been removed where fireproofing will be exposed to view as a finish material.

3.2 PREPARATION

A. Perform tests as recommended by fireproofing manufacturer in applications where adhesion of fireproofing to substrate is in question.

- B. Remove incompatible materials that could effect bond by scraping, brushing, scrubbing, or sandblasting.
- C. Prepare substrates to receive fireproofing in strict accordance with instructions of fireproofing manufacturer.
- D. Apply fireproofing manufacturer's recommended bonding agent on primed steel.
- E. Protect surfaces not scheduled for fireproofing and equipment from damage by overspray, fallout, and dusting.
- F. Close off and seal duct work in areas where fireproofing is being applied.

3.3 APPLICATION

- A. Apply primer adhesive in accordance with manufacturer's instructions.
- B. Apply fireproofing in uniform thickness and density as necessary to achieve required ratings.
- C. In exposed locations, trowel surface smooth and form square edges, using tools and procedures recommended by fireproofing manufacturer.
- 3.4 FIELD QUALITY CONTROL
 - A. Perform field inspection and testing in accordance with Section 01 40 00 Quality Requirements.
 - B. Inspect installed fireproofing after application and curing for integrity, prior to its concealment.
 - C. Ensure that actual thicknesses, densities, and bond strengths meet requirements for specified ratings and requirements of authorities having jurisdiction (AHJ).
 - D. Re-inspect installed fireproofing for integrity of fire protection, after installation of subsequent Work.
- 3.5 CLEANING
 - A. Remove excess material, overspray, droppings, and debris.
 - B. Remove fireproofing from materials and surfaces not required to be fireproofed.
 - C. At exposed fireproofing, clean surfaces that have become soiled or stained, using manufacturer's recommended procedures.

SECTION 07 92 00 - JOINT SEALANTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Nonsag gunnable joint sealants.
- B. Self-leveling pourable joint sealants.
- C. Joint backings and accessories.
- 1.2 RELATED REQUIREMENTS
 - A. Section 08 80 00 Glazing: Glazing sealants and accessories.

1.3 SUBMITTALS

- A. See Section 01 30 00 Administrative Requirements, for submittal procedures.
- B. Product Data for Sealants: Submit manufacturer's technical data sheets for each product to be used, that includes the following.
 - 1. Physical characteristics, including movement capability, VOC content, hardness, cure time, and color availability.
 - 2. List of backing materials approved for use with the specific product.
 - 3. Substrates that product is known to satisfactorily adhere to and with which it is compatible.
 - 4. Substrates the product should not be used on.
 - 5. Substrates for which use of primer is required.
 - 6. Substrates for which laboratory adhesion and/or compatibility testing is required.
 - 7. Installation instructions, including precautions, limitations, and recommended backing materials and tools.
 - 8. Sample product warranty.
 - 9. Certification by manufacturer indicating that product complies with specification requirements.
 - 10. SWRI Validation: Provide currently available sealant product validations as listed by SWRI (VAL) for specified sealants.
- C. Product Data for Accessory Products: Submit manufacturer's technical data sheet for each product to be used, including physical characteristics, installation instructions, and recommended tools.

- D. Color Cards for Selection: Where sealant color is not specified, submit manufacturer's color cards showing standard colors available for selection.
- E. Samples for Verification: Where custom sealant color is specified, obtain directions from Architect and submit at least two physical samples for verification of color of each required sealant.
- 1.4 QUALITY ASSURANCE
 - A. Installer Qualifications: Company specializing in performing the work of this section and with at least three years of documented experience.
- 1.5 WARRANTY
 - A. See Section 01 78 00 Closeout Submittals, for additional warranty requirements.
 - B. Correct defective work within a five year period after Date of Substantial Completion.
 - C. Warranty: Include coverage for installed sealants and accessories that fail to achieve watertight seal , exhibit loss of adhesion or cohesion, or do not cure.

PART 2 PRODUCTS

2.1 JOINT SEALANT APPLICATIONS

- A. Scope:
 - 1. Interior Joints: Do not seal interior joints unless specifically indicated to be sealed. Interior joints to be sealed include, but are not limited to, the following items.
 - a. Joints between door, window, and other frames and adjacent construction.
 - b. In sound-rated wall and ceiling assemblies, gaps at electrical outlets, wiring devices, piping, and other openings; between wall/ceiling and other construction; and other flanking sound paths.
 - 1) Exception: Such gaps and openings in gypsum board and plaster finished stud walls and suspended ceilings.
 - 2) Exception: Through-penetrations in sound-rated assemblies that are also fire-rated assemblies.
 - c. Other joints indicated below.
 - 2. Do not seal the following types of joints.
 - a. Joints indicated to be treated with manufactured expansion joint cover or some other type of sealing device.
 - b. Joints where sealant is specified to be provided by manufacturer of product to be sealed.
 - c. Joints where installation of sealant is specified in another section.

- d. Joints between suspended panel ceilings/grid and walls.
- B. Interior Joints: Use non-sag polyurethane sealant, unless otherwise indicated.
 - 1. Wall and Ceiling Joints in Non-Wet Areas: Acrylic emulsion latex sealant.
 - 2. Wall and Ceiling Joints in Wet Areas: Non-sag polyurethane sealant for continuous water immersion.
 - 3. Floor Joints in Wet Areas: Self-leveling polyurethane "traffic-grade" sealant suitable for continuous water immersion.
 - 4. Joints between Fixtures in Wet Areas and Floors, Walls, and Ceilings: Mildew-resistant silicone sealant; clear.
 - 5. In Sound-Rated Assemblies: Acrylic emulsion latex sealant.
 - 6. Narrow Control Joints in Interior Concrete Slabs: Self-leveling epoxy sealant.
 - 7. Other Floor Joints: Self-leveling polyurethane "traffic-grade" sealant.
- C. Sound-Rated Assemblies: Walls and ceilings identified as "STC-rated", "sound-rated", or "acoustical".
- 2.2 JOINT SEALANTS GENERAL
 - A. Sealants and Primers: Provide products having lower volatile organic compound (VOC) content than indicated in SCAQMD 1168.
- 2.3 NONSAG JOINT SEALANTS
 - A. Mildew-Resistant Silicone Sealant: ASTM C920, Grade NS, Uses M and A; single component, mildew resistant; not expected to withstand continuous water immersion or traffic.
 - 1. FDA suitable for indirect food additives, NSF recognized for direct food contact, or USDA accepted for use in meat and poultry processing plants.
 - 2. Color: White.
 - 3. Manufacturers:
 - a. Pecora Corporation; Pecora 898 NST (Non-Staining Technology): www.pecora.com.
 - b. Polymeric Systems; 601 FG: www.polymericsystems.com.
 - c. Sika Corporation; Sikasil GP: www.usa-sika.com.
 - d. Substitutions: See Section 01 60 00 Product Requirements.
 - B. Acrylic Emulsion Latex: Water-based; ASTM C834, single component, non-staining, nonbleeding, non-sagging; not intended for exterior use.
 - 1. Color: Standard colors matching finished surfaces, Type OP (opaque).

2.4 SELF-LEVELING SEALANTS

A. Self-Leveling Polyurethane Sealant for Continuous Water Immersion: Polyurethane; ASTM C920, Grade P, Uses M and A; single or multi-component; explicitly approved by manufacturer for traffic exposure and continuous water immersion.

for the County of Union

- 1. Movement Capability: Plus and minus 25 percent, minimum.
- 2. Color: To be selected by Architect from manufacturer's standard range.
- 3. Manufacturers:
 - a. Sika Corporation; Sikaflex-1c SL: www.usa-sika.com.
 - b. W. R. MEADOWS, Inc; POURTHANE SL: www.wrmeadows.com.
 - c. Substitutions: See Section 01 60 00 Product Requirements.
- B. Semi-Rigid Self-Leveling Epoxy Joint Filler: Epoxy or epoxy/polyurethane copolymer; intended for filling cracks and control joints not subject to significant movement; rigid enough to support concrete edges under traffic.
 - 1. Composition: Multi-component, 100 percent solids by weight.
 - 2. Durometer Hardness: Minimum of 85 for Type A or 35 for Type D, after seven days when tested in accordance with ASTM D2240.
 - 3. Joint Width, Minimum: 1/8 inch.

2.5 ACCESSORIES

- A. Backer Rod: Cylindrical cellular foam rod with surface that sealant will not adhere to, compatible with specific sealant used, and recommended by backing and sealant manufacturers for specific application.
 - 1. Type for Joints Not Subject to Pedestrian or Vehicular Traffic: ASTM C1330; Type O Open Cell Polyurethane.
 - 2. Type for Joints Subject to Pedestrian or Vehicular Traffic: ASTM C1330; Type B Bi-Cellular Polyethylene.
 - 3. Open Cell: 40 to 50 percent larger in diameter than joint width.
 - 4. Closed Cell and Bi-Cellular: 25 to 33 percent larger in diameter than joint width.
- B. Backing Tape: Self-adhesive polyethylene tape with surface that sealant will not adhere to and recommended by tape and sealant manufacturers for specific application.
- C. Masking Tape: Self-adhesive, nonabsorbent, non-staining, removable without adhesive residue, and compatible with surfaces adjacent to joints and sealants.
- D. Joint Cleaner: Non-corrosive and non-staining type, type recommended by sealant manufacturer; compatible with joint forming materials.
- E. Primers: Type recommended by sealant manufacturer to suit application; non-staining.

PART 3 EXECUTION

- 3.1 EXAMINATION
 - A. Verify that joints are ready to receive work.

- B. Verify that backing materials are compatible with sealants.
- C. Verify that backer rods are of the correct size.

3.2 PREPARATION

- A. Remove loose materials and foreign matter that could impair adhesion of sealant.
- B. Clean joints, and prime as necessary, in accordance with manufacturer's instructions.
- C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.
- D. Mask elements and surfaces adjacent to joints from damage and disfigurement due to sealant work; be aware that sealant drips and smears may not be completely removable.

3.3 INSTALLATION

- A. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
- B. Perform installation in accordance with ASTM C1193.
- C. Perform acoustical sealant application work in accordance with ASTM C919.
- D. Measure joint dimensions and size joint backers to achieve width-to-depth ratio, neck dimension, and surface bond area as recommended by manufacturer, except where specific dimensions are indicated.
- E. Install bond breaker backing tape where backer rod cannot be used.
- F. Install sealant free of air pockets, foreign embedded matter, ridges, and sags, and without getting sealant on adjacent surfaces.
- G. Do not install sealant when ambient temperature is outside manufacturer's recommended temperature range, or will be outside that range during the entire curing period, unless manufacturer's approval is obtained and instructions are followed.
- H. Nonsag Sealants: Tool surface concave, unless otherwise indicated; remove masking tape immediately after tooling sealant surface.
- I. Concrete Floor Joint Filler: After full cure, shave joint filler flush with top of concrete slab.

3.4 POST-OCCUPANCY

A. Post-Occupancy Inspection: Perform visual inspection of entire length of project sealant joints at a time that joints have opened to their greatest width; i.e. at low temperature in thermal cycle. Report failures immediately and repair.

SECTION 08 12 13 - HOLLOW METAL FRAMES

PART 1 GENERAL

- 1.1 SECTION INCLUDES
 - A. Non-fire-rated hollow metal frames for flush wood doors.
- 1.2 RELATED REQUIREMENTS
 - A. Section 08 14 16 Flush Wood Doors: Non-hollow metal door for hollow metal frames.
 - B. Section 09 91 23 Interior Painting: Field painting.

1.3 SUBMITTALS

- A. See Section 01 30 00 Administrative Requirements for submittal procedures.
- B. Product Data: Materials and details of design and construction, hardware locations, reinforcement type and locations, anchorage and fastening methods, and finishes; and one copy of referenced grade standard.
- C. Shop Drawings: Details of each opening, showing elevations, glazing, frame profiles, and identifying location of different finishes, if any.
- D. Samples: Submit one sample of frame metal, 2 by 2 inches, showing factory finishes, colors, and surface textures.
- E. Installation Instructions: Manufacturer's published instructions, including any special installation instructions relating to this project.
- F. Manufacturer's Qualification Statement.
- 1.4 QUALITY ASSURANCE
 - A. Manufacturer Qualifications: Provide hollow metal frames from SDI Certified manufacturer: www.steeldoor.org/sdicertified.php.
 - B. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of experience.
 - C. Maintain at project site copies of reference standards relating to installation of products specified.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store in accordance with applicable requirements and in compliance with standards and/or custom guidelines as indicated.
- B. Protect with resilient packaging; avoid humidity build-up under coverings; prevent corrosion.

PART 2 PRODUCTS

- 2.1 PERFORMANCE REQUIREMENTS
 - A. Door Frame Type: Provide hollow metal door frames with integral casings.
 - B. Steel Sheet: Comply with one or more of the following requirements; galvannealed steel complying with ASTM A653/A653M, cold-rolled steel complying with ASTM A1008/A1008M, or hot-rolled pickled and oiled (HRPO) steel complying with ASTM A1011/A1011M, commercial steel (CS) Type B, for each.
 - C. Accessibility: Comply with ICC A117.1 and ADA Standards.
 - D. Combined Requirements: If a particular door and frame unit is indicated to comply with more than one type of requirement, comply with the specified requirements for each type; for instance, an exterior frame that is also indicated as being sound-rated must comply with the requirements specified for exterior frames and for sound-rated frames; where two requirements conflict, comply with the most stringent.
 - E. Hardware Preparations, Selections and Locations: Comply with BHMA A156.115, NAAMM HMMA 830, NAAMM HMMA 831 or ANSI/SDI A250.8 (SDI-100) in accordance with specified requirements.
 - F. Zinc Coating for Units Subject to Corrosive Conditions: Components zinc-coated (galvanized) and/or zinc-iron alloy-coated (galvannealed) by the hot-dip process in accordance with ASTM A653/A653M, with manufacturer's standard coating thickness, unless noted otherwise.
- 2.2 HOLLOW METAL DOOR FRAMES WITH INTEGRAL CASINGS
 - A. Interior Door Frames, Non-Fire Rated: Knock-down type.
 - 1. Based on SDI Standards: ANSI/SDI A250.8 (SDI-100).
 - a. Level 2 Heavy-duty.
 - b. Physical Performance Level B 500 000 cycles; in accordance with ANSI/SDI A250.4.
 - c. Frame Metal Thickness: 16 gauge, 0.053 inch, minimum.

2.3 FINISHES

- A. Primer: Rust-inhibiting, complying with ANSI/SDI A250.10, door manufacturer's standard.
- B. Factory Finish: Complying with ANSI/SDI A250.3, manufacturer's standard coating.
- C. Bituminous Coating: Cold-applied asphalt mastic, compounded for 15 mil, 0.015 inch dry film thickness (DFT) per coat; provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

2.4 ACCESSORIES

A. Silencers: Resilient rubber, fitted into drilled hole; provide three on strike side of single door, three on center mullion of pairs, and two on head of pairs without center mullions.

PART 3 EXECUTION

- 3.1 EXAMINATION
 - A. Verify existing conditions before starting work.
 - B. Verify that opening sizes and tolerances are acceptable.
 - C. Verify that finished walls are in plane to ensure proper door alignment.
- 3.2 PREPARATION
 - A. Coat inside of frames to be installed in masonry or to be grouted, with bituminous coating, prior to installation.

3.3 INSTALLATION

- A. Install frames in accordance with manufacturer's instructions and related requirements of specified frame standards or custom guidelines indicated.
- B. Coordinate frame anchor placement with wall construction.
- C. Grout frames in masonry construction, using hand trowel methods; brace frames so that pressure of grout before setting will not deform frames.
- D. Install door hardware as specified in Section 08 71 00.
 - 1. Comply with recommended practice for hardware placement of doors and frames in accordance with ANSI/SDI A250.6 or NAAMM HMMA 861.

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E. Coordinate installation of electrical connections to electrical hardware items.

3.4 TOLERANCES

- A. Clearances Between Door and Frame: Comply with related requirements of specified frame standards or custom guidelines indicated in accordance with SDI 117 or NAAMM HMMA 861.
- B. Maximum Diagonal Distortion: 1/16 inch measured with straight edges, crossed corner to corner.

SECTION 08 14 16 - FLUSH WOOD DOORS

PART 1 GENERAL

- 1.1 SECTION INCLUDES
 - A. Flush wood doors; flush configuration
- 1.2 RELATED REQUIREMENTS
 - A. Section 08 12 13 Hollow Metal Frames.
 - B. Section 09 91 23 Interior Painting: Field finishing of doors.
 - C. Section 09 93 00 Staining and Transparent Finishing: Field finishing of doors.
- 1.3 REFERENCE STANDARDS
 - A. ANSI A208.1 American National Standard for Particleboard; 2016.
 - B. AWI/AWMAC/WI (AWS) Architectural Woodwork Standards; 2014, with Errata (2018).
 - C. AWMAC/WI (NAAWS) North American Architectural Woodwork Standards, U.S. Version 3.1; 2017, with Errata (2019).
 - D. WDMA I.S. 1A Interior Architectural Wood Flush Doors; 2013.
- 1.4 SUBMITTALS
 - A. See Section 01 30 00 Administrative Requirements, for submittal procedures.
 - B. Product Data: Indicate door core materials and construction; veneer species, type and characteristics.
 - C. Shop Drawings: Show doors and frames, elevations, sizes, types, swings, undercuts, beveling, blocking for hardware, factory machining, factory finishing, cutouts for glazing and other details.
 - D. Samples: Submit two samples of door veneer, 4 by 4 inches in size illustrating wood grain, stain color, and sheen.
 - E. Manufacturer's Installation Instructions: Indicate special installation instructions.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Package, deliver and store doors in accordance with specified quality standard.
- B. Accept doors on site in manufacturer's packaging, and inspect for damage.
- C. Protect doors with resilient packaging sealed with heat shrunk plastic; do not store in damp or wet areas or areas where sunlight might bleach veneer; seal top and bottom edges with tinted sealer if stored more than one week, and break seal on site to permit ventilation.

PART 2 PRODUCTS

2.1 DOORS AND PANELS

- A. Doors: See drawings for locations and additional requirements.
 - 1. Quality Standard: Custom Grade, Heavy Duty performance, in accordance with AWI/AWMAC/WI (AWS), AWMAC/WI (NAAWS) or WDMA I.S. 1A.
 - 2. Wood Veneer Faced Doors: 5-ply unless otherwise indicated.
- B. Interior Doors: 1-3/4 inches thick unless otherwise indicated; flush construction.
 1. Provide solid core doors at each location.
- 2.2 DOOR AND PANEL CORES
 - A. Non-Rated Solid Core and 20 Minute Rated Doors: Type particleboard core (PC), plies and faces as indicated.
 - B. Core for Low Pressure Decorative Laminate (LPDL), Non-Rated and 20 Minute Rated Doors: ANSI A208.1 Grade M-2 particleboard, minimum, with no seams on faces; edges reinforced as required to pass performance grade specified.

2.3 DOOR FACINGS

- A. Veneer Facing for Transparent Finish: Red oak, veneer grade in accordance with quality standard indicated, plain sliced (flat cut), with book match between leaves of veneer, running match of spliced veneer leaves assembled on door or panel face.
- B. Veneer Facing for Opaque Finish: Medium density overlay (MDO), in compliance with indicated quality standard.
- 2.4 DOOR CONSTRUCTION
 - A. Fabricate doors in accordance with door quality standard specified.

- B. Cores Constructed with stiles and rails:
 - 1. Provide solid blocks at lock edge for hardware reinforcement.
 - 2. Provide solid blocking for other throughbolted hardware.
- C. Where supplementary protective edge trim is required, install trim after veneer facing has been applied full-width.
- D. Factory machine doors for hardware other than surface-mounted hardware, in accordance with hardware requirements and dimensions.
- E. Factory fit doors for frame opening dimensions identified on shop drawings, with edge clearances in accordance with specified quality standard.
 - 1. Exception: Doors to be field finished.
- F. Provide edge clearances in accordance with the quality standard specified.
- 2.5 FINISHES WOOD VENEER DOORS
 - A. Finish work in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), Section 5 -Finishing for grade specified and as follows:
 - 1. Transparent:
 - a. System 11, Polyurethane, Catalyzed.
 - b. Stain: As selected by Architect.
 - c. Sheen: Semigloss.
 - 2. Opaque:
 - a. System 11, Polyurethane, Catalyzed.
 - b. Color: As selected by Architect.
 - c. Sheen: Semigloss.
 - B. Finish work in accordance with WDMA I.S. 1A for grade specified and as follows:
 - 1. Transparent:
 - a. System TR-6, Catalyzed Polyurethane.
 - b. Sheen: Semigloss.
 - 2. Opaque:
 - a. System OP-6, Catalyzed Polyurethane.
 - b. Color: As selected by Architect.
 - c. Sheen: Semigloss.
 - C. Seal door top edge with color sealer to match door facing.
- 2.6 ACCESSORIES
 - A. Hollow Metal Door Frames: See Section 08 12 13.

B. Door Hardware: As indicated on Drawings

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that opening sizes and tolerances are acceptable.
- C. Do not install doors in frame openings that are not plumb or are out-of-tolerance for size or alignment.

3.2 INSTALLATION

- A. Install doors in accordance with manufacturer's instructions and specified quality standard.
- B. Factory-Finished Doors: Do not field cut or trim; if fit or clearance is not correct, replace door.
- C. Use machine tools to cut or drill for hardware.
- D. Coordinate installation of doors with installation of frames and hardware.

3.3 TOLERANCES

- A. Comply with specified quality standard for fit and clearance tolerances.
- B. Comply with specified quality standard for telegraphing, warp, and squareness.

3.4 ADJUSTING

- A. Adjust doors for smooth and balanced door movement.
- B. Adjust closers for full closure.

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SECTION 09 21 16 - GYPSUM BOARD ASSEMBLIES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Performance criteria for gypsum board assemblies.
- B. Metal stud wall framing.
- C. Acoustic insulation.
- D. Gypsum wallboard.
- E. Joint treatment and accessories.
- 1.2 RELATED REQUIREMENTS
 - A. Section 06 10 00 Rough Carpentry: Wood blocking product and execution requirements.
- 1.3 REFERENCE STANDARDS
 - A. ASTM C514 Standard Specification for Nails for the Application of Gypsum Board; 2004 (Reapproved 2020).
 - B. ASTM C645 Standard Specification for Nonstructural Steel Framing Members; 2018.
 - C. ASTM C665 Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing; 2017.
 - D. ASTM C754 Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products; 2020.
 - E. ASTM C840 Standard Specification for Application and Finishing of Gypsum Board; 2020.
 - F. ASTM C919 Standard Practice for Use of Sealants in Acoustical Applications; 2018.
 - G. ASTM C1047 Standard Specification for Accessories For Gypsum Wallboard and Gypsum Veneer Base; 2019.
 - H. ASTM C1278/C1278M Standard Specification for Fiber-Reinforced Gypsum Panel; 2017.
 - I. ASTM C1396/C1396M Standard Specification for Gypsum Board; 2017.

- J. ASTM C1658/C1658M Standard Specification for Glass Mat Gypsum Panels; 2019, with Ediorial Revision (2020).
- K. ASTM E814 Standard Test Method for Fire Tests of Penetration Firestop Systems; 2023a.
- L. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials; 2020.
- M. ASTM E119 Standard Test Methods for Fire Tests of Building Construction and Materials; 2020.
- N. GA-216 Application and Finishing of Gypsum Panel Products; 2016.
- O. UL (FRD) Fire Resistance Directory; Current Edition.

1.4 SUBMITTALS

- A. See Section 01 30 00 Administrative Requirements for submittal procedures.
- B. Product Data: Provide data on metal framing, gypsum board, accessories, and joint finishing system.
- C. Test Reports: For stud framing products that do not comply with ASTM C645 or ASTM C754, provide independent laboratory reports showing maximum stud heights at required spacings and deflections.

PART 2 PRODUCTS

- 2.1 GYPSUM BOARD ASSEMBLIES
 - A. Provide completed assemblies complying with ASTM C840 and GA-216.
 - B. Fire-Resistance-Rated Assemblies: Provide completed assemblies complying with applicable code and UL assemblies indicated on drawings
 - 1. UL Assembly Numbers: Provide construction equivalent to that listed for the particular assembly in the current UL (FRD).

2.2 METAL FRAMING MATERIALS

- A. Non-structural Framing System Components: ASTM C645; galvanized sheet steel, of size and properties necessary to comply with ASTM C754 for the spacing indicated, with maximum deflection of wall framing of L/240 at 5 psf.
 - 1. Runners: U shaped, sized to match studs.
 - 2. Furring Members: Hat-shaped sections, minimum depth of 7/8 inch.

- B. Shaft Wall Studs and Accessories: ASTM C645; galvanized sheet steel, of size and properties necessary to comply with ASTM C754 and specified performance requirements.
- C. Area Separation Wall Studs and Accessories: ASTM C645; galvanized sheet steel, of size and properties necessary to comply with specified performance requirements.

2.3 BOARD MATERIALS

- A. Gypsum Wallboard: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
 - 1. Application: Use for vertical surfaces and ceilings, unless otherwise indicated.
 - 2. Glass mat faced gypsum panels, as defined in ASTM C1658/C1658M, suitable for paint finish, of the same core type and thickness may be substituted for paper-faced board.
 - a. Glass mat faced gypsum panels are required wherever board is installed before building is enclosed and conditioned.
 - 3. Unfaced fiber-reinforced gypsum panels as defined in ASTM C1278/C1278M, suitable for paint finish, of the same core type and thickness may be substituted for paper-faced board.
 - 4. At Assemblies Indicated with Fire-Resistance Rating: Use type required by indicated tested assembly; if no tested assembly is indicated, use Type X board, UL or WH listed.
 - 5. Thickness:
 - a. Vertical Surfaces: 5/8 inch.

2.4 GYPSUM WALLBOARD ACCESSORIES

- A. Acoustic Insulation: ASTM C665; preformed glass fiber, friction fit type, unfaced. Thickness as indicated on drawings.
- B. Acoustic Firestop: Moldable acoustic silicone pad, 1/8 inch thick, complying with ASTM E814, ASTM E119, and ASTM C919.
- C. Mullion Trim Cap: Sound barrier mullion trim caps of aluminum and sound absorbing foam, capable of accommodating variations in adjacent surfaces.
 - 1. Fasteners: Concealed.
 - 2. Sound Transmission: STC 55.
 - 3. Surface Burning Characteristics: Flame spread/Smoke developed index of 25/50, maximum, when tested in accordance with ASTM E84.
 - 4. Finish: Anodized, natural.
 - 5. Products:
 - a. MULL-it-OVER Products; Mullion Trim Cap: www.mullitoverproducts.com.
- D. Beads, Joint Accessories, and Other Trim: ASTM C1047, galvanized steel or rolled zinc, unless noted otherwise.
 - 1. Types: As indicated on drawings or required for finished appearance.

E. Nails for Attachment to Wood Members: ASTM C514.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that project conditions are appropriate for work of this section to commence.

3.2 FRAMING INSTALLATION

- A. Metal Framing: Install in accordance with ASTM C754 and manufacturer's instructions.
- B. Studs: Space studs at 16 inches on center.
- C. Openings: Reinforce openings as required for weight of doors or operable panels, using not less than double studs at jambs.
- D. Standard Wall Furring: Install at concrete and masonry walls scheduled to receive gypsum board, not more than 4 inches from floor and ceiling lines and abutting walls. Secure in place on alternate channel flanges at maximum 24 inches on center.
- E. Blocking: Install wood blocking for support of:
 - 1. Framed openings.
 - 2. Wall-mounted cabinets.
 - 3. Plumbing fixtures.
 - 4. Toilet partitions.
 - 5. Toilet accessories.
 - 6. Wall-mounted door hardware.

3.3 ACOUSTIC ACCESSORIES INSTALLATION

- A. Acoustic Insulation: Place tightly within spaces, around cut openings, behind and around electrical and mechanical items within partitions, and tight to items passing through partitions.
- B. Acoustic Sealant: Install in accordance with manufacturer's instructions.
 - 1. Place one bead continuously on substrate before installation of perimeter framing members.
 - 2. Place continuous bead at perimeter of each layer of gypsum board.
 - 3. Seal around all penetrations by conduit, pipe, ducts, and rough-in boxes, except where firestopping is provided.
- C. Acoustical Firestop: Wrap pads around electrical boxes, cutting as required to fit around wires, before concealing or enclosing.

3.4 BOARD INSTALLATION

- A. Comply with ASTM C840, GA-216, and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.
- B. Single-Layer Nonrated: Install gypsum board in most economical direction, with ends and edges occurring over firm bearing.
 - 1. Exception: Tapered edges to receive joint treatment at right angles to framing.
- C. Fire-Resistance-Rated Construction: Install gypsum board in strict compliance with requirements of assembly listing.
- D. Installation on Metal Framing: Use screws for attachment of gypsum board except face layer of nonrated double-layer assemblies, which may be installed by means of adhesive lamination.
- E. Installation on Wood Framing: For rated assemblies, comply with requirements of listing authority. For nonrated assemblies, install as follows:
- F. Replace gypsum board that directly or indirectly has been damaged by exposure to moisture or mold.
- 3.5 INSTALLATION OF TRIM AND ACCESSORIES
 - A. Control Joints: Place control joints consistent with lines of building spaces and as follows:
 - 1. Not more than 30 feet apart on walls, soffits, and ceilings over 50 feet long or more than 900 square feet in area.
 - 2. Where a control joint occurs in a fire or an acoustically rated assembly, provide gypsum blocking behind the joint.
 - B. Corner Beads: Install at external corners, using longest practical lengths.
 - C. Edge Trim: Install at locations where gypsum board abuts dissimilar materials.

3.6 JOINT TREATMENT

- A. Paper Faced Gypsum Board: Use paper joint tape, embed with drying type joint compound and finish with drying type joint compound.
- B. Finish gypsum board in accordance with levels defined in ASTM C840, as follows:
 - 1. Level 5: Walls and ceilings to receive semi-gloss or gloss paint finish and other areas specifically indicated.
 - 2. Level 4: Walls and ceilings to receive paint finish or wall coverings, unless otherwise indicated.

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- 3. Level 1: Fire-resistance-rated wall areas above finished ceilings, whether or not accessible in the completed construction.
- C. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
 - 1. Feather coats of joint compound so that camber is maximum 1/32 inch.
 - 2. Taping, filling, and sanding is not required at surfaces behind adhesive applied ceramic tile.
- D. Where Level 5 finish is indicated, spray apply high build drywall surfacer over entire surface after joints have been properly treated; achieve a flat and tool mark-free finish.

3.7 TOLERANCES

A. Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet in any direction.

SECTION 09 51 00 - ACOUSTICAL CEILINGS

PART 1 GENERAL

- 1.1 SECTION INCLUDES
 - A. Suspended metal grid ceiling system.
 - B. Acoustical units.
- 1.2 REFERENCE STANDARDS
 - A. ASTM C635/C635M Standard Specification for the Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings; 2017.
 - B. ASTM C636/C636M Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels; 2013.
 - C. ASTM E580/E580M Standard Practice for Installation of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Subject to Earthquake Ground Motions; 2020.
 - D. ASTM E1264 Standard Classification for Acoustical Ceiling Products; 2019.
- 1.3 ADMINISTRATIVE REQUIREMENTS
 - A. Sequence work to ensure acoustical ceilings are not installed until building is enclosed, sufficient heat is provided, dust generating activities have terminated, and overhead work is completed, tested, and approved.
 - B. Do not install acoustical units until after interior wet work is dry.

1.4 SUBMITTALS

- A. See Section 01 30 00 Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on suspension system components and acoustical units.
- C. Samples: Submit two samples 4 by 4 inch in size illustrating material and finish of acoustical units.
- D. Samples: Submit two samples each, 12 inches long, of suspension system main runner, cross runner, and perimeter molding.

- E. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.
- F. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 01 60 00 Product Requirements, for additional provisions.
 - 2. Extra Acoustical Units: Quantity equal to 5 percent of total installed.
- 1.5 FIELD CONDITIONS
 - A. Maintain uniform temperature of minimum 60 degrees F, and maximum humidity of 40 percent prior to, during, and after acoustical unit installation.

PART 2 PRODUCTS

- 2.1 MANUFACTURERS
 - A. Acoustic Tiles/Panels:
 - 1. Armstrong World Industries, Inc: www.armstrong.com.
 - 2. CertainTeed Corporation: www.certainteed.com.
 - 3. USG Corporation: www.usg.com.
 - 4. Substitutions: See Section 01 60 00 Product Requirements.
 - B. Suspension Systems:
 - 1. Same as for acoustical units.
 - 2. Substitutions: See Section 01 60 00 Product Requirements.
- 2.2 ACOUSTICAL UNITS
 - A. Acoustical Units General: ASTM E1264, Class A.
 - B. Acoustical Panels Type AP-1: Painted mineral fiber, ASTM E1264 Type III, Form 2, Pattern CE, with the following characteristics:
 - 1. Size: 24 by 48 inches.
 - 2. Thickness: 5/8 inches.
 - 3. Composition: Wet felted.
 - 4. Edge: Square.
 - 5. Surface Color: White.
 - 6. Surface Pattern: Perforated, small holes, lightly textured.
 - 7. Suspension System: Exposed grid Type W.
 - 8. Products:
 - a. Armstrong Fine Fissured.
 - b. CertainTeed Baroque, Fine Fissured.
 - c. USG Radar.

2.3 SUSPENSION SYSTEM(S)

- A. Metal Suspension Systems General: Complying with ASTM C635/C635M; die cut and interlocking components, with perimeter moldings, hold down clips, stabilizer bars, clips, and splices as required.
- B. Exposed Steel Suspension System Type W: Formed steel, commercial quality cold rolled; intermediate-duty.
 - 1. Profile: Tee; 15/16 inch wide face.
 - 2. Construction: Double web.
 - 3. Finish: White painted.
- 2.4 ACCESSORIES
 - A. Support Channels and Hangers: Galvanized steel; size and type to suit application, seismic requirements, and ceiling system flatness requirement specified.
 - B. Hanger Wire: 12 gauge, 0.08 inch galvanized steel wire.
 - C. Perimeter Moldings: Same metal and finish as grid.
 - D. Metal Edge Trim for "Cloud" Suspension Systems: Steel or extruded aluminum; provide attachment clips, splice plates, and preformed corner pieces for complete trim system.
 - 1. Finish: Baked enamel.
 - 2. Color: White.
 - 3. Products:
 - a. Armstrong World Industries, Inc; Axiom: www.armstrong.com.
 - b. CertainTeed Corporation; Cloud Permeter Trim: www.certainteed.com.
 - c. USG Corporation; Compasso Suspension Trim: www.usg.com/ceilings.
 - d. Substitutions: See Section 01 60 00 Product Requirements.
 - E. Touch-up Paint: Type and color to match acoustical and grid units.

PART 3 EXECUTION

- 3.1 EXAMINATION
 - A. Verify existing conditions before starting work.
 - B. Verify that layout of hangers will not interfere with other work.

3.2 PREPARATION

- A. Install after major above-ceiling work is complete.
- B. Coordinate the location of hangers with other work.
- C. Provide hanger clips during steel deck erection. Provide additional hangers and inserts as required.
- 3.3 INSTALLATION SUSPENSION SYSTEM
 - A. Install suspension system in accordance with ASTM C636/C636M, ASTM E580/E580M, and manufacturer's instructions and as supplemented in this section.
 - B. Rigidly secure system, including integral mechanical and electrical components, for maximum deflection of 1:360.
 - C. Perimeter Molding: Install at intersection of ceiling and vertical surfaces and at junctions with other interruptions.
 - 1. Use longest practical lengths.
 - D. Suspension System, Non-Seismic: Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.
 - E. Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.
 - F. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability.
 - G. Support fixture loads using supplementary hangers located within 6 inches of each corner, or support components independently.
 - H. Do not eccentrically load system or induce rotation of runners.
- 3.4 INSTALLATION ACOUSTICAL UNITS
 - A. Install acoustical units in accordance with manufacturer's instructions.
 - B. Fit acoustical units in place, free from damaged edges or other defects detrimental to appearance and function.
 - C. Fit border trim neatly against abutting surfaces.

- D. Install acoustical units level, in uniform plane, and free from twist, warp, and dents.
- E. Cutting Acoustical Units:
 - 1. Cut to fit irregular grid and perimeter edge trim.
 - 2. Make field cut edges of same profile as factory edges.
 - 3. Double cut and field paint exposed reveal edges.
- F. Where round obstructions occur, provide preformed closures to match perimeter molding.
- G. Install hold-down clips on panels within 20 ft of an exterior door.

3.5 TOLERANCES

- A. Maximum Variation from Flat and Level Surface: 1/8 inch in 10 feet.
- B. Maximum Variation from Plumb of Grid Members Caused by Eccentric Loads: 2 degrees.

SECTION 09 65 00 - RESILIENT FLOORING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Resilient tile flooring.
- B. Resilient base.
- C. Installation accessories.

1.2 REFERENCE STANDARDS

- A. ASTM E648 Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source; 2019a, with Editorial Revision (2020).
- B. ASTM F1066 Standard Specification for Vinyl Composition Floor Tile; 2004 (Reapproved 2018).
- C. ASTM F1700 Standard Specification for Solid Vinyl Floor Tile; 2020.
- D. NFPA 253 Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source; 2019.

1.3 SUBMITTALS

- A. See Section 01 30 00 Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on specified products, describing physical and performance characteristics; including sizes, patterns and colors available; and installation instructions.
- C. Shop Drawings: Indicate seaming plans and floor patterns.
- D. Verification Samples: Submit two samples, 12 by 12 inch in size illustrating color and pattern for each resilient flooring product specified.
- E. Maintenance Data: Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning, stripping, and re-waxing.
- F. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 01 60 00 Product Requirements, for additional provisions.
 - 2. Extra Flooring Material: Quantity equivalent to 5 percent of each type and color.
 - 3. Extra Wall Base: Quantity equivalent to 5 percent of each type and color.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in installing specified flooring with minimum three years documented experience.
- 1.5 DELIVERY, STORAGE, AND HANDLING
 - A. Upon receipt, immediately remove any shrink-wrap and check materials for damage and the correct style, color, quantity and run numbers.
 - B. Store all materials off of the floor in an acclimatized, weather-tight space.
 - C. Maintain temperature in storage area between 55 degrees F and 90 degrees F.
- 1.6 FIELD CONDITIONS
 - A. Store materials for not less than 48 hours prior to installation in area of installation at a temperature of 70 degrees F to achieve temperature stability. Thereafter, maintain conditions above 55 degrees F.

PART 2 PRODUCTS

2.1 TILE FLOORING

- A. Vinyl Composition Tile: Homogeneous, with color extending throughout thickness.1. Manufacturers:
 - a. As indicated on drawings.
 - 2. Minimum Requirements: Comply with ASTM F1066, of Class corresponding to type specified.
 - 3. Critical Radiant Flux (CRF): Minimum 0.45 watt per square centimeter, when tested in accordance with ASTM E648 or NFPA 253.
 - 4. Size: 12 by 12 inch.
 - 5. Thickness: 0.125 inch.
 - 6. Color: As indicated on drawings.
- B. Vinyl Tile: Printed film type, with transparent or translucent wear layer.
 - 1. Manufacturers:
 - a. As indicated on drawings.
 - 2. Minimum Requirements: Comply with ASTM F1700, of Class corresponding to type specified.
 - 3. Critical Radiant Flux (CRF): Minimum 0.45 watt per square centimeter, when tested in accordance with ASTM E648 or NFPA 253.
 - 4. Plank Tile Size: As indicated on drawings.

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- 5. Wear Layer Thickness: 0.020 inch.
- 6. Total Thickness: 0.125 inch.
- 7. Color: As indicated on drawings.

2.2 RESILIENT BASE

- A. Resilient Base: ASTM F1861, Type TS rubber, vulcanized thermoset; Style B, Cove.
 - 1. Manufacturers:
 - a. As indicated on drawings.
 - 2. Critical Radiant Flux (CRF): Minimum 0.45 watt per square centimeter, when tested in accordance with ASTM E648 or NFPA 253.
 - 3. Length: Roll.
 - 4. Color: As indicated on drawings.

2.3 ACCESSORIES

- A. Subfloor Filler: White premix latex; type recommended by adhesive material manufacturer.
- B. Primers, Adhesives, and Seam Sealer: Waterproof; types recommended by flooring manufacturer.
- C. Moldings, Transition and Edge Strips: Same material as flooring.
- D. Filler for Coved Base: Plastic.
- E. Sealer and Wax: Types recommended by flooring manufacturer.

PART 3 EXECUTION

- 3.1 EXAMINATION
 - A. Verify that surfaces are flat to tolerances acceptable to flooring manufacturer, free of cracks that might telegraph through flooring, clean, dry, and free of curing compounds, surface hardeners, and other chemicals that might interfere with bonding of flooring to substrate.
 - B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive resilient base.
 - C. Cementitious Subfloor Surfaces: Verify that substrates are ready for resilient flooring installation by testing for moisture and alkalinity (pH).
 - 1. Obtain instructions if test results are not within limits recommended by resilient flooring manufacturer and adhesive materials manufacturer.

3.2 PREPARATION

- A. Remove subfloor ridges and bumps. Fill minor low spots, cracks, joints, holes, and other defects with subfloor filler to achieve smooth, flat, hard surface.
- B. Prohibit traffic until filler is fully cured.
- 3.3 INSTALLATION GENERAL
 - A. Starting installation constitutes acceptance of subfloor conditions.
 - B. Install in accordance with manufacturer's written instructions.
- 3.4 INSTALLATION TILE FLOORING
 - A. Mix tile from container to ensure shade variations are consistent when tile is placed, unless otherwise indicated in manufacturer's installation instructions.
 - B. Lay flooring with joints and seams parallel to building lines to produce symmetrical pattern.
 - C. Install square tile to basket weave pattern. Allow minimum 1/2 full size tile width at room or area perimeter.
 - D. Install plank tile with a random offset of at least 6 inches from adjacent rows.
- 3.5 INSTALLATION RESILIENT BASE
 - A. Fit joints tightly and make vertical. Maintain minimum dimension of 18 inches between joints.
 - B. Miter internal corners. At external corners, 'V' cut back of base strip to 2/3 of its thickness and fold. At exposed ends, use premolded units.
 - C. Install base on solid backing. Bond tightly to wall and floor surfaces.
 - D. Scribe and fit to door frames and other interruptions.
- 3.6 CLEANING
 - A. Remove excess adhesive from floor, base, and wall surfaces without damage.
 - B. Clean, seal, and wax in accordance with manufacturer's written instructions.

3.7 PROTECTION

A. Prohibit traffic on resilient flooring for 48 hours after installation.

SECTION 09 68 13 - TILE CARPETING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Carpet tile, fully adhered.
- 1.2 REFERENCE STANDARDS
- 1.3 SUBMITTALS
 - A. See Section 01 30 00 Administrative Requirements, for submittal procedures.
 - B. Product Data: Provide data on specified products, describing physical and performance characteristics; sizes, patterns, colors available, and method of installation.
 - C. Samples: Submit two carpet tiles illustrating color and pattern design for each carpet color selected.
 - D. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.
 - E. Maintenance Data: Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning.
 - F. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 01 60 00 Product Requirements, for additional provisions.
 - 2. Extra Carpet Tiles: Quantity equal to 5 percent of total installed of each color and pattern installed.

1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing specified carpet tile with minimum three years documented experience.
- B. Installer Qualifications: Company specializing in installing carpet tile with minimum three years documented experience and approved by carpet tile manufacturer.
- 1.5 FIELD CONDITIONS
 - A. Store materials in area of installation for minimum period of 24 hours prior to installation.

PART 2 PRODUCTS

2.1 MATERIALS

A. Tile Carpeting: Tufted, manufactured in one color dye lot.1. Product: As indicated on drawings.

2.2 ACCESSORIES

- A. Subfloor Filler: White premix latex; type recommended by flooring material manufacturer.
- B. Edge Strips: Rubber, color as selected by Architect.
- C. Adhesives:
 - 1. Compatible with materials being adhered; maximum VOC content of 50 g/L; CRI (GLP) certified; in lieu of labeled product, independent test report showing compliance is acceptable.
- D. Carpet Tile Adhesive: Recommended by carpet tile manufacturer; releasable type.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that subfloor surfaces are smooth and flat within tolerances specified for that type of work and are ready to receive carpet tile.
- B. Verify that subfloor surfaces are dust-free and free of substances that could impair bonding of adhesive materials to subfloor surfaces.
- C. Cementitious Subfloor Surfaces: Verify that substrates are ready for flooring installation by testing for moisture and alkalinity (pH).
 - 1. Obtain instructions if test results are not within limits recommended by flooring material manufacturer and adhesive materials manufacturer.

3.2 PREPARATION

- A. Remove subfloor ridges and bumps. Fill minor or local low spots, cracks, joints, holes, and other defects with subfloor filler.
- B. Apply, trowel, and float filler to achieve smooth, flat, hard surface. Prohibit traffic until filler is cured.

C. Vacuum clean substrate.

3.3 INSTALLATION

- A. Starting installation constitutes acceptance of subfloor conditions.
- B. Install carpet tile in accordance with manufacturer's instructions.
- C. Blend carpet from different cartons to ensure minimal variation in color match.
- D. Cut carpet tile clean. Fit carpet tight to intersection with vertical surfaces without gaps.
- E. Lay carpet tile in square pattern, with pile direction parallel to next unit, set parallel to building lines.
- F. Locate change of color or pattern between rooms under door centerline.
- G. Trim carpet tile neatly at walls and around interruptions.
- H. Complete installation of edge strips, concealing exposed edges.

3.4 CLEANING

- A. Remove excess adhesive without damage, from floor, base, and wall surfaces.
- B. Clean and vacuum carpet surfaces.

SECTION 09 91 23 - INTERIOR PAINTING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Surface preparation.
- B. Field application of paints.
- C. Scope: Finish interior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated.
 - 1. Both sides and edges of plywood backboards for electrical and telecom equipment before installing equipment.
 - 2. Prime surfaces to receive wall coverings.
- D. Do Not Paint or Finish the Following Items:
 - 1. Items factory-finished unless otherwise indicated; materials and products having factoryapplied primers are not considered factory finished.
 - 2. Items indicated to receive other finishes.
 - 3. Items indicated to remain unfinished.
 - 4. Fire rating labels, equipment serial number and capacity labels, bar code labels, and operating parts of equipment.
 - 5. Stainless steel, anodized aluminum, bronze, terne coated stainless steel, and lead items.
 - 6. Marble, granite, slate, and other natural stones.
 - 7. Floors, unless specifically indicated.
 - 8. Ceramic and other tiles.
 - 9. Brick, architectural concrete, cast stone, integrally colored plaster and stucco.
 - 10. Glass.
 - 11. Acoustical materials, unless specifically indicated.
 - 12. Concealed pipes, ducts, and conduits.
 - 13. Operating and moving parts of operating equipment, including valve and damper operators, linkages, sensing devices, and motor and fan shafts.

1.2 REFERENCE STANDARDS

A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; current edition.

1.3 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.

- B. Product Data: Provide complete list of products to be used, with the following information for each:
 - 1. Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel").
 - 2. Cross-reference to specified paint system(s) product is to be used in; include description of each system.
- C. Samples: Submit three paper "draw down" samples, 8-1/2 by 11 inches in size, illustrating range of colors available for each finishing product specified.
 - 1. Where sheen is specified, submit samples in only that sheen.
- D. Manufacturer's Instructions: Indicate special surface preparation procedures.
- E. Maintenance Data: Submit data including finish schedule showing where each product/color/finish was used, product technical data sheets, material safety data sheets (MSDS), care and cleaning instructions, touch-up procedures, repair of painted and finished surfaces, and color samples of each color and finish used.
- F. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 01 60 00 Product Requirements, for additional provisions.
 - 2. Extra Paint and Finish Materials: 1 gallon of each color and type; from the same product run, store where directed.
 - 3. Label each container with color, type, and room locations in addition to the manufacturer's label.

1.4 QUALITY ASSURANCE

- A. Applicator Qualifications: Company specializing in performing the type of work specified with minimum five years experience and approved by manufacturer.
- 1.5 DELIVERY, STORAGE, AND HANDLING
 - A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
 - B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
 - C. Paint Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

1.6 FIELD CONDITIONS

- A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.
- B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
- C. Do not apply materials when relative humidity exceeds 85 percent; at temperatures less than 5 degrees F above the dew point; or to damp or wet surfaces.
- D. Minimum Application Temperatures for Paints: 50 degrees F for interiors unless required otherwise by manufacturer's instructions.
- E. Provide lighting level of 80 ft candles measured mid-height at substrate surface.

PART 2 PRODUCTS

- 2.1 MANUFACTURERS
 - A. Provide paints and finishes used in any individual system from the same manufacturer; no exceptions.
 - B. Paints:
 - 1. Benjamin Moore: www.benjaminmoore.com.
 - 2. PPG Paints: www.ppgpaints.com.
 - 3. Sherwin-Williams Company: www.sherwin-williams.com.
 - C. Primer Sealers: Same manufacturer as top coats.
 - D. Substitutions: See Section 01 60 00 Product Requirements.
- 2.2 PAINTS AND FINISHES GENERAL
 - A. Paints and Finishes: Ready mixed, unless intended to be a field-catalyzed paint.
 - 1. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
 - 2. Provide materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
 - 3. For opaque finishes, tint each coat including primer coat and intermediate coats, one-half shade lighter than succeeding coat, with final finish coat as base color.

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4 Supply each paint material in quantity required to con

- 4. Supply each paint material in quantity required to complete entire project's work from a single production run.
- 5. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.
- B. Volatile Organic Compound (VOC) Content:
 - 1. Provide paints and finishes that comply with the most stringent requirements specified in the following:
 - a. 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.
 - b. Ozone Transport Commission (OTC) Model Rule, Architectural, Industrial, and Maintenance Coatings; www.otcair.org; specifically:
 - 1) Opaque, Flat: 50 g/L, maximum.
 - 2) Opaque, Nonflat: 150 g/L, maximum.
 - 3) Opaque, High Gloss: 250 g/L, maximum.
 - 2. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.
- C. Colors: As indicated on drawings.
 - 1. Extend colors to surface edges; colors may change at any edge as directed by Architect.
- 2.3 PAINT SYSTEMS INTERIOR
 - A. Interior Surfaces to be Painted, Unless Otherwise Indicated: Including gypsum board, concrete, concrete masonry units, and plaster.
 - 1. Two top coats and one coat primer.
 - 2. Top Coat(s): Interior Epoxy-Modified Latex.
 - a. Products:
 - 1) Benjamin Moore Corotech Waterborne Acrylic Epoxy, V450, Gloss.
 - 2) PPG Paints Pitt-Glaze WB Water-Borne Acrylic Epoxy, 16-599 Series, Gloss.
 - 3) Sherwin-Williams Waterbased Catalyzed Epoxy, B73 Series, Gloss.
 - 4) Substitutions: Section 01 60 00 Product Requirements.
 - 3. Top Coat Sheen:
 - a. Semi-Gloss: Use this sheen at all locations.
 - 4. Primer: As specified under "PRIMERS" below.

2.4 PRIMERS

- A. Primers: Provide the following unless other primer is required or recommended by manufacturer of top coats.
 - 1. Interior/Exterior Latex Block Filler; For Rough Concrete and Masonry.
 - a. Products:
 - 1) Benjamin Moore Corotech Polyamide Epoxy Primer.

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- 2) PPG Paints: 6-15XI Speedhide Masonry Hi Fill Latex Block Filler.
- 3) Sherwin-Williams Loxon Block Surfacer, A24W00200.
- 4) Substitutions: Section 01 60 00 Product Requirements.
- 2. Latex Primer for Interior Wood; Plaster; or Gypsum Wallboard.
 - a. Products:
 - 1) Benjamin Moore Ultra Spec 500 Interior Latex Primer, N534.
 - 2) Sherwin-Williams Premium Wall & Wood Interior Latex Primer, B28W08111; except ProMar 200 Zero VOC Interior Latex Primer, B28W02600, for gypsum wallboard.
 - 3) Substitutions: Section 01 60 00 Product Requirements.

2.5 ACCESSORY MATERIALS

- A. Accessory Materials: Provide primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of painted surfaces.
- B. Patching Material: Latex filler.
- C. Fastener Head Cover Material: Latex filler.

PART 3 EXECUTION

- 3.1 EXAMINATION
 - A. Do not begin application of paints and finishes until substrates have been properly prepared.
 - B. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
 - C. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially effect proper application.
 - D. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
 - E. Test shop-applied primer for compatibility with subsequent cover materials.
 - F. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
 - 1. Gypsum Wallboard: 12 percent.
 - 2. Plaster and Stucco: 12 percent.
 - 3. Masonry, Concrete, and Concrete Masonry Units: 12 percent.

3.2 PREPARATION

- A. Clean surfaces thoroughly and correct defects prior to application.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.
- D. Seal surfaces that might cause bleed through or staining of topcoat.
- E. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
- F. Masonry:
 - 1. Remove efflorescence and chalk. Do not coat surfaces if moisture content or alkalinity of surfaces or if alkalinity of mortar joints exceed that permitted in manufacturer's written instructions. Allow to dry.
 - 2. Prepare surface as recommended by top coat manufacturer.
- G. Gypsum Board: Fill minor defects with filler compound. Spot prime defects after repair.
- H. Plaster: Fill hairline cracks, small holes, and imperfections with latex patching plaster. Make smooth and flush with adjacent surfaces. Wash and neutralize high alkali surfaces.
- I. Metal Doors to be Painted: Prime metal door top and bottom edge surfaces.

3.3 APPLICATION

- A. Apply products in accordance with manufacturer's written instructions.
- B. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
- C. Apply each coat to uniform appearance in thicknesses specified by manufacturer.
- D. Dark Colors and Deep Clear Colors: Regardless of number of coats specified, apply as many coats as necessary for complete hide.
- E. Sand wood and metal surfaces lightly between coats to achieve required finish.
- F. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.

- G. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.
- 3.4 CLEANING
 - A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.
- 3.5 PROTECTION
 - A. Protect finishes until completion of project.
 - B. Touch-up damaged finishes after Substantial Completion.

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SECTION 09 93 00 - STAINING AND TRANSPARENT FINISHING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Surface preparation.
- B. Field application of stains and transparent finishes.
- 1.2 REFERENCE STANDARDS
 - A. 40 CFR 59, Subpart D National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; current edition.
- 1.3 SUBMITTALS
 - A. See Section 01 30 00 Administrative Requirements, for submittal procedures.
 - B. Product Data: Provide complete list of products to be used, with the following information for each:
 - 1. Manufacturer's name, product name and/or catalog number, and general product category.
 - 2. Manufacturer's installation instructions.
 - C. Samples: Submit three samples, illustrating selected colors and sheens for each system. Submit on actual wood substrate to be finished, 4 by 4 inch in size.
 - D. Manufacturer's Instructions: Indicate special surface preparation procedures.
 - E. Applicator's Qualification Statement.
 - F. Maintenance Data: Submit data including finish schedule showing where each product/color/finish was used, product technical data sheets, safety data sheets (SDS), care and cleaning instructions, touch-up procedures, and color samples of each color and finish used.
 - G. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 01 60 00 Product Requirements, for additional provisions.
 - 2. Extra Stain and Transparent Finish Materials: 1 gallon of each color and type; from the same product run, store where directed.
 - 3. Label each container with color and type in addition to the manufacturer's label.

1.4 QUALITY ASSURANCE

- A. Applicator Qualifications: Company specializing in performing the type of work specified with minimum five years experience.
- 1.5 DELIVERY, STORAGE, AND HANDLING
 - A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
 - B. Container Label: Include manufacturer's name, type of stain or transparent finish, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
 - C. Stain and Transparent Finish Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

1.6 FIELD CONDITIONS

- A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by manufacturer of stains and transparent finishes.
- B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.

PART 2 PRODUCTS

- 2.1 STAINS AND TRANSPARENT FINISHES GENERAL
 - A. Finishes:
 - 1. Provide finishes capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
 - 2. Provide materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
 - 3. Supply each finish material in quantity required to complete entire project's work from a single production run.
 - 4. Do not reduce, thin, or dilute finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.
 - B. Volatile Organic Compound (VOC) Content:

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- 1. Provide stains and transparent finishes that comply with the most stringent requirements specified in the following:
 - a. 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.
 - b. Ozone Transport Commission (OTC) Model Rule, Architectural, Industrial, and Maintenance Coatings; www.otcair.org; specifically:
 1) Varnishes: 350 g/L, maximum.
 - Architectural coatings VOC limits of the State in which the Project is located.
- 2. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.
- C. Colors: To be selected from manufacturer's full range of available colors.
 - 1. Selection to be made by Architect after award of contract.
- 2.2 EXTERIOR STAIN AND TRANSPARENT FINISH SYSTEMS
 - A. Finish on Wood:

c.

- 1. Stain: Exterior Solid Stain for Wood, Water Based.
 - a. Products:
 - 1) Behr Deckplus Solid Color Waterproofing Wood Stain (Home Depot)
 - 2) Benjamin Moore Arborcoat Solid Deck & Siding.
 - 3) Olympic Maximum Solid.
 - 4) PPG Paints ProLuxe Rubbol Solid Matte Wood Finish, SIK710 Series.
 - 5) Substitutions: Section 01 60 00 Product Requirements.

2.3 INTERIOR STAIN AND TRANSPARENT FINISH SYSTEMS

- A. Finish on Wood Vertical Surfaces:
 - 1. Stain: Semi-Transparent Stain for Wood, Solvent Based.
 - a. Products:
 - 1) Sherwin-Williams MinWax 250 VOC Oil Stain.
 - 2) Approved equal.
 - 2. Top Coat(s): Polyurethane Varnish.
 - a. Products:
 - 1) Sherwin-Williams Minwax Water-Based Oil-Modified Polyurethane, Semi-Gloss.
 - 2) Approved equal.
 - 3. Top Coat Sheen:
 - a. Semi-Gloss: Use this sheen at all locations.
- B. Finish on Wood Floors.
 - 1. Stain: Semi-Transparent Stain for Wood.
 - a. Products:

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- 1) Sherwin-Williams MinWax 250 VOC Oil Stain.
- 2) Approved equal.
- 2. Top Coat(s): Polyurethane Varnish.
 - a. Products:
 - 1) Sherwin-Williams MinWax Ultimate Floor Finish, Gloss.
 - 2) Approved equal.
- 3. Top Coat Sheen:
 - a. Gloss: Use this sheen at all locations.

2.4 ACCESSORY MATERIALS

A. Accessory Materials: Cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of finished surfaces.

PART 3 EXECUTION

- 3.1 EXAMINATION
 - A. Do not begin application of stains and finishes until substrates have been properly prepared.
 - B. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
 - C. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially effect proper application.
- 3.2 PREPARATION
 - A. Clean surfaces thoroughly and correct defects prior to application.
 - B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
 - C. Remove or repair existing finishes that exhibit surface defects.
 - D. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.
 - E. Wood Surfaces to Receive Transparent Finish: Wipe off dust and grit prior to sealing, seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after sealer has dried; sand lightly between coats. Prime concealed surfaces with gloss varnish reduced 25 percent with thinner.
 - F. Wood Doors to be Field-Finished: Seal wood door top and bottom edge surfaces with clear sealer.

- G. Wood Floor Finishing: Sand flooring to smooth even finish with no evidence of sander marks. Take precautions to contain dust. Remove dust by vacuum.
- 3.3 APPLICATION
 - A. Apply products in accordance with manufacturer's written instructions.
 - B. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
 - C. Apply each coat to uniform appearance in thicknesses specified by manufacturer.
 - D. Wood to Receive Transparent Finishes: Tint fillers to match wood. Work fillers into the grain before set. Wipe excess from surface.
 - E. Reinstall items removed prior to finishing.
- 3.4 CLEANING
 - A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.
- 3.5 PROTECTION
 - A. Protect finishes until completion of project.
 - B. Touch-up damaged finishes after Substantial Completion.

END OF SECTION

SECTION 14 20 00 - ELECTRIC ELEVATORS – ELEVATOR #1

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Include all labor, materials and appliances required for the furnishing, installing, and testing, complete and ready for operation in a manner satisfactory to the Consultant, all the work specified herein.
 - 1. One (1) Electric, Overhead Geared Traction, Passenger Elevator, Elevator No. 1., <u>Utilizing</u> Non-Proprietary Equipment/Components.
 - 2. Car enclosure remodel, including car doors and hangers and operating devices for car doors and landing doors.
 - 3. Signals and trail cables for signals and intercommunication system.
 - 4. All controls and signal equipment.
 - 5. Provisions for a proximity card reader system.
 - 6. Inter-communications system and two-way hands free system, As outlined in the latest A17.1 code, section 2.27.1.
 - 7. Clean entire shaft including wash down of all rails, door pockets, etc..
 - 8. Suitable storage space for tools and materials brought into the building, by the Elevator Contractor to be used during construction.

1.2 INTENT OF SPECIFICATIONS

- A. The entire installation shall be installed as herein specified, Utilizing Non-Proprietary Equipment/Components.
- B. The type, duty, etc., of this elevator shall be in accordance with the data hereinafter specified.
- C. Wherever in these specifications the words "supply", "provide", "furnish", or similar term is used in the sense of furnishing apparatus or materials, it shall mean that the Contractor for this work shall supply, install and connect such apparatus or materials to which it is referred, except as may otherwise be specifically defined.

- D. Bring to the attention of the Architect immediately any changes in the size or location of the material or equipment which may be necessary in order to meet field conditions, or in order to avoid conflict with the equipment of other Sections. Obtain the Architect's acceptance before such deviations are made.
- E. It is the intent of these specifications to provide a complete system, and all necessary labor and materials, whether or not specifically mentioned herein, shall be included and left in good working order, ready for operation.
- F. Locate all equipment and accessories in such a manner, as to provide easy access for proper service and maintenance.

1.3 RELATIONS WITH OTHER TRADES

- A. Confer with others engaged in the construction of the building whose work might affect the installation, and arrange all parts of the work and equipment in proper relation to the work and equipment of others, with the building construction and with the architectural finish, so that it will harmonize in service and appearance. Special care shall be taken in the installation of the equipment, where same is concealed, to assure that it does not project beyond the finished lines of floors, ceilings or walls.
- B. If it should be necessary to remove and relocate any material or equipment that has been installed without the proper investigations and coordination with the work of other Sections, such materials or equipment shall be removed and relocated by this Contractor without any additional cost to the Owner.

1.4 CUTTING AND PATCHING

- A. The cost of cutting and patching of walls, partitions, ceilings and floors necessary for reception of work shall be borne under this Section.
- B. When it is necessary to cut finished materials, provide proper protection as to protect the surrounding area (hallways, office spaces, etc.).
- C. Any damage to personal property caused by the contractor's work shall be repaired, cleaned, etc. and all costs shall be paid for by the Contractor.

1.5 STANDARDS

A. Materials specified by reference to a specific standard such as the American Society of Testing Materials, Underwriters' Laboratories, American National Standards Institute, Federal Specifications, a trade association standard, or other similar standard shall comply with the

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requirement in the latest revision thereof, in effect at the time of bidding, except as limited by type, class or grade, or modified in such reference.

1.6 DEFINITIONS

A. All terms in the specifications have the definition given in the Safety Code for Elevators, Escalators and Dumbwaiters as approved by the American National Standard Institute, latest edition, including all revisions and changes authorized by the Sectional Committee on Elevator Safety Code to date of these specifications. Hereafter in these specifications, the abbreviation "ANSI Code" shall be understood to refer to this Code.

1.7 NOTICE TO BIDDERS

A. Before submitting proposals, examine the specifications and become fully informed as to the extent and character of the work and the relation of the work to the work of other Sections.

1.8 SIGNS AND ADVERTISEMENTS

A. No signs and advertisements will be allowed to be displayed on the premises.

1.9 SPECIAL TREATMENTS

A. The Architect will accept no exposed fasteners and no manufacturers' logos or trademarks on any material or equipment provided in these specifications.

1.10 DESCRIPTION OF ELEVATOR SYSTEMS

- A. Passenger Elevators
 - 1. Quantity: One (1) single wrap overhead geared traction, passenger elevators (1:1 roping).
 - 2. Capacity: 2000 pounds.
 - 3. Speed: Existing, 250 F.P.M.
 - 4. Travel: Existing, Floors L*, 2 to 5.
 - 5. Number of Landings: Existing.
 - 6. Number of Openings: Existing.
 - 7. Operation: Simplex Collective w/wo independent service.
 - 8. Special Operations: Fireman's return service, intercom, two-way hands-free communication, independent service, access switches.
 - 9. Control: V.V.V.F.
 - 10. Safety: Existing to remain, but overhauled.
 - 11. Buffers: New oil cushion buffers, with switches.

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- 12. Car Enclosure: Remodel, \$35,000.00 allowance.
- 13. Landing Doors: Existing to remain, new interlocks, tracks, etc.
- 14. Door Operation: Medium speed power with electronic door control.
- 15. Signals: Call acknowledging lights, car position indicators, hallway position indicators, hallway travel lanterns.
- 16. Machine Location: Overhead.
- 17. Communication Equipment: Intercommunication system & two way <u>outside</u> hands-free communication. As to comply with the latest A17.1 code, Rule No. 2.27.1.
- 18. Power Supply: Existing.

1.11 SHOP DRAWINGS AND SAMPLES

- A. Submit required or requested shop drawings, and obtain written acceptance of same before ordering or installing any equipment or materials.
- B. Shop drawings of equipment shall consist of manufacturer's scale drawings, cuts or catalogs, including descriptive literature which shall indicate the construction, including material and physical dimensions, and complete operating data.

1.12 WIRING DIAGRAMS

A. The Contractor shall furnish a complete set of wiring diagrams and single line diagrams for each elevator, showing the electrical connections, functions and sequence of operation of all apparatus connected with the work; and all data and instructions necessary for the proper maintenance and repair of all equipment. All items that do not apply directly to this installation shall be omitted from the final diagrams, and these diagrams should reflect all field and/or shop changes. The diagrams shall be located in the elevator machine room.

1.13 LAWS AND ORDINANCES

- A. All local and State laws and regulations, Occupational Safety and Health Administration Rules, and National Fire Protection Association's recommendations, governing or relating to any portion of this work are hereby made a part of these specifications; responsibility for compliance to their provisions is included.
- B. Inform the Architect of any work or materials which violates any of the applicable laws and regulations before proceeding with the work.

1.14 APPLICABLE CODES AND SPECIFICATIONS

- A. Only the latest editions and revisions of referenced codes ASME A17.1 & A117.1 and specifications shall be applicable for the work of this Section.
- B. All construction, workmanship and materials, all factors of safety used in designing all structural and working parts of the equipment, and unless herein specifically modified, all top and bottom clearances and the construction and operation of all safety devices shall be in full accordance with the requirements of ANSI Code. In addition, all such equipment and clearances shall fulfill the rules, regulations and codes of all local bodies having jurisdiction.
- C. Where the requirements of the ANSI Code are more severe than local rules, regulations and codes, the ANSI Code shall govern.
- D. Factors of safety, buffers, roping and rope socketing, guide rails, safeties, speed governors, counterweights, top and bottom terminals stopping devices, emergency stopping devices, etc., are not described hereinafter, except as to special requirements, since they are fully covered in the **ANSI Code**.
- E. In addition, the equipment shall conform to certain special safety requirements as given in these specifications.

1.15 DELIVERY OF MATERIALS AND EQUIPMENT

A. Store materials and equipment where directed by the Owner. Any damage caused by any overloading of the structure shall be repaired at no additional cost to the Owner. Include the hoisting of all materials and equipment and assume all responsibility for such hoisting equipment.

1.16 EXAMINATION OF EXISTING CONDITIONS

- A. Visit and carefully examine those portions of the site and/or present buildings affected by this work so as to become familiar with existing conditions and difficulties that will attend the execution of the work, before submitting proposals.
- B. Submission of a proposal will be construed as evidence that such examination has been made and later claims for labor, equipment or materials required because of difficulties encountered, which could have been foreseen had such examination been made, will not be recognized.

1.17 DAMAGE TO PROPERTY

A. Restore to its original condition without extra payment any of the Owner's property that shall become damaged due to the negligence of any employees or agents of the Contractors. Such repairs shall meet the acceptance of the Owner.

- B. Take proper care and protect all portions of the work until its acceptance. Any and all portions of work liable to damage under this or other Sections or by freezing or inclement weather must be thoroughly and securely protected by a substantial boarding or covering until not further required.
- C. Protect all plated and polished material and trimming against damage.

1.18 WORK IN EXISTING BUILDING

- A. Perform the work in the existing buildings when and as directed (and generally in accordance with the SEQUENCE OF OPERATIONS). Caution is hereby given that the work shall be performed so as to cause the least possible inconvenience and disturbance to the occupants.
- B. The proposal for work in the existing buildings shall be predicated on the performance of the work during regular working hours. When so directed, however, install work in overtime and the additional cost charged therefore shall be only the "premium" portion of the wages paid.
- C. All scrap and debris, except as otherwise specified, shall be removed from the site and disposed of by the Contractor. When requested by the Owner, move equipment to a storage place on the premises and leave as property of the Owner.

1.19 SHUT DOWNS

A. When installation of new work requires the shutdown of an existing operating system, the connection of the new work shall be performed only after not less than 72 hour notification to, and acceptance by the Owner.

1.20 GUARANTEES/WARRANTY

A. The Contractor shall furnish, under his contract, a written guarantee to replace or repair promptly at his own expense, any workmanship and equipment in which defects develop within one year from the date of final acceptance of his work, evidenced by the Consultant's report and final payment. The work shall be done as directed by the Consultant. This guarantee shall also provide that where defects occur, the Contractor will assume responsibility for all expenses incurred in repairing and replacing work of other trades affected by defects, repairs or replacements in equipment supplied by the Contractor.

1.21 SHOP DRAWINGS AND SUBMITTALS

A. Submit four (4) hard copies, (E-MAILS ARE UNACCETPABLE) of the following shop drawings/submittals and obtain written acceptance, before ordering or installing any equipment or materials.

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- 1. State of New Jersey, Dept. of community Affairs Elevator Permits.
- 2. Machine room layout drawings.
- 3. Geared traction hoist machine submittal.
- 4. AC hoist motor submittal.
- 5. Rope gripper submittal
- 6. V.V.V.F. micro-processor controller with manufacture doors submittal.
- 7. Signal fixtures drawings.
- 8. Communication systems submittals.
- 9. Hatchway and car door equipment submittals.
- 10. Oil cushion buffers with switches submittals.
- 11. Car and counterweight roller guide submittals.
- 12. Cab remodel drawings.
- B. Shop drawings of equipment shall consist of manufacturer's scale drawings, cuts or catalogs, including descriptive literature which shall indicate the construction, including material and physical dimensions and complete operating data.
- C. Submit for acceptance requested samples. the samples shall be properly tagged and shall remain in the possession of the Owner, until final acceptance of the work.

PART 2 - EQUIPMENT

2.1 ACCEPTED MATERIALS

A. Materials and equipment shall be new, of makes and kinds specified herein, without exception. Where one brand, make of material, device or equipment is specified or shown, the products of the manufacturers listed in "ACCEPTED MANUFACTURERS" shall be regarded as acceptable when, in the opinion of the Consultant, it is a recognized equal considering quality, workmanship, economy of operation, and suitability for the purpose intended.

2.2 ACCEPTED MANUFACTURERS

- A. All materials shall be in strict accordance with the quality, style, performance and sizes hereinbefore specified. Manufacturer's names and catalog numbers are given in the specifications for the purpose of establishing a standard of quality, style, size and type and shall not be construed to exclude equipment or material of other manufacturers.
- B. To furnish equipment of a manufacturer other than that specified or listed hereinafter, include a complete specification of the substituted item along with each submission copy of shop drawings. Write specifications as close as possible over the Contract Specifications; each paragraph shall bear the same paragraph number as the Contract Specifications so that close comparison can be

made with the equipment specified. Changes shall be subject to the complete acceptance of the Architect.

- C. When materials and equipment are purchased from the manufacturer specified or listed hereinafter, submit a complete verification specification with each copy of shop drawings.
 - 1. ROLLER GUIDES
 - a. Elevator Safety Company ELSCO
 - 2. STEEL ROPES
 - a. AFD Industries Inc.
 - b. Bethlehem Elevator International
 - c. Macwhyte Wire Rope Company
 - d. United Ropeworks
 - 3. WIRING
 - a. Benfield Electric Corporation
 - b. Draka Elevator Products
 - 4. HOISTING MACHINE
 - a. Hollister Whitney Elevator Corporation
 - b. Titan Machine Corporation
 - 5. AC HOIST MOTORS
 - a. LeRoy Somer Inc.
 - b. Imperial
 - c. General Electric
 - d. Reuland
 - 6. CONTROLLERS
 - a. G.A.L. Galaxy
 - b. Claddagh Electronics
 - c. Elevator Systems, Inc.
 - d. Smart-rise Engineering
 - 7. LEVELING DEVICE
 - a. G.A.L.
 - b. Claddagh Electronics
 - c. Elevator Systems, Inc.

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- 8. SIGNAL FIXTURES
 - a. Monitor Controls
 - b. Innovation Industries
- 9. HANGERS AND TRACKS
 - a. G.A.L.
- 10. DOOR OPERATORS
 - a. G.A.L.
- 11. CAB ENCLOSURES
 - a. National Elevator Cab & Door Corp.
 - b. EDI-ECI
 - c. Liberty Elevator Cabs
 - d. Cab-Tech Elevator Design

12. ASCENDING CAR DEVICE/ROPE GRIPPER

a. Hollister-Whitney Elevator Corporation

2.3 MACHINE SUPPORTS

- A. Provide all machine beams, channels, angles, zee bars and steel plates, as required for the elevator machines, deflector sheaves, ascending car device.
- B. The existing supports shall be retained and reused.
- C. The machines shall be carefully aligned and centered with reference to the car and counterweight rope hitch centers and then securely bolted and braced to prevent shifting.

2.4 HOISTING MACHINES AND CONTROL Provide for this elevator a non-proprietary hoist machine & AC hoist motor:

A. The hoisting machine shall be of the single worm geared traction type, with motor, brake, gearing and driving sheave mounted in proper alignment on a cast iron or steel bedplate. The worm shall be of steel, integral with the worm shaft, and shall be provided with a ball bearing thrust with selfaligning blocks, or shall be of the preloaded type thrust bearing, designed to take the end thrust of the worm in both directions. Thrusts shall be removable without dismantling the machine. The worm gear shall be hobbed from a bronze rim which shall be accurately fitted and bolted to the gear spider.

- B. Bearings of anti-friction metal or roller bearings shall be provided and equipped with suitable means for lubrication. Brake shall be spring applied, electrically released and designed to be instantly and automatically applied in event of interruption of power supply from any cause.
- C. Sheaves shall be made of semi-steel containing approximately 25% steel, accurately turned with machine progressive grooves, shaped so as to maintain traction throughout the life of the groove. Brake wheels shall be accurately turned and balanced. Surface of sheaves shall show a hardness of not less than 240 Brinnell.
- D. The diameter of the hoisting machine driving sheaves shall be not less than forty- eight (48) times the diameter of the hoisting rope.
- E. Geared Elevator Hoisting Machine Motor AC Provide a new hoist motor complying with the following:
 - 1. The motor shall be of the alternating current reversible induction type of a design adapted to the severe requirements of elevator service. Motor shall be capable of developing the required high starting torque (minimum 225%) with a low starting current, and shall be designed to stand the severe loads encountered in elevator service.
 - 2. The motor shall be rated in accordance with the standards of NEMA, NFPA and AIEEE 30 minute rating motors, in accordance with the class of insulation of motors, and shall be sufficient capacity to operate elevator with rated contract load at rated contract speed without overheating. The motor will be tested as specified in this Specification.
 - 3. The motor shall be single speed AC and have variable frequency control and shall be of the special elevator type with high internal resistance squirrel cage rotor.
 - 4. Insulation of all windings shall be impregnated and baked to prevent absorption of moisture and oil. The insulation resistance between motor frame and windings shall not be less than one Megohm. The motor windings shall stand a dielectric test of twice the normal voltage plus 1000 RMS volts of 60 Hertz, alternating current for one minute. Insulation shall be Class B. Better insulation may be used but must be approved by Authority prior to use. Motors shall be designed to maintain proper temperature during operation.
 - 5. Motor bearings shall be either approved sealed bearing, the anti-friction bearing metal sleeve type, or of the open (non-seal) type or roller type arranged for grease lubrication and fitted with grease gun connections and drain plugs. Bearings and lubricant reservoirs shall be virtually dust tight and shall incorporate effective lubricant seals or other means to prevent lubricant leakage. Bearing shall be replaceable type and separate from the motor housing (not part of the housing). Bearings that are part of the motor housing will not be accepted.
 - 6. The design of frames, and end bells, etc., shall be such as to insure perfect alignment of bearings and minimize vibration. The Contractor shall stamp (with approved tool) "date of installation", on the motor frame and specify the date the motor is installed. The

Contractor shall be responsible for providing the Authority Inspector concerned, with a list of dates that the motors were installed, including the motor serial numbers.

7. The Contractor shall provide temperature sensitive electrical resistors (Thermistors) to protect the rotor and stator windings of each elevator hoist motor. Thermistors shall be installed in each phase of each winding and shall have a temperature response setting equivalent to the rating per class of insulation. These Thermistors shall be connected to a motor protection device located on the elevator control panel. When activated, it shall cause the elevator to level in at the nearest floor landing and shall disconnect power from the elevator hoist motor. Activation of the motor protection device due to thermal overloading, shall require a "manual reset". In the event of a power outage, the elevator will automatically reset. The motor protection device shall been clearly labeled and identified at the terminals and a cover plate shall be provided with a light illumination indicating that this device has been tripped with a reset button provided to restore normal operation.

2.5 ASCENDING CAR DEVICE/ROPE GRIPPER

- A. Provide this elevator with an ascending car device/rope gripper.
- B. Provide all necessary steel beams, bolts, nuts, washers, etc. to mount device to the overhead rope beams, as recommended by the manufacturer.
- C. If it is necessary to raise the entire hoist machine to accommodate the rope gripper, provide all necessary steel beams, labor, etc.

2.6 CONTROLLER

- A. Provide this elevator with a non-proprietary solid state V.V.V.F. microprocessor controller shall be as follows:
 - 1. Frame: All controller printed circuit boards, discrete components, switches, and other items of control equipment shall be mounted on a common panel or individual panels which are made of an approve moisture-resisting, non-combustible material which shall be securely mounted on a substantial, self-supporting steel frame.
 - 2. Electro-mechanical switches and relays shall be used where heavy current is supplied and/or on safety circuits where required by Code.
 - 3. Switch Design: Switches shall be of the direct-current type, magnet operated with contacts of design and material to insure maximum conductivity, long life and reliable operation without overheating or excessive wear and provide a wiping action to prevent

sticking due to fusion. Switches carrying highly inductive currents shall be provided with arc deflectors or suppressors

- 4. Switch Mounting: All switches, printed circuit boards, and discrete components shall be mounted on the front of panels together with any small electronic components, but large capacity resistors shall be mounted on the rear or top of panels. They shall all be readily accessible and easily renewable.
- 5. Time Delay Device Design: Where time delay circuits are employed, they shall be of an accepted design that is reliable and consistent, such as electronic timing circuits. <u>No air</u> dash pot time relays shall be used.
- 6. Wiring: Wiring on the controller, whether factory or field wiring, shall be done in neat workmanlike order and all connections shall be made to studs and/or terminals by means of grommets, solder less lugs or similar connections. All wiring shall be copper.
- 7. Terminal Blocks: Terminal blocks with identifying studs shall be provided on controller for connection of board wiring and external wiring.
- 8. Marking: Identifying symbols or letters shall be permanently marked on or adjacent to each device on the controller and the marking shall be identical to marking used on the wiring diagrams. In addition to the identifying marks, the ampere rating shall be marked adjacent to all fuse holders.
- 9. Input-output devices shall be marked similarly to relays for easy reference to wiring diagrams.
- 10. Provide all necessary filters, traps, etc., to eliminate all noise being transmitted back into the building electrical system. Also, the controller shall be properly protected against and/or protect all outside influences, i.e., radio or T.V. signals.
- 11. Variable Voltage Variable Frequency Power (AC) Control System
 - a. The elevator hoist machine shall have a AC motor. The control of the hoisting motor shall be by means of a solid state drive system. The speed, acceleration and deceleration shall be automatically and continuously controlled by varying the frequency and voltage of the motor. A closed loop system shall be provided.
 - b. The drive shall utilize a 3 phase, full wave rectifier and capacitator bank to provide direct current for the solid state inverter. The control principle shall be based on constant flux control utilizing pulse width modulation.

- c. A means shall be provided for removing regenerated power from the drive DC power supply. This power shall be dissipated in resistors or returned to the 3 phase AC power line. Failure of the system to remove the regenerated power shall cause the drive output to be removed from the hoist motor.
- d. The final stopping shall be performed independent of the machine brake which shall be applied to hold the car at a floor only after the car has stopped.
- e. The drive shall not create excessive audible noise in the elevator motor and control system.
- f. The drive system shall include but not necessarily be limited to the following features:
 - 1) Maintain a car speed within +/-5% of the contract speed.
 - 2) Protection against excessive motor current in addition to normal overload relays.
 - 3) Maintain operation within 90 to 110% of nominal line voltage.
 - 4) Line fault protection to prevent operation under:
 - a) Loss of phase.
 - b) Low line voltage.
 - c) High line voltage.
 - 5) The transistor protection shall ensure 100% protection of the transistors and prevent fuse blow-out.
 - 6) Continuous supervision of the braking resistors shall be provided.
 - 7) Motor contacts shall disconnect the motor stator winding during each stop. In normal operation, the contactors shall operate only under zero current conditions, but must be capable of interrupting the line current should an emergency stop be required.
 - 8) The drive system shall continuously monitor the hoisting motor operation and motor torque in order to ensure 100% safe elevator operation at all time.
 - 9) Provide each controller with the manufacture's cover/door.

2.7 CAR LEVELING DEVICE

- A. Provide this elevator with an **non-proprietary** car leveling device that shall automatically bring the car to a position level +/- 1/4" with any floor, regardless of the load in the car or its direction of motion. The device shall correct over travel and under travel as well as rope stretch due to variations of load. Correction shall be in small steps without surges to eliminate tripping hazard.
- B. Leveling to IP 8300 or approved equal.

2.8 RAILS

- A. The present guide rails shall be retained and reused. All guides shall be <u>cleaned</u>, all brackets and rail bolts shall be tightened, all joints adjusted and filed.
- B. Car and counterweight rails must be <u>thoroughly cleaned</u> and smoothed before cars are put in operation. When cars are tested, they must be free from any noise due to rough or rusty guides and the car guides must be free from any signs of abrasion.

2.9 SHAFT CLEANING

A. The entire shaft of this elevator from the pit floor to the machine room slab shall be thoroughly cleaned of all debris, lint, grease, dust, etc..

2.10 HOIST AND GOVERNOR ROPES

- A. Roping for all elevators shall be 1:1.
- B. Provide hoist ropes of high grade traction steel, 8 x 19 Seale construction, especially designed for elevator service having a factor of safety at least equal to that specified in the ANSI Code. They shall be securely attached at both ends into the shackles, using the method specified in the ANSI Code.
- C. The governor rope shall be steel construction, 8 x 19 Seale, especially designed for elevator service. The two ends shall be securely fastened together at the car and shall be attached to the safety operating mechanism.
- D. All ropes shall be cut and tagged for installation on this elevator.
- E. Ropes for this elevator shall be cut in sequence from any run.

2.11 SPEED GOVERNOR

- A. Provide a **non-proprietary speed governor of the centrifugal,** self-oiling type. The safety rope grip shall lock in position when the governor throws and shall be held in contact with the rope both by springs and by the sliding action and pull of the rope on the grip. Governor jaws shall be machined and so arranged that if worn, they can be replaced. Speed governors shall be located in the machine room.
- B. The diameter of the governor sheave shall be not less thirty-two (32) times the diameter of the governor rope.
- C. The governor shall be accurately adjusted and sealed with the tripping speed specified in the ANSI code.
- D. Provide a new pit tension sheave for each elevator.

2.12 SAFETY

- A. The mechanical safety under the car platform shall be retained and reused with **necessary** cleaning and adjusting.
- B. The safety mechanism, when tripped, shall engage the rails.

2.13 CAR SLING AND PLATFORM

- A. The car platforms, slings and safety planks shall be retained and reused with the **necessary cleaning.** All bolts shall be tightened and the car sling shall be provided with new rubber roller guides, as hereinbefore specified, located top and bottom on each side **of sling**.
- B. The entrances to this car shall be provided with one-piece non-slip extruded aluminum saddle/sill flush with finished floor.
- C. Finished floor shall be a design, as selected by the Owner.
- D. Provide this elevator with suitable receptacles fitted with wire lamp guards on top of the car and beneath the car platform. Provide a suitable plug receptacle on top and bottom of the car.
- E. Provide on top of the car an inspection station marked "stop", "up", and "down".

2.14 COUNTERWEIGHT

A. The existing counterweight shall be retain and reused, but must be checked for proper counterbalance and if additional weights are required, they must be added.

2.15 ROLLER GUIDES

- A. Provide this elevator with 6" roller guides and base on top and bottom of each car frame and 3" roller guides and base on the top and bottom each counterweight frame for each guide rail. Each roller guide shall consist of three (3) rubber tired wheels to run on the three (3) finished rail surfaces. The wheels shall be equipped with ball bearings and shall be held against the rail surfaces by adjustable springs, all contained on a substantial metal base. The roller guides shall run on dry guide rails not lubricated. All rollers are to be free enough to turn by hand with a minimum of pressure.
- B. Car roller guides to be Elsco Model B.
- C. Counterweight roller guides to be Elsco Model D.

2.16 TERMINAL STOP DEVICES

- A. Provide upper and lower normal terminal stopping devices that shall be arranged to automatically stop the car from speed specified within the top clearance and bottom over-travel independent of the operating device, final terminal stopping device and the buffers.
- B. Provide final terminal stopping devices that shall automatically stop the car and counterweight from speed specified within the top clearance and bottom over travel independent of the operation of the normal terminal stopping device with the buffers operative.
- C. Final terminal stopping devices shall be through bolted to the rails.

2.17 CAR AND COUNTERWEIGHT BUFFERS

- A. Provide new oil cushion buffers under the car and counterweight in the existing location. These buffers shall bring the car and counterweight to a gradual stop at the extreme limits of travel, beyond the terminal landings, should the car for any reason run by the terminal landings more than a safe distance.
 - 1. Provide both car and counterweight oil buffers with switches, so that in the event that a buffer, after being compressed, does not restore itself, the car shall not operate, until the buffer/plunger has been restored to its normal position.
 - 2. The existing support steel and support stands may be retained and reused.
- B. Provide a switch in this pit, arranged to interrupt the power supply and apply the brake independently of the regular operating device to permit safe access to pit for servicing the equipment. Locate switch next to the pit access door.

C. The existing pit stop switch/contact, located at the top of the pit access door, shall be retained and reused, but must checked for a proper operation.

2.18 CAR POSITION INDICATOR

- A. Provide a car position indicator for this elevator consisting of readout two inches high (2") with directional arrows and locate at the top of the car operating panel to indicate the car position to the passengers.
- B. Readouts in the car station shall be two inch planar, neon gas discharge displays, alphanumeric type, neon red color with 130 viewing angle or approved equal.

2.19 COMBINATION HALLWAY TRAVEL LANTERNS & POSITION INDICATORS

- A. Provide combination hallway travel lanterns and a two inch, (2") car position indicator "<u>at each landing</u>" and locate above each hatchway entrance frame, with single lights at the terminal floors. All hallway lanterns shall be connected into the control and signal system, so that the proper hallway lantern will be illuminate, as the car approaches to stop at a landing in answer to a hall call, to indicate to waiting passengers, the direction of the elevator, light shall remain illuminated until the car leaves the floor.
- B. Provide in each hallway lantern, a single stroke bell and connect to ring the number of times, as required by the Code, when the lights are energized.
- C. Cover plates to be made of #4 stainless steel, utilizing tamper-proof screws.
- D. Provide all necessary labor and material, to locate these combination stations above each hatchway entrance at every landing.
- 2.20 CAR SIGNAL AND OPERATING PANEL
 - A. Provide this elevator car a panel, (selected from Contractor's stock designs, stainless steel and surface mounted).
 - B. The following items shall be included on the panel unless otherwise specified:
 - 1. A complete set of **vandal-resistant**, **(positive stop) pushbuttons** corresponding to each floor served, with "call registered lights" in the button in each car station.
 - 2. The open door button.
 - 3. The safety switch. (Emergency stop switch), (key operated).

- 4. The car light switch.
- 5. The fan switch, two (2) speed.
- 6. Keyed switch to change from "Automatic" operation to "Independent" operation.
- 7. Fireman's emergency service switch.
- 8. Grill for the communication speaker
- 9. Two inch high floor indicator with directional arrows.
- 10. Provide provisions for a proximity card reader system, provided by others.
- 11. Provide all provisions, that are required by the latest A17.1 code, As outlined in Rule No. 2.27.1.
- 12. "NO SMOKING" to be engraved in 1-1/2" letters.
- 13. Union County Annex. Bldg. to be engraved in 1" letters.
- 14. Capacity to be engraved in 3/4" letters.
- 15. All switches, shall be key-operated and located behind the keyed cover, except the emergency switch.
- C. The car signal panels shall be located as required by Code including the ADA requirements and shall include the markings adjacent to each button, switch, etc. The BRAILLE indications shall be square and engraved in the plate. Applied plates will not be accepted.
- D. Plate to be secured by Ace or equal type locks and properly hinged to prevent bowing.
- E. Provide a G.F.I. duplex plug receptacle in this car and locate in the service cabinet.

2.21 CAR PUSHBUTTONS

- A. Provide car pushbuttons that shall be of vandal-proof, (positive stop) type with floor designation engraved in the button "with call registered lights in the buttons". The circuit set up by the pressing of a signal button on the car control panel shall be reset or extinguished when arriving at the designated floor.
- B. All pushbuttons, except the Lobby/Main floor, shall be a minimum of 1-1/4" outer diameter convex in design.

C. The Lobby/Main floor car button shall be a Bar Button.

2.22 SAFETY SWITCH (Emergency Stop Switch), (Key Operated)

A. Provide a safety switch which shall be of a distinct color from the other switches and pushbuttons and shall be so located, etc., as not to become confused with the other switches. The operation of the safety switch shall cut off all power, apply the brake and ring a 6" diameter bell under the car platform.

2.23 LANDING PUSHBUTTONS

- A. Provide landing pushbutton call station of the that shall be of the **vandal-proof (positive stop) type with arrows engraved in the button** with "call registered lights in the button" as hereinbefore described. Button mechanism shall be of substantial construction for expected use. Contacts shall be of the rubbing type of silver or composition metal and shall be arranged so as to equalize pressure and prevent undue compression of the springs. Buttons shall be of the short throw type and be 1-1/4" outer diameter.
- B. Provide all necessary labor and back boxes, to locate the hallway pushbutton stations at the required ADA height.
- C. Provide required signage on each hall station, as outlined in "Appendix O" of the A17.1 code
- D. Cover plates to be made of #4 stainless steel utilizing tamper-proof screws.

2.24 ELEVATOR COMMUNICATION SYSTEM

- A. Provide all equipment, accessories and materials complete and in strict accordance with the specifications <u>and the latest A17.1 code, Rule No. 2.27.1</u>. All materials and/or equipment necessary for proper operation of the system not specified or described herein shall be deemed part of this specification.
- B. Provide facilities for originating calls and establishing two-way communication (inter-com) from the elevator cab to the machine room.
- C. Provide facilities for complying with the requirements of the hands-free communication as outlined in the ADA law.
- D. Provide a trickle charger and battery as a part of the communication system. In the event of a power failure, the battery shall be able to provide for full communication for a period of two (2) hours.

2.25 HATCHWAY ENTRANCES

- A. The existing entrance frames and doors, shall be retained and reused, but the doors shall be provided with new hangers and tracks, new nylon bottom door guides, etc. and reinforced to accept power operation. A reinforcement shall be installed at the center of each door panel and located between the new guides. such reinforcement shall be fabricated of twelve (12) gauge stainless steel and shall have a minimum length of eight (8) inches and a minimum height of two and one fourth inches (2-1/4"). The reinforcement shall engage the saddle by not less then three eights inch (3/8").
- B. Provide Braille jamb plates at every landing and locate at the required ADA height.

2.26 HATCHWAY DOOR AND CAR DOOR CONTACTS

- A. Provide each elevator hatchway door and the car door with an electric switch which will prevent the operation of the elevator unless the car door is closed and all hatchway doors are locked in the closed position.
- B. These switches shall be positive in operation and must be so located and designed as to be protected from mechanical injury and the possibility of short circuits.

2.27 ELECTRIC DOOR OPERATOR

- A. Provide a non-proprietary, medium speed electric operator capable of operating the hoistway doors and the car doors simultaneously from the closed position to within three (3") inches of full open position at a speed of approximately two and one-half (2-1/2) feet per second. the closing speed shall be slightly slower than the opening speed. The movement of the car shall be controlled simultaneously by the normal operation of the elevator controls. The doors shall operate smoothly and without slamming in both opening and closing direction. The car door shall be cushioned in its final movement in each direction of travel.
- B. Provide <u>8" Z-bar reinforcement</u> on both car doors and locate between the new nylon guides.
- C. Provide new nylon guides on the car door.
- D. Provide a solid state micro scan unit on the car door.

2.28 HOISTWAY ACCESS SWITCH

A. Provide a cylindrical type keyed switch at the top and bottom terminal landings, in order to permit the car to be moved at a slow speed with the doors open, to allow authorized personal to obtain access to the top of the car.

- B. Locate this key switch in the **5th floor** hallway pushbutton station.
- C. This switch is to be of the continuous pressure spring-return type, and shall be operated by a cylinder-type lock having not less that a five (5) pin or five (5) disc combination with the key removable only in the off position. The lock shall not be operable by any key that operates locks or devices used for other purposes in the building and shall be available to and used only by inspectors, authorized maintenance and repairmen.

2.29 CAR ENCLOSURE

- A. The sum of \$25,000.00 shall be allowed, to remodel this car enclosure.
- B. The net allowance for the car enclosure is to be exclusive of any handling charge, applicable sales and/or use taxes, car door hangers, interlocks, exit contact locks, platform or flooring, car door sill, car installation, or any operating equipment, **and such items are to be included by the Elevator Contractor.**
- C. The net allowance covering each car enclosure of a design and material shall include ventilation, lighting, doors, base, wainscoting, handrails, entrance columns, pad buttons and transoms, as required and all necessary cutouts.
- D. Provide one (1) complete set of protective pads for this elevator.

PART 3 - OPERATION

3.1 OPERATION

- A. This elevator shall be arranged for "Simplex Collective" with or without Independent operation as follows:
 - 1. This elevator shall operate from a single riser of pushbuttons with "call registered lights" at the landings. "Up" and "Down" pushbuttons shall be provided for the intermediate landings, and single buttons at the terminal landings set in a flush mounted case.
 - 2. Provide a key-operated switch in the elevator for selecting "with" or "without" Independent operation.
 - 3. The operation of each elevator from the car when the transfer switch is in the nonindependent position shall be such that the momentary pressing of one or more buttons shall send the car to the designated landings for which buttons have been pressed in the order in which the landings are reached by the car, irrespective of the sequence in which the buttons have been pressed and shall illuminate the proper hallway lantern.

- 4. This car shall always respond to its own car button calls regardless of the direction of the landing calls, and all car movements shall be subject to the interlock circuits being established.
- 5. A key-operated switch shall be provided in each car station and be marked "Independent Service" and shall operate as outlined herein. When this switch is thrown to the "Independent Service" position, it shall cancel all car calls for that car and transfer landing calls to the other elevator and permit the car to be taken direct to any floor by pressure of the proper car button. Doors shall not close until a car button is pressed or until the key-operated switch is opened. Opening of the switch shall restore the car to normal operation.
- 6. A time limit relay shall be provided, designed to hold the car at a landing at which it has stopped for an adjustable predetermined period of time, unless hoistway door is held open, before it will start automatically in response to other calls.
- 7. An emergency stop switch shall be provided in this car to interrupt the power supply, ring a 6" diameter bell under the car platform and apply the brake independently of the regular operating device. The opening of the stop switch shall not cancel the registered calls and after this switch is again closed, the car shall continue to answer its calls. The emergency alarm bell shall be connected to the emergency stop switch.
- 8. As required, operation of elevators under fire or other emergency conditions shall be provided in accordance with Local Law.

3.2 SPEED REGULATION, ETC.

- A. Speed regulation shall be such that the maximum velocity attained with any load up to full load in the car on either up or down motion shall not vary more than 5% plus or minus from normal operation velocity and only the manufacturer's latest equipment will be acceptable.
- B. The rate of change in acceleration and retardation of the cars under any condition of load will be at rates up to four feet per second, with stops being accomplished without the aid of the brake, i.e., completely dynamic, with the brake being applied only after the car is motionless.
- C. A fully digital, position referenced, close looped drive control shall be provided for consistently rapid floor to floor performance and accurate positioning under varying loads, power and temperature conditions. The source of shall be electrically connected to the elevator motor so that changes in the strength and polarity of the source produce changes in the speed and the direction of the machine.

3.3 EMERGENCY AND SERVICE KEYS

- A. Provision shall be made by this Section for Fire Department emergency keys and service keys, as required by Code.
- B. Provide in each hatchway door, drop key access holes and ferrules.

3.04 PAINTING

- A. At the completion of the work, the machine room floor shall receive one (1) coat of a quality deck enamel.
- B. At the completion of all work, the pit floor shall be cleaned and shall receive one (1) coat of a quality deck enamel.
- C. Provide insulating floor mats having proper dielectric properties at the front of the controller for the full width of the equipment and be 24 inches (24") deep.

3.5 ELECTRIC WIRING

- A. Provide all wiring except trail cables in rigid standard weight or thin wall conduit with steel outlet boxes or wiring troughs, except that a small amount of flexible conduit may be used where not subject to moisture or imbedded in concrete.
- B. Rigid conduit shall be galvanized and of the proper size to comply with the National Electric Code requirements. All wiring shall be installed in accordance with the National Electric Code and such local regulations that may apply.
- C. Provide traveling cables between car and hatchway that shall be flexible and so hung to relieve strains in the copper conductors. Cables shall have the required number of shielded pairs for voice communication and coaxial cables for C.C.T.V. cameras. The shielded pairs for voice communication shall be terminated in the car station in the cab and the elevator machine room. The coaxial cable for C.C.T.V. shall be connected/tied into the existing C.C.T.V. system in the building.
- D. All wiring material used shall have flame retarding and moisture resisting outer covering and shall contain the label of approval of the Underwriters' Laboratories. Metal boxes, troughs and ducts shall be of a design to comply with the National Electric Code.
- E. Interlock wiring shall comply with requirements of the A17.1 code.

3.6 PERMITS AND CERTIFICATES

- A. Give necessary notices, file drawings and specifications with the departments having jurisdiction, obtain permits or licenses necessary to carry out this work and pay all fees therefore.
- B. Arrange for inspection and tests, including Controlled Inspections, of any or all parts of the work, as required by authorities or utility companies having jurisdiction and pay all charges for same.
- C. Pay all costs for and furnish to the Owner all certificates necessary, as evidence that the work installed conforms with all regulations where they apply to this work.

3.7 TESTS

- A. Include tests specified and/or required under laws, rules and regulations of all Departments having jurisdiction.
- B. All parts of the work and associated equipment shall be tested and adjusted to work properly and be left in perfect operating condition. Correct defects disclosed by these tests, without any additional cost to the Owner.

END OF SECTION

SECTION 14 20 00.2 -ELECTRIC ELEVATORS – ELEVATORS #2 AND #3

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Include all labor, materials and appliances required for the furnishing, installing, and testing, complete and ready for operation in a manner satisfactory to the Consultant, all the work specified herein.
 - 1. Two (2) Electric, Overhead Geared Traction, Passenger Elevators, Elevator No. 2 & No. 3, Utilizing Non-Proprietary Equipment.
 - 2. Car enclosure's, Remodeled, including floor covering and car doors, hangers and operating devices for car doors and landing doors.
 - 3. Signals and trail cables for signals and intercommunication system.
 - 4. All controls and signal equipment.
 - 5. Inter-Communications system and two-way hands free system. As outlined in the latest A17.1 code, Rule No. 2.27.1..
 - 6. Clean entire shaft including wash down of all rails, separator beams, etc.
 - 7. Suitable storage space for tools and materials brought into the building, by the Elevator Contractor to be used during construction.

1.2 INTENT OF SPECIFICATIONS AND DRAWINGS

- A. The entire installation shall be installed as herein specified, Utilizing Non-Proprietary Equipment/Components.
- B. The type, duty, etc., of each elevator shall be in accordance with the data hereinafter specified.
- C. Wherever in these specifications the words "supply", "provide", "furnish", or similar term is used in the sense of furnishing apparatus or materials, it shall mean that the Contractor for this work shall supply, install and connect such apparatus or materials to which it is referred, except as may otherwise be specifically defined.
- D. Bring to the attention of the Architect immediately any changes in the size or location of the material or equipment which may be necessary in order to meet field conditions, or in order to avoid conflict with the equipment of other Sections. Obtain the Architect's acceptance before such deviations are made.
- E. It is the intent of these specifications to provide a complete system, and all necessary labor and materials, whether or not specifically mentioned herein, shall be included and left in good working order, ready for operation.

F. Locate all equipment and accessories in such a manner as to provide easy access for proper service and maintenance.

1.3 RELATIONS WITH OTHER TRADES

- A. Confer with others engaged in the construction of the building whose work might affect the installation and arrange all parts of the work and equipment in proper relation to the work and equipment of others, with the building construction and with the architectural finish, so that it will harmonize in service and appearance. Special care shall be taken in the installation of the equipment, where same is concealed, to assure that it does not project beyond the finished lines of floors, ceilings or walls.
- B. If it should be necessary to remove and relocate any material or equipment that has been installed without the proper investigations and coordination with the work of other Sections, such materials or equipment shall be removed and relocated by this Contractor without any additional cost to the Owner.

1.4 CUTTING AND PATCHING

- A. The cost of cutting and patching of walls, partitions, ceilings and floors necessary for reception of work shall be borne under this Section.
- B. When it is necessary to cut finished materials, provide proper protection as to protect the surrounding area (hallways, apartments, etc.).
- C. Any damage to personal property caused by the contractor's work shall be repaired, cleaned, etc. and all costs shall be paid for by the Contractor.

1.5 STANDARDS

A. Materials specified by reference to a specific standard such as the American Society of Testing Materials, Underwriters' Laboratories, American National Standards Institute, Federal Specifications, a trade association standard, or other similar standard shall comply with the requirement in the latest revision thereof, in effect at the time of bidding, except as limited by type, class or grade, or modified in such reference.

1.6 DEFINITIONS

A. All terms in the specifications have the definition given in the Safety Code for Elevators, Escalators and Dumbwaiters as approved by the American National Standard Institute, latest edition, including all revisions and changes authorized by the Sectional Committee on Elevator Safety Code

to date of these specifications. Hereafter in these specifications, the abbreviation "ANSI Code" shall be understood to refer to this Code.

1.7 NOTICE TO BIDDERS

A. Before submitting proposals, examine the specifications and become fully informed as to the extent and character of the work and the relation of the work to the work of other Sections.

1.8 SIGNS AND ADVERTISEMENTS

A. No signs and advertisements will be allowed to be displayed on the premises.

1.9 SPECIAL TREATMENTS

A. The Architect will accept no exposed fasteners and no manufacturers' logos or trademarks on any material or equipment provided in these specifications.

1.10 DESCRIPTION OF ELEVATOR SYSTEMS

- A. Passenger Elevators
 - 1. Quantity: Two (2) single wrap overhead geared traction passenger elevators (1:1 roping).
 - 2. Capacity: 3500 pounds.
 - 3. Speed: Existing, 300 F.P.M.
 - 4. Travel: Existing, Floors B, L*, 2 to 5.
 - 5. Number of Landings: Existing.
 - 6. Number of Openings: Existing.
 - 7. Operation: Duplex Collective w/wo independent service.
 - 8. Special Operations: Fireman's return service, intercom, two-way hands-free communication, independent service, access switches.
 - 9. Control: V.V.V.F.
 - 10. Safety: Existing to remain, but overhauled.
 - 11. Buffers : New, Oil Buffers with switch's.
 - 12. Car Enclosures: Remodeled, \$35,000.00 allowance, per elevator.
 - 13. Landing Doors: Existing to remain, new tracks, hanger rollers, interlocks, etc.
 - 14. Door Operation: Medium speed power with electronic door control.
 - 15. Signals: Call acknowledging lights, car position indicators, hallway position indicators, hallway travel lanterns.
 - 16. Machine Location: Overhead.
 - 17. Communication Equipment: Intercommunication system & two way outside hands-free communication. As to comply with the latest, A17.1 code, Rule No. 2.27.1.

18. Power Supply: Existing.

1.11 SHOP DRAWINGS AND SAMPLES

- A. Submit required or requested shop drawings, and obtain written acceptance of same before ordering or installing any equipment or materials.
- B. Shop drawings of equipment shall consist of manufacturer's scale drawings, cuts or catalogs, including descriptive literature which shall indicate the construction, including material and physical dimensions, and complete operating data.

1.12 WIRING DIAGRAMS

A. The Contractor shall furnish a complete set of wiring diagrams and single line diagrams for each elevator, showing the electrical connections, functions and sequence of operation of all apparatus connected with the work; and all data and instructions necessary for the proper maintenance and repair of all equipment. All items that do not apply directly to this installation shall be omitted from the final diagrams, and these diagrams should reflect all field and/or shop changes. The diagrams shall be located in the elevator machine room.

1.13 LAWS AND ORDINANCES

- A. All local and State laws and regulations, Occupational Safety and Health Administration Rules, and National Fire Protection Association's recommendations, governing or relating to any portion of this work are hereby made a part of these specifications; responsibility for compliance to their provisions is included.
- B. Inform the Architect of any work or materials which violates any of the applicable laws and regulations before proceeding with the work.

1.14 APPLICABLE CODES AND SPECIFICATIONS

- A. Only the latest editions and revisions of referenced codes ASME A17.1 & A117.1 and specifications shall be applicable for the work of this section.
- B. All construction, workmanship and materials, all factors of safety used in designing all structural and working parts of the equipment, and unless herein specifically modified, all top and bottom clearances and the construction and operation of all safety devices shall be in full accordance with the requirements of ANSI Code. In addition, all such equipment and clearances shall fulfill the rules, regulations and codes of all local bodies having jurisdiction.

- C. Where the requirements of the ANSI Code are more severe than local rules, regulations and codes, the ANSI Code shall govern.
- D. Factors of safety, buffers, roping and rope socketing, guide rails, safeties, speed governors, counterweights, top and bottom terminals stopping devices, emergency stopping devices, etc., are not described hereinafter, except as to special requirements, since they are fully covered in the ANSI Code.
- E. In addition, the equipment shall conform to certain special safety requirements as given in these specifications.

1.15 DELIVERY OF MATERIALS AND EQUIPMENT

A. Store materials and equipment where directed by the Owner. Any damage caused by any overloading of the structure shall be repaired at no additional cost to the Owner. Include the hoisting of all materials and equipment and assume all responsibility for such hoisting equipment.

1.16 EXAMINATION OF EXISTING CONDITIONS

- A. Visit and carefully examine those portions of the site and/or present buildings affected by this work so as to become familiar with existing conditions and difficulties that will attend the execution of the work, before submitting proposals.
- B. Submission of a proposal will be construed as evidence that such examination has been made and later claims for labor, equipment or materials required because of difficulties encountered, which could have been foreseen had such examination been made, will not be recognized.

1.17 DAMAGE TO PROPERTY

- A. Restore to its original condition without extra payment any of the Owner's property that shall become damaged due to the negligence of any employees or agents of the Contractors. Such repairs shall meet the acceptance of the Owner.
- B. Take proper care and protect all portions of the work until its acceptance. Any and all portions of work liable to damage under this or other Sections or by freezing or inclement weather must be thoroughly and securely protected by a substantial boarding or covering until not further required.
- C. Protect all plated and polished material and trimming against damage.

1.18 WORK IN EXISTING BUILDING

- A. Caution is hereby given, that the work shall be performed so as to cause the least possible inconvenience and disturbance to the occupants.
- B. The proposal for work in the existing buildings shall be predicated on the performance of the work during regular working hours. When so directed, however, install work in overtime and the additional cost charged therefore shall be only the "premium" portion of the wages paid.
- C. All scrap and debris, except as otherwise specified, shall be removed from the site and disposed of by the Contractor. When requested by the Owner, move equipment to a storage place on the premises and leave as property of the Owner.

1.19 SHUT DOWNS

A. When installation of new work requires the shutdown of an existing operating system, the connection of the new work shall be performed only after not less than 72 hour notification to, and acceptance by the Owner.

1.20 GUARANTEES/WARRANTY

A. The Contractor shall furnish, under his contract, a written guarantee to replace or repair promptly at his own expense, any workmanship and equipment in which defects develop within one year from the date of final acceptance of his work, evidenced by the Consultant's report and final payment. The work shall be done as directed by the Consultant. This guarantee shall also provide that where defects occur, the Contractor will assume responsibility for all expenses incurred in repairing and replacing work of other trades affected by defects, repairs or replacements in equipment supplied by the Contractor.

1.21 SHOP DRAWINGS AND SUBMITTALS

- A. Submit four (4) hard copies, (E-MAILS ARE UNACCETPABLE) of the following shop drawings/submittals and obtain written acceptance, before ordering or installing, any of the equipment or materials.
 - 1. State of New Jersey, Dept. of Community Affairs Elevator Permits.
 - 2. Machine room layout drawings.
 - 3. Geared traction hoist machine submittal.
 - 4. AC hoist motor submittal.
 - 5. Rope gripper submittal.

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- 6. V.V.V.F. micro-processor controller submittal.
- 7. Signal fixtures submittals.
- 8. Hatchway and car door equipment submittals.
- 9. Communication systems submittals.
- 10. Car & counterweight oil cushion buffers with over travel switch's submittals.
- 11. Car & counterweight roller guide submittals.
- 12. Cab remodeling drawings/submittals.
- B. Shop drawings of equipment shall consist of manufacture's scale drawings, cuts or catalogs, including descriptive literature, which shall indicate the construction, including material and physical dimensions and complete operating data.
- C. Submit for acceptance requested samples. The samples shall be properly tagged and shall remain in the possession of the Owner, until final acceptance of the work.

PART 2 - EQUIPMENT

2.1 ACCEPTED MATERIALS

- A. Materials and equipment shall be new, of makes and kinds specified herein, without exception. Where one brand, make of material, device or equipment is specified or shown, the products of the manufacturers listed in "ACCEPTED MANUFACTURERS" shall be regarded as acceptable when, in the opinion of the Consultant, it is a recognized equal considering quality, workmanship, economy of operation, and suitability for the purpose intended.
- B. Should a bidder desire to install equipment and materials other than those included under "ACCEPTED MATERIALS" he shall submit with his bid a rider listing the deductions or additions to the Contract for these substitutions. Said substitutions must be accepted in writing by the Consultant, otherwise all materials and equipment must be according to plans and specifications.
- C. Where such accepted substitution or deviation requires different quantity or arrangement of foundations, supports, wiring and any other equipment or accessories normal to this equipment, furnish said changes and additions pay all costs for all changes to the work and the work of others affected by this substitution or deviation.

2.2 ACCEPTED MANUFACTURERS

A. All materials shall be in strict accordance with the quality, style, performance and sizes hereinbefore specified. Manufacturer's names and catalog numbers are given in the specifications for the purpose of establishing a standard of quality, style, size and type and shall not be construed to exclude equipment or material of other manufacturers.

- B. To furnish equipment of a manufacturer other than that specified or listed hereinafter, include a complete specification of the substituted item along with each submission copy of shop drawings. Write specifications as close as possible over the Contract Specifications; each paragraph shall bear the same paragraph number as the Contract Specifications so that close comparison can be made with the equipment specified. Changes shall be subject to the complete acceptance of the Architect.
- C. When materials and equipment are purchased from the manufacturer specified or listed hereinafter, submit a complete verification specification with each copy of shop drawings.
 - 1. ROLLER GUIDES
 - a. Elevator Safety Company, ELSCO
 - 2. STEEL ROPES
 - a. AFD Industries Inc.
 - b. Bethlehem Elevator International
 - c. Macwhyte Wire Rope Company
 - d. United Ropeworks
 - 3. WIRING
 - a. Benfield Electric Corporation
 - b. Draka Elevator Products
 - 4. HOISTING MACHINE
 - a. Hollister Whitey Elevator Corporation
 - b. Titan Machine Corporation
 - 5. AC HOIST MOTORS
 - a. LeRoy Somer Inc.
 - b. Imperial
 - c. General Electric
 - d. Reuland
 - 6. CONTROLLERS
 - a. G.A.L. Galaxy
 - b. Elevator Controls Corporation
 - c. Elevator Systems, Inc.
 - d. Smart-rise Controllers

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- 7. LEVELING DEVICE
 - a. G.A.L.
 - b. Elevator Controls Corporation
 - c. Elevator Systems, Inc.
 - d. Smart-Rise Controllers
- 8. SIGNAL FIXTURES
 - a. Innovation Industries
 - b. Monitor Controls
- 9. HANGERS AND TRACKS
 - a. G.A.L.
- 10. DOOR OPERATORS
 - a. G.A.L.
- 11. CAB ENCLOSURES
 - a. National Elevator Cab & Door Corp.
 - b. Cab-Tech Elevator Designs
 - c. Liberty Elevator Cabs.
 - d. EdI-ECI Cabs.
- 12. ASCENDING CAR DEVICE/ROPE GRIPPER
 - a. Hollister-Whitney Elevator Corporation

2.3 MACHINE SUPPORTS

- A. Provide all machine beams, channels, angles, zee bars and steel plates required for the elevator machines, deflector sheaves, ascending car device.
- B. The existing supports shall be retained and reused.
- C. The machines shall be carefully aligned and centered with reference to the car and counterweight rope hitch centers and then securely bolted and braced to prevent shifting.
- 2.4 HOISTING MACHINES AND CONTROL Provide for each elevator, a non-proprietary hoist machine & AC hoist motor, as follows:

- A. The hoisting machine shall be of the single worm geared traction type, with motor, brake, gearing and driving sheaves mounted in proper alignment on a cast iron or steel bedplate. The worm shall be of steel, integral with the worm shaft, and shall be provided with a ball bearing thrust with self-aligning blocks, or shall be of the preloaded type thrust bearing, designed to take the end thrust of the worm in both directions. Thrusts shall be removable without dismantling the machine. The worm gear shall be hobbed from a bronze rim which shall be accurately fitted and bolted to the gear spider.
- B. Bearings of anti-friction metal or roller bearings shall be provided and equipped with suitable means for lubrication. Brake shall be spring applied, electrically released and designed to be instantly and automatically applied in event of interruption of power supply from any cause.
- C. Sheaves shall be made of semi-steel containing approximately 25% steel, accurately turned with machine progressive grooves, shaped so as to maintain traction throughout the life of the groove. Brake wheels shall be accurately turned and balanced. Surface of sheaves shall show a hardness of not less than 240 Brinnell.
- D. The diameter of the hoisting machine driving sheaves shall be not less than forty-eight (48) times the diameter of the hoisting rope.
- E. Geared Elevator Hoisting Machine Motor ACProvide new hoist motors for each machine, complying with the following:
 - 1. The motor shall be of the alternating current reversible induction type of a design adapted to the severe requirements of elevator service. Motor shall be capable of developing the required high starting torque (minimum 225%) with a low starting current, and shall be designed to stand the severe loads encountered in elevator service.
 - 2. The motor shall be rated in accordance with the standards of NEMA, NFPA and AIEEE 30 minute rating motors, in accordance with the class of insulation of motors, and shall be sufficient capacity to operate elevator with rated contract load at rated contract speed without overheating. The motor will be tested as specified in this Specification.
 - 3. The motor shall be single speed AC and have variable frequency control and shall be of the special elevator type with high internal resistance squirrel cage rotor.
 - 4. Insulation of all windings shall be impregnated and baked to prevent absorption of moisture and oil. The insulation resistance between motor frame and windings shall not be less than one Megohm. The motor windings shall stand a dielectric test of twice the normal voltage plus 1000 RMS volts of 60 Hertz, alternating current for one minute. Insulation shall be Class B. Better insulation may be used but must be approved by Authority prior to use. Motors shall be designed to maintain proper temperature during operation.
 - 5. Motor bearings shall be either approved sealed bearing, the anti-friction bearing metal sleeve type, or of the open (non-seal) type or roller type arranged for grease lubrication and fitted with grease gun connections and drain plugs. Bearings and lubricant reservoirs shall be virtually dust tight and shall incorporate effective lubricant seals or other means

to prevent lubricant leakage. Bearing shall be replaceable type and separate from the motor housing (not part of the housing). Bearings that are part of the motor housing will not be accepted.

- 6. The design of frames, and end bells, etc., shall be such as to insure perfect alignment of bearings and minimize vibration. The Contractor shall stamp (with approved tool) "date of installation", on the motor frame and specify the date the motor is installed. The Contractor shall be responsible for providing the Authority Inspector concerned, with a list of dates that the motors were installed, including the motor serial numbers.
- 7. The Contractor shall provide temperature sensitive electrical resistors (Thermistors) to protect the rotor and stator windings of each elevator hoist motor. Thermistors shall be installed in each phase of each winding and shall have a temperature response setting equivalent to the rating per class of insulation. These Thermistors shall be connected to a motor protection device located on the elevator control panel. When activated, it shall cause the elevator to level in at the nearest floor landing and shall disconnect power from the elevator hoist motor. Activation of the motor protection device due to thermal overloading, shall require a "manual reset". In the event of a power outage, the elevator will automatically reset. The motor protection device shall been clearly labeled and identified at the terminals and a cover plate shall be provided with a light illumination indicating that this device has been tripped with a reset button provided to restore normal operation.

2.5 ASCENDING CAR DEVICE/ROPE GRIPPER

- A. Provide each elevator with an ascending car device/rope gripper.
- B. Provide all necessary steel beams, bolts, nuts, washers, etc. to mount device to the overhead rope beams, as recommended by the manufacturer.
- C. If it is necessary to raise the entire hoist machine to accommodate the rope gripper, provide all necessary steel beams, labor, etc.

2.6 HOIST ROPE DEFLECTOR SHEAVES

A. Provide for each elevator, a hoist rope deflector sheave of proper diameter supported by heavy brackets and shafts, securely fastened to the existing support steel.

2.7 CONTROLLERS

A. Provide each elevator with a non-proprietary, solid state V.V.V.F. microprocessor controller shall be as follows:

- 1. Frame: All controller printed circuit boards, discrete components, switches, and other items of control equipment shall be mounted on a common panel or individual panels which are made of an approve moisture-resisting, non-combustible material which shall be securely mounted on a substantial, self-supporting steel frame.
- 2. Electro-mechanical switches and relays shall be used where heavy current is supplied and/or on safety circuits where required by Code.
- 3. Switch Design: Switches shall be of the direct-current type, magnet operated with contacts of design and material to insure maximum conductivity, long life and reliable operation without overheating or excessive wear and provide a wiping action to prevent sticking due to fusion. Switches carrying highly inductive currents shall be provided with arc deflectors or suppressors.
- 4. Switch Mounting: All switches, printed circuit boards, and discrete components shall be mounted on the front of panels together with any small electronic components, but large capacity resistors shall be mounted on the rear or top of panels. They shall all be readily accessible and easily renewable.
- 5. Time Delay Device Design: Where time delay circuits are employed, they shall be of an accepted design that is reliable and consistent, such as electronic timing circuits. No air dash pot time relays shall be used.
- 6. Wiring: Wiring on the controller, whether factory or field wiring, shall be done in neat workmanlike order and all connections shall be made to studs and/or terminals by means of grommets, solderless lugs or similar connections. All wiring shall be copper.
- 7. Terminal Blocks: Terminal blocks with identifying studs shall be provided on controller for connection of board wiring and external wiring.
- 8. Marking: Identifying symbols or letters shall be permanently marked on or adjacent to each device on the controller and the marking shall be identical to marking used on the wiring diagrams. In addition to the identifying marks, the ampere rating shall be marked adjacent to all fuse holders.
- 9. Input-output devices shall be marked similarly to relays for easy reference to wiring diagrams.
- 10. Diagnostics: A CRT Scope shall be provided in the cabinet for controller diagnostic work. The controller shall also have the capacity to display operational status of the elevator plus statistical and diagnostic information. The system shall also provide diagnostics for analyzing system performance and troubleshooting including historical data for reviewing performance over time.
- 11. Provide all necessary filters, traps, etc., to eliminate all noise being transmitted back into the building electrical system. Also, the controller shall be properly protected against and/or protect all outside influences, i.e., radio or T.V. signals.
- 12. Variable Voltage Variable Frequency Power (AC) Control System
 - a. The elevator hoist machine shall have an AC motor. The control of the hoisting motor shall be by means of a solid-state drive system. The speed, acceleration and deceleration shall be automatically and continuously controlled by varying the frequency and voltage of the motor. A closed loop system shall be provided.

- b. The drive shall utilize a 3 phase, full wave rectifier and capacitator bank to provide direct current for the solid-state inverter. The control principle shall be based on constant flux control utilizing pulse width modulation.
- c. A means shall be provided for removing regenerated power from the drive DC power supply. This power shall be dissipated in resistors or returned to the 3 phase AC power line. Failure of the system to remove the regenerated power shall cause the drive output to be removed from the hoist motor.
- d. The final stopping shall be performed independent of the machine brake which shall be applied to hold the car at a floor only after the car has stopped.
- e. The drive shall not create excessive audible noise in the elevator motor and control system.
- f. The drive system shall include but not necessarily be limited to the following features:
 - 1) Maintain a car speed within +/-5% of the contract speed.
 - 2) Protection against excessive motor current in addition to normal overload relays.
 - 3) Maintain operation within 90 to 110% of nominal line voltage.
 - 4) Line fault protection to prevent operation under:
 - a) Loss of phase.
 - b) Low line voltage.
 - c) High line voltage.
 - 5) The transistor protection shall ensure 100% protection of the transistors and prevent fuse blow-out.
 - 6) Continuous supervision of the braking resistors shall be provided.
 - 7) Motor contacts shall disconnect the motor stator winding during each stop. In normal operation, the contactors shall operate only under zero current conditions, but must be capable of interrupting the line current should an emergency stop be required.
 - 8) The drive system shall continuously monitor the hoisting motor operation and motor torque in order to ensure 100% safe elevator operation at all times.
 - 9) Provide each controller with the manufacture's cover/door.

2.8 CAR LEVELING DEVICE

- A. Provide each elevator with an non-proprietary car leveling device, that shall automatically bring the car to a position level +/- 1/4" with any floor, regardless of the load in the car or its direction of motion. The device shall correct over travel and under travel as well as rope stretch due to variations of load. Correction shall be in small steps without surges to eliminate tripping hazard.
- B. Leveling to IP 8300 or approved equal.

2.9 RAILS

- A. The present guide rails shall be retained and reused. All guides shall be <u>cleaned</u>, all brackets and rail bolts shall be tightened, all joints adjusted and filed.
- B. Car and counterweight rails must be thoroughly cleaned and smoothed before cars are put in operation. When cars are tested, they must be free from any noise due to rough or rusty guides and the car guides must be free from any signs of abrasion.

2.10 SHAFT CLEANING

A. The entire shaft of each elevator from the pit floor to the overhead sheave area shall be thoroughly cleaned of all debris, lint, grease, dust, etc..

2.11 HOIST AND GOVERNOR ROPES

- A. Roping for all elevators shall be 1:1.
- B. Provide hoist ropes of high-grade traction steel, 8 x 19 Seale construction, especially designed for elevator service having a factor of safety at least equal to that specified in the ANSI Code. They shall be securely attached at both ends into the shackles, using the method specified in the ANSI Code.
- C. The governor ropes shall be retained and reused.
- D. All ropes shall be cut and tagged for installation on each elevator.
- E. Ropes for each elevator shall be cut in sequence from any run.
- 2.12 SPEED GOVERNORS

- A. Provide each elevator with a non-proprietary speed governor of the centrifugal, self-oiling type. The safety rope grip shall lock in position, when the governor throws and shall be held in contact with the rope, both by springs and by the sliding action and pull of the rope on the grip. Governor jaws shall be machined and so arranged that if worn, they can be replaced. Speed governors shall be located in the machine room.
- B. The diameter of the governor sheave shall be not less then thirty two, (32) times the diameter of the governor rope.
- C. The governor shall be accurately adjusted and sealed with the tripping speed, specified in the ANSI code.
- D. Provide a new pit tension sheave for each elevator.

2.13 SAFETY

- A. The mechanical safety under the car platform shall be retained and reused, with necessary cleaning and adjusting.
- B. The safety mechanism, when tripped, shall engage the rails.

2.14 CAR SLING AND PLATFORM

- A. The car platforms, slings and safety planks shall be retained and reused with the necessary cleaning. All bolts shall be tightened and the car sling shall be provided with new rubber roller guides as hereinbefore specified, located top and bottom on each side of sling.
- B. The entrances to each car shall be provided with one-piece non-slip extruded aluminum saddle/sill flush with finished floor.
- C. Finished floor of each elevator shall be in a design, as selected by the Owner.
- D. Provide each elevator with suitable receptacles fitted with wire lamp guards on top of the car and beneath the car platform. Provide a suitable plug receptacle on top and bottom of the car.
- E. Provide on top of each car an inspection station marked "stop", "up", and "down".

2.15 COUNTERWEIGHTS

A. The existing counterweights shall be retained and reused, but must be checked for proper counterbalance and if additional weights are required, they must be added.

2.16 ROLLER GUIDES

- A. Provide each elevator with 6" roller guides and base on the top and bottom of each car frame and 3" roller guide and base on the top and bottom of each counterweight frame for each guide rail. Each roller guide shall consist of three (3) rubber tired wheels to run on the three (3) finished rail surfaces. The wheels shall be equipped with ball bearings and shall be held against the rail surfaces by adjustable springs, all contained on a substantial metal base. The roller guides shall run on dry guiderails, not lubricated. All rollers are to be free enough to turn by hand, with the minimum amount of pressure.
- B. Car roller guides to be Elsco Model B.
- C. Counterweight roller guides to be Elsco Model D.

2.17 TERMINAL STOP DEVICES

- A. Provide upper and lower normal terminal stopping devices that shall be arranged to automatically stop the car from speed specified within the top clearance and bottom over-travel independent of the operating device, final terminal stopping device and the buffers.
- B. Provide final terminal stopping devices that shall automatically stop the car and counterweight from speed specified within the top clearance and bottom over travel independent of the operation of the normal terminal stopping device with the buffers operative.
- C. Final terminal stopping devices shall be through bolted to the rails.

2.18 CAR AND COUNTERWEIGHT BUFFERS

- A. Provide oil cushion buffers under each car and counterweight for both elevators. These buffers shall bring the car and counterweight to a gradual stop at the extreme limits of travel beyond the terminal landings should the car for any reason run by the terminal landings more than a safe distance.
- B. Provide both car and counterweight oil cushion buffers with switches, so that in the event that a buffer, after being compressed, does not restore it self, the car shall not operate until the plunger has been restored to its normal position.
- C. The existing support steel and support stands, for each elevator, may be retained and reused.
- D. Provide a switch in each pit, arranged to interrupt the power supply and apply the brake independently of the regular operating device to permit safe access to pit for servicing the equipment. Locate the stop switch, next to each pit access ladder, at the code required height.

E. Provide an additional stop switch, (in series), for the No. 2 elevator and locate the stop switch, adjacent to the "existing pit access ladder", located next to the steel access door, leading into the No. 2 pit, from the No. 1 Elevator's walk-in pit.

2.19 CAR POSITION INDICATOR

- A. Provide a car position indicator for each elevator consisting of readout two inches high (2") with directional arrows and locate at the top of each car operating panel to indicate the car position to the passengers.
- B. Readouts in the car station shall be two inch planar, neon gas discharge displays, alphanumeric type, neon red color with 130 viewing angle or approved equal.

2.20 COMBINATION HALLWAY TRAVEL LANTRENS & POSITION INDICATORS

- A. Provide combination hallway travel lanterns and a two inch, (2") car position indicator, "at each landing for each elevator" and locate above each hatchway entrance frame, with single lights at the terminal floors. All hallway lanterns shall be connected into the control system and signal system, so that the proper hallway lantern will illuminate, as the car approaches to stop at a landing, in answer to a hall call, to indicate to waiting passengers, the direction of the elevator, light shall remain illuminated, until the car leaves the floor.
- B. Provide in each hallway lantern, a single stroke bell and connect to ring the number of times, as required by the Code, when the lights are energized.
- C. Cover plates to be made of #4 stainless steel, utilizing tamper-proof screws.
- D. Provide all necessary labor and material, to locate these combination stations above each hatchway entrance at every landing for both elevators.
- 2.21 CAR SIGNAL AND OPERATING PANEL
 - A. Provide in each elevator car, panels, (selected from Contractor's stock designs, stainless steel and flush mounted).
 - B. The following items shall be included on the panels, unless otherwise specified:
 - 1. A complete set of vandal-resistant, (positive stop) pushbuttons corresponding to each floor served, with "call registered lights" in the button in each car station.
 - 2. The open door button.
 - 3. The safety switch. (Emergency stop switch), (key operated).
 - 4. The car light switch.
 - 5. The fan switch, two (2) speed.

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- 6. Keyed switch to change from "Automatic" operation to "Independent" operation.
- 7. Fireman's emergency service switch.
- 8. Grill for the communication speaker.
- 9. Provide all provisions, that are required by the latest A17.1 Code, Rule No. 2.27.1.
- 10. Two inch high floor indicator with directional arrows.
- 11. "NO SMOKING" to be engraved in 1-1/2" letters.
- 12. Capacity to be engraved in 3/4" letters.
- 13. Union County Annex. Bldg. to be engraved in 1" letters.
- 14. All switches, shall be key-operated and located behind the keyed cover, except the emergency switch.
- C. The car signal panels shall be located as required by Code including the ADA requirements and shall include the markings adjacent to each button, switch, etc. The BRAILLE indications shall be square and engraved in the plate. Applied plates will not be accepted.
- D. Plate to be secured by Ace or equal type locks and properly hinged to prevent bowing.
- E. Provide a G.F.I. duplex plug receptacle in each car and locate in the service cabinet.

2.22 CAR PUSHBUTTONS

- A. Provide car pushbuttons that shall be of vandal-proof, (positive stop) type with floor designation engraved in the button "with call registered lights in the buttons". The circuit set up by the pressing of a signal button on the car control panel shall be reset or extinguished when arriving at the designated floor.
- B. All pushbuttons, except the Lobby/Main floor, shall be a minimum of 1-1/4" outer diameter convex in design.
- C. The Lobby/Main floor car pushbutton, shall be a Bar-Button.

2.23 SAFETY SWITCH (Emergency Stop Switch), (Key Operated)

A. Provide a safety switch which shall be of a distinct color from the other switches and pushbuttons and shall be so located, etc., as not to become confused with the other switches. The operation of the safety switch shall cut off all power, apply the brake and ring a 6" diameter bell under the car platform.

2.24 LANDING PUSHBUTTONS

A. Provide landing pushbutton call stations, that shall be vandal-proof, (positive stop) type with arrows engraved in the button with "call registered lights in the buttons", as hereinbefore described. Button mechanism shall be of the substantial construction for expected use. Contacts

shall be of the rubbing type of silver composition metal and shall be arranged so as to equalize pressure and prevent undue compression of the springs. Buttons shall be of the short throw type and be 1-1/4" outer diameter.

- B. Provide all necessary labor and back boxes, to locate each hallway pushbutton station at the required ADA height.
- C. Provide the required signage on each hall station, as outlined in "Appendix O" of the A17.1 code.
- D. Cover plates are to be made of #4 stainless steel, utilizing tamper-proof screws.

2.25 ELEVATOR COMMUNICATION SYSTEM

- A. Provide all equipment, accessories and materials, complete and in strict accordance with the specifications and the A17.1 latest code, Rule No. 2.27.1. All materials and/or equipment necessary for the proper operation of the system, not specified or described herein, shall be deemed part of this specification.
- B. Provide facilities for originating calls and establishing two-way communication, (inter-com) from the elevator cab to the machine room.
- C. Provide facilities for complying with the requirements of the hands-free communication, as outlined in the ADA law.
- D. Provide a trickle charger and battery, as part of the communication system. In event of a power failure, the battery shall be able to provide full communication, for a period of two (2) hours.

2.26 HACTHWAY DOOR AND CAR DOOR CONTACTS

- A. Provide each elevator hatchway door and each car door with an electric switch which will prevent the operation of the elevator unless the car door is closed and all hatchway doors are locked in the closed position.
- B. These switches shall be positive in operation and must be so located and designed as to be protected from mechanical injury and the possibility of short circuits.

2.27 ELECTRIC DOOR OPERATORS

A. Provide a non-proprietary medium speed electric operator capable of operating the hoistway doors and the car doors simultaneously from the closed position to within three (3") inches of full open position at a speed of approximately two and one-half (2-1/2) feet per second. the closing speed shall be slightly slower than the opening speed. The movement of the car and hatchway doors shall be controlled simultaneously by the normal operation of the elevator controls. The

doors shall operate smoothly and without slamming in both opening and closing direction. Each hatchway and car door shall be cushioned in its final movement in each direction of travel.

- B. Provide 8" Z-bar reinforcement on each car door and locate between the nylon guides.
- C. Provide new nylon guides on each car door.
- D. Provide a solid state micro scan unit on each car door.

2.28 HATCHWAY ENTRANCES

- A. The existing entrance frames and doors shall be retained and reused, but the doors shall be provided with new hangers, tracks and new nylon bottom door guides, etc. and reinforced to accept power operation. A reinforcement shall be installed at the center of each panel and located between the two bottom guides. Such reinforcement shall be fabricated of twelve (12) gauge stainless or galvanized steel and shall have a minimum length of eight (8) inches and minimum height of two and one fourth inches (2-1/4"). The reinforcement shall engage the saddle by not less than three eights (3/8")
- B. Provide sill mounted spring closures for each hatchway door at each landing.
- C. Provide Braille jamb plates at every landing and locate at the required ADA height.
- D. Provide in each hatchway door, drop key access holes and ferrules.

2.29 HOISTWAY ACCESS SWITCHES

- A. Provide a cylindrical type keyed switch at the top and bottom terminal landings, in order to permit the car to be moved at a slow speed with the doors open, to allow authorized personal to obtain access to the top of the car and access to the pit.
- B. Locate these switches is the existing locations, present.
- C. This switch is to be of the continuous pressure spring return type, and shall be operated by a cylinder-type lock, having not less then a five (5) pin or five (5) disc combination with the key removable only in the off position. The lock shall not be operable by any key that operates locks or devices, used for the purposes in the building and shall only be available to and used by inspectors, authorized maintenance and repairmen.

2.30 CAR ENCLOSURE

A. The sum of \$35,000.00 shall be allowed, to remodel, each car enclosure.

ELECTRIC ELEVATORS

- B. The net allowance for each car enclosure is to be exclusive of any handling charge, applicable sales and/or use taxes, car door hangers, interlocks, exit contact locks, platform or flooring, car door sill, car installation, or any operating equipment and such items are to be included by the Elevator Contractor.
- C. The net allowance covering each car enclosure of a design and material, shall include ventilation, lighting, doors, bas, wainscoting, handrails, entrance columns, pad buttons and transoms, as required and all necessary cutouts.
- D. Provide one (1) complete of protective pads "for each elevator".

PART 3 - OPERATION

3.1 OPERATION

- A. Elevators shall be arranged for "Duplex Collective" with or without Independent operation as follows:
 - 1. Both elevators shall operate from a single riser of pushbuttons with "call registered lights" at the landings. "Up" and "Down" pushbuttons shall be provided for the intermediate landings, and single buttons at the terminal landings set in a flush mounted case.
 - 2. Provide a key-operated switch in the elevator for selecting "with" or "without" Independent operation.
 - 3. The operation of each elevator from the car when the transfer switch is in the nonindependent position shall be such that the momentary pressing of one or more buttons shall send the car to the designated landings for which buttons have been pressed in the order in which the landings are reached by the car, irrespective of the sequence in which the buttons have been pressed and shall illuminate the proper hallway lantern. During this operation, the cars shall also answer the calls from the landings, but only one (1) car shall respond to any one call and it shall be the car nearest the call and set for the direction of the landing button pressed.
 - 4. The car shall always respond to its own car button calls regardless of the direction of the landing calls, and all car movements shall be subject to the interlock circuits being established.
 - 5. A key-operated switch shall be provided in each car station and be marked "Independent Service" and shall operate as outlined herein. When this switch is thrown to the "Independent Service" position, it shall cancel all car calls for that car and transfer landing calls to the other elevator and permit the car to be taken direct to any floor by pressure of the proper car button. Doors shall not close until a car button is pressed or until the key-operated switch is opened. Opening of the switch shall restore the car to normal operation.
 - 6. Provide a solid state micro scan unit on each elevator. This system shall contain a minimum of 32 infrared beams strategically placed at intervals along the leading edge of the car

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door, creating a detection screen in the elevator entrance. The micro scan unit shall be insensitive to dust, moisture and vibration and to be encased in as aluminum section. It shallclose the doors, automatically, momentarily after the last entering or leaving passenger, and shall distinguish between stops made for a car call and stops made for corridor calls. The electronic device shall operate at both terminal and intermediate floors to prevent the car and hatchway doors from starting to close if a person or a sizeable object is in the doorway. It shall cause the doors to stop and reopen if, while closing, a person or object enters the doorway.

- 7. A time limit relay shall be provided, designed to hold the car at a landing at which it has stopped for an adjustable predetermined period of time, unless hoistway door is held open, before it will start automatically in response to other calls.
- 8. An emergency stop switch shall be provided in each car to interrupt the power supply, ring a 6" diameter bell under the car platform and apply the brake independently of the regular operating device. The opening of the stop switch shall not cancel the registered calls and after this switch is again closed, the car shall continue to answer its calls. The emergency alarm bell shall be connected to the emergency stop switch.
- B. As required, operation of elevators under fire or other emergency conditions shall be provided in accordance with Local Law.

3.2 SPEED REGULATION, ETC.

- A. Speed regulation shall be such that the maximum velocity attained with any load up to full load in the car on either up or down motion shall not vary more than 5% plus or minus from normal operation velocity and only the manufacturer's latest equipment will be acceptable.
- B. The rate of change in acceleration and retardation of the cars under any condition of load will be at rates up to four feet per second, with stops being accomplished without the aid of the brake, i.e., completely dynamic, with the brake being applied only after the car is motionless.
- C. A fully digital, position referenced, close looped drive control shall be provided for consistently rapid floor to floor performance and accurate positioning under varying loads, power and temperature conditions. The source of shall be electrically connected to the elevator motor so that changes in the strength and polarity of the source produce changes in the speed and the direction of the machine.

3.3 EMERGENCY AND SERVICE KEYS

- A. Provision shall be made by this Section for Fire Department emergency keys as required by Local Law and service keys as required by Code.
- B. Provide in each hatchway door, drop key access holes and ferrules.

3.4 PAINTING

- A. At the completion of the work, the machine room floors shall receive one (1) coat of a quality deck enamel.
- B. At the completion of all work, the pit floor shall be cleaned and shall receive one (1) coat of a quality deck enamel.
- C. At the completion of the work, all machine room equipment shall be identified with their own NYC ID number.
- D. Provide insulating floor mats having proper dielectric properties at the front and rear of each controller and motor drive for the full width of the equipment and 24 inches (24") deep.

3.5 ELECTRIC WIRING

- A. Provide all wiring except trail cables in rigid standard weight or thin wall conduit with steel outlet boxes or wiring troughs, except that a small amount of flexible conduit may be used where not subject to moisture or imbedded in concrete.
- B. Rigid conduit shall be galvanized and of the proper size to comply with the National Electric Code requirements. All wiring shall be installed in accordance with the National Electric Code and such local regulations that may apply.
- C. Provide traveling cables between car and hatchway that shall be flexible and so hung to relieve strains in the copper conductors. Cables shall have the required number of shielded pairs for voice communication and coaxial cables for T.V. cameras. The shielded pairs for voice communication shall be terminated in the car station in the cab and the elevator machine room. The coaxial cable for C.C.T.V. system shall be connected/tied into the existing C.C.T.V. system in the building.
- D. All wiring material used shall have flame retarding and moisture resisting outer covering and shall contain the label of approval of the Underwriters' Laboratories. Metal boxes, troughs and ducts shall be of a design to comply with the National Electric Code.
- E. Interlock wiring shall comply with requirements of A17.1 code.

3.6 PERMITS AND CERTIFICATES

- A. Give necessary notices, file drawings and specifications with the departments having jurisdiction, obtain permits or licenses necessary to carry out this work and pay all fees therefore.
- B. Arrange for inspection and tests, including Controlled Inspections, of any or all parts of the work if so required by authorities or utility companies having jurisdiction and pay all charges for same.

C. Pay all costs for and furnish to the Owner all certificates necessary, as evidence that the work installed conforms with all regulations where they apply to this work.

3.7 TESTS

- A. Include tests specified and/or required under laws, rules and regulations of all Departments having jurisdiction.
- B. All parts of the work and associated equipment shall be tested and adjusted to work properly and be left in perfect operating condition. Correct defects disclosed by these tests, without any additional cost to the Owner.

END OF SPECIFICATION

RJB PROJECT #2024024-02 July 24, 2024



TECHNICAL SPECIFICATIONS

FOR ASBESTOS ABATEMENT AND ENVIRONMENTAL REMEDIATION

UNION COUNTY COURTHOUSE ANNEX 2ND AND 5TH FLOORS 7 ELIZABETHTOWN PLAZA, ELIZABETH, NJ 07201

> PREPARED FOR: USA ARCHITECTS 10 DOUGHTY AVENUE, SOMERVILLE, NJ 08876

REVIEWED, APPROVED AND RELEASED

PROJECT DESIGNER: James Frisbee EPA Certification # 0424-10004 **RJB** Environmental. Inc. ASCM FIRM: 00149

Service with experience, integrity and value P.O. Box 869, Levittown, PA 19058 Website: www.rjbenv.com | Phone: 267-991-9212 | Fax: 267-799-4443



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SECTION 1 - ASBESTOS ABATEMENT

- PART 1 GENERAL CONDITIONS
- 1.1 GENERAL REQUIREMENTS
- A. **RELATED DOCUMENTS**: Project Specifications and Plans, associated reports, and general requirements of the Contract apply to this work. The Contractor is bound by all referenced Contract Documents. The written Contract for the work specified is with the Building Owner, Lessee, or Owner's Agent and shall be executed prior to the commencement of the work.
- B. SITE INSPECTION: Before submitting a proposal or bid, the Contractor shall perform a verification inspection of site conditions. Material quantities provided are estimates only, the Contractor in submission of its bid, shall base its bid on site verification of material quantities and conditions. The Contractor shall be held responsible for having examined the premises to be familiar with the existing site conditions under which the work shall have to be executed. The Contractor will not be granted a change order or allowed to withdraw its bid for failing to conduct this site verification.
- C. **OTHER DOCUMENTS**: The Contractor shall review the written Specification in conjunction with the Project's Plans and any other related documents, such as an assessment report. The Contractor should pose any questions in writing prior to the submission of its bid/proposal, to ascertain the intended Scope of Work. Supplementary General Conditions, Specification sections, addenda, and modifications to the contract documents issued subsequent to the published date of these Plans and Specifications shall be acknowledged on the bid/proposal.
- D. **SUBCONTRACTORS:** If allowed by written contract, sub-contracting portions of the work shall be performed such that prevailing wage rates are maintained, if applicable, and that work schedules not be changed that result in delays, claims, and losses in the performance of work. All sub-contractors shall be approved in advance and maintain insurances as required by the Contract documents.
- E. **INSURANCES:** Union County, USA Architects, and RJB Environmental, Inc., shall be named additionally insured. The Contractor and each Sub-Contractor shall procure and maintain the following **minimum** insurances from commencement until completion and final acceptance of the work. Should the actual Contract signed require greater insurance coverage amounts, then the Contractor is required to maintain those amounts. Coverages shall apply to workers employed in connection with the work under Contract and shall be in force for every State and Federal statute applicable to workers' compensation. The Contractor may procure additional insurance it deems necessary to protect themselves against hazards not covered by the Owner's property insurance. Owner's all-risk insurance typically does not cover theft of material unless installed and made part of the building structure. Such hazards may include coverage for materials and equipment onsite, water damage, theft, building collapse and against loss of owned or rented equipment and tools, equipment, scaffolding, and any other property owned or rented by the Contractor.



Insurance Type	Required Minimum		
Workers' Compensation (Statutory Limits) And Employer's Liability Insurance	\$1,000,000		
Comprehensive General Liability and Specific Asbestos Abatement Liability*	\$1,000,000 combined single limit.		
Bodily injury and personal injury, property damage	\$1,000,000 combined single limit. \$1,000,000 excess liability coverage		
Comprehensive Automobile Liability Insurance	\$1,000,000 combined single limit		
Pollution Liability	\$1,000,000 per occurrence		
Umbrella Coverage	\$1,000,000 per occurrence		

1.2 SUMMARY OF WORK

- A. SCOPE OF WORK: The Contractor is responsible for the removal of Asbestos-Containing Materials (ACM's), inclusive of work area preparation activities, post removal clean-up, waste transport and disposal. At all times, an Asbestos Abatement Supervisor and Asbestos Safety Technician (AST) shall be on-site and available while work is being performed. All abatement work shall be completed in strict accordance with the Project Plans and Specifications, the State of New Jersey's Sub-chapter 8, NJAC 5:23-8 (as applicable) and all other applicable Local, State and Federal regulations and guidelines. Material quantities provided are estimates only, the Contractor in submission of its bid, shall base its bid on site verification of material quantities and conditions. The Contractor shall field verify all materials, quantities, locations, and field conditions prior to submitting their bid proposal. Compliance with all applicable Federal, State, and Local procedures, and methods for preparation, execution, cleanup, disposal, and safety are absolutely required and said compliance is the sole responsibility of the Contractor.
- B. PROJECT SUMMARY: The intent of this asbestos abatement project is to remove all accessible asbestos containing materials located on the 2nd and 5th floors of the Courthouse Annex. The abatement work shall be completed within a full containment within an Occupied building, as per N.J.A.C. 5:23-8.19, Occupied buildings. All substrate materials shall be cleaned free of visible debris and subsequently encapsulated. In addition to asbestos removal, Universal Waste items listed in the Appendix are to be removed for reclamation/recycling as part of the scope of work. It is the Contractor's responsibility to coordinate their schedule with the Owner's Engineering/Construction Management Firm and RJB Environmental, Inc.

C. **DESCRIPTION**

Base Bid

All work shall be conducted within the Union County Courthouse Annex located on Elizabethtown Plaza in Elizabeth, New Jersey, in accordance with 1.2 Summary of Work, Tables 1-6 below, Items 1-19 and 1.22. This Scope of Work includes the provision that a variation or multiple variations will be issued by the NJ DCA to afford the abatement of a portion of ACM ceiling tile in order to construct separation and critical



barriers to segregate each floor into two work areas, yielding a total of four (4) phases and work areas for the project. The anticipated requirements of such variations are included in the items below.

The Contractor shall remove, transport and dispose of the following estimated quantities of Asbestos Containing Materials:

Table 1 – 2 nd Floor North ACM							
Spray-on Fireproofing (SF)	Ceiling Tile (SF)	Floor Tile and Mastic (SF)	Cove Base (LF)	Adhesive (SF)	Fitting Insulation (SF)	Mastic (SF)	Thinset (SF)
1128	4838	3720	864	281	20	0	988

Table 2 – 2 nd Floor South ACM							
Spray-on Fireproofing (SF)	Ceiling Tile (SF)	Floor Tile and Mastic (SF)	Cove Base (LF)	Adhesive (SF)	Fitting Insulation (SF)	Mastic (SF)	Thinset (SF)
1020	4096	4344	922	0	0	0	0

Table 3 – 5 th Floor North ACM								
Spray-on Fireproofing (SF)	Ceiling Tile (SF)	Floor Tile and Mastic (SF)	Cove Base (LF)	Adhesive (SF)	Fitting Insulation (SF)	Mastic (SF)	Thinset (SF)	
1600	4508	7335	1056	440	0	0	150	

Table 4 – 5 th Floor South ACM							
Spray-on Fireproofing (SF)	Ceiling Tile (SF)	Floor Tile and Mastic (SF)	Cove Base (LF)	Adhesive (SF)	Fitting Insulation (SF)	Mastic (SF)	Thinset (SF)
1080	3479	2277	865	300	0	300	823

In addition to the removal of ACM's identified in Tables 1-4, the Contractor shall be responsible to remove any additional ACM located above the ceilings being removed, as well as any fiberglass insulation located above the ceilings that will be considered contaminated.



- The abatement work shall be completed within a series of negatively pressured full containments as stated in Section 3.3 and 3.14 of these Specifications. Work shall be phased such that the 2nd floor will be completed in two (2) full containments, and the 5th floor will be completed in two (2) full containments, for a total of four (4) full containment work areas. The four phases are as follows:
 - Phase 1 5th floor North work area is approximately 7,500 square feet,
 - Phase 2 5th floor South work area is approximately 6,000 square feet,
 - Phase 3 2nd floor North work area is approximately 7,500 square feet,
 - Phase 4 2nd floor South work area is approximately 6,000 square feet,

Each Phase will be conducted in consecutive order, no two (2) phases will occur concurrently. The building contents are to be removed by others in advance of project pre-commencement work. The Contractor shall protect any murals and/or wooden finishes with Masonite board.

The Contractor is responsible for separating the floor's work areas with separation barriers to separate each work area from adjacent occupied/occupiable portions of the building. Elevator #1 (Security Elevator) is to be used only by the Asbestos Abatement Contractor during the course of the project.

In order to separate each floor, removal of floor tile and associated mastic shall be performed in front of Elevator #1 in advance of Separation barrier construction. This is estimated to be 50 square feet in area for the 5th floor and 50 square feet in area for the 2nd floor. The separation barrier installed at this location shall be reconfigured per the plans between Phases 1 and 2 and Phases 3 and 4.

The Contractor is to utilize rolling scaffolds within the work area to establish a working surface of no more than ten feet (10') from the ceiling. The scaffolding shall be erected in accordance with 29 CFR, Part 1910.27(a) *Scaffolds*. Additionally, scaffolds used in general industry must meet the requirements in 29 CFR, Part 1926, subpart L (Scaffolds).

2. The licensed Asbestos Abatement Contractor shall isolate the work area in accordance with preparation requirements for full containment within Occupied buildings, N.J.A.C. 5:23-8.19 Asbestos Hazard Sub-code (i.e., the installation of fire-retardant walls and floor polyethylene) as depicted on the attached Plans. Vinyl Asbestos Tile (VAT)/mastic flooring systems are scheduled to be removed throughout. Terrazzo flooring systems are to be protected and plasticized in accordance with N.J.A.C. 5:23-8.19 Asbestos Hazard Sub-code. The critical barriers are to be installed over any openings. Two (2) mechanical rooms house vertical air supply/return ducts. These rooms shall have critical barriers installed to keep these rooms outside of the work area. Fire-retardant polyethylene sheeting shall be installed on floors, walls and plaster/sheetrock ceilings. Columns where fireproofing removal is scheduled, are to be accessed for preparation activities, after the separation barriers are completed. Air Filtration Devices (AFD's) equipped with HEPA filtration are to be located along the East side of the work area, and exhausts attached to plywood cowls cut and installed in the window systems. For the West side of the building one (1) large window shall be removed and plywood installed for each phase (work area). The Contractor is responsible for contracting and coordinating the window removal and subsequent window re-installation.



- 3. After critical barriers and wall and floor polyethylene is installed throughout the work area, final preparations shall occur in accordance with a variance that will allow for the wetting and removal of the asbestos ceiling tiles to complete critical barriers and wall polyethylene sheeting installation from the tops of wooden separation barriers to the deck. All floor and wall polyethylene and negative pressure systems shall be in place prior to the removal of 1' x 1' ceiling tiles for final barrier completion. This removal shall occur along the East-West separation, and shall include cutting of the spline ceiling frame, and installing supports to the deck above. After the separation barriers are completed, the wetting and removal of ceiling tiles at all column locations shall be completed to allow for additional preparation to be performed. The area surrounding fireproofing on I-Beams at the lower points of each column build-out, are to be prepared by the application of spray foam and two (2) layers of polyethylene sheeting. It is not the intent to demolish walls to access all fireproofing; however, all accessible fireproofing is to be removed to the deck. Column locations are denoted on the attached plans located in Appendix B. Based on a review of original structural plans, 52 column locations are located on the 5th floor and 56 column locations are located on the 2nd floor. However, many columns are encased with plaster and inaccessible. An estimated 50 % of the columns have some accessible fireproofing that is to be removed, (an estimated 24 columns on the 5th floor and an estimated 25 columns on the 2nd floor), along with an estimated 60 linear feet of horizontal I Beam fireproofing (an estimated 240 square feet fireproofing and overspray) located in the rear security hallway on each floor. The estimated locations for the 5th floor are depicted on ASB 1.5, and for the 2nd floor, depicted on ASB 3.3. Columns located in areas outside the work area (duct shafts/ bathrooms) will not be abated, regardless of fireproofing accessibility. The variance shall include the limited removal of 1' x 1' ceiling tiles to inspect walls above for openings requiring critical barriers and accessing the plenum to install the critical barriers. This is the last phase of preparation to achieve the required -0.050 i.w.c.
- 4. Ductwork systems located above the ceilings have fiberglass insulation and are inaccessible to protect in advance of abatement. The insulation shall be left on the ductwork until all asbestos removal has been completed. The exterior duct surfaces shall be cleaned and encapsulated. Pipe insulation located above the ceilings is largely fiberglass; however, some corrugated pipe insulation and cementitious fittings may be present. The Contractor is responsible for the removal of all pipe and fitting insulation as part of the project.
- 5. The Contractor shall remove light bulbs/ballasts for recycling during the preparation phase. In addition, cameras and speakers are to be labeled, removed for storage and reinstallation by others. The Contractor is responsible for the removal of all BX and/or Romex wiring back to the "spider boxes" and disposal of same as ACM waste.
- 6. The Contractor shall establish and maintain a minimum of four (4) air changes per hour and a minimum of 0.05 inches of water column (i.w.c.) of negative pressure from the commencement of ceiling removal through final clearance testing.
- 7. Each of the four (4) work areas shall incorporate the erection of a three (3)-stage personnel decontamination unit which shall allow for sufficient shower facilities (i.e., one (1) shower for every eight (8) workers). All personnel shall access the work area through the three-stage decontamination unit. Ingress and egress for Phase 1 5th floor North and Phase 3, 2nd floor North shall be from the South Stairwell (Stairwell B) or Elevator #1. Ingress and egress for Phase 2 5th floor South and Phase 4, 2nd floor South shall be from the North Stairwell (Stairwell A) or Elevator #1.



- 8. The work area shall incorporate the erection of a two (2) stage waste decontamination unit, 4' x 8' in dimension, equipped with weighted Z-flap airlocks. Waste shall be wetted and placed in a single asbestos waste bag and sealed with duct tape and passed into the 1st chamber of the waste decontamination unit, where a second worker shall place the bag into a second bag, seal the bag with duct tape and apply a waste generator label. The double bagged waste is then transferred to the 2nd chamber, where a separate worker will remove and load bags into a cart equipped with a closable lid. Waste will be transferred to Security elevator #1, to the ground level for loading into an enclosed lockable dumpster. Whenever waste is not being removed, the Z-flaps shall be sealed closed with duct tape to minimize work area pressure loss.
- 9. All asbestos waste shall be packaged within two (2) individual six-mil polyethylene waste bags with all proper labeling (i.e., OSHA warning, EPA generator and DOT shipping labels).
- 10. The Contractor shall be responsible for the sealing of any openings with critical barriers or spray foam as appropriate to maintain the required negative air pressure.
- 11. The Contractor shall be required to complete the cleaning of all substrate surfaces through HEPA vacuuming and wet wiping of all horizontal and vertical surfaces. Upon completion of the cleaning of the work area and its subsequent inspection, all surfaces within the work area shall be encapsulated with an approved encapsulant.
- 12. The Contractor shall construct separation barriers at locations identified on the drawings to separate the "Occupied" and "Unoccupied" portions of the building. The separation barrier located at the west side of the work area shall be kick-out capable and labeled in paint or large marker as "EMERGENCY ESCAPE." The barrier shall be installed with wedges, into the separation barrier and shall be caulk sealed in place. The Contractor shall then install double layer critical barriers inside and outside of the Separation barriers upon which are posted the required OSHA Asbestos Warning Signs.
- 13. Elevators #2 and #3 that open to the main hallway will be in the work area for Phase 1, 5th floor North and Phase 3, 2nd floor North. Elevators #2 and #3 doors are to locked out from opening on the floor of abatement. Additionally, they are to have separation barriers installed, and the polyethylene seals are to be pressurized to positive (+) 0.05 i.w.c. for all phases of work. The pressurization shall be completed using a small AFD located outside the work area. The separation barrier adjacent to Elevator #1 used to remove waste shall also be pressurized to positive (+) 0.05 i.w.c. for all phases of work. Additionally, the separation barrier adjacent to the stairwell for each phase shall also be pressurized to positive (+) 0.05 i.w.c. The Contractor shall provide and maintain additional digital manometers to monitor pressure on these separation barriers.
- 14. All entry doors to the building areas of the project shall be posted with the required OSHA Asbestos Warning Signs. The 20-day occupant notifications shall be posted by the County or its representative 7 days prior to commencement on all exterior building entry doors.
- 15. The Contractor shall establish temporary lighting within the work area, in a sufficient amount to provide the required foot candles of light in accordance with 29 CFR, Part 1926.56.



- 16. All line electric within the regulated work areas shall be locked out/tagged out. The Contractor shall provide power from outside the work area using a 100-amp GFCI panel. All HVAC systems within or servicing the work area shall be shut down. HVAC duct systems are insulated with fiberglass insulation and located above asbestos ceiling systems. As a result, these HVAC ducts cannot have critical barriers installed prior to the removal of the asbestos ceiling. A variance shall be obtained to address this anomaly and shall require that the fiberglass insulation remain in place until all asbestos removal is completed, upon which it shall be wetted, removed and disposed of as ACM.
- 17. All wood used for construction shall be Class 1 fire-rated with proper labels stamped on each piece of lumber and all six (6) mil polyethylene sheeting, flame-retardant.
- 18. The Contractor shall supply a temporary Porta Pot for its workers, to be located near the ingress/egress to the building.
- 19. **Quantities:** The quantities shown are estimates only for the Contractor's informational purposes. No guarantee is expressed or implied that the quantities are correct or that the asbestos-containing materials are easily removed from the substrate, surfaces or components. No allowances shall be made for the failure of the Contractor to verify, in the field, material amounts or existing field conditions.

Refer to the Asbestos Abatement Drawings for approximate locations of the various identified asbestoscontaining materials, incorporating the materials to be removed and locations of specified separation and critical barriers, walls, ceilings and floors, etc.

The Contractor shall conduct non-friable removal of floor tile and mastic located in front of the Security elevator # 1 on the 2nd and 5th floors in advance of final preparation as this area will be used for waste load-out.

1.2.2 Universal Wastes

1. Universal Wastes (UW) - The Contractor shall be responsible to handle universal waste items listed below for the 5th and 2nd floors. Some items are to be removed and saved for the Owner to be reinstalled by others, other items protected in place or protected and hung, other items to be removed and recycled/reclaimed. The Contractor shall field verify all materials, quantities, locations, and field conditions prior to submitting their bid proposal. Compliance with all applicable federal, state, and local procedures, and methods for preparation, execution, cleanup, transport and disposal is the sole responsibility of the Contractor. The Contractor is responsible for the removal, transport and disposal/recycling of all UW identified in the following table and shall provide certifications for their proper recycling or disposal. A majority of the UW removal shall be performed prior to asbestos abatement. The following table represents the common universal waste items identified within the 2nd and 5th floors of the building.



TABLE 5: SUMMARY OF UNIVERSAL WASTES: 5 TH FLOOR (PHASES 1 AND 2) (ESTIMATED QUANTITIES)							
Bulbs/Ballasts (Remove and Recycle/Reclaim)	Strobes/Smoke Sensors (Protect and Hang in Place)	Cameras/Speakers (Remove, Save for Owner re- installation)	Exit Signs/Lights (Protect in Place)				
695/346	23/21	16/5	7				

TABLE 6: SUMMARY OF UNIVERSAL WASTES: 2 ND FLOOR (PHASES 3 AND 4) (ESTIMATED QUANTITIES)							
Bulbs/Ballasts (Remove and Recycle/Reclaim)	Strobes/Smoke Sensors (Remove and Recycle/Reclaim)	Cameras/Speakers (Remove, Save for Owner re- installation)	Exit Signs/Lights (Remove and Recycle/Reclaim)				
733/370	20/24	8/5	2				

1.3 CONTRACTOR'S SCHEDULE

- A. Work of the Base Bid shall be completed within a maximum of eighty (80), eight (8) hour work shifts, inclusive of satisfactory clearance air sample analysis, containment breakdown and removal of waste from the site. At a minimum, the Contractor shall keep a supervisor on-site for the entire duration of the abatement phase to ensure maintenance of the engineering controls (i.e., negative pressure) or they may establish remote wireless alarm notification for the loss of negative pressure.
- B. All work shall be completed between Monday and Friday between 7 a.m. and 4 p.m. The Contractor shall be limited to one (1) shift per day, so that AST and AAR staffing can be provided as required. The building will be largely unoccupied, however other trades will be in the building.
- C. Should final clearance air samples fail, the Contractor shall re-clean the work area at no additional cost to the Owner or their representatives. Additional costs incurred for all re-



sampling of the work area shall be the responsibility of the Contractor, at no additional cost to the Owner or his/her representatives.

<u>SEQUENCE OF WORK:</u> The Contractor shall follow the general sequence of events as described below.

- 1. Construction of separation barriers.
- 2. Preparation of the work area, floors, walls.
- 3. Variance work to remove 1' x 1' ceiling tiles to extend barriers to the deck.
- 4. Variance work to install polyethylene sheeting and foam around the I-Beams for column fireproofing removal.
- 5. Removal and packaging of ACM from ceilings.
- 6. Removal and packaging of fireproofing.
- 7. Removal of cementitious fittings, pipe insulation.
- 8. Removal of floor tile and mastic.
- 9. Removal of duct insulation.
- 10. Removal of asbestos containing waste from the work area.
- 11. Cleaning and Encapsulation of the work area.
- 12. Removal of containment systems following acceptable final clearance air testing.
- 13. Transport and Disposal of the ACM.

1.4 DESCRIPTION

A. Furnish all labor, materials, services, insurance, and equipment in accordance with the most stringent requirements of the NJ DCA, NJ DHSS, NJ DOLWD, US EPA and OSHA, as applicable, and all other applicable regulatory agencies, to complete the removal of asbestos-containing materials as described in the Summary of Work.

1.5 SUBMITTAL REQUIREMENTS

- A. Pre-work Submittals
 - 1. **NOTIFICATIONS:** Submit Notifications to the appropriate agencies as required by State and Federal Regulations at least ten (10) business days in advance of the project, and provide copies to RJB Environmental, Inc.
 - 2. **PERMITS:** Submit copies of Construction permits, when required by State and Local regulations.



- 3. **LICENSES:** Submit copies of valid and current NJ Asbestos Abatement Licenses and permits necessary to carry out the work including, but not limited to the Contractor license, supervisor licenses, and worker licenses.
- 4. **HEALTH AND SAFETY PLAN**: Submit the Contractor Health and Safety Program with project specific Emergency Plans and Contacts to be posted at the jobsite.
- 5. **RESPIRATORY PROTECTION PROGRAM**: Submit the Contractor Respiratory Protection Program.
- 6. WORKER TRAINING: The Contractor shall submit a list of the people who will be employed and any sub-contractors involved in the removal work. Present evidence that personnel have received proper training required by regulations and the medical examinations required by OSHA 29 CFR 1926.1101. Submit fit-testing records for these workers/personnel.
- 7. **SAFETY DATA SHEET**: Submit a Safety Data Sheet (SDS), or equivalent for each material proposed for use during the work in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200).
- 8. **SUBCONTRACTORS**: Submit Asbestos and/or Painting/Cafco applicator Subcontractor Information, evidence of experience, and project references.

B. CLOSE-OUT SUBMITTALS

- 1. Submit copies of the fully completed Waste Shipment Records (WSR) as documentation of compliance with NESHAP 61.150 (d) (3) and (4).
- 2. Submit OSHA compliance air monitoring records of sampling conducted during the work.
- 3. Submit copies of the daily progress logs.
- 4. Submit copies of Visitors' Logs.

1.6 TERMINOLOGY

ABATEMENT: Procedures including the removal, repair, encapsulation or enclosure of ACM/ACBM.

ACBM OR ACM: Asbestos-containing building materials or asbestos-containing materials.

AIR LOCK: A serial arrangement of rooms whose polyethylene flapped doors are spaced a minimum of four (4) feet apart to permit ingress or egress through one (1) room without interfering with the next and constructed in such a manner as to prevent or restrict the free flow of air in either direction.

AIR PRESSURE DIFFERENTIAL: When air pressure is lower than the surrounding area, generally caused by exhausting air from a sealed space (work area). A minimum of 0.03 inches of water column (i.w.c.) of pressure differential for unoccupied buildings and 0.05 i.w.c. for occupied buildings is required.

AIR MONITORING: The process of measuring the fiber content of a specific volume of air in a stated period of time. This shall include Phase Contrast Microscopy (PCM) by NIOSH Method 7400 and 582 as



well as Transmission Electron Microscopy (TEM) via 40 CFR, Part 763. When "aggressive" air sampling is specified, leaf blowers are used to disperse settled fibers into the air during sampling and box fans are employed to replicate building occupancy.

AMENDED WATER: Water to which a surfactant has been added to reduce water surface tension and thereby provide a more rapid penetration.

ASBESTOS HAZARD ABATEMENT PROJECT: The removal, enclosure or encapsulation of more than 25 square feet of asbestos-containing material used on any equipment or surface area such as wall or ceiling area; or the removal of more than 10 linear feet of asbestos-containing material on covered piping.

ASBESTOS SAFETY CONTROL MONITOR (ASCM): A business entity authorized, pursuant to N.J.A.C. 5:23-8, to ensure compliance with the Asbestos Hazard Abatement Sub-code.

ASBESTOS SAFETY TECHNICIAN (AST): A person certified by the New Jersey Department of Community Affairs (NJDCA), hired by the ASCM firm who continuously monitors and inspects the asbestos abatement work pursuant to N.J.A.C. 5:23-8. This person shall be required to be on the job site during the time asbestos abatement work is taking place, inclusive of preparation and final breakdown, and perform all duties and responsibilities established by these regulations.

AUTHORIZED PERSONNEL: The Building Owner, the Building Owner's representative, the Asbestos Abatement Contractor, Asbestos Safety Control Monitor personnel, emergency personnel, or a representative of any Federal, State, or Local regulatory agency or other personnel under contract for or having jurisdiction over the project.

BARRIER: Any surface that inhibits air and fiber movement from the work area to non-work areas. Can be comprised of one or a combination of several materials, including but not limited to plywood, polyethylene sheeting, duct tape, and spray-poly.

BUILDING OWNER: The Owner or his authorized representative.

CERTIFICATE OF COMPLETION: The certificate issued by the ASCM firm signifying that the asbestos hazard abatement work has been completed in conformance with N.J.A.C. 5:23-8.

CONSTRUCTION PERMIT FOR ASBESTOS ABATEMENT: Required Official approval to commence any asbestos hazard abatement project. This permit is issued by the enforcing agency or local code official. The Contractor is responsible for submitting the application for and obtain the Construction Permit in advance of the project start date.

CONTRACTOR: The Asbestos Removal Contractor licensed by the State of New Jersey's Department of Labor and Workforce Development (NJDOLWD).

CRITICAL BARRIER: Two (2) layers of nominal six (6) mil polyethylene sheeting that completely seals off the work area to prevent the distribution of fibers to the surrounding area, such as the opening between the top of a wall and the underside of ceiling construction, electrical outlets, non-removable lights, HVAC systems, windows, doorways, entranceways, ducts, grilles, grates, wall clocks, speaker grilles, floor drains, sink drains, etc.



DECONTAMINATION UNIT: A series of three (3) connected rooms, with air locks between any two (2) adjacent rooms, for the decontamination of workers and/or materials and equipment, constructed or moved onto the job site.

<u>Equipment Room</u>: A contaminated area or room in the decontamination unit with provisions for storage of contaminated clothing and equipment.

<u>Shower Room</u>: A room between the equipment and clean rooms and the two (2) air locks in the decontamination unit with hot and cold running water, controllable at the tap, suitably arranged for complete showering during decontamination.

<u>Clean Room</u>: An uncontaminated area or room that is part of the decontamination unit at its entrance with provisions for storage of workers' street clothes and protective equipment.

ENCAPSULATION: The treatment of asbestos containing materials with a material that surrounds or embeds asbestos fibers in an adhesive matrix to prevent the release of fibers, as the encapsulant creates a membrane over the surface (bridging encapsulant) or penetrates the material and binds its components together (penetrating encapsulant). It is also a liquid material which is applied to surfaces from which asbestos-containing materials have been removed to control the possible release of residual asbestos fibers.

ENCLOSURE: The construction of a permanent barrier around ACM that is air-tight and impermeable and controls the release of asbestos fibers into the air.

FLAME-RESISTANT POLYETHYLENE SHEET: A single layer of polyethylene film in the largest sheet size possible to minimize seams, nominal six (6) mil thick, conforming to requirements set forth by the National Fire Protection Association Standard 701, Small Scale Fire Test for Flame-Resistant Textiles and Films.

FULL CONTAINMENT AREA: An asbestos removal area that is sealed and fully contained in polyethylene with a one (1) layer wall and two (2) layer floor. Workers enter the containment area through a three-stage decontamination unit.

FIXED OBJECT: A unit of equipment or furniture in the work area that cannot be removed from the work area without dismantling.

GLOVE BAG: A polyethylene bag or other techniques or work practices approved by the Department of Community Affairs and OSHA especially designed to enclose sections of equipment for the purpose of removing asbestos-containing material without releasing fibers.

HEPA FILTER: A high efficiency particulate air (HEPA) filter capable of trapping and retaining 99.97% of asbestos fibers greater than 0.3 microns in length.

HEPA VACUUM EQUIPMENT: High efficiency particulate air filtered vacuuming equipment with a filter system capable of collecting and retaining asbestos fibers. Filters should be of 99.97% efficiency for retaining fibers greater than 0.3 microns in length.

LIMITED CONTAINMENT AREA: An asbestos removal area built for the express purpose of containing an area or space where glove bag removal shall be completed. This shall include the erection of a single layer



of nominal six (6) ml polyethylene sheeting as a tent enclosure to isolate a single or series of glove bags or the erection of critical barriers to isolate a room. All areas shall be maintained under negative pressure.

NEGATIVE AIR PRESSURE EQUIPMENT OR AIR FILTRATION DEVICE: A HEPA equipped local filtration and exhaust system, capable of maintaining constant, low velocity airflow through the Decontamination Unit and into the Work Area from adjacent uncontaminated areas and exhausting that air outside the building through HEPA filters.

NIOSH: National Institute for Occupational Safety and Health.

OCCUPIED BUILDING: A building or structure where occupancy is permitted in certain areas outside of the required containment during an asbestos hazard abatement project.

ON-SITE REPRESENTATIVE: Owner's full-time representative responsible for air monitoring and site observation. Also referred to as the Asbestos Safety Technician (AST).

PLASTICIZING: Procedures necessary using a minimum of six (6) mil thick polyethylene sheeting, adhesives, and/or taping to seal an area airtight.

REPAIR: Application of materials, such as bridging encapsulants, wettable cloth wraps or other materials to return damaged ACM to an intact and undamaged condition that prevents/minimizes the release of asbestos fibers.

SEPARATION BARRIER: A wall constructed to isolate the clean area from the work area and to support the polyethylene sheets. Must be caulk sealed and covered with two (2) layers of six (6) mil polyethylene sheeting on the inside and outside of the barrier.

SURFACTANT: A chemical wetting agent added to water to improve penetration, thus reducing the quantity of water required for a given operation or area.

WET CLEANING/WIPING: The process of eliminating contamination from building and containment surfaces and objects by using cloths, mops, or other cleaning tools which have been dampened with water, and by afterwards disposing of these cleaning tools as asbestos contaminated waste.

WASTE DECON: A series of two (2) connected rooms, with air locks between rooms, for the double – bagging of waste, prior to transferring to the waste dumpster.

1.7 CODES AND REGULATIONS

- A. **GENERAL APPLICABILITY OF CODES, REGULATIONS, AND STANDARDS**: Except to the extent that more explicit or more stringent requirements are written directly into the contract documents, all applicable codes, regulations, and standards shall be considered as part of the contractual obligation and are made a part of the contract documents by reference.
- B. **FEDERAL REGULATIONS**: Those which govern asbestos abatement work or transport and disposal of asbestos waste materials include, but are not limited to the following:



- 1. US Department of Labor, Occupational Safety and Health Administration, (OSHA), including, but not limited to:
 - a. Asbestos Regulations Title 29, Part 1910, Section 1001 of the Code of Federal Regulations
 - b. Respiratory Protection Title 29, Part 1910, Section 134 of the Code of Federal Regulations
 - c. Construction Industry Title 29, Part 1926, Section 1101 of the Code of Federal Regulations
 - d. Access to Employee Exposure & Medical Records Title 29, Part 1910, Section 20 of the Code of Federal Regulations
 - e. Hazard Communication Title 29, Part 1910, Section 1200 of the Code of Federal Regulations
 - f. Specifications for Accident Prevention Signs and Tags Title 29, Part 1910, Section 145 of the Code of Federal Regulations
- 2. US Environmental Protection Agency (EPA), including, but not limited to:
 - a. Worker Protection Rule 40 CFR Part 763, Subpart G, CPTS 62044, FLR 28439, Federal Register, Vol. 50, No. 134, 7/12/85 - P28530-28540
 - b. Regulation for Asbestos Title 40, Part 61, Subpart A of the Code of Federal Regulations
 - c. National Emission Standard for Asbestos Title 40, Part 61, Subpart M of the Code of Federal Regulations including Asbestos NESHAP Revision; Final Rule, Federal Register; Tuesday, November 20, 1990.
 - d. Asbestos Hazard Emergency Response Act (AHERA) 40 CFR Part 763
- 3. US Department of Transportation (DOT) including, but not limited to:
 - a. Hazardous Substances: Final Rule Regulation 49 CFR, Parts 171 and 172
- C. **STATE REGULATIONS**: Abide by all state regulations which govern asbestos abatement work or hauling and disposal of asbestos waste materials, including but not limited to:
 - New Jersey Department of Labor and Workforce Development Asbestos Control and Licensing 225 East State Street P.O. Box 392 Trenton, NJ 08625-08392

 Asbestos Licenses and Permits, as per N.J.A.C. 8:60 and 12:120
 - 2. New Jersey Department of Environmental Protection



Division of Solid and Hazardous Waste 120 South Stockton Street Trenton, NJ 08625-0410 a. Disposal Regulations, as per N.J.A.C. 7:26

- New Jersey Department of Health and Senior Services Asbestos Control Program CN 360 Trenton, NJ 08625-0360

 Asbestos Training Courses, as per N.J.A.C. 8:60 and 12:120
- New Jersey Department of Community Affairs

 Bureau of Code Services
 Asbestos Control Unit
 CN 816
 Trenton, NJ 08625-0816
 Asbestos Hazard Abatement Sub-code, as per N.J.A.C. 5:23-8
- B. **STANDARDS:** American National Standards Institute (ANSI) and the American Society for Testing and Materials (ASTM) standards below which discuss engineering controls, respiratory protection and the transport and disposal of asbestos waste materials associated with asbestos abatement and are not limited to the following:
 - 1. American National Standards Institute (ANSI)
 - a. <u>Fundamentals Governing the Design and Operation of Local Exhaust Systems</u>, Publication Z9.2-79 b.
 - b. <u>Practices for Respiratory Protection</u>, Publication Z88.2-80
 - 2. American Society for Testing and Materials (ASTM)
 - a. <u>Safety and Health Requirements relating to Occupational Exposure to Asbestos</u> E 849-82
- E. **GUIDANCE DOCUMENTS:** Documents that provide guidance or standards of care for asbestos abatement work or hauling and disposal of asbestos waste materials are listed below only for the Contractor's information.
 - 1. <u>Guidance for Controlling Asbestos-Containing Materials in Buildings</u> (Purple Book) EPA560/5-85-024.
 - 2. <u>Asbestos Waste Management Guidance</u> EPA 530-SW-85-007.
 - 3. <u>Recommended Work Practices for Removal of Resilient Floor Coverings (October 2011)</u>, Resilient Floor Covering Institute (RFCI).



4. <u>Removing Vinyl Asbestos Tile in New Jersey, A Contractor's Guide for the Non-friable</u> <u>Removal of Vinyl Asbestos Floor Tiles</u>, NJ DOH.

1.8 ASBESTOS ABATEMENT PHASING

- A. Asbestos abatement work shall be scheduled and coordinated with the Building Owner, the Architect/Engineer, the General Contractor, and the Asbestos Safety Control Monitor. The Abatement Contractor is responsible for coordinating with the Asbestos Safety Control Monitor a minimum of 48 hours in advance of site mobilization with required project notifications submitted ten (10) business days in advance of the start date. No abatement work shall commence on this project unless the Owner's Asbestos Safety Technician is present.
- B. The project is designed for work to be performed in four (4) work areas/phases, with two (2) work areas/phases on the 2nd floor and two (2) work areas/phases on the 5th floor.

PART 2 - EQUIPMENT AND MATERIALS

2.1 PERSONNEL PROTECTION REQUIREMENTS

- A. Prior to the commencement of work, the workers shall be instructed and shall be knowledgeable of the hazards of asbestos exposure, use and fitting of respirators, protective clothing, decontamination procedures, and all aspects of asbestos work procedures; workers shall have medical examinations.
- B. The Contractor acknowledges that they alone are responsible for enforcing personnel protection requirements and that these Specifications provide only a minimum acceptable standard for each phase of operation.
- C. Provide workers with personally issued and marked respiratory equipment approved by NIOSH and accepted by OSHA.
- D. Where not in violation of NIOSH and OSHA requirements, the Contractor shall provide, as a minimum, the following respirator protection for each phase of operation:
 - 1. Pre-cleaning/Wet Wiping of Area: NIOSH approved half-face dual cartridge respirators equipped with HEPA cartridges.
 - 2. Polyethylene Installation: NIOSH approved half-face dual cartridge respirators equipped with HEPA cartridges.
 - 3. Asbestos Removal: NIOSH approved half-face dual cartridge respirators equipped with HEPA cartridges for non-friable materials and full-face NIOSH approved powered air purifying respirator (PAPR) for friable materials. If mastic solvents are to be utilized on site, appropriate respiratory protection is required in accordance with the manufacturer's recommendation.



- 4. Polyethylene Removal: NIOSH approved half-face dual cartridge respirators equipped with HEPA cartridges.
- 5. Loading Waste Material on Truck (outside work area): NIOSH approved half-face dual cartridge respirators equipped with HEPA cartridges.
- 6. Unloading Bags at Landfill: NIOSH approved half-face dual cartridge respirators equipped with HEPA cartridges.
- E. The above schedule is the minimum respiratory protection acceptable. Should any condition, for any reason, be encountered where the exposure level, after application of the appropriate protection factor of the respiratory equipment in use, exceeds 0.01 f/cc, substitute respiratory equipment with protection factors that reduce worker exposure levels below 0.01 f/cc.
- F. No visitors shall be allowed in work areas, except as authorized by the Department.
- G. Provide workers with sufficient sets of disposable protective full-body clothing. Such clothing shall consist of Tyvek full-body coveralls, footwear, and headgear, one-piece coveralls or equal.
 Provide eye protection and hard hats as required by applicable safety regulations. Disposable clothing shall not be allowed to accumulate and shall be disposed of as contaminated waste.
- H. Provide authorized visitors and the Owner's Asbestos Safety Technician with suitable protective clothing, headgear, footwear, and gloves as described above whenever they enter the work area.

2.2 MATERIALS

- A. Deliver all materials in the original packages, containers, or bundles bearing the name of the manufacturer and the brand name. Safety Data Sheets shall be provided for all materials delivered to the jobsite.
 - 1. Store all materials subject to damage off the ground, away from wet or damp surfaces, and under cover sufficient to prevent damage or contamination.
 - 2. Damaged or deteriorating materials shall not be used and shall be removed from the premises.
- B. **POLYETHYLENE SHEETING**: A minimum of two (2) 6-mil layers for floors where floor tile/resilient sheet flooring is not being removed and one (1) 6-mil layer for the walls, in sizes to minimize the frequency of joints. Specific floor and wall polyethylene installation requirements are set forth in N.J.A.C 5:23-8. Flame retardant polyethylene sheeting shall be used where applicable to comply with fire code requirements.
- C. **TAPE**: Capable of sealing joints of adjacent sheets of polyethylene and for attachment of polyethylene sheets to finished or unfinished surfaces of dissimilar materials and capable of adhering under both dry and wet conditions, including use of amended water, duct tape, poly prep tapes or approved equal.



- D. **ADHESIVES**: Capable of sealing joints of adjacent sheets of polyethylene and for attachment of polyethylene sheeting to finished or unfinished surfaces of dissimilar materials and capable of adhering under both dry and wet conditions, including use of amended water.
- E. **CAULKS**: Silicon caulking.
- F. **AMENDED WATER**: Shall consist of 50% polyoxyethylene ether and 50% polyoxyethylene ester, or equivalent, and shall be mixed with water to provide a concentration of one ounce of surfactant to 5 gallons of water.
- G. IMPERMEABLE CONTAINERS: Suitable to receive and retain any asbestos-containing or contaminated materials until disposal at an approved site. The containers shall be labeled in accordance with OSHA Regulation 29 CFR 1926.1101 and NESHAP Regulation 40 CFR 61, Subpart M. Containers must be both air and watertight and must be resistant to damage and rupture.
- H. WARNING LABELS AND SIGNS: As required by OSHA regulations 29 CFR 1926.1101.
- I. **GLOVE BAGS**: Industry standard glove bags, minimum of 6 mil thickness.
- J. **ENCAPSULANTS**: Tinted encapsulant to lock-down regulated work area substrates and associated polyethylene sheeting, excluding floor surfaces that are to receive new flooring adhesive that may be incompatible with encapsulant.
- K. **MASTIC REMOVER**: Only low odor mastic removers may be used on this project.
- L. **OTHER MATERIALS**: Provide all other materials, such as, but not limited to lumber, plywood, nails, and hardware, which may be required to properly prepare and complete this project.

2.3 TOOLS AND EQUIPMENT

- A. <u>Electric and Water</u>: If the site does not have water or electricity supplied to the building, the Contractor will be responsible for providing ample power and water to successfully complete the project. The Contractor must ensure negative pressure is maintained within containments from the time asbestos abatement has started until the containment is cleared by the Asbestos Safety Technician.
 - 1. Water Sprayer: Airless or a low-pressure sprayer for amended water application as applicable.
 - 2. Air Filtration Device (AFD): High Efficiency Particulate Air Filtration Systems (HEPA) shall comply with ANSI Z9.2-79. No air movement system or air equipment should discharge asbestos fibers outside the work area. Thus, the AFD shall be equipped with a three-filter bank with the last being the HEPA filter capable of removing 99.97% of fibers >0.3µ (microns).
 - 3. Paint/Encapsulant Sprayer: Airless.
 - 4. Scaffolding: As required to accomplish the specified work and meet all applicable safety regulations.



- 5. Vacuums: High Efficiency Particulate Air (HEPA) vacuums only.
- 6. Other tools and equipment as necessary.

PART 3 - EXECUTION

- 3.1 POSTING OF THE PROJECT
- A. Post caution signs in and around the work area to comply with OSHA regulation 29 CFR 1926.1101 and in compliance with all other Federal, State, and local requirements.
- B. As required by OSHA regulations 29 CFR 1926.1101, warning shall bear the following information:

DANGER

ASBESTOS

MAY CAUSE CANCER

CAUSES DAMAGE TO LUNGS

AUTHORIZED PERSONNEL ONLY

WEAR RESPIRATORY PROTECTION

AND PROTECTIVE CLOTHING IN THIS AREA

3.2 WORK AREA PREPARATION

- A. Contractor shall utilize power available at the site. Should the facility not be occupied, and have no electric service, establish temporary power to the site with the use of portable power (i.e., Generators) or seek temporary hook-up with local utility. Contractor shall install Ground Fault Circuit Interrupter (GFCI) for all power applications within the work areas through cords or temporary panels.
- B. Contractor shall utilize water service available at the site. Should the facility be vacant and no water service is available, the Contractor shall provide water to the site with the use of portable water tanks or coordinate with the municipality to establish a temporary hook-up to the municipal water system.
- C. Before the work is begun, and unless otherwise specified, the Owner shall remove from work areas all removable items and equipment not attached to or located on the asbestos materials.

3.3 WORK AREAS - WORK BY CONTRACTOR

A. Pre-clean fixed objects within the work area, first using HEPA vacuum equipment and then wet cleaning methods as appropriate, and completely enclose with minimum 6-mil thick plastic sheeting sealed with tape.



- B. Clean work areas where debris or visible dust is present and in areas where floor materials are not being removed. Clean the work area first using HEPA vacuum equipment and then wet cleaning methods as appropriate. Do not use methods that raise dust, such as dry sweeping or vacuuming with equipment not equipped with HEPA filters. Do not use HEPA vacuum equipment on wet surfaces unless units are specially constructed for wet/dry use. HEPA vacuum or damp sponge with regular water would be appropriate.
- C. Seal off all openings, including, but not limited to windows, corridors, doorways, skylights, ducts, grilles, diffusers, and any other penetrations of the work areas, with 6-mil plastic sheeting sealed with tape (Critical Barriers).
- D. Prepare areas undergoing abatement in accordance with the following requirements. Areas undergoing multiple removal operations shall be prepared in accordance with the most stringent requirements as follows:
 - 1. **ACM** shall be abated within a negatively pressured, full containment with a Personnel Decontamination Unit in accordance with N.J.A.C. 5:23-8.19 as well as Section 3.14 of these Plans and Specifications. The exception to this is the removal of VAT and mastic in front of the security elevator (Elevator #1) in advance of construction of the two (2) full containments on each floor.

3.4 DECONTAMINATION UNITS

- A. **GENERAL**: The Contractor shall use decontamination units acceptable to the NJ DCA, EPA and OSHA, connected to the work area with framed-in or accordion tunnels, if necessary, and line the tunnels with plastic, sealed with tape at all joints in the plastic, or shall construct decontamination units on-site. Each space shall be a minimum of four foot by four foot (4'x4') interior dimension with a minimum height of seven feet (7'). For this project the decontamination unit shall be constructed using fire rated lumber and flame-retardant polyethylene sheeting.
- B. ACCESS: In all cases, access to contained areas shall be through an air lock constructed on three
 (3) polyethylene sheeted flaps in a "Z" formation. In all cases, access between any two (2) rooms within the decontamination enclosure system shall be through an air lock.
- C. **WORKER DECONTAMINATION SYSTEM**: Construct a worker decontamination system contiguous to the work area consisting of three (3) totally enclosed chambers as follows:
 - 1. An **Equipment Room** with two (2) curtained doorways, one to the work area and one to the shower room, via an air lock.
 - 2. A **Shower Room** with two (2) curtained doorways, one (1) to the equipment room and one (1) to the clean room, via air locks. The shower room shall contain at least one (1) shower for every eight (8) workers with hot and cold running water controllable at the tap, with individual shut-off valves inside the shower(s). Careful attention shall be paid to the shower enclosure to ensure against leakage of any kind. Ensure an ample supply of soap in the shower room. Drainage from showers shall be disposed of by adding it to



the abatement waste, as contaminated water or filtered as specified below. Water shall be contained within the work area until such time as the water is disposed.

- 3. Wastewater containing asbestos, including drainage from decontamination showers, shall be either disposed of by adding it to the bagged asbestos waste, or as contaminated waste after a gelling agent has been applied or filtered in accordance with the following requirements prior to introduction into the sanitary sewer system.
 - a. Filter water using four (4) in-line filter cartridges with 2" inlets and outlets. The outlet of each filter cartridge shall be connected in series to the inlet of the next cartridge. The first cartridge shall contain 100-micron pre-filters and the second and third cartridge shall contain 25-micron filters and the final cartridge shall contain 5-micron filters. No water shall be disposed of into the public sewage system, unless express written permission has been garnered from the local sewerage authority having jurisdiction.
 - b. Provide a holding tank for contaminated wastewater as required to prevent backup of water into the shower when the amount of water generated exceeds the flow rate of the filters.
- 4. A Clean Room with one (1) curtained doorway into the shower (via an air lock) and one (1) curtained doorway entrance or exit to non-contaminated areas of the building (via an airlock). The clean room shall have sufficient space for storage of the workers' street clothes, towels, and other non-contaminated items.
- D. **WASTE DECONTAMINATION SYSTEM**: Construct a waste decontamination system contiguous to the work area consisting of two (2) totally enclosed chambers as follows: two (2) stage waste decontamination unit, 4' x 8' in dimension, equipped with weighted Z-flap airlocks on each side of both chambers.

3.5 MAINTENANCE OF DECONTAMINATION UNITS

- A. At the beginning of each work shift and every four (4) hours thereafter and throughout removal, all seals and curtained doorways shall be inspected and smoke tested, and if not found in proper condition, repaired immediately.
- B. Respiratory equipment shall be cleaned, repaired, and sanitized after each use.
- C. Soap and shampoo shall be in the showers at all times.
- D. Fresh towels shall be available at all times.
- E. All areas shall be kept clean and in order.
- F. Provide a disposal bag for contaminated filters in the shower room.
- G Provide storage for wet and dry towels.



- H. Ensure that the drainage filtering systems are kept clean and operable at all times.
- I. At the end of each decontamination period, the shower, air locks, and clean room shall be cleaned and dried.
- J. At the end of each work shift: the two (2) air locks and the shower shall be thoroughly disinfected; the filter bag (if applicable) shall be returned to the equipment room for disposal; the equipment room and first air lock shall be thoroughly HEPA vacuumed and wet cleaned.

3.6 SEPARATION OF WORK AREAS FROM OCCUPIED AREAS

- A. The Contractor shall construct barriers, where specified, to separate regulated work areas from occupied building areas or areas that contain active mechanical systems that could potentially cause migration of asbestos to other building locations.
- B. Separation barriers shall include "A" grade fire rated 2'x4' studded construction and plywood, caulk sealed and covered with 2 layers of 6 mil polyethylene sheeting on each side of the barrier as an airtight barrier between occupied and unoccupied building areas as part of a N.J.A.C 5:23-8.19, occupied building project.
- C. Separation barriers shall include "A" grade fire rated 2'x4' studded construction and plywood to act as a physical barrier to the regulated work area for buildings that are not regulated by N.J.A.C 5:23-8.

3.7 WORKER PROTECTION

- A. All workers and authorized personnel, in order to enter the work area, shall:
 - 1. Remove clothing unless it is to remain in the equipment room for eventual disposal.
 - 2. Don protective clothing (coveralls, gloves, boots, etc.).
 - 3. Don the appropriate respiratory protection, following all training procedures and manufacturer's instructions. Hood shall be worn over respirator straps.
- B. All workers and authorized personnel, in order to leave the work area, shall:
 - 1. Remove gross (visible) contamination from themselves and their equipment.
 - Enter the equipment room and, keeping respirator in place, remove all protective clothing, including gloves and boots. Place contaminated clothing in the bag(s) provided. Store gloves and/or boots in their respective areas.
 - 3. Still wearing the respirator, proceed through the first air lock. Once inside, ensure all curtained doorways behind are properly closed.
 - 4. With the respirator still in place, move into the shower and rinse off thoroughly. If wearing dual cartridge respirators, make sure the cartridges are completely soaked



before removing the respirator and disposing of cartridges in the container provided. Pass respirators through the second air lock (between shower and the clean room).

- 5. Complete showering, thoroughly soaping, and shampooing.
- 6. Proceed to the clean room, dry off, dress, and return respirator to the storage area.
- 7. No smoking, eating, or drinking shall be allowed inside decontamination enclosures.

3.8 COMMUNICATIONS

A. Provide a communications system suitable for inside or outside, in order to monitor all activities within the work area and to readily transfer messages from one location to another as may be needed, especially for emergency communications.

3.9 FIRE EXITS

A. Designate and maintain emergency and fire exits from the work area in accordance with local codes and regulations. All exits shall be clearly marked with fluorescent tape or red enamel and shall be clearly visible from any part of the work area.

3.10 SECURITY

A. The Contractor is responsible for maintaining both the building and property contents security throughout the abatement project, if the owner has vacated the building. If generators are used to provide power, they must remain on at all times during active abatement. The Contractor is responsible for the security of their equipment (i.e., generators) and keeping them fueled during work and non-work hours.

3.11 NEGATIVE AIR PRESSURE

- A. Maintain negative pressure systems, Air Filtration Devices (AFD's) in the work areas during all asbestos abatement work for which gross abatement techniques are specified or required.
- B. Backup AFD's shall be maintained at the project site and/or in the work area, in case of primary AFD failures.
- C. Suspend electrical cords off the floor and out of the workers' way to protect the cords from damage from traffic, sharp objects, and pinching. Do not fasten cords with staples, and do not hang cords from nails or suspend them with wire.
- D. Provide a sufficient number of AFDs in each work area to provide one (1) air change every 15 minutes in all locations of the work areas.
- E. Locate units so that make-up air enters the work area primarily through the decontamination facility and traverses the work area as much as possible. Based on the size and configuration of the work areas, AFD's may be relocated, within the work area, during the removal process to



ensure proper air changes within the immediate work area and to reduce the potential for dead air space.

- F. Provide a minimum number of auxiliary make-up air openings to maintain negative pressure. Where work is being completed in accordance with N.J.A.C. 5:23-8, a negative pressure in excess of 0.03 inches of water column (i.w.c.) differential shall be maintained for unoccupied buildings, while negative pressure in excess of 0.05 inches of water column (i.w.c.) differential shall be maintained for occupied buildings.
- G. Vent all exhaust units to the outside of the building. Provide flexible or rigid duct as necessary to provide exterior venting and proper location of exhaust units. Ducts shall be completely sealed, in good repair, and protected from possible damage within the work area.
- H. After the work area has been prepared, the decontamination unit set up, and the exhaust units installed, start the units (one (1) at a time if more than one (1) is provided). Conduct AFD exhaust velometer testing to calculate the volumetric flow of each AFD. Adjust the location of exhaust units or provide additional exhaust units for the work area as needed to reach the differential pressure required.
- I. After removal has begun, maintain operation of exhaust units continuously to maintain a constant negative pressure until decontamination of the work area is complete and final clearance criteria has been met.
- J. A differential pressure recorder (DPR) or digital manometer with a 24-hour strip chart shall be maintained, at a minimum, adjacent to the decontamination unit. This unit shall be zeroed every four (4) hours during the course of the workday to ensure accuracy.
- K. Change pre-filters in exhaust units when there is obvious dust loading or loss of pressure is noted by the AFD magnehelic gauge or the Differential Pressure Recorder (DPR).
- L. When a final inspection and the results of the final air monitoring tests indicate an acceptable level of airborne fibers, remove and dispose of pre-filters and shut off the exhaust units. If the exhaust units are to be used in another work area, leave the final filter in place and seal all intake openings to the unit to prevent contamination due to asbestos fibers collected on the final filter. If the exhaust units are not to be used in other work areas, remove the final filter and dispose of as contaminated waste.
- M. If dismantling operations result in visible dust on surfaces, replace filters, restart exhaust units, re-clean surfaces and perform additional area air monitoring (at Contractor's expense) until the level of airborne fibers is acceptable, as specified.
- N. Dispose of all filters as asbestos-contaminated waste material, as specified.
- 3.12 EQUIPMENT REMOVAL PROCEDURES



- A. Clean external and internal surfaces of all non-fixed equipment and/or objects by thoroughly wet wiping and/or rinsing, before moving such items into the Equipment Decontamination Unit for final cleaning and removal to uncontaminated areas.
- B. Objects and equipment removed shall be stored in areas designated by the Owner.

3.13 VISUAL INSPECTIONS

- A. Upon completion of each phase of work area activities and four (4) hours before the next phase of work activities are to begin, notify the AST that the work area is ready for inspection.
- B. The Contractor shall not begin the next work activities until the AST has inspected the area and any deficiencies have been corrected.
- C. The AST with the Contractor present will perform the following minimum schedule of inspections.
 - 1. Prior to the initiation of any site activities (document condition of existing site).
 - 2. After area pre-cleaning and prior to preparation of work area with plastic sheeting.
 - 3. After work area preparation with plastic sheeting and prior to start of abatement (Precommencement).
 - 4. After fine cleaning and before encapsulation (Pre-encapsulation).
 - 5. After Final Clearance (Barrier Breakdown).
 - 6. After the removal of all barriers and cleaning of surfaces (Final Inspection).

3.14 GROSS REMOVAL OPERATIONS – FRIABLE ACM

3.14.1 5:23-8.19 Full Containment – Occupied Building Condition Requirements

- A. The requirements of this Section are intended to prevent contamination and exposure of building occupants to asbestos fibers.
- B. The Building Owner shall notify building occupants in writing twenty (20) business days prior to the commencement of the asbestos abatement project. The Building Owner shall outline in writing any procedures and/or precautions that are deemed necessary in order to protect the health, safety and welfare of the occupants. This notification shall include, but not be limited to relocation plans, if any; entrances and exits that may temporarily be blocked and alternate routes to be used; the name and telephone number of the Owner's representative for the occupant to call in case of an emergency or to answer any questions with regard to the project. This notification shall accompany the application for a construction permit for asbestos abatement and shall be filed with the enforcing agency.
 - 1. This notification shall be posted seven days prior to the preparation of the work area, in visible locations, for the benefit of the affected occupants of the workplace, and in areas



immediately adjacent to the asbestos abatement project. It shall be the owner's responsibility to ensure that these postings are maintained throughout the project.

- 2. When circumstances require immediate removal of asbestos-containing material, notification shall be provided to the building occupants as soon as possible.
- 3. Nothing in this section shall be interpreted as prohibiting the building owner from providing additional notification
- 4. The ASCM firm shall notify the Department in writing 10 days prior to the commencement of an abatement project in an occupied building.
- C. A building or structure or part thereof may be occupied during an asbestos abatement project when all of the following conditions are met:
 - 1. Isolation conditions include a requirement that the work area be physically separated from occupied areas by separation barriers of rigid construction consisting of nominal two-inch (2") by four-inch (4") studs spaced sixteen inches (16") on center and covered with a minimum of half inch (½") plywood or comparable metal framing and half inch (½") gypsum board covering. All seams shall be caulked to render the barrier airtight before two layers of polyethylene sheeting are applied on both sides. The polyethylene sheeting shall overlap at the seams. All penetrations around conduits, pipes, ducts or other openings between the work area and adjacent spaces shall be sealed, using materials determined to be suitable in accordance with the applicable sub-code. In buildings required by the Uniform Construction Code (UCC) to be of noncombustible construction, all materials used to construct separation barriers shall meet the UCC, building sub-code requirements for that building and all plastics used shall be flame resistant. A separate means of egress for abatement personnel, materials and equipment shall be maintained. Adequate fire evacuation routes shall always exist for all building occupants.
 - a. Whenever the building in which this work area is located exceeds four (4) stories in height and when stairs, elevator or similar shafts lie within or adjacent to the separation barriers or the work area, then special seals shall be installed. Such seals shall be constructed in the same manner as the separation barriers and shall create a space not less than three inches in depth in front of the entire access area which space is sealed on both sides and positively pressurized with HEPA filtered air so that the pressure in the sealed space is .05 inches w.c. greater than that in the work area or the shaft.
 - b. All HVAC systems located in the work area shall be shut down. If HVAC equipment is in the work area and must be operated to service other areas of the building, then the HVAC equipment shall be isolated from the remainder of the work area by an enclosure constructed in a manner similar to the separation barriers and the space between the equipment and the seal shall be positively pressurized with HEPA filtered air to at least .05 inches w.c. greater than the work area.



- c. Where return air ductwork which must be kept operating is located within the work area, then it shall be isolated from the work area by an enclosure forming an annular space around the duct which is positively pressurized with HEPA filtered air to at least .02 inches w.c. greater than the work area. The enclosure shall be constructed in a manner like that required for separation barriers.
- d. All electrical systems in the work area shall be shut down. Their use may be approved by the asbestos safety control monitor if they are properly protected by ground fault circuit interrupters, they are cleanable, and provided that such other precautions as may be necessary are taken to ensure the safety of all who are in the work area.
- 2. Engineering controls shall be implemented as follows:
 - a. The AST shall verify exhaust capacity through appropriate field measurement and record these results in writing. The verification of exhaust flow rate via use of devices for monitoring pressure drop across filters on air filtration devices shall not be a substitute for appropriate field measurement. All exhaust from the work area shall be directed to the exterior of the building. If exhaust to the exterior of the building is not feasible, exhaust from the work area shall be directed into a second set of in-line air filtration devices, which, then, shall be permitted to be discharged into designated spaces approved by the ASCM firm.
 - b. The Contractor shall install enough HEPA filter equipped air filtration units to cause a complete air change or total air filtration within the work area at least once every 15 minutes. (Nothing in this subchapter shall be construed to limit the maximum exhaust capacity from the work area or to prohibit additional air changes per hour.) The exhaust capacity from the work area and all adjacent spaces greater than or equal to 0.05 inches w.c. (Nothing in this subchapter shall be construed to limit the maximum pressure differential established between the work area and occupied spaces.)
 - Make up air shall not be drawn through openings in the separation barriers in buildings greater than four stories in height, unless those openings are equipped with systems or devices which will not permit air flow except toward the work area and the air filtration and exhaust units located in the work area.
- 3. Work area protection shall be assured as follows:
 - a. Floors shall be covered with two layers of polyethylene sheeting which shall overlap at the seams and which shall be applied to the floor, individually sealed. The first layer shall extend up the wall at least 12 inches. The second-floor layer shall be installed and extend up sidewalls at least 24 inches.



- b. Walls shall be covered with one (1) layer of polyethylene sheeting individually sealed to the wall. The layer shall hang straight down overlapping the second layer of floor sheeting on the wall by at least 18 inches.
- c. Sheeting shall be sized to minimize the number of seams. No seams shall be located at the joints between walls and floors. As a minimum, no seam shall stop within 12 inches of a corner and sheeting shall overlap at least 12 inches between seams of adjacent layers.
- d. When a strippable coating is used in place of polyethylene sheeting, it shall be used in accordance with *N.J.A.C.* 5:23-8.15(f)7 and the product shall be applied during periods of minimal occupancy as determined by the owner and included in the approved plan.
- 4. Monitoring shall be conducted as follows:
 - a. Air sampling shall be done as follows:
 - 1) At a minimum, one (1) sample at the beginning of each work shift, one every four (4) hours thereafter, and one at the end of the contractor's workday for every 10,000 square feet of occupied space adjacent to the work area shall be collected and analyzed. Air samples shall be taken in areas where the greatest potential for fiber migration exists. In addition to the requirements noted above, air samples shall be taken at the entrance(s) to the work area and any other interior spaces from which make-up air is drawn. Additional samples shall be taken for all areas such as stairwells, communicating shafts, elevators, plenums, ducts which pass through the work area and which are in service, and unusual room and building configurations. If air levels exceed the permitted fiber count, the applicable requirements of the contingency plan in Section 2, Part 1, Item 1.3 and C. 5 below shall be followed.
 - a) At least one (1) air sample shall be collected and analyzed during the work shift inside the work area. The results of this test will not, however, trigger the requirements of the contingency plan.
 - 2) A secure chain of custody for air samples shall be established in writing as part of the approved plan by the ASCM firm. The final disposition of samples (whether they should be retained or disposed of after analysis and if retained, who keeps them) shall be determined prior to the commencement of asbestos abatement.
 - 3) The services of a testing laboratory, as delineated in N.J.A.C. 5:23-8.21(a)1 and 2, shall include a microscope and laboratory technician at the project site or the capacity to obtain results within four hours from start of sample. The laboratory technician shall be listed in the Asbestos Analyst Registry (AAR) of the American Industrial Hygiene Association (AIHA) for PCM analysis or qualified by other programs recognized by the Department as equivalent. If



the laboratory technician is on site, the Owner shall provide a safe and clean space for the analysis of samples separate and distinct from the work area. Air samples are to be analyzed via NIOSH 7400 and verbal results made available for a determination regarding continued occupancy. A written record of test results shall be kept at the job site and included in the final report.

- 4) Ten percent (10%) of all abatement samples shall be re-analyzed within 24 hours at a laboratory for quality control purposes.
- 5) Daily occupancy shall be allowed when the results of all the air samples are less than or equal to 0.010 fibers/cc by Phase Contrast Microscopy. If air levels exceed 0.010 fibers/cc, the contingency plan during abatement, outlined in C. 5 below shall be followed.
- 6) In the case of re-occupancy and final clearance, all air samples used to determine reentry shall be analyzed by an accredited laboratory.
- b. Pressure monitoring shall be carried out as follows:
 - Pressure differential shall be monitored by digital manometers with continuous printout or other approved low-pressure monitoring devices. Sensor tubes used for monitoring shall be placed so that the air filtration devices shall not cause false readings. The AST shall zero and level the gauges each time a reading is taken.
 - 2) One or more separate pressure monitoring systems shall be installed by the ASCM firm near the entrance(s) to the work area and between the work area and any interior spaces from which make-up air is drawn.
 - 3) Written documentation of pressure differential shall be provided by the AST by continuous printout devices. The AST and the Contractor Supervisor will ensure, prior to the completion of the work shift, the integrity of the containment site before workers depart.
 - 4) The pressure differential shall be greater than or equal to 0.05 inches w.c. at the pre-commencement inspection (at the time of approval immediately prior to the start of abatement work).
 - a) In addition to providing a pressure differential greater than or equal to 0.05 inches w.c. for the pre-commencement inspection, a smoke test shall be conducted to demonstrate that the work area has been isolated properly and that the pressure differentials have been established to prevent fiber migration from the work area.
 - 5) Daily Occupancy shall be allowed when the pressure differential is equal to or exceeds 0.05 inches w.c. If the air pressure differential drops below 0.05



inches w.c., the contingency plan during abatement, outlined in (c) 5 below, shall be followed.

- 5. The Contingency plan during abatement shall be implemented as described in Section 2, Part 1, Item 1.3 of these Specifications. These are the minimum requirements which shall be enforced by the ASCM firm and their AST.
- 6. Security shall be required as follows:
 - a. In high-risk areas, the Owner shall provide a 24-hour security guard to ensure protection against damage or vandalism to separation barriers, engineering systems, monitoring devices, or other equipment.
 - b. The Owner shall provide continuous unlimited access for the Asbestos Safety Technician in all occupied spaces for installation, maintenance, and data collection from monitoring systems.
 - c. The ASCM firm shall include provisions in the plan and the AST shall ensure that filters are changed as necessary and that pressure differential is maintained around the clock until the project is completed.
- 7. Waste removal shall be accomplished as follows:
 - a. The waste removal route of travel is to be designated on the abatement plans and shall be separate and distinct from the normal route of travel used by building occupants. Waste removal shall occur during the time of least amount of building occupancy. If the route of travel is to be used the following day by building occupants, air monitoring must be performed, and if the results of air levels exceed 0.010 f/cc, then the waste removal route is to be wet wiped using amended water, HEPA vacuumed and retested until an acceptable air level is achieved prior to allowing occupancy of the area.
 - b. The waste removal process shall be closely monitored visually and through air sampling by the AST.
 - c. No dumpster shall remain on the premises overnight unless the dumpster is locked and labeled to indicate that it contains asbestos-contaminated waste.
- 8. A written statement shall be signed by the ASCM firm denoting that an asbestos abatement will occur during building occupancy and verifying that the above requirements will be maintained. This written statement shall accompany the application for a construction permit for asbestos abatement and shall be filed with the enforcing agency. This statement shall include the areas to be occupied during the abatement and the number of occupants.

3.14.2 5:23-8.15 Full Containment



- A. No asbestos hazard abatement work including preparation shall be performed or continued without having a certified AST at the work site.
- B. Protective clothing, equipment, and general procedures for asbestos abatement shall be subject to the following requirements:
 - 1. Only authorized personnel shall be permitted in the work area. The Contractor shall provide the required respirators and protective clothing to all who may inspect or visit the work area;
 - 2. The protective clothing and equipment requirements, as set forth in this section, shall be used to prevent the contamination by workers engaged in asbestos abatement projects of areas or buildings accessible to or used by the public;
 - 3. All persons entering the work area shall wear protective clothing. All clothing worn during removal operations shall be disposed of as contaminated waste. The requirement that clothing be disposed of as contaminated waste shall not include rubber boots, respirators, eye protection, hard hats, and other protective clothing, which can be easily cleaned.
 - 4. Polyethylene bags shall be six mil thick and of sufficient size for their intended use;
 - 5. All tape, spray-on adhesives, glove bags, glue, and other materials used in the abatement process shall be of sufficiently high quality to serve their intended purpose;
 - 6. The Contractor shall have available a sufficient inventory of protective clothing, respirators, filter cartridges, polyethylene sheeting, duct tape, spray-on adhesives, and air filters. Sufficient personal protective equipment shall be available for usage by authorized personnel;
 - 7. The Contractor shall have available shower stall(s) and sufficient plumbing for these showers including hot and cold running water, controllable at the tap, and sufficient hose length and drain systems or an acceptable alternate such as a portable decontamination trailer with showers. Waste shower water shall be added to asbestos-contaminated waste material before disposal in a permitted asbestos waste landfill or it shall be solidified using an approved polymer to prevent leaks or accidental spills within a facility or during transport for disposal to a permitted asbestos waste landfill. Alternatively, it shall be filtered using a five-micron (5 μ) filter and disposed of in the sanitary drain, if allowed by local treatment works by regulation or as allowed by permit;
 - 8. The Contractor shall have available adequate ladders and/or scaffolds and sufficient temporary lighting equipped with ground fault circuit interrupters for the AST and all others who may inspect the work;
 - 9. The Contractor shall have available HEPA filter equipped air filtering equipment capable of filtering asbestos fibers to 0.3 μ at 99.97 percent efficiency and of sufficient quantity and capacity to cause a complete air change or total air filtration within the work area at least once every 15 minutes. Nothing in these Specifications shall be construed to limit the maximum exhaust capacity from the work area. If the situation warrants, additional



air changes per hour may be required to meet the negative pressure requirements. The exhaust capacity from the work area shall be sufficient to establish a pressure differential between the work area and all adjacent spaces greater than or equal to 0.03 i.w.c. for unoccupied buildings and greater than or equal to 0.05 i.w.c. for occupied buildings.

- a. Pressure differential shall be monitored by digital manometers with continuous printout or other approved low-pressure monitoring devices. The AST shall zero and level the gauges each time a reading is taken.
- b. One or more separate pressure monitoring systems shall be installed by the ASCM firm near the entrance(s) to the work area and between the work area and any interior spaces from which make-up air is drawn.
- c. In unoccupied buildings, if the pressure differential drops below 0.01 inches w.c., the AST and the Contractor supervisor shall investigate and evaluate the engineering controls to determine the source of the pressure loss and the Contractor shall institute corrective action as indicated.
- In occupied buildings, the requirements and procedures set forth in N.J.A.C.
 5:23-8.19 shall be followed as outlined in Section 3.14.1 as well as Section 2, Part 1, Item 1.2 - Contingency Plan of these Specifications.
- 10. Air shall flow into the work area through all openings, including the decontamination chamber and waste exit ports, any areas in the work area where air leakage may occur, and other controlled makeup air inlets. Air shall exhaust through the air pressure differential filtration unit by means of flexible or solid duct leading outside the building. The air-filtering equipment should be positioned at a maximum distance from the decontamination chamber to maximize filtration of airborne fibers. Sufficient air shall be exhausted by an approved HEPA equipped vacuum truck or HEPA equipped air filtration units when necessary to provide air pressure differential. Air filtration units shall be in operation at all times;
- 11. Asbestos-containing material shall be disposed of as specified in N.J.A.C. 5:23-8.22.
- C. Decontamination procedures are as follows:
 - 1. The Contractor shall provide an adequate decontamination unit consisting of a serial arrangement of rooms or spaces adjoining the work area or a decontamination trailer. Each airlock shall be clearly identified and separated from the other by polyethylene crossover sheet doors designed to minimize fiber and air transfer as people pass between areas. A minimum of two layers of polyethylene sheeting shall be required for floors, walls, and the ceiling for on-site constructed decontamination units. Polyethylene crossover sheet doors shall have at least three layers of polyethylene sheeting and be weighted to fall into place when people pass through the area. Decontamination chamber doors shall be of sufficient height and width to enable replacement of equipment that may fail and to safely stretcher or carry an injured worker from the site without destruction of the chamber or unnecessary risk to the integrity of the work area. Such



doors must be at least four feet wide, and the distance between sets of doors must be at least four feet.

- a. As an alternative to the use of polyethylene crossover sheet doors, any other suitable method to accomplish this end shall be acceptable, if it is approved by the ASCM. Alternative doors shall provide for adequate exiting in accordance with the building sub-code of the Uniform Construction Code.
- 2. The decontamination areas shall consist of the following:
 - a. Clean room: In this room people remove and leave all street clothes and put on clean disposable coveralls. Appropriate NIOSH approved respiratory protection equipment is also picked up in this area. No asbestos contaminated items are permitted in this room.
 - b. Shower room: This is a separate room used for transit by cleanly dressed people entering the work area from the clean room and for showering by them after they have undressed in the equipment room. This is a contaminated area.
 - c. Equipment room: Work equipment, footwear, and all other contaminated work clothing shall be stored here. This is also a change and transit room for people. All areas between the shower room and work area shall be considered part of the equipment room. This is a contaminated area.
- 3. In order to prevent contamination of the environment, the Contractor shall be responsible for controlling access to the work area and shall maintain a daily log of personnel entering the work area. A list of names of workers shall be posted with their start and stop times for each day. In addition, the Contractor shall ensure that all persons who enter the work area shall observe the following work area entry and exit procedures:
 - a. A person enters the clean room and removes street clothing, puts on protective clothing and a respirator, and passes through shower room into equipment room.
 - b. Any additional required clothing and equipment previously deposited in the equipment room is put on.
 - c. A person proceeds to work area.
 - d. Before leaving the work area, the person shall remove all gross contamination and debris from the coveralls using a vacuum with a High Efficiency Particulate Air (HEPA) filter. In practice, this is usually carried out by one person assisting another.
 - e. The person then proceeds to the equipment room and removes all clothing except approved respirators. Extra clothing may be stored in the contaminated end of the unit. Disposable coveralls are placed in a bag for disposal with other material.
 - f. The person then proceeds directly into the shower room. Respirators shall be taken off last to prevent inhalation of fibers during removal of contaminated clothing and shall not be removed until they have been washed free of dust.



- g. After showering, the person moves to the clean room and dresses in street clothing prior to exiting.
- h. Respirators are picked up, washed thoroughly, and disinfected as required, wrapped and stored in the clean room.
- 4. The Contractor shall ensure that filters in cartridge type respirators used during the preparation and abatement phase of the project are removed, wetted, and discarded as contaminated waste. All new filters shall be in place in the respirator prior to reuse. For powered air purifying respirators or supplied air respirators, the manufacturer's instructions shall be followed about the proper decontamination sequence.
- 5. There shall be no smoking, eating, or drinking in any contaminated areas (shower room, equipment room, and work area). Respirators shall be worn in all contaminated areas.
- 6. Non-disposable footwear shall remain inside the contaminated area until completion of the activity and shall be thoroughly cleaned at that time.
- D. Preliminary preparations in the work area shall be conducted as follows:
 - 1. The Contractor shall provide and post in clearly visible locations, appropriate caution and/or danger signs indicating that asbestos work is being conducted and that unprotected persons should not enter;
 - 2. Employees of the Contractor permitted pursuant to N.J.A.C. 8:60 and N.J.A.C. 12:120 or persons employed by the building owner who have successfully completed a maintenance/custodial or worker training course approved by the New Jersey Department of Health shall clean with wet cloths and/or with HEPA vacuums as appropriate all objects that can be removed from the work area without disrupting the asbestos-containing material. Objects shall include, but not be limited to, furniture, equipment, drapes, and curtains. The cloths used for cleaning shall be disposed of as asbestos contaminated waste. If the room and objects within it are shown to be uncontaminated by asbestos, then other employees of the building owner or Contractor may remove such objects;
 - 3. The Contractor shall install or build a decontamination facility in accordance with this section;
 - 4. The Contractor shall arrange for shutting down and sealing off all electrical, heating, cooling, and ventilating or other air handling systems. However, if approved by the ASCM, the lighting and the receptacles in the work area may be used if these are properly protected by ground fault circuit interrupters and can be adequately cleaned following abatement;
 - 5. The Contractor shall establish written emergency procedures to be posted within each work area. These procedures shall include plans for medical emergencies, fire evacuation, temporary loss of electrical power or water and procedures for repair and clean-up following temporary breach of containment barriers.



- E. Isolation and barrier construction in the work area shall be conducted as follows:
 - 1. Before removing any asbestos from the work area, the Contractor shall ensure that the outer perimeters of the work area have been securely sealed off from the rest of the building;
 - 2. All vertical and horizontal surfaces except those of asbestos containing materials shall be sealed with watertight polyethylene sheeting except as provided in (e)3 below;
 - 3. The only permissible exception to total enclosure shall be:
 - a. An entrance airlock with showers and a decontamination chamber;
 - b. A debris removal airlock to permit cleaning and removing asbestos waste;
 - c. Staircases; and
 - d. Controlled makeup air inlets into the work area.
 - 4. Polyethylene sheeting shall be used to isolate contaminated from uncontaminated areas. This polyethylene sheeting shall be replaced or repaired immediately if torn or damaged. One layer of polyethylene sheeting shall be required for walls and two layers of polyethylene sheeting shall be used to seal open space between work areas and noncontaminated areas and for all floors. In buildings required by the Uniform Construction Code to be of noncombustible construction, all materials used to construct separation barriers must meet the Uniform Construction Code, building sub-code requirements for that building and all plastics used must be flame resistant.
- F. Initial activity in the work area shall be conducted in the following order:
 - 1. Remove filters from all heating, ventilating, and air conditioning systems. Wet the filters and place them in polyethylene bags, double bagged with visible labels, for disposal as asbestos-containing waste. Squeeze all excess air out of the bag before sealing to prevent puncture during disposal. Secure bags by twisting, taping, folding over, and sealing them with duct tape.
 - The Contractor shall wet clean and/or HEPA vacuum all non-removable non-asbestos items such as radiators and suspended light fixtures in the work area, including built-in equipment; and shall cover with two layers of polyethylene sheeting taped securely in place;
 - 3. The Contractor shall detach and wet clean removable electrical, heating, and ventilating equipment and other items which may be connected to the asbestos surfaces. These items shall be removed from the work area and returned and reattached to their proper place when the work area has been decontaminated and final air testing has provided satisfactory results;
 - 4. The Contractor shall seal all floor, wall, and ceiling penetrations with suitable material such as expanding foam insulation before covering the surfaces with polyethylene sheeting. The Contractor then shall seal all openings between the work area and uncontaminated areas including, but not limited to, windows, doorways, elevator



openings, skylights, corridor entrances, floor and sink drains, air ducts, grills, grates and diffusers with critical barriers consisting of two layers of polyethylene sheeting taped securely in place or stapled or fastened by spray-on adhesives, glue beads, or horizontal wood battens or the equivalent. Floor drains shall be sealed individually and then covered as all other floor surfaces with two layers of polyethylene sheeting. Separation barriers may be constructed to support the critical barriers. Separation barriers shall not block any required means of egress;

- 5. For floor covering two layers of polyethylene sheeting shall be used. The first layer of floor sheeting shall extend up the wall at least 12 inches. The second layer shall be extended up walls at least 24 inches. Sheeting shall be sized to minimize the number of seams necessary. No seams shall be located at the joints between walls and floors;
- 6. Wall and ceiling sheeting shall consist of one (1) layer of polyethylene sheeting. Wall sheeting shall be installed to minimize joints and shall overlap floor sheeting by at least 18 inches. No seams shall be located at the corners. Wall coverings shall be taped first to the upper most edge of the wall and shall hang straight down;
- 7. When a strippable coating is used in place of polyethylene sheeting, it must be manufactured for the specific application required for walls, floors, or windows.
 - a. When dry, the strippable coating must have a class A rating as a building material and must meet the following requirements when tested in accordance with ASTM E-84: flame spread no greater than 20, fuel contributed 0, and smoke developed no more than 110.
 - b. The strippable coating shall be applied uniformly in such a manner as to achieve a minimum uniform final thickness of six mil for each layer required pursuant to this subchapter.
 - c. Manufacturer's specifications shall be followed for the method of application and for the protection of the applicators and building occupants.
 - d. Use of the product shall be authorized in advance by the ASCM firm. The material shall be delivered to the project site in unopened, factory-labeled containers.
- 8. As all existing ventilating systems in the work area are to be sealed throughout the removal operation, an alternative system shall be utilized. Install approved HEPA equipped air filtration units with filters in place. HEPA equipped air filtration units shall be of sufficient number and capacity to ensure that the total air volume is exchanged at least once every 15 minutes and an acceptable pressure differential is established and maintained. These units shall be rated by the manufacturer as to their actual working air capacity and field tested pursuant to N.J.A.C. 5:23-8.10(d)4.
- G. Sequence of asbestos removal activities shall be as follows:
 - 1. The asbestos-containing material shall be sprayed with water containing an additive or surfactant to enhance penetration (amended water) or removal encapsulant. All wetting agents shall be tested on a small area before use to ensure effectiveness. A fine low-pressure spray of this solution shall be applied to prevent fiber disturbance preceding



removal. The removal encapsulant or amended water shall be sprayed on as many times and as often as necessary to ensure that the asbestos material is adequately wetted throughout (especially that asbestos nearest the substrate) to prevent dust emission.

- 2. As a method of organizing the asbestos removal work, workers shall begin working on the areas nearest to the decontamination unit and work towards the HEPA equipped air filtration units. If this is not feasible, the ASCM firm shall approve an alternative to this requirement.
- 3. The wet material from each section shall be packed and sealed into labeled six mil polyethylene bags and double bagged with visible labels or placed in labeled, leak-proof containers, prior to starting the next section. Water-soaked fallen material shall be picked up while wet.
- 4. Contaminated material containing sharp edged items shall be cut to a manageable size while being adequately wet, and then placed in suitable leak-tight and puncture-proof containers or wrapped individually in two separate polyethylene sheets and double bagged.
- 5. Bags and drums shall be marked with the label prescribed by 40 CFR Part 61, Subpart M of the US EPA, 29 CFR 1926 of OSHA, and 49 CFR-Parts 100-199 of the US DOT Hazardous Waste Hauling regulations. The outside of all containers shall be wet-cleaned or HEPA vacuumed before leaving the work area.
- 6. After completion of this removal phase (stripping), all surfaces from which asbestos has been removed shall be scrubbed using nylon or bristle brushes and wet sponged or cleaned by an equivalent method to remove visible asbestos-containing material. During this work, the surfaces being cleaned shall be kept wet using amended water or a removal encapsulant. All disposable equipment shall be packaged for disposal. Containers shall be washed with amended water or a removal encapsulant and shall have all exterior particulate matter removed prior to the removal from the contaminated area.
- 7. All accessory equipment shall be moved to the equipment room and decontaminated for removal.
- 8. All free water (in contaminated areas) shall be retrieved and added to asbestoscontaminated waste and/or placed in plastic lined leak-tight drums and/or solidified with an acceptable polymer or it shall be filtered using a five-micron (5 μ) filter and disposed of in the sanitary drain, if allowed by local treatment works by regulation or as allowed by permit. All shower wastewater shall be containerized inside the work area until it is added to the waste, gelled or filtered.
- 9. Final clean-up of the work area may commence.
- H. Final clean-up of the work area shall be conducted as follows:
 - 1. The Contractor shall first clean all surfaces in the work area using a fine spray or mist of amended water or removal encapsulant applied to all surfaces followed by the wet-



wiping procedure using disposable cloths. These cloths shall be disposed of or rinsed thoroughly at a frequency sufficient to eliminate visible accumulation of debris. The Contractor shall allow all surfaces to dry before re-entering the work area and proceeding to (h)2 below.

- a. The Contractor shall notify the AST in writing that a pre-sealant inspection is requested.
- 2. After completion of cleaning all surfaces in the work area and upon receiving a satisfactory pre-sealant inspection, the Contractor shall spray coat all dried exposed surfaces with a sealant. The color of this coat shall be separate and distinct from the underlying substrate. The surfaces to be coated shall include surfaces from which asbestos-containing materials have been removed (such as ceilings) and polyethylene which has been used to cover walls, floors and non-removable fixtures and equipment.
- 3. The polyethylene sheeting used to protect floors, walls, ceilings, fixtures and equipment shall be carefully removed and rolled up, with the contaminated portion on the inside, and packaged for disposal. Tape and any other debris shall also be disposed of in sealed polyethylene bags labeled as asbestos-contaminated waste.
- 4. Wet clean with amended water or a removal encapsulant all walls, floors, woodwork, ceilings, electric light fixtures and other surfaces. Allow all surfaces to dry and repeat procedure. Cloths or sponges used in the cleaning operation shall be disposed of as contaminated waste.
- 5. The polyethylene sheeting used to maintain critical barriers between work areas and clean areas such as those in doorways, windows and air vents shall be sprayed with encapsulant, but not removed until air monitoring is completed and satisfactory results have been obtained.
- 6. After completion of the cleaning operations the Contractor shall:
 - a. Notify the AST that a clean-up inspection can be performed to ensure all visible asbestos has been removed and the area is dust free;
 - b. Request final air clearance monitoring of the work area by the AST.
- 7. After the work area is found to be in compliance with the acceptance criteria, the following tasks shall be performed by the Contractor:
 - a. All critical barriers shall be removed and bagged in polyethylene bags for disposal;
 - b. The inside of windows shall be washed;
 - c. Any walls, floors, trim, doors, furniture or other items damaged during the work shall be repaired and refinished to match existing material;
- 8. Notice for a final inspection shall be made by the Owner or Contractor to the AST.
- 9. Upon receiving a satisfactory final inspection, application for a Certificate of Completion may be made, to be issued by the AST and the ASCM firm.



- I. Special precautions shall be implemented, where appropriate, including, but not limited to, the following examples:
 - 1. Asbestos abatement projects involving ceiling tile and T-grid components, elevators, carpet, contaminated soil and projects in tunnels, crawl spaces, plumbing access panels, and/or involving live electrical panels or live steam lines are likely to present unique conditions that will require special precautions in addition to the procedures described in this section. In instances where special precautions need to be instituted, they shall be described in Plans and Specifications approved by the ASCM monitor firm and, where necessary, variations to the Subchapter shall be requested from the Department.

3.15 GROSS CLEANUP

- A. Remove all visible accumulations of asbestos-containing materials and debris by HEPA vacuums, sponging, etc. Wet clean all surfaces within the work area.
- B. The entire work area shall be totally and visibly clean and free of residual dust or debris. The Contractor shall notify the Owner's AST of the time the work area will be subject for visual inspection.

3.16 DISPOSAL OF ASBESTOS-CONTAINING MATERIAL

- A. As the work progresses, at the end of each work shift, bags of removed ACM within the work area shall be transferred to the Waste Dumpster. A minimum of three (3) workers shall perform the operation. Single bags shall be taped and passed from the work area, rinsed and placed in a second bag within the shower room and passed to the clean room of the Decontamination Unit. At no time shall a removal worker pass the curtained doorway between the work area.
 - 1. LABEL REQUIREMENTS: Provide labels affixed to all asbestos waste containers:
 - a. Warning labels as required by OSHA regulation 40 CFR 1926.1101 as follows:

DANGER

CONTAINS ASBESTOS FIBERS

AVOID CREATING DUST

CANCER AND LUNG DISEASE HAZARD

AVOID BREATHING AIRBORNE ASBESTOS FIBERS

AND

ASBESTOS, NA 2212, RQ

AND

CLASS 9 LABEL



- b. Informational labels shall be affixed to the waste bags as required by NESHAP regulation 40 CFR 61, Subpart M with the name of the waste generator and the location at which the waste was generated. If handwritten, use, at a minimum, indelible ink to legibly record the required information.
- B. Vehicles used for transporting asbestos-containing materials to disposal sites shall have a completely enclosed, lockable storage compartment. Storage compartments shall be plasticized and sealed with a minimum of two (2) layers of 6-mil polyethylene. All plastic sheeting, tape, cleaning material, including mops and sponges, clothing, filters, and all other contaminated disposable materials shall be packaged, labeled, and disposed of as asbestos-containing waste.
 - 1. TRANSPORT SIGN REQUIREMENTS: Provide signs during waste transport and disposal as follows:
 - a. As required by the US Department of Transportation, 49 CFR, Parts 171 and 172, warning signs shall display the following:



RQ HAZARDOUS

SUBSTANCE

SOLID, NOS

ORM-E, NA 9188

(ASBESTOS)

b. As required by NESHAP, 40 CFR, Part 61, Subpart M, mark vehicle used to transport asbestos-containing waste material during the loading and unloading of the waste so that the signs are visible as follows:

DANGER

ASBESTOS DUST HAZARDS

CANCER AND LUNG DISEASE HAZARD

AUTHORIZED PERSONNEL ONLY

- C. Dispose of materials at an authorized disposal site in accordance with the requirements of federal, state, and local disposal authorities.
- D. Workers unloading waste material at the disposal site shall be dressed in full-body protective clothing and half-face negative pressure dual cartridge respirators.

3.17 POST-REMOVAL ENCAPSULATION OF AFFECTED AREAS

- A. The work area shall have passed visual inspection prior to post-removal encapsulation.
 - 1. Upon completion of encapsulation of surfaces from which asbestos has been removed, the Contractor shall inform the on-site representative that the area is ready for clearance testing.
 - 2. The Contractor shall then remove all interior polyethylene sheeting except for the critical barriers and the decontamination unit and then clean all vertical and horizontal surfaces within the work area through the employment of wet wiping and HEPA vacuuming until no visible dust or debris is visible in the work area.
 - 3. Upon completion of the final cleaning, the Contractor shall inform the AST who, after successful inspection, shall perform final air testing.
 - 4. Upon receipt of proper final clearance test results, the Contractor shall break down the remainder of all plastic and the decontamination unit and remove all tape and adhesive residue to the satisfaction of the AST.



3.18 RE-ESTABLISHMENT OF OBJECTS AND SYSTEMS

Fixtures, equipment, or objects relocated by the Contractor to storage areas designated by the
 Owner shall be reestablished under this contract as to their exact position and material shape.
 The Contractor assumes full responsibility for damage to objects on premises.

END OF SECTION 1



SECTION 2 - ASBESTOS AIR MONITORING/TESTING

PART 1 - GENERAL

1.1 TESTING/AIR MONITORING

- A. Throughout the entire removal and cleaning operations, air monitoring will be conducted by an accredited AST to ensure Contractor compliance with DCA, EPA and OSHA regulations, excluding personnel samples required by OSHA, and any additional applicable State and Local government regulations. Air monitoring results gathered by the Owner's ASCM firm will not be used by the Contractor to verify OSHA compliance. Air monitoring for OSHA compliance by the Contractor shall be conducted per the method prescribed by 29 CFR, Part 1926.1101, Appendix A or applicable State or Local regulations.
- B. Air monitoring shall be conducted by an AST licensed by the State of New Jersey's Department of Community Affairs pursuant to the requirements of N.J.A.C. 5:23-8, Sub-chapter 8.
- C. Air monitoring will be performed by an independent firm contracted by the Owner or the Owner's duly authorized representative. Selection of and payment to the ASCM firm will be made by the Owner or the Owner's duly authorized representative.
- D. The Abatement Contractor shall be responsible for providing personal monitoring of his employees as per OSHA's 29 CFR, Part 1926.1101.
- E. Monitoring During Asbestos Removal: The AST will provide environmental and work area monitoring, for the Owner, during exposure to airborne concentrations of asbestos.
 - If monitoring outside the asbestos work area shows airborne concentrations exceeding 0.01 f/cc and is due to the abatement contractor's work practices or breach in the containment, the Contractor shall stop all work, notify the Owner immediately, identify and correct the condition(s) causing the increase.
- F. Monitoring Results During Asbestos Abatement: PCM fiber counting shall be completed and results reviewed by the AST within 24 hours after conducting sampling. Where the building is occupied, the samples shall be collected every four (4) hours from the start of each shift. The AST shall notify the Contractor and the Owner immediately of any exposures to asbestos fibers greater than or equal to 0.01 fibers/cc.
 - 1. The services of a testing laboratory may be employed by the Owner's ASCM firm to perform laboratory analysis of the air samples. Alternatively, the ASCM firm may elect to set a microscope and its AST at the job site for project sample analysis. However, the ASCM firm may elect to send its samples daily to a laboratory, so that written reports on air samples can be obtained within 24 hours of sample collection. Where the building is occupied, during the abatement activities, the services of an on-site Asbestos Analyst Registry (AAR) accredited analyst shall be utilized.



- G. Final Compliance Monitoring: Final Compliance Monitoring shall be conducted in accordance with the Environmental Protection Agency's (EPA) regulations, the Department of Community Affairs regulations and these Specifications. Analysis of samples taken after final cleanup shall be by Transmission Electron Microscopy (TEM) if the materials are being abated within a full containment or the amount to be abated is greater than 160 square feet or 260 linear feet. Exterior removal of non-friable materials removed intact will not require an air clearance to be conducted. However, a final visual inspection by the Owner's AST will be required. The Owner's AST will conduct final air clearance monitoring. Sampling shall start after the following:
 - 1. HEPA vacuuming and wet cleaning of all surfaces of the work area must have been be conducted, except for dirt floors in the crawlspaces.
 - 2. All visible accumulations of asbestos-containing waste material and areas of contaminated soil must have been removed from the work area, as determined by the Owner's Certified Industrial Hygienist/AST.
 - 3. First polyethylene layer must have been removed from walls and floors, while all critical barriers remain in place to maintain the work area's integrity.
 - 4. Completion of a satisfactory visual inspection by the AST.
 - 5. The area completely covered by a spray encapsulant.
 - 6. All surfaces within the regulated area shall be completely dry, spray applied encapsulant shall be completely dry.
 - 7. If asbestos-containing materials being removed within the work area are less than 160 square feet, 260 linear feet, or 35 cubic feet, and not within a State regulated full containment, then five (5) samples may be collected and analyzed by PCM in accordance with NIOSH 7400 and 582 requirements.
 - a. Clearance Criteria: All samples will have a concentration of airborne fibers at or below 70 structures per millimeter squared (S/mm²) for TEM finals and less than 0.01 fibers/cc for Phase Contrast Microscopy (PCM) finals. If the final clearance samples do not meet the minimum clearance requirements, re-cleaning and resampling must be accomplished. The Abatement Contractor shall be responsible for the additional cost of re-sampling and re-analysis. The method of sampling and analysis will be the same as that used for the first set of samples.

1.2 CONTINGENCY PLAN

A. Contingency plan during abatement shall be implemented as described below. These are the minimum requirements which shall be enforced by asbestos safety control monitors. These requirements shall not limit the asbestos safety control monitors from instituting additional requirements, if necessary, for the protection of the building occupants.

1. If the pressure differential drops below 0.05 inches w.c., the following procedures shall be implemented:



(a) The asbestos safety technician and the contractor supervisor shall investigate and evaluate the engineering controls to determine the source of the pressure loss.

(b) The contractor shall institute corrective action such as: additional sealing, critical barrier maintenance and construction, changing of exhaust unit filters, adjustment of make-up air, operation of additional exhaust units or other necessary measures to reestablish an acceptable pressure differential.

2. If the pressure differential drops below 0.01 inches w.c., the following procedures shall be implemented:

(a) The contractor shall cease abatement activity in the work area.

(b) The asbestos safety control monitor shall notify the building owner to evacuate the pressurized space(s). The pressurized space(s) shall include all space outside the work area which is pressurized to maintain the required pressure differential relative to the work area and is isolated from the rest of the building in terms of air flow. The pressurized space may include the entire building exclusive of the work area or any part of the building that is pressurized to isolate it from the work area.

(c) The asbestos safety technician and the contractor supervisor shall investigate and evaluate the engineering controls and determine the source of the pressure loss.

(d) The contractor shall institute corrective action such as: additional sealing, critical barrier maintenance and construction, changing of exhaust unit filters, adjustment of make-up air, operation of additional exhaust units or other necessary measures to re-establish an acceptable pressure differential.

(e) Re-occupancy shall not be permitted in any area unless a pressure differential of 0.05 inches w.c. or greater is reestablished.

(f) If a pressure differential of 0.05 inches w.c. or greater is not reestablished within 24 hours of the first reading below 0.01 inches w.c., then the building shall be evacuated.

3. If air fiber levels exceed 0.010 f/cc, the following procedures shall be implemented:

(a) The asbestos safety technician and the contractor supervisor shall investigate and evaluate the engineering controls to determine the source of the high air fiber level.

(b) An additional/second PCM air sample shall be taken at each place at which a high air level was obtained. The additional/second PCM sample may be split,



and if the result of the air sample is less than or equal to 0.010 f/cc the contingency plan is terminated. If the result of the air sample exceeds 0.010 f/cc, the contractor, in consultation with the asbestos safety control monitor, shall choose the option of cleaning and retesting by PCM analysis or analyzing the split sample by TEM analysis. If the result of the TEM analysis exceeds 0.010 f/cc, then cleaning shall be undertaken.

(c) The decision as to the timing of the cleaning activity shall be made by the asbestos safety control monitor firm in consultation with the building owner and the contractor.

(d) Cleaning shall include, but not be limited to, wet wiping and misting the air. Cleaning the affected area shall be continued outside of containment and PCM sampling shall also be continued until the result in the area is equal to or less than 0.010 f/cc by either PCM or TEM analysis.

(e) If laboratory analysis of air samples does not yield a reading less than or equal to 0.010 f/cc within 24 hours of receipt of the first test result above 0.010 f/cc.

(f) Re-occupancy shall not be permitted in any area where PCM analysis reveals results greater than 0.010 f/cc, unless TEM results indicate asbestos fibers are equal to or less than 0.010 f/cc. In the case of re-occupancy, all air samples used to make the determination to allow reentry shall be analyzed by an accredited laboratory.

4. If a power outage occurs during active abatement work, the building occupants shall be evacuated until the air samples determine that the occupied spaces are safe, and power has been restored. If a power outage occurs when the building is unoccupied, occupancy will not be permitted until air samples determine that the spaces to be occupied are safe and power has been restored.

1.3 CERTIFICATE OF COMPLETION

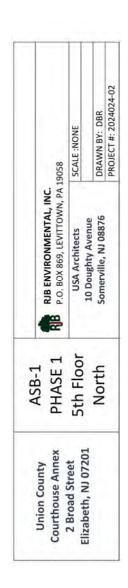
A. A Certificate of Completion shall be completed by the AST following completion of removal work, cleanup, and his/her visual inspection of the work area. The Certificate of Completion shall be provided to the Code Official and the Owner upon completion of the job, so that a Certificate of Completion/Occupancy can be issued by the Code Official.

END OF SECTION 2

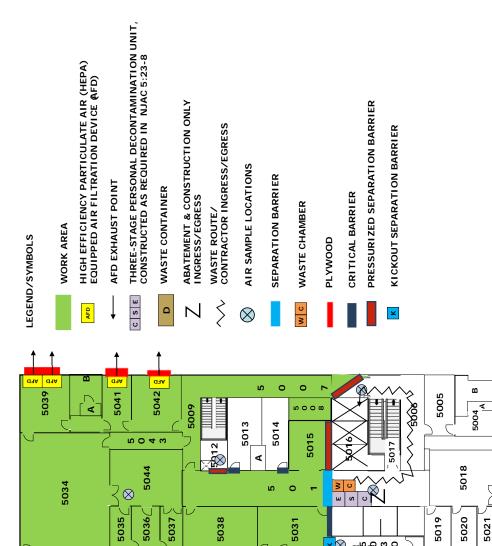
APPENDIX A

ASBESTOS ABATEMENT DRAWINGS

PHASE 1: ASB 1, 1.1, 1.2, 1.3, 1.4, 1.5



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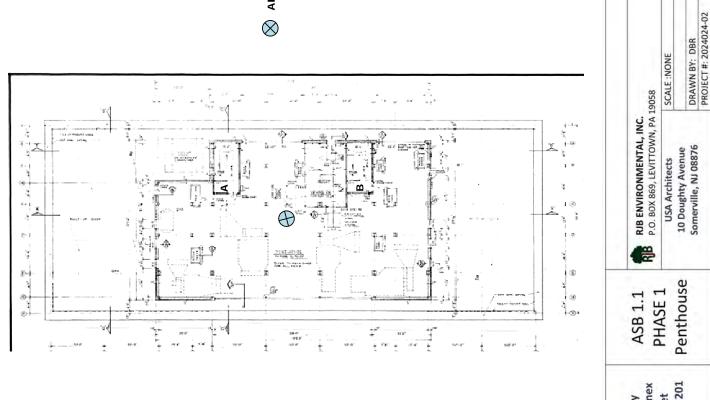


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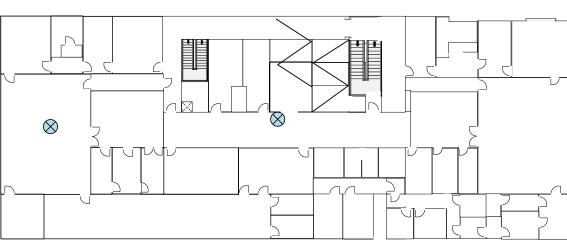


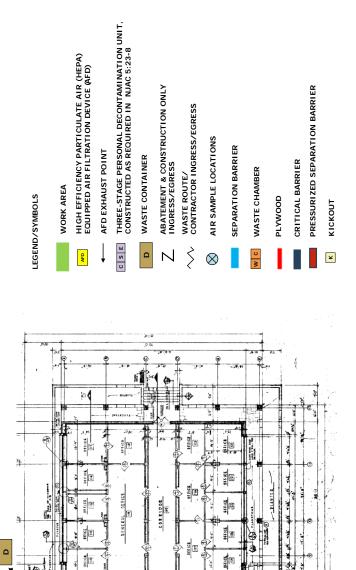
⊗ AIR SAMPLE LOCATIONS

Elizabeth, NJ 07201 **Courthouse Annex 2** Broad Street Union County





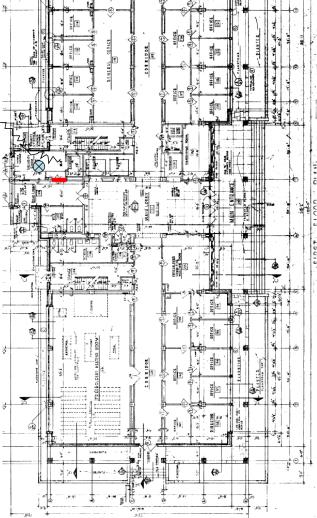




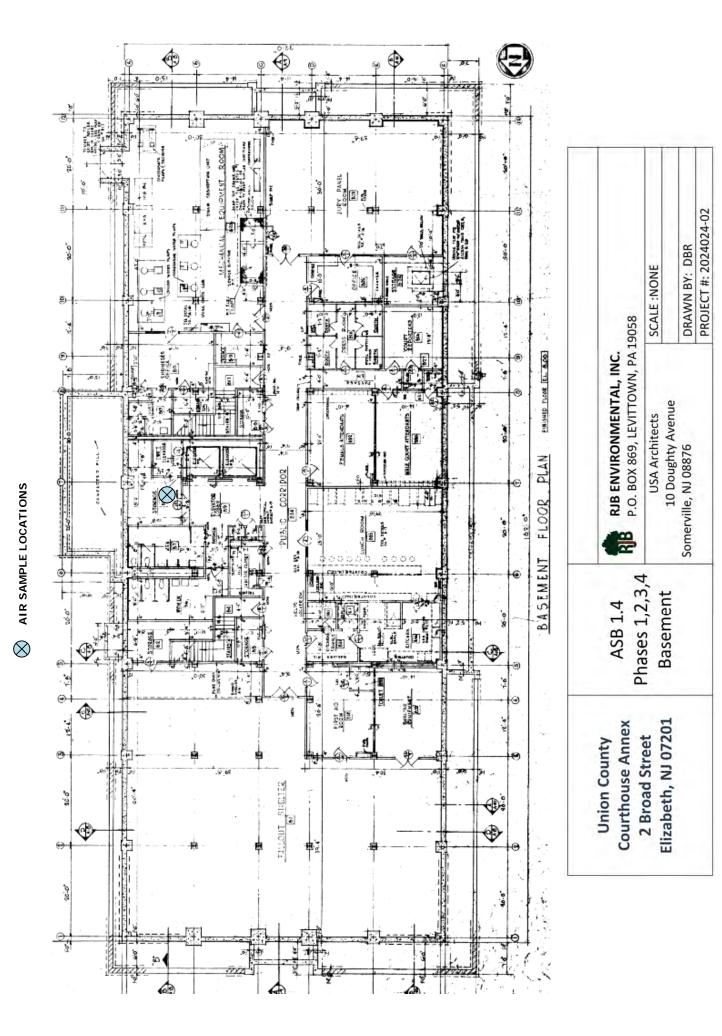


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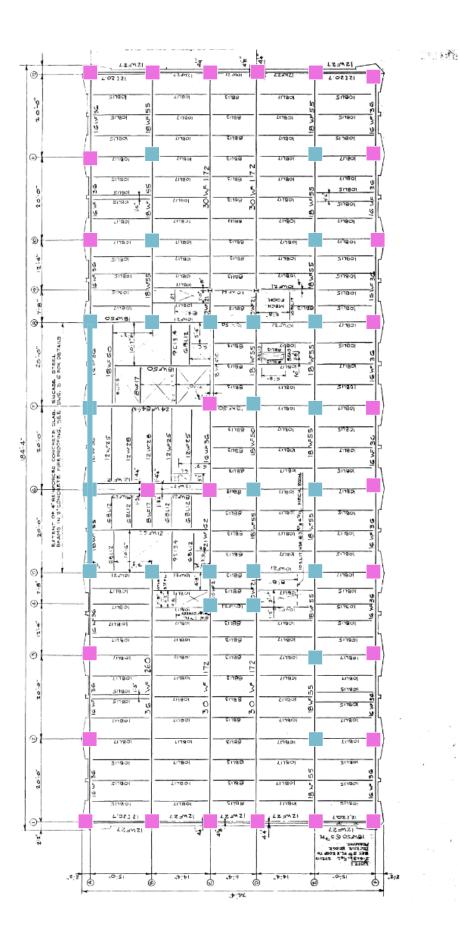
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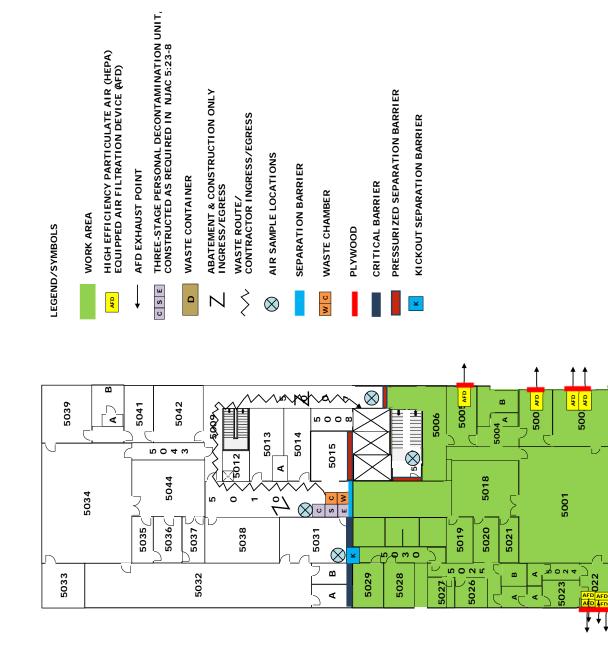


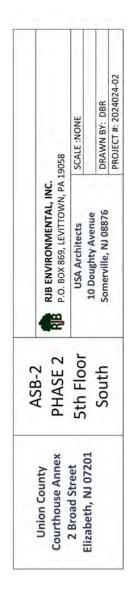


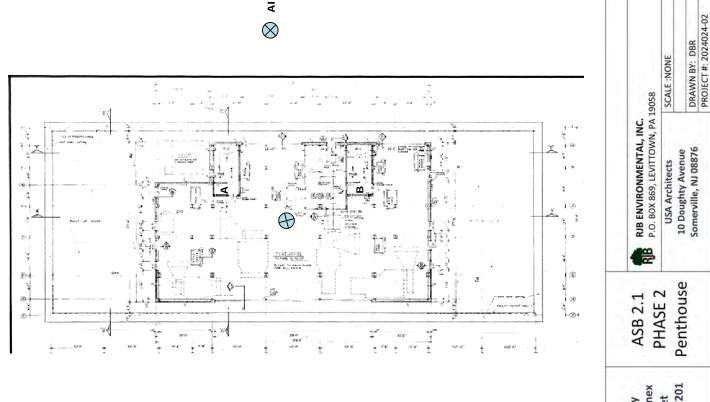




PHASE 2: ASB 2, 2.1, 2.2, 1.3, 1.4, 1.5

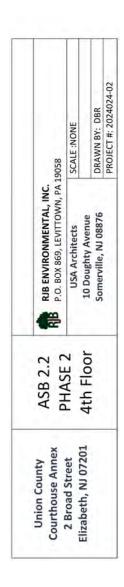




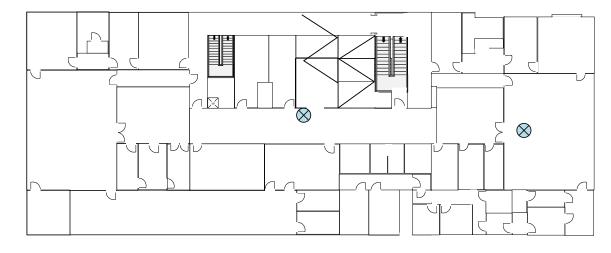


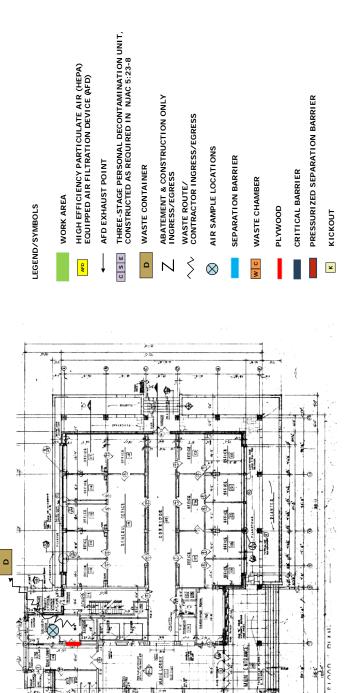
X AIR SAMPLE LOCATIONS

Union County Courthouse Annex 2 Broad Street Elizabeth, NJ 07201









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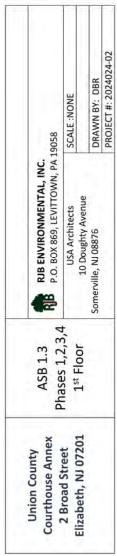
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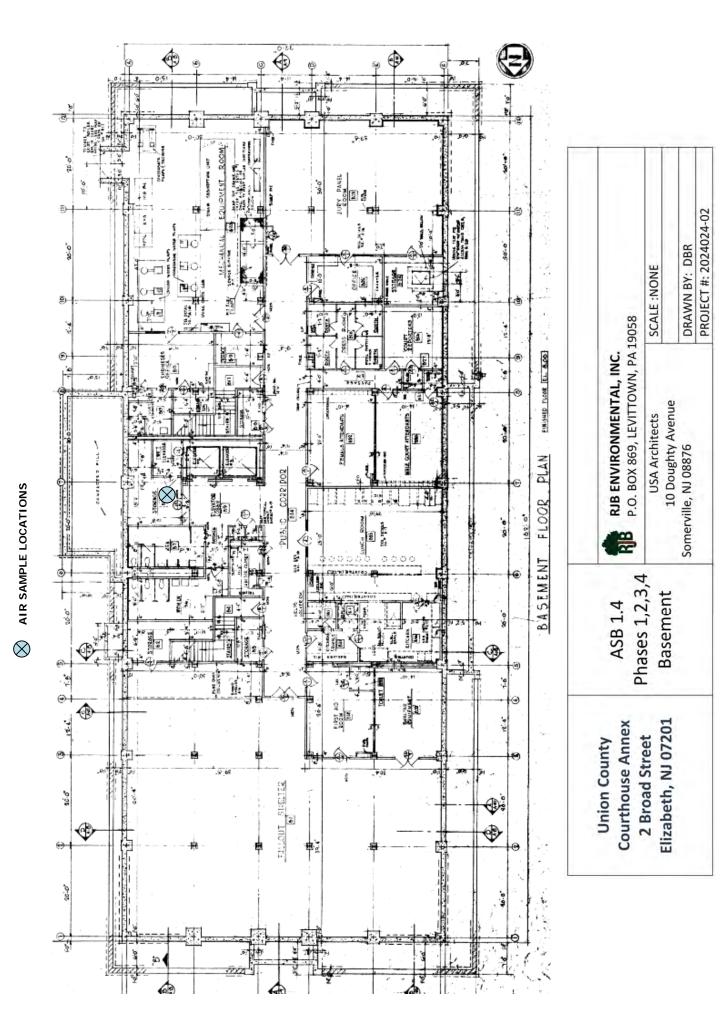
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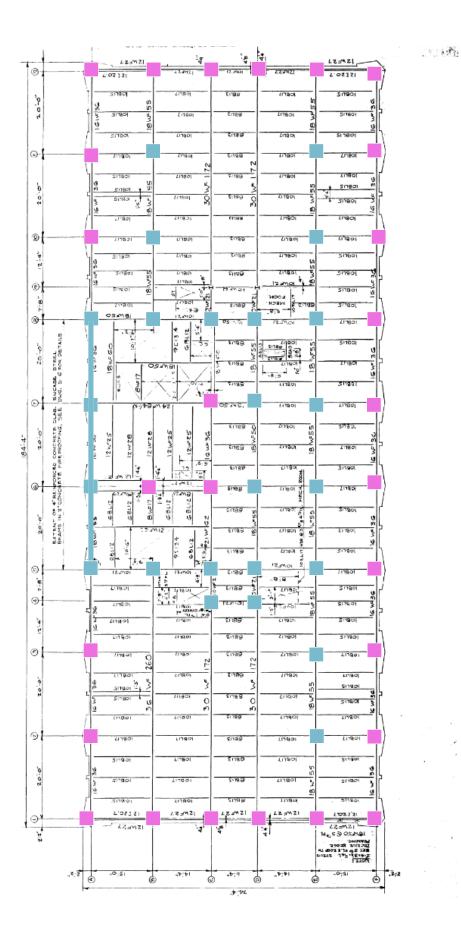
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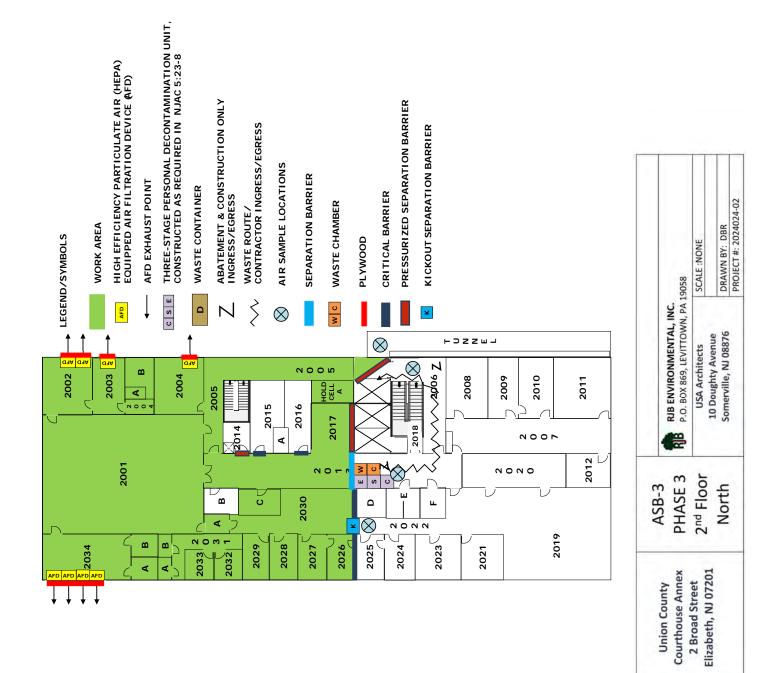


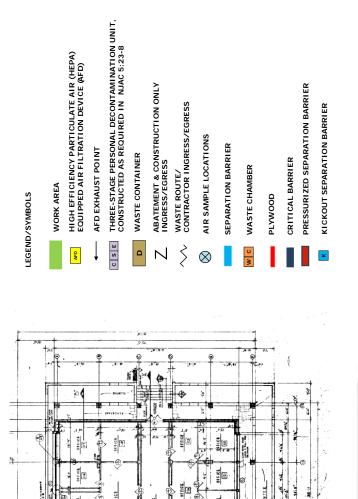




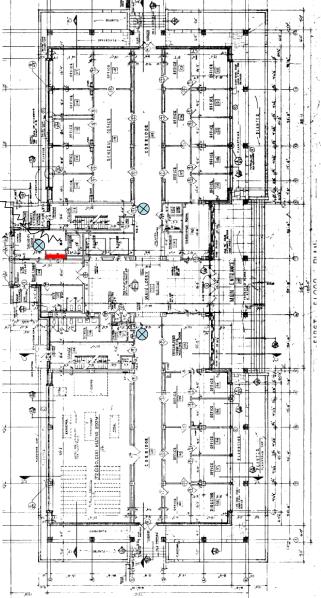


PHASE 3: ASB 3, 3.1, 3.2, 3.3, 1.4, 1.5

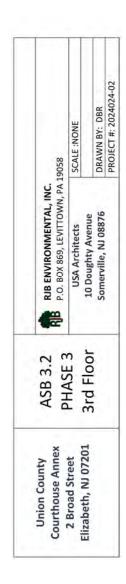




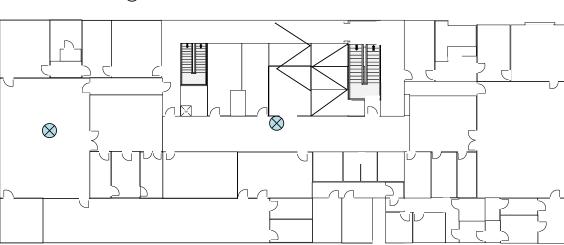
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RIB ENVIRONMENTAL, INC. P.O. BOX 869, LEVITTOWN, PA 19058	USA Architects	Somerville, NJ 08876
ASB 3.1	1 st Floor	
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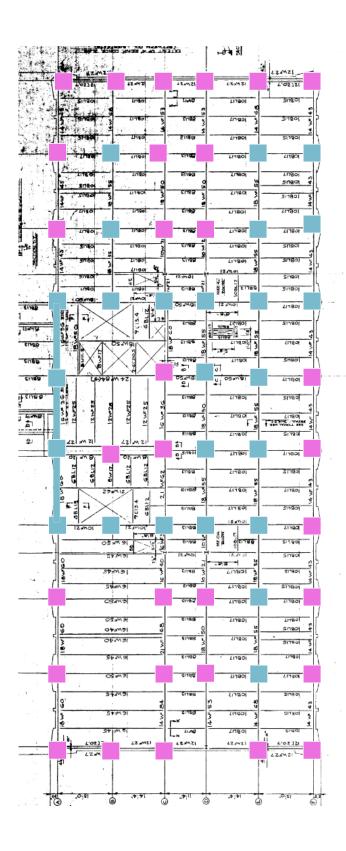


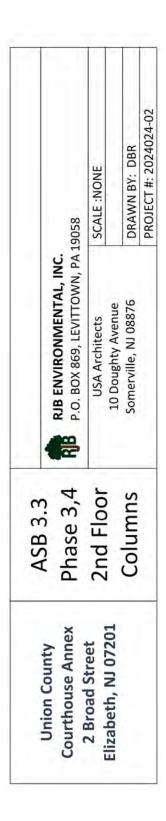


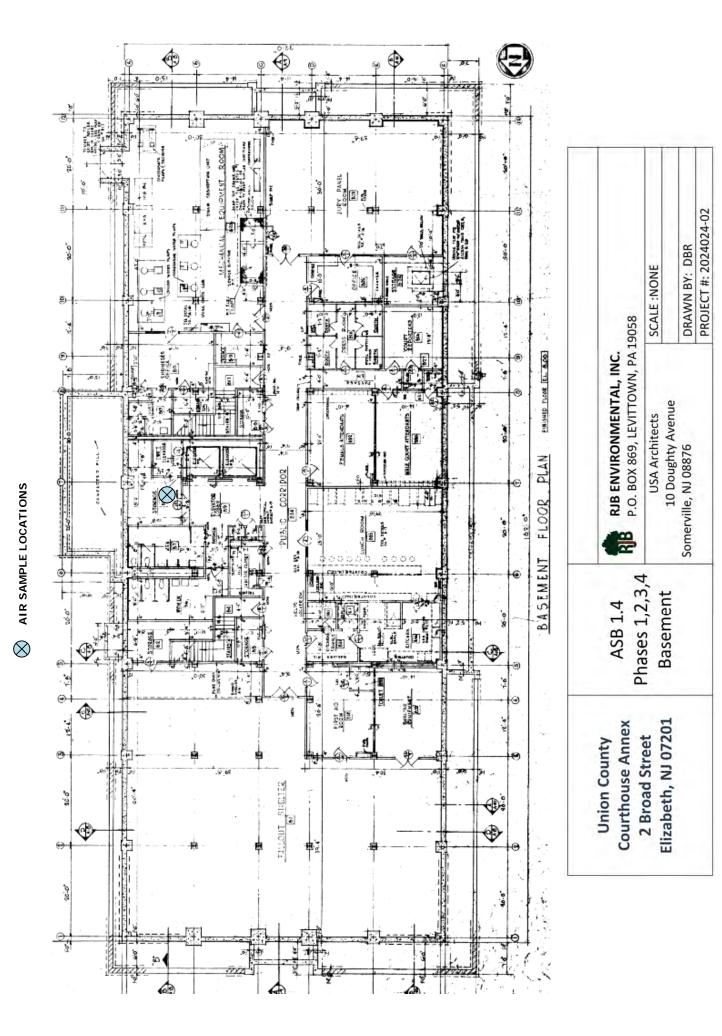


COLUMN LOCATIONS

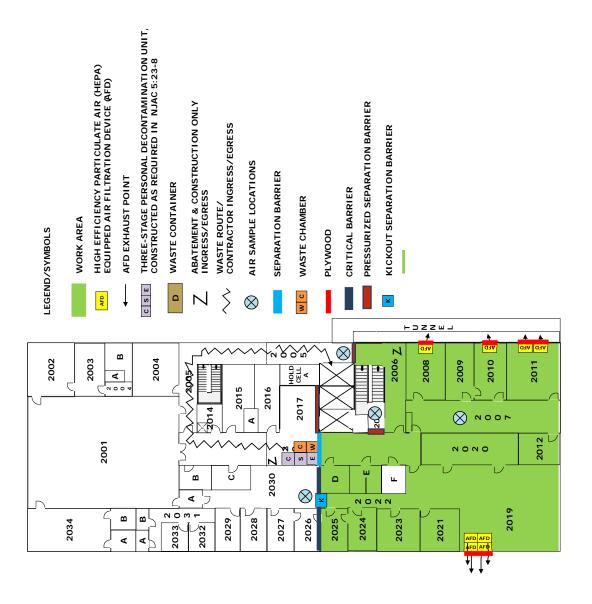
ANTICIPATED LOCATIONS OF ACCESSIBLE FIREPROOFING

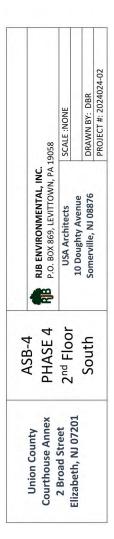


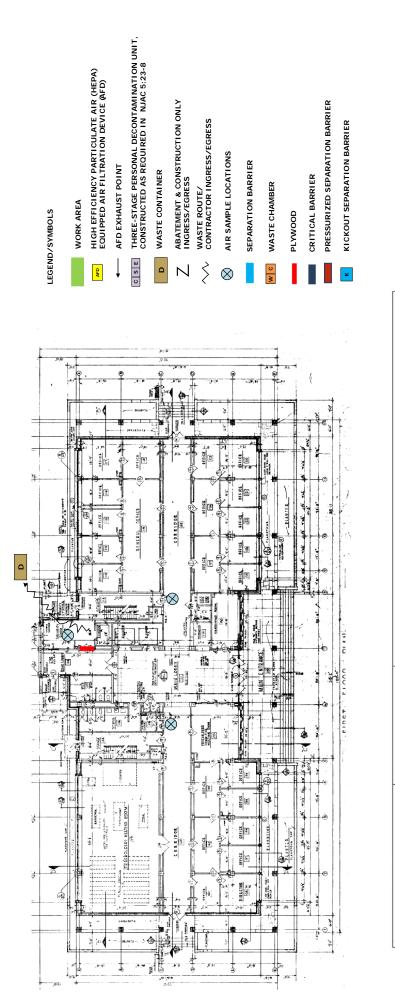




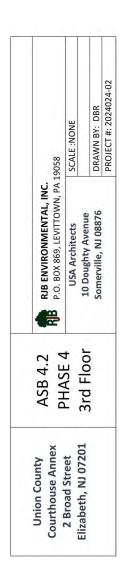
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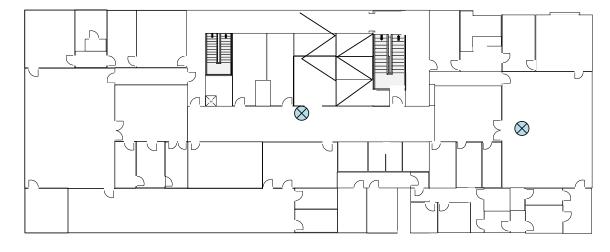




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Union County Courthouse Annex ASB 4.1 2 Brood Strood	Elizabeth, NJ 07201 1 st Floor		

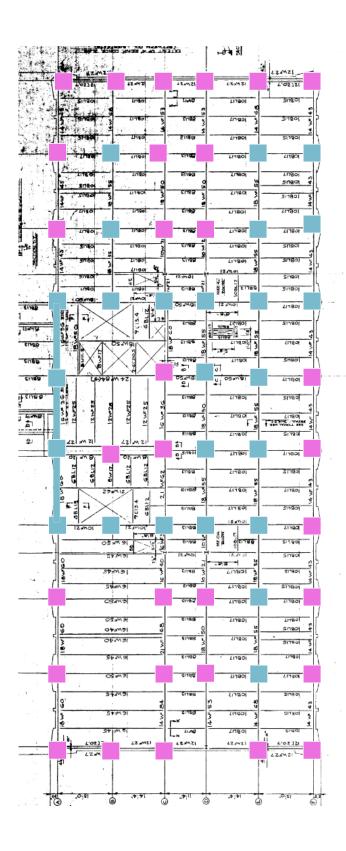


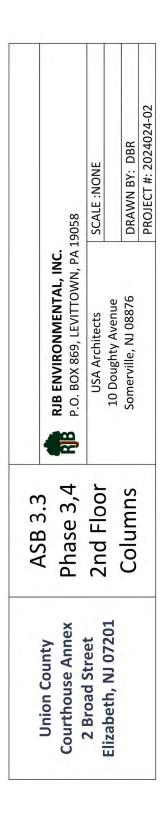


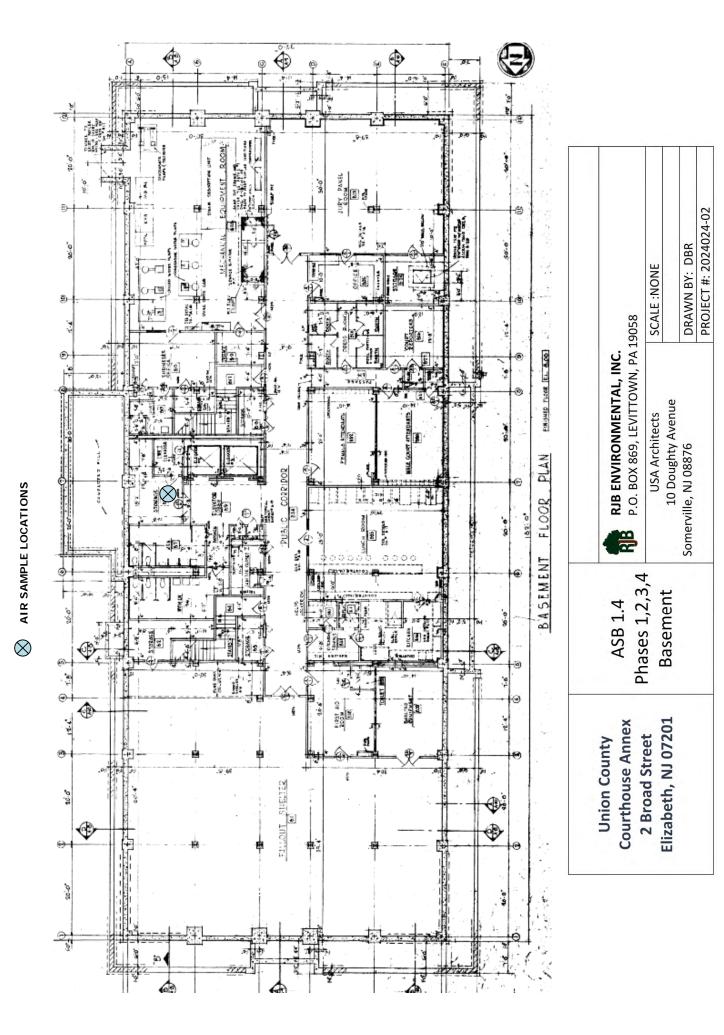


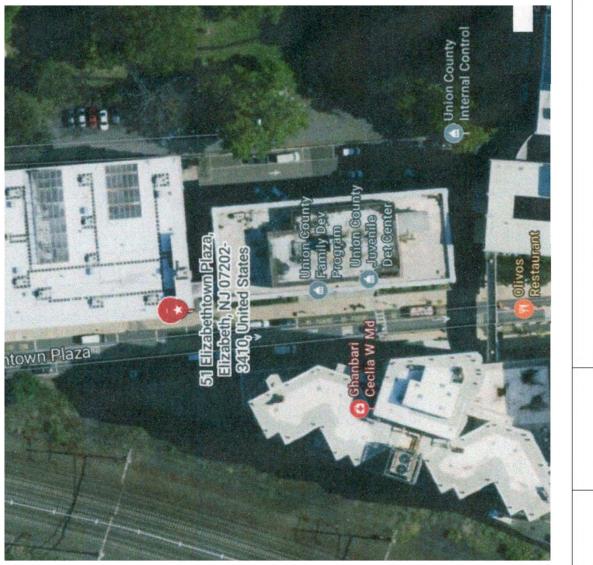
COLUMN LOCATIONS

ANTICIPATED LOCATIONS OF ACCESSIBLE FIREPROOFING











APPENDIX B

ASBESTOS DATA TABLES

5th FLOOR NORTH DATA TABLES

Client: USA Architects Building:Union County Courthouse Annex

Date:05/7/24 Project: 2024015-01

Comments																							
	Not Applicable	2.2% Chrysotile	Not Applicable	4% Chrysotile	2.2% Chrysotile	2.2% Chrysotile	Not Applicable	Not Applicable	Not Applicable	2.2% Chrysotile	1.73% Chrysotile	Not Applicable	Not Applicable	Not Applicable	2.2% Chrysotile	Not Applicable	Not Applicable	2.2% Chrysotile	Not Applicable	Not Applicable	2.2% Chrysotile	2.2% Chrysotile	Not Applicable
Results	12-15% Chrysotile	None Detected	12-15% Chrysotile	None Detected	None Detected	None Detected	12-15% Chrysotile	10% Amosite	10% Amosite	None Detected	None Detected	12-15% Chrysotile	10% Amosite	Assumed	None Detected	10% Amosite	10% Chrysotile	None Detected	10% Amosite	10% Chrysotile	None Detected	None Detected	Assumed
Unit	SF	Ч	SF	SF	LF	Ъ	SF	SF	SF	LF	SF	SF	SF	SF	ĿF	SF	SF	Γ	SF	SF	LF	Ъ	SF
Quantity	200	40	260	285	120	40	360	200	340	40	290	420	975	1,100	150	72	80	30	72	80	20	20	45
Material ID	02 - SOF - S	25 - Cove Base - M	02 - SOF - S	06 - Floor Tile - M	25 - Cove Base - M	25 - Cove Base - M	02 - SOF - S	03 - Ceiling Tile - M	03 - Ceiling Tile - M	25 - Cove Base - M	33 - Adhesive - M	02 - SOF - S	07 - Ceiling Tile - M	21 - Floor Tile - M	25 - Cove Base - M	07 - Ceiling Tile - M	17 - Floor Tile - M	25 - Cove Base - M	07 - Ceiling Tile - M	17 - Floor Tile - M	25 - Cove Base - M	32 - Cove Base - M	35 - Floor Tile - M
Room #	5007	5007	5008	5008	5008	5009	5010	5010	5031	5031	5031	5032	5032	5032	5032	5032A	5032A	5032A	5032B	5032B	5032B	5032C	5032C

Client: USA Architects Building:Union County Courthouse Annex

Date:05/7/24 Project: 2024015-01

Comments																							
	Not Applicable	Not Applicable	Not Applicable	2.2% Chrysotile	Not Applicable	Not Applicable	2.2% Chrysotile	4.9% Chrysotile	Not Applicable	2.2% Chrysotile	4% Chrysotile	Not Applicable	4% Chrysotile	2.2% Chrysotile	Not Applicable	4% Chrysotile	2.2% Chrysotile	4% Chrysotile	2.2% Chrysotile	Not Applicable	2.2% Chrysotile	Not Applicable	Not Applicable
Results	12-15% Chrysotile	10% Amosite	10% Chrysotile	None Detected	12-15% Chrysotile	10% Amosite	None Detected	None Detected	10% Amosite	None Detected	None Detected	10% Amosite	None Detected	None Detected	10% Amosite	None Detected	None Detected	None Detected	None Detected	12-15% Chrysotile	None Detected	Assumed	10% Amosite
Unit	SF	SF	SF	Ъ	SF	SF	ΓĿ	SF	SF	SF	SF	SF	SF	SF	SF	SF	SF	SF	LF	SF	LF	SF	SF
Quantity	180	190	200	40	60	006	120	1,100	92	40	105	92	105	40	92	105	40	105	40	60	20	240	260
Material ID	02 - SOF - S	07 - Ceiling Tile - M	17 - Floor Tile - M	25 - Cove Base - M	02 - SOF - S	03 - Ceiling Tile - M	08 - Cove Base - M	29 - Floor Tile - M	03 - Ceiling Tile - M	19 - Cove Base - M	23 - Floor Tile - M	03 - Ceiling Tile - M	23 - Floor Tile - M	25 - Cove Base - M	03 - Ceiling Tile - M	23 - Floor Tile - M	25 - Cove Base - M	23 - Floor Tile - M	25 - Cove Base - M	02 - SOF - S	25 - Cove Base - M	35 - Floor Tile - M	03 - Ceiling Tile - M
Room #	5033	5033	5033	5033	5034	5034	5034	5034	5035	5035	5035	5036	5036	5036	5037	5037	5037	5038	5038	5038	5038	5038	5039

Client: USA Architects Building:Union County Courthouse Annex

Date:05/7/24 Project: 2024015-01

Comments	1.73% Chrysotile	4% Chrysotile	2.2% Chrysotile	4% Chrysotile	2.2% Chrysotile	Not Applicable	Not Applicable	Not Applicable	2.2% Chrysotile	4% Chrysotile	2.2% Chrysotile	Not Applicable	4% Chrysotile	2.2% Chrysotile	Not Applicable	2.2% Chrysotile	Not Applicable	Not Applicable	Not Applicable	4% Chrysotile	
Results	None Detected	None Detected	None Detected	None Detected	None Detected	2% Chrysotile	12-15% Chrysotile	10% Amosite	None Detected	None Detected	None Detected	10% Amosite	None Detected	None Detected	10% Amosite	None Detected	Assumed	None Detected	10% Amosite	None Detected	
Unit	SF	SF	ΓĿ	SF	LF	SF	SF	SF	LF	SF	ΕF	SF	SF	LF	SF	ΓĿ	SF	SF	SF	SF	
Quantity	150	75	20	6	6	150	60	164	50	180	9	164	180-	56	105	50	125	125	290	340	
Material ID	33 - Adhesive - M	23 - Floor Tile - M	25 - Cove Base - M	23 - Floor Tile - M	25 - Cove Base - M	09 - Thinset - M	02 - SOF - S	07 - Ceiling Tile - M	08 - Cove Base - M	23 - Floor Tile - M	25 - Cove Base - M	07 - Ceiling Tile - M	23 - Floor Tile - M	25 - Cove Base - M	03 - Ceiling Tile - M	08 - Cove Base - M	24 - Floor Tile - M	28 - Floor Tile - M	07 - Ceiling Tile - M	23 - Floor Tile - M	
Room #	5039	5040	5040	5040A	5040A	5040B	5041	5041	5041	5041	5041	5042	5042	5042	5043	5043	5043	5043	5044	5044	

5th FLOOR SOUTH DATA TABLES

Client: USA Architects Building:Union County Courthouse Annex

Date:05/7/24 Project: 2024015-01

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RB ENVIRONMENTAL, INC.

P.O. Box 869 Levittown, PA 19055 Phone: 267-991-9212

Fax: 267-799-4443

Client: USA Architects

Building:Union County Courthouse Annex

Date:05/7/24 Project: 2024015-01

Comments	Not Applicable	Not Applicable	2.2% Chrysotile	Not Applicable	Not Applicable	2.2% Chrysotile	Not Applicable	2.2% Chrysotile	Not Applicable	Not Applicable	2.2% Chrysotile	Not Applicable	Not Applicable	2.2% Chrysotile	Not Applicable	Not Applicable	2.2% Chrysotile	Not Applicable	2.2% Chrysotile	Not Applicable	Not Applicable	Not Applicable	
Results	12-15% Chrysotile No	10% Amosite No	None Detected 2.2	10% Amosite No	Assumed	None Detected 2.2	10% Amosite No	None Detected 2.2	10% Amosite No	Assumed	None Detected 2.2	12-15% Chrysotile No	10% Amosite No	None Detected 2.2	10% Chrysotile No	12-15% Chrysotile No	None Detected 2.2	10% Chrysotile No	None Detected 2.2	10% Chrysotile No	2% Chrysotile No	12-15% Chrysotile No	ADD/ Amarita
Unit	SF	SF	LF	SF	SF	LF	SF	Ц	SF	SF	Ŀ	SF	SF	LF	SF	SF	LF	SF	Ŀ	SF	SF	SF	LU
Quantity	60	332	74	96	120	45	96	45	96	120	45	60	130	40	140	60	36	120	30	72	110	60	140
Material ID	02 - SOF - S	03 - Ceiling Tile - M	25 - Cove Base - M	03 - Ceiling Tile - M	31 - Floor Tile - M	32 - Cove Base - M	03 - Ceiling Tile - M	32 - Cove Base - M	03 - Ceiling Tile - M	31 - Floor Tile - M	32 - Cove Base - M	02 - SOF - S	07 - Ceiling Tile - M	08 - Cove Base - M	17 - Floor Tile - M	02 - SOF - S	08 - Cove Base - M	17 - Floor Tile - M	08 - Cove Base - M	17 - Floor Tile - M	11 - Thinset - M	02 - SOF - S	AT Collectile AA
Room #	5018	5018	5018	5019	5019	5020	5020	5020	5021	5021	5021	5022	5022	5022	5022	5023	5023	5023	5024	5024	5024A	5025	ECOF

Client: USA Architects Building:Union County Courthouse Annex

Date:05/7/24 Project: 2024015-01

Material ID	Quantity	Unit	Results		Comments
17 - Floor Tile - M	150	SF	10% Chrysotile	Not Applicable	
25 - Cove Base - M	70	ΓĿ	None Detected	2.2% Chrysotile	
11 - Thinset - M	204	SF	2% Chrysotile	Not Applicable	
09 - Thinset - M	184	SF	2% Chrysotile	Not Applicable	
07 - Ceiling Tile - M	80	SF	10% Amosite	Not Applicable	
17 - Floor Tile - M	66	SF	10% Chrysotile	Not Applicable	
25 - Cove Base - M	38	Ŀ	None Detected	2.2% Chrysotile	
02 - SOF - S	60	SF	12-15% Chrysotile	Not Applicable	
07 - Ceiling Tile - M	80	SF	10% Amosite	Not Applicable	
17 - Floor Tile - M	66	SF	10% Chrysotile	Not Applicable	
25 - Cove Base - M	38	LF	None Detected	2.2% Chrysotile	
02 - SOF - S	60	SF	12-15% Chrysotile	Not Applicable	
07 - Ceiling Tile - M	134	SF	10% Amosite	Not Applicable	
32 - Cove Base - M	45	ΓĿ	None Detected	2.2% Chrysotile	
33 - Adhesive - M	150	SF	None Detected	1.73% Chrysotile	
34 - Mastic - M	150	SF	None Detected	1.71% Chrysotile	
07 - Ceiling Tile - M	134	SF	10% Amosite	Not Applicable	
32 - Cove Base - M	45	Ľ	None Detected	2.2% Chrysotile	
33 - Adhesive - M	150	SF	None Detected	1.73% Chrysotile	
34 - Mastic - M	150	SF	None Detected	1.71% Chrysotile	
03 - Ceiling Tile - M	125	SF	10% Amosite	Not Applicable	
25 - Cove Base - M	10	Ц	None Detected	2.2% Chrysotile	
31 - Floor Tile - M	20	SF	Assumed	Not Applicable	



2nd FLOOR NORTH DATA TABLES

Client: USA Architects Building:Union County Courthouse Annex

Date:05/7/24 Project: 2024015-01

Comments	Not Applicable	Not Applicable	4% Chrysotile	2.2% Chrysotile	Not Applicable	Not Applicable	1.73% Chrysotile	Not Applicable	1.73% Chrysotile	Not Applicable	2.2% Chrysotile	4% Chrysotile	2.2% Chrysotile	4% Chrysotile	Not Applicable		Not Applicable	Not Applicable Not Applicable	Not Applicable Not Applicable Not Applicable	Not Applicable Not Applicable Not Applicable 2.2% Chrysotile	Not Applicable Not Applicable Not Applicable 2.2% Chrysotile Not Applicable	Not Applicable Not Applicable Not Applicable 2.2% Chrysotile Not Applicable Not Applicable	Not Applicable Not Applicable Not Applicable 2.2% Chrysotile Not Applicable S.2% Chrysotile
Results	12-15% Chrysotile No	10% Amosite No	None Detected 49	None Detected 2.2	12-15% Chrysotile No	10% Amosite No	None Detected 1.7:	10% Amosite No	None Detected 1.7:	10% Amosite No	None Detected 2.2	None Detected 49	None Detected 2.2	None Detected 49	12-15% Chrysotile No		2% Chrysottie No	e					
Unit	SF	SF	SF	ΓĿ	SF	SF	SF	SF	SF	SF	LF	SF	LF	SF	SF	SF	5	SF	2 2 2	S S S	2 72 72 72 2	៵៵៵៵៵	5 K K H K K H
Quantity	120	1385	2025	180	120	232	216	130	65	255	75	300	6	6	60	170		408	408 325	408 325 162	408 325 162 300	408 325 162 300 750	408 325 162 300 750
Material ID	02 - SOF - S	03 - Ceiling Tile - M	06 - Floor Tile - M	08 - Cove Base - M	02 - SOF - S	03 - Ceiling Tile - M	33 - Adhesive - M	03 - Ceiling Tile - M	33 - Adhesive - M	03 - Ceiling Tile - M	08 - Cove Base - M	23 - Floor Tile - M	08 - Cove Base - M	23 - Floor Tile - M	02 - SOF - S	09 - Thinset - M		02 - SOF - S	02 - SOF - S 07 - Ceiling Tile - M	02 - SOF - S 07 - Ceiling Tile - M 25 - Cove Base - M	02 - SOF - S 07 - Ceiling Tile - M 25 - Cove Base - M 02 - SOF - S	02 - SOF - S 07 - Ceiling Tile - M 25 - Cove Base - M 02 - SOF - S 03 - Ceiling Tile - M	02 - SOF - S 07 - Ceiling Tile - M 25 - Cove Base - M 02 - SOF - S 03 - Ceiling Tile - M 08 - Cove Base - M
Room #	2001	2001	2001	2001	2002	2002	2002	2003	2003	2004	2004	2004	2004A	2004A	2004B	2004B	and the second sec	2005	2005 2005	2005 2005 2005	2005 2005 2005 2013	2005 2005 2005 2013 2013	2005 2005 2005 2013 2013 2013

Client: USA Architects Building:Union County Courthouse Annex

Date:05/7/24 Project: 2024015-01

Comments	Not Applicable	2.2% Chrysotile	Not Applicable	Not Applicable	2.2% Chrysotile	Not Applicable	Not Applicable	Not Applicable	2.2% Chrysotile	Not Applicable	Not Applicable	Not Applicable	2.2% Chrysotile	Not Applicable	Not Applicable	4% Chrysotile	2.2% Chrysotile	Not Applicable	10% Chrysotile Not Applicable	2.2% Chrysotile	Not Applicable	Not Applicable	
Results	10% Amosite No	None Detected 2.2	Assumed	10% Amosite No	None Detected 2.2	Assumed	12-15% Chrysotile No	10% Amosite No	None Detected 2.2	Assumed	12-15% Chrysotile No	10% Amosite No	None Detected 2.2	Assumed	10% Amosite No	None Detected 49	None Detected 2.2	10% Amosite No	10% Chrysotile 10	None Detected 2.2	2% Chrysotile No	None Detected No	
Unit	SF	LF	SF	SF	Ŀ	SF	SF	SF	LF	SF	SF	SF	LF	SF	SF	SF	LF	SF	SF	LF	SF	SF	
Quantity	134	45	150	134	45	150	60	134	45	150	60	134	45	150	360	20	9	140	150	60	170	36	
Material ID	07 - Ceiling Tile - M	19 - Cove Base - M	21 - Floor Tile - M	07 - Ceiling Tile - M	19 - Cove Base - M	21 - Floor Tile - M	02 - SOF - S	07 - Ceiling Tile - M	19 - Cove Base - M	21 - Floor Tile - M	02 - SOF - S	07 - Ceiling Tile - M	19 - Cove Base - M	21 - Floor Tile - M	03 - Ceiling Tile - M	06 - Floor Tile - M	19 - Cove Base - M	07 - Ceiling Tile - M	17 - Floor Tile - M	19 - Cove Base - M	13 - Thinset - M	14 - Thinset - M	
Room #	2026	2026	2026	2027	2027	2027	2028	2028	2028	2028	2029	2029	2029	2029	2030	2030A	2030A	2031	2031	2031	2031A	2031A	A DE LA P

Client: USA Architects Building:Union County Courthouse Annex

Date:05/7/24 Project: 2024015-01

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Fax: 267-799-4443

2nd FLOOR SOUTH DATA TABLES

Client: USA Architects Building:Union County Courthouse Annex

Date:05/7/24 Project: 2024015-01

Comments																							
	Not Applicable	Not Applicable	2.2% Chrysotile	Not Applicable	Not Applicable	2.2% Chrysotile	4% Chrysotile	Not Applicable	Not Applicable	2.2% Chrysotile	4% Chrysotile	Not Applicable	Not Applicable	2.2% Chrysotile	4% Chrysotile	Not Applicable	2.2% Chrysotile	4% Chrysotile	Not Applicable	Not Applicable	2.2% Chrysotile	4% Chrysotile	olitorian /or c
Results	10% Amosite	Assumed	None Detected	12-15% Chrysotile	10% Amosite	None Detected	None Detected	12-15% Chrysotile	10% Amosite	None Detected	None Detected	12-15% Chrysotile	10% Amosite	None Detected	None Detected	10% Amosite	None Detected	None Detected	12-15% Chrysotile	10% Amosite	None Detected	None Detected	Manual Date and
Unit	SF	SF	SF	SF	SF	LF	SF	SF	SF	LF	SF	SF	SF	LF	SF	SF	LF	SF	SF	SF	LF	SF	1
Quantity	240	230	54	120	710	136	795	60	300	55	325	60	134	45	150	134	45	150	120	240	65	300	35
Material ID	07 - Ceiling Tile - M	24 - Floor Tile - M	25 - Cove Base - M	02 - SOF - S	03 - Ceiling Tile - M	19 - Cove Base - M	23 - Floor Tile - M	02 - SOF - S	03 - Ceiling Tile - M	19 - Cove Base - M	23 - Floor Tile - M	02 - SOF - S	03 - Ceiling Tile - M	19 - Cove Base - M	23 - Floor Tile - M	03 - Ceiling Tile - M	19 - Cove Base - M	23 - Floor Tile - M	02 - SOF - S	03 - Ceiling Tile - M	19 - Cove Base - M	23 - Floor Tile - M	AD Company AA
Room #	2006	2006	2006	2007	2007	2007	2007	2008	2008	2008	2008	2009	2009	2009	2009	2010	2010	2010	2011	2011	2011	2011	010

Client: USA Architects Building:Union County Courthouse Annex

Date:05/7/24 Project: 2024015-01

Comments	le	le	le	ile	le	ile	le	le	ile	le	ile	ile	le	le	le	ile	le	le	ile	le	le	le	ile
	Not Applicable	Not Applicable	Not Applicable	2.2% Chrysotile	Not Applicable	2.2% Chrysotile	Not Applicable	Not Applicable	2.2% Chrysotile	Not Applicable	2.2% Chrysotile	2.2% Chrysotile	Not Applicable	Not Applicable	Not Applicable	2.2% Chrysotile	Not Applicable	Not Applicable	2.2% Chrysotile	Not Applicable	Not Applicable	Not Applicable	2.2% Chrysofile
Results	Assumed	12-15% Chrysotile	10% Amosite	None Detected	10% Chrysotile	None Detected	12-15% Chrysotile	10% Amosite	None Detected	Assumed	None Detected	None Detected	Assumed	12-15% Chrysotile	10% Amosite	None Detected	Assumed	10% Amosite	None Detected	Assumed	12-15% Chrysotile	10% Amosite	None Detected
Unit	SF	SF	SF	ΕF	SF	ΓĿ	SF	SF	Ъ	SF	ΓĿ	ΓĿ	SF	SF	SF	LF	SF	SF	ГF	SF	SF	SF	ц
Quantity	100	300	750	12	66	40	180	870	80	1070	80	90	350	60	200	45	225	250	50	250	60	134	45
Material ID	35 - Floor Tile - M	02 - SOF - S	03 - Ceiling Tile - M	08 - Cove Base - M	22 - Floor Tile - M	32 - Cove Base - M	02 - SOF - S	07 - Ceiling Tile - M	19 - Cove Base - M	21 - Floor Tile - M	25 - Cove Base - M	25 - Cove Base - M	35 - Floor Tile - M	02 - SOF - S	07 - Ceiling Tile - M	19 - Cove Base - M	21 - Floor Tile - M	07 - Ceiling Tile - M	19 - Cove Base - M	21 - Floor Tile - M	02 - SOF - S	07 - Ceiling Tile - M	119 - Cove Base - M
Room #	2012	2013	2013	2013	2013D	2013D	2019	2019	2019	2019	2019	2020	2020	2021	2021	2021	2021	2022	2022	2021	2023	2023	2023

RBENVIRONMENTAL, INC.

P.O. Box 869 Levittown, PA 19055 Phone: 267-991-9212

Fax: 267-799-4443

ACM INSPECTION FORM

Client: USA Architects Building:Union County Courthouse Annex

Date:05/7/24 Project: 2024015-01

Room #	Material ID	Quantity	Unit	Results		Comments
2023	21 - Floor Tile - M	150	SF	Assumed	Not Applicable	
2025	02 - SOF - S	60	SF	12-15% Chrysotile	Not Applicable	
2025	07 - Ceiling Tile - M	134	SF	10% Amosite	Not Applicable	
2025	19 - Cove Base - M	45	ΕF	None Detected	2.2% Chrysotile	
2025	21 - Floor Tile - M	150	SF	Assumed	Not Applicable	



Fax: 267-799-4443

APPENDIX C

UNIVERSAL WASTE INVENTORY

Client : USA Architects

Project : Environmental Assessment Building : Union County Courthouse Annex Date Technician

Project #

:May 7, 2024 :James W. Frisbee : 2024024-01

FLOOR	ROOM NAME OR NO.	MATERIAL IDENTIFIED	QUANTITY	COMMENTS
5	001	Fluorescent Light Bulbs/Ballasts	156/78	Bulbs Mercury/ Ballast Oils
		Fire Alarm Strobe/Smoke Sensor	1/4	Circuit Board/Batteries- Metals
		Camera	3	Circuit Board- Metals
		Thermostat	1	Mercury
		Emergency Exit Sign/Lights	1	Circuit Borad/Batteries - Metals
		Altrunix Box	1	Circuit Borad/Batteries - Metals
	002	Fluorescent Light Bulbs/Ballasts	16/8	Bulbs Mercury/ Ballast Oils
		Thermostat	1	Mercury
		Fire Alarm Strobe	1	Circuit Board- Metals
	003	Fluorescent Light Bulbs/Ballasts	8/4	Bulbs Mercury/ Ballast Oils
		Thermostat	1	Mercury
	004	Fluorescent Light Bulbs	3	Mercury
	004B	Fluorescent Light Bulbs/Ballasts	3/1	Bulbs Mercury/ Ballast Oils
	005	Fluorescent Light Bulbs/Ballasts	12/6	Bulbs Mercury/ Ballast Oils
		Thermostat	1	Mercury
		Alarm Panel Box	1	Circuit Borad/Batteries - Metals
	006	Fluorescent Light Bulbs/Ballasts	16/8	Bulbs Mercury/ Ballast Oils
		Thermostat	1	Mercury
		Fire Alarm Strobe/Smoke Sensor	1/2	Circuit Board/Batteries- Metals
	007	Fire Alarm Strobe/Smoke Sensor	1/1	Circuit Board/Batteries- Metals
		Thermostat	1	Mercury
	009	Fluorescent Light Bulbs/Ballasts	12/6	Bulbs Mercury/ Ballast Oils
		Fire Alarm Strobe/Smoke Sensor	2/3	Circuit Board/Batteries- Metals
PCBs – Balla		ids/putty; Mercury – thermostats/ bulbs/switch rums – labeled ID/ unlabeled; Chemicals/Elec		circuit boards; Metals - circuit boards;



FLOOR	ROOM NAME OR NO.	MATERIAL IDENTIFIED	QUANTITY	COMMENTS
5	009	Thermostat	1	Mercury
	011	Fire Alarm Strobe/Smoke Sensor	3/3	Circuit Board/Batteries- Metals
		Speakers	3	Circuit Board - Metals
		Camera	5	Circuit Board- Metals
		Emergency Exit Sign/Lights	2	Circuit Board/Batteries- Metals
		Water Cooler	1	Compressor Freon
	018	Fire Alarm Strobe/Smoke Sensor	1/1	Circuit Board/Batteries- Metals
		Fluorescent Light Bulbs/Ballasts	32/16	Bulbs Mercury/ Ballast Oils
		Camera	1	Circuit Board- Metals
		Emergency Exit Sign/Lights	1	Circuit Board/Batteries- Metals
		Electronic Box	1	Circuit Board- Metals
	019	Fluorescent Light Bulbs/Ballasts	12/6	Bulbs Mercury/ Ballast Oils
		Emergency Exit Sign/Lights	1	Circuit Board/Batteries- Metals
	020	Fluorescent Light Bulbs/Ballasts	12/6	Bulbs Mercury/ Ballast Oils
	021	Fluorescent Light Bulbs/Ballasts	12/6	Bulbs Mercury/ Ballast Oils
	022	Fluorescent Light Bulbs/Ballasts	8/4	Bulbs Mercury/ Ballast Oils
		Fire Alarm Strobe	1	Circuit Board/Batteries- Metals
		Thermostat	1	Mercury
	023	Fluorescent Light Bulbs/Ballasts	4/2	Bulbs Mercury/ Ballast Oils
		Camera	1	Circuit Board- Metals
	023A	Fluorescent Light Bulbs/Ballasts	2/1	Bulbs Mercury/ Ballast Oils
		Fire Alarm Strobe	1	Circuit Board- Metals
	024	Fluorescent Light Bulbs/Ballasts	4/2	Bulbs Mercury/ Ballast Oils
		Camera	1	Circuit Board- Metals
	024A	Fluorescent Light Bulbs/Ballasts	2/1	Bulbs Mercury/ Ballast Oils
		Fire Alarm Strobe	1	Circuit Board- Metals

RBENVIRONMENTAL, INC.

FLOOR	ROOM NAME OR NO.	MATERIAL IDENTIFIED	QUANTITY	COMMENTS
5	025	Fluorescent Light Bulbs/Ballasts	9/4	Bulbs Mercury/ Ballast Oils
		Fire Alarm Strobe	1	Circuit Board- Metals
		Thermostat	1	Mercury
	025A	Fluorescent Light Bulbs/Ballasts	2/1	Bulbs Mercury/ Ballast Oils
	025B	Fluorescent Light Bulbs/Ballasts	2/1	Bulbs Mercury/ Ballast Oils
	026	Fluorescent Light Bulbs/Ballasts	4/2	Bulbs Mercury/ Ballast Oils
	027	Fluorescent Light Bulbs/Ballasts	4/2	Bulbs Mercury/ Ballast Oils
	028	Fluorescent Light Bulbs/Ballasts	8/4	Bulbs Mercury/ Ballast Oils
		Thermostat	1	Mercury
	029	Fluorescent Light Bulbs/Ballasts	8/4	Bulbs Mercury/ Ballast Oils
		Thermostat	1	Mercury
	030	Fluorescent Light Bulbs/Ballasts	2/2	Bulbs Mercury/ Ballast Oils
		Fire Alarm Strobe/Smoke Sensor	1/1	Circuit Board/Batteries- Metals
	031	Fluorescent Light Bulbs/Ballasts	18/9	Bulbs Mercury/ Ballast Oils
		Fire Alarm Strobe/Smoke Sensor	1/1	Circuit Board/Batteries- Metals
	032	Fluorescent Light Bulbs/Ballasts	64/32	Bulbs Mercury/ Ballast Oils
		Thermostat	4	Mercury
	032A	Fluorescent Light Bulbs/Ballasts	4/2	Bulbs Mercury/ Ballast Oils
		Thermostat	1	Mercury
	032B	Fluorescent Light Bulbs/Ballasts	4/2	Bulbs Mercury/ Ballast Oils
		Fluorescent Light Bulbs/Ballasts	4/2	Bulbs Mercury/ Ballast Oils
	033	Fluorescent Light Bulbs/Ballasts	12/6	Bulbs Mercury/ Ballast Oils
		Fire Alarm Strobe	1	Circuit Board/Batteries- Metals
		Thermostat	1	Mercury
		Siemens Control Panel	1	Circuit Board/Batteries- Metals
		Pyrotronics Panel	1	Circuit Board/Batteries- Metals Lead Acid Batteries

RBENVIRONMENTAL, INC.

FLOOR	ROOM NAME OR NO.	MATERIAL IDENTIFIED	QUANTITY	COMMENTS
5	034	Fluorescent Light Bulbs/Ballasts	144/72	Bulbs Mercury/ Ballast Oils
		Fire Alarm Strobe/Smoke Sensor	4/1	Circuit Board/Batteries- Metals
		Emergency Exit Sign/Lights	1	Circuit Board/Batteries- Metals
	034	Camera	3	Circuit Board- Metals
		Speakers	2	Circuit Board- Metals
		Thermostat	1	Mercury
	035	Fluorescent Light Bulbs/Ballasts	6/3	Bulbs Mercury/ Ballast Oils
		Thermostat	1	Mercury
	036	Fluorescent Light Bulbs/Ballasts	2/4	Bulbs Mercury/ Ballast Oils
	037	Fluorescent Light Bulbs/Ballasts	9/3	Bulbs Mercury/ Ballast Oils
	038	Fluorescent Light Bulbs/Ballasts	16/8	Bulbs Mercury/ Ballast Oils
		Thermostat	1	Mercury
		Fire Alarm Strobe/Smoke Sensor	1/1	Circuit Board/Batteries- Metals
	040	Fluorescent Light Bulbs	3	Bulbs Mercury
	040A	Fluorescent Light Bulbs /Smoke Sensor	1/1	Bulbs- Mercury Circuit Board/Batteries- Metals
	040B	Fluorescent Light Bulbs/Ballasts	3/1	Bulbs Mercury/ Ballast Oils
		Thermostat	1	Mercury
	041	Fluorescent Light Bulbs/Ballasts	8/4	Bulbs Mercury/ Ballast Oils
		Thermostat	1	Mercury
	042	Fluorescent Light Bulbs/Ballasts	8/4	Bulbs Mercury/ Ballast Oils
		Thermostat	1	Mercury
		Alarm Panel	1	Circuit Board/Batteries- Metals
	043	Fluorescent Light Bulbs/Ballasts	20/10	Bulbs Mercury/ Ballast Oils
		Fire Alarm Strobe/Smoke Sensor	1/1	Circuit Board/Batteries- Metals
		Camera	1	Circuit Board- Metals
	044	Fluorescent Light Bulbs/Ballasts	15/8	Bulbs Mercury/ Ballast Oils

RBENVIRONMENTAL, INC.

FLOOR	ROOM NAME OR NO.	MATERIAL IDENTIFIED	QUANTITY	COMMENTS
5	044	Fire Alarm Strobe/Smoke Sensor	1/1	Circuit Board/Batteries- Metals
		Camera	1	Circuit Board- Metals
		Emergency Exit Sign/Lights	1	Circuit Board/Batteries- Metals
2	001	Fluorescent Light Bulbs/Ballasts	320/160	Bulbs Mercury/ Ballast Oils
		Fire Alarm Strobe/Smoke Sensor	1/4	Circuit Board/Batteries- Metals
		Camera	3	Circuit Board- Metals
		Thermostat	1	Mercury
		Emergency Exit Sign/Lights	1	Circuit Borad/Batteries - Metals
	002	Fluorescent Light Bulbs/Ballasts	16/8	Bulbs Mercury/ Ballast Oils
		Thermostat	1	Mercury
	003	Fluorescent Light Bulbs/Ballasts	6/3	Bulbs Mercury/ Ballast Oils
		Thermostat	1	Mercury
	004	Fluorescent Light Bulbs/Ballasts	12/6	Bulbs Mercury/ Ballast Oils
		Panel Box	1	Circuit Borad/Batteries - Metals
	004A	Fluorescent Light Bulbs/Smoke Sensor	1/1	Bulbs Mercury/ Metals
	004B	Fluorescent Light Bulbs/Ballasts	3/2	Bulbs Mercury/ Ballast Oils
		Thermostat	1	Mercury
	005	Fluorescent Light Bulbs/Ballasts	34/17	Bulbs Mercury/ Ballast Oils
		Thermostat	2	Mercury
		Fire Alarm Strobe/Smoke Sensor	3/4	Circuit Board/Batteries- Metals
	005A	Fluorescent Light Bulbs/Ballasts	2/1	Bulbs Mercury/ Ballast Oils
		Smoke Sensor	1	Circuit Board/Batteries- Metals
	006	Fluorescent Light Bulbs/Ballasts	16/8	Bulbs Mercury/ Ballast Oils
		Thermostat	1	Mercury
		Fire Alarm Strobe/Smoke Sensor	2/2	Circuit Board/Batteries- Metals
		Panel Box	1	Circuit Borad/Batteries - Metals

RBENVIRONMENTAL, INC.

FLOOR	ROOM NAME OR NO.	MATERIAL IDENTIFIED	QUANTITY	COMMENTS
2	007	Fluorescent Light Bulbs/Ballasts	44/22	Bulbs Mercury/ Ballast Oils
		Thermostat	1	Mercury
		Fire Alarm Strobe/Smoke Sensor	1/2	Circuit Board/Batteries- Metals
	008	Fluorescent Light Bulbs/Ballasts	12/6	Bulbs Mercury/ Ballast Oils
		Thermostat	1	Mercury
	009	Fluorescent Light Bulbs/Ballasts	6/3	Bulbs Mercury/ Ballast Oils
		Thermostat	1	Mercury
	010	Fluorescent Light Bulbs/Ballasts	8/4	Bulbs Mercury/ Ballast Oils
		Thermostat	1	Mercury
	011	Fluorescent Light Bulbs/Ballasts	16/8	Bulbs Mercury/ Ballast Oils
		Thermostat	1	Mercury
	012	Fluorescent Light Bulbs/Ballasts	4/2	Bulbs Mercury/ Ballast Oils
		Smoke Sensor	1	Circuit Board/Batteries- Metals
	013	Fluorescent Light Bulbs/Ballasts	10/5	Bulbs Mercury/ Ballast Oils
		Thermostat	1	Mercury
		Fire Alarm Strobe/Smoke Sensor	2/2	Circuit Board/Batteries- Metals
		Speakers	3	Circuit Board - Metals
		Camera	2	Circuit Board- Metals
		Emergency Exit Sign/Lights	1	Circuit Board/Batteries- Metals
		Water Cooler	1	Compressor Freon
	015	Fire Alarm Strobe	1	Circuit Board/Batteries- Metals
	017	Fluorescent Light Bulbs/Ballasts	2/1	Bulbs Mercury/ Ballast Oils
		Camera	2	Circuit Board- Metals
		Fire Alarm Strobe/Smoke Sensor	1/1	Circuit Board/Batteries- Metals
	019	Fluorescent Light Bulbs/Ballasts	68/34	Bulbs Mercury/ Ballast Oils
		Thermostat	4	Mercury

RBENVIRONMENTAL, INC.

FLOOR	ROOM NAME OR NO.	MATERIAL IDENTIFIED	QUANTITY	COMMENTS
2	019	Fire Alarm Strobe/Smoke Sensor	1/1	Circuit Board/Batteries- Metals
	020	Fluorescent Light Bulbs/Ballasts	8/4	Bulbs Mercury/ Ballast Oils
		Smoke Sensor	1	Circuit Board/Batteries- Metals
		Cable Boxes	3	Metals
	021	Fluorescent Light Bulbs/Ballasts	8/4	Bulbs Mercury/ Ballast Oils
		Thermostat	1	Mercury
	022	Fluorescent Light Bulbs/Ballasts	2/1	Bulbs Mercury/ Ballast Oils
		Fire Alarm Strobe/Smoke Sensor	1/1	Circuit Board/Batteries- Metal
		Speakers	1	Circuit Board - Metals
	023	Fluorescent Light Bulbs/Ballasts	8/4	Bulbs Mercury/ Ballast Oils
		Thermostat	1	Mercury
	024	Fluorescent Light Bulbs/Ballasts	8/4	Bulbs Mercury/ Ballast Oils
		Thermostat	1	Mercury
	025	Fluorescent Light Bulbs/Ballasts	8/4	Bulbs Mercury/ Ballast Oils
		Thermostat	1	Mercury
	026	Fluorescent Light Bulbs/Ballasts	8/4	Bulbs Mercury/ Ballast Oils
		Thermostat	1	Mercury
	027	Fluorescent Light Bulbs/Ballasts	8/4	Bulbs Mercury/ Ballast Oils
		Thermostat	1	Mercury
	028	Fluorescent Light Bulbs/Ballasts	8/4	Bulbs Mercury/ Ballast Oils
		Thermostat	1	Mercury
	029	Fluorescent Light Bulbs/Ballasts	8/4	Bulbs Mercury/ Ballast Oils
		Thermostat	1	Mercury
	030	Fluorescent Light Bulbs/Ballasts	27/13	Bulbs Mercury/ Ballast Oils
		Fire Alarm Strobe/Smoke Sensor	1/2	Circuit Board/Batteries- Metal
		Speakers	1	Circuit Board - Metals

RBENVIRONMENTAL, INC.

FLOOR	ROOM NAME OR NO.	MATERIAL IDENTIFIED	QUANTITY	COMMENTS
2	031	Fluorescent Light Bulbs/Ballasts	11/5	Bulbs Mercury/ Ballast Oils
		Fire Alarm Strobe	1	Circuit Board/Batteries- Metals
	031A	Fluorescent Light Bulbs/Ballasts	2/1	Bulbs Mercury/ Ballast Oils
		Fire Alarm Strobe	1	Circuit Board/Batteries- Metals
	031B	Fluorescent Light Bulbs/Ballasts	2/1	Bulbs Mercury/ Ballast Oils
		Fire Alarm Strobe	1	Circuit Board/Batteries- Metals
	032	Fluorescent Light Bulbs/Ballasts	3/1	Bulbs Mercury/ Ballast Oils
		Thermostat	1	Mercury
	033	Fluorescent Light Bulbs/Ballasts	4/2	Bulbs Mercury/ Ballast Oils
		Thermostat	1	Mercury
	034	Fluorescent Light Bulbs/Ballasts	16/8	Bulbs Mercury/ Ballast Oils
		Thermostat	1	Mercury
		Fire Alarm Strobe	1	Circuit Board/Batteries- Metals
	034A	Fluorescent Light Bulbs/Ballasts	2/1	Bulbs Mercury/ Ballast Oils
		Fire Alarm Strobe	1	Circuit Board/Batteries- Metals
	034B	Fluorescent Light Bulbs/Ballasts	2/1	Bulbs Mercury/ Ballast Oils
		Fire Alarm Strobe	1	Circuit Board/Batteries- Metals
	013C	Fluorescent Light Bulbs/Ballasts	8/4	Bulbs Mercury/ Ballast Oils
		Camera	1	Circuit Board- Metals
		Amplifier	1	Circuit Boards/Bulbs- Metals
	013D	Fire Alarm Smoke Sensor	1	Circuit Board/Batteries- Metals
	013E	Lucent Power Panels/Boards	3/3	Circuit Board/Batteries- Metals
		Panel Boxes	3	Circuit Board/Batteries- Metals

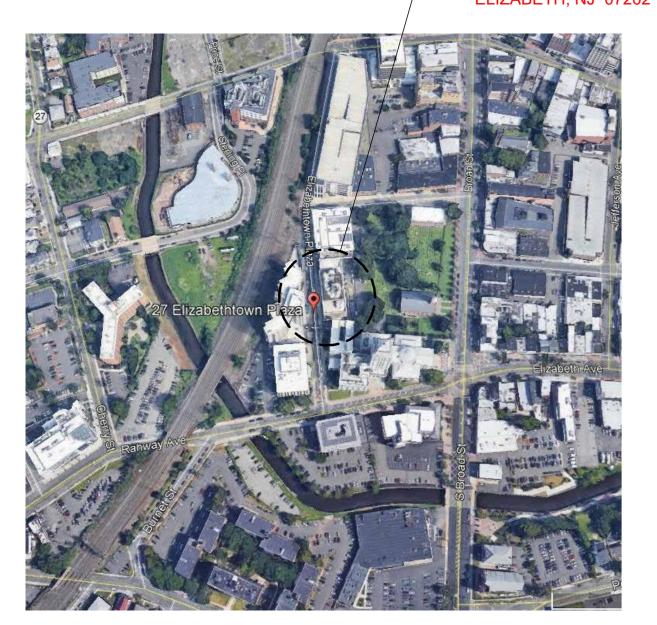


RENOVATIONS, ELEVATOR MODERNIZATION, ASBESTOS ABATEMENT AND FIRE SPRINKLER INSTALLATION AT THE NEW ANNEX BUILDING FOR THE



CSI DIVISION				
DIVISION 00 PROCUREMENT	00.01 ALL BIDDERS, UPON SUBMITTING BIDS, HEREBY CERTIFY THAT THEY HAVE REVIEWED THE ENTIRE SET OF CONTRACT DOCUMENTS, (CONTRACT DOCUMENTS CONSIST OF A COMPLETE SET OF DRAWINGS AND THE ENTIRE PROJECT MANUAL, INCLUDING ALL DIVISIONS & ANY/ALL ADDENDA) AND ARE AWARE OF, AND AGREE TO MEET THE INTENT OF THE CONTRACT DOCUMENTS WHETHER EXPRESSED OR IMPLIED.		01.14 ALL CONSTRUCTION, EQUIPMENT, CONTENTS, ETC. SHALL BE PROTECTED BY EACH CONTRACTOR DURING THE ENTIRE PERFORMANCE OF THE WORK. AREAS DISTURBED OR DAMAGED BY THE CONTRACTOR SHALL BE COMPLETELY RESTORED, REPAIRED, OR REPLACED BY THE CONTRACTOR. TO THE OWNER'S COMPLETE SATISFACTION AT NO ADDITIONAL COST.	
	00.02 PRODUCT MANUFACTURERS IN CONJUNCTION WITH SUBCONTRACTORS AND PRIME CONTRACTOR(S) ARE RESPONSIBLE FOR ALL COMPONENTS AND CALCULATIONS AND/OR CERTIFICATIONS OF THEIR PRODUCT AND FOR PROVIDING COMPLETE SYSTEMS/ASSEMBLIES TO MEET THE DESIGN INTENT OF THE PROJECT.		01.15 ALL UNUSED MATERIAL AND DEBRIS SHALL BE COMPLETELY REMOVED FROM THE SITE AND LEGALLY DISPOSED OF. NO ON-SITE STORAGE, BURNING, OR BURIAL OF DEBRIS SHALL BE PERMITTED. THE CONSTRUCTION SITE SHALL BE KEPT IN A CLEAN AND SAFE MANNER, INCLUDING, BUT NOT LIMITED TO DAILY BROOM CLEANING THROUGHOUT THE DURATION OF THE CONSTRUCTION PROJECT.	
	00.03 THE BIDDER/CONTRACTOR IS REQUIRED TO VISIT THE SITE & EXAMINE THE EXISTING CONDITIONS TO HIS COMPLETE SATISFACTION PRIOR TO BIDDING. THE BIDDER/CONTRACTOR SHALL COMPARE THE EXISTING CONDITIONS TO THE DESIGN INTENT OF THE CONTRACT DOCUMENTS & SHALL IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING OF ANY/ALL DISCREPANCIES BEFORE SUBMITTING A BID. FAILURE TO DO SO WILL PLACE THE BURDEN OF RESPONSIBILITY ON THE CONTRACTOR TO PERFORM THE WORK AS INTENDED BY THE CONTRACT DOCUMENTS, AT NO ADDITIONAL COST TO THE	PRODUCT REQUIREMENTS	01.17 ALL MATERIALS AND PRODUCTS SHALL BE PROTECTED AND PROPERLY STORED AS PER MANUFACTURER'S	STANDARD
<u>DIVISION 01</u> AVAILABLE INFORMATION	OWNER. 01.01 ANY ADDITIONAL INFORMATION THAT IS NOT PART OF THE CONSTRUCTION DOCUMENTS, SUCH AS, BUT NOT LIMITED TO, SOIL REPORT(S), HAZARDOUS MATERIALS REPORT(S), EXISTING DRAWINGS, ETC., ARE INTENDED FOR REFERENCE ONLY AND ARE TO BE USED BY THE CONTRACTOR(S) AT HIS/HER OWN DISCRETION.		01.18 PRIOR TO THE INSTALLATION OF ALL MAJOR BUILDING COMPONENTS, THE PRIME CONTRACTOR(S) SHALL CONDUCT A PRE-INSTALLATION AND COORDINATION MEETING WITH THE MANUFACTURER'S REPRESENTATIVE. INCLUDED IN THE MEETING SHALL BE ANY SUBCONTRACTOR AND PRODUCT MANUFACTURER AFFECTED BY THE SPECIFIC WORK. FAILURE OF THE PRIME CONTRACTOR(S) TO CONDUCT SUCH A MEETING, AND PROPERLY COORDINATE THE PROCESS, SHALL PLACE THE BURDEN FOR ANY & ALL PROBLEMS, RESULTING FROM SAID INSTALLATION, UPON THE PRIME CONTRACTOR(S) RESPONSIBLE FOR	WARRANTY
	01.02 THE INDICATION OF SUBSTRATE & CONFIGURATION OF CONCEALED ITEMS & MATERIALS SHOWN ON THE CONSTRUCTION DOCUMENTS IS FOR GENERAL REFERENCE ONLY. THE CONTRACTOR(S) SHALL NOT BE ENTITLED TO ADDITIONAL COMPENSATION FOR ANY VARIANCE BETWEEN ACTUAL EXISTING CONDITIONS AND THAT REPRESENTED ON THE CONSTRUCTION DOCUMENTS.		THAT PORTION OF THE WORK. 01.19 LONG LEAD ITEMS SHALL BE IDENTIFIED BY THE CONTRACTOR(S) WITH NOTIFICATION TO THE ARCHITECT IN A TIMELY MANNER. FAILURE BY THE CONTRACTOR(S) TO OBTAIN SUBMITTAL APPROVALS, AND TO ORDER LONG LEAD ITEMS, SO AS NOT THE DELAY THE PROGRESS OF THE WORK. WILL NOT JUSTIFY AN EXTENSION OF THE SCHEDULE FOR COMPLETION. NOR	DEMOLITION
	01.03 ALL DIMENSIONS INDICATED ON THE CONSTRUCTION DOCUMENTS, OF EXISTING CONDITIONS, ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR(S) PRIOR TO SUBMITTING A BID.		WILL IT CAUSE PRODUCT SUBSTITUTIONS IN ORDER TO MEET THE SCHEDULE.	
GENERAL REQUIREMENTS	01.04 THE CONTRACTOR(S) SHALL DISCUSS & VERIFY, WITH ALL GOVERNING AUTHORITIES ALL CODE REQUIREMENTS INDICATED AND/OR REQUIRED FOR THE COMPLETE EXECUTION OF THE WORK AS INTENDED BY THE CONSTRUCTION	EXECUTION REQUIREMENTS	WHETHER OR NOT SPECIFICALLY INDICATED ON THE DRAWINGS.	<u>DIVISION 07</u> SEALANTS
	DOCUMENTS. 01.05 THE CONTRACTOR(S) SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL CODES AND ORDINANCES HAVING JURISDICTION OVER THE PROJECT. THE CONTRACTOR(S) SHALL OBTAIN PERMITS & GIVE NOTICES TO SUCH AGENCIES IN AMPLE TIME FOR OFFICIALS TO CONDUCT INSPECTIONS AND OBTAIN TIMELY APPROVALS. FAILURE TO COMPLY WILL SOLELY DE THE DESPONSIBILITY OF THE CONTRACTOR(S)	1	01.23 EACH PRIME CONTRACTOR SHALL FIRE STOP/SMOKE PROOF ANY/ALL PENETRATIONS AS REQUIRED TO MAINTAIN THE DESIGNATED FIRE RATING/SMOKE PROOFING OF THE CONSTRUCTION WHETHER EXISTING OR NEW. THE GENERAL CONTRACTOR SHALL ALSO EXTEND RATED CONSTRUCTION TO MAINTAIN CONTINUITY OF SAME THROUGH CONCEALED SPACES (VERTICAL & HORIZONTAL) AS REQUIRED.	DIVISION 09
	BE THE RESPONSIBILITY OF THE CONTRACTOR(S). 01.06 THE CONTRACTOR(S) SHALL PROVIDE PROTECTION FOR THE PUBLIC, OWNER'S STAFF, AND CONSTRUCTION WORKERS IN AND AROUND THE CONSTRUCTION AREA & ADJACENT PROPERTY. ADEQUATE BARRIERS & SIGNAGE SHALL BE PROVIDED TO EXERCISE CONTROL OF SAFE INGRESS & EGRESS OF PREMISES. FIRE EXITS SHALL NOT BE BLOCKED. PROPER SITE SECURITY DURING WORKING & OFF-HOURS SHALL BE MAINTAINED. BARRICADE ALL UNSAFE OR POTENTIALLY	R	01.24 ANY/ALL EQUIPMENT PROVIDED SHALL BE INSTALLED TO BE COMPLETELY FUNCTIONAL. EACH PIECE OF EQUIPMENT PROVIDED BY A PRIME CONTRACTOR, REQUIRING SERVICE CONNECTIONS BY ANOTHER PRIME CONTRACTOR SHALL BE COORDINATED BY THE GENERAL CONTRACTOR. STARTUP & TESTING OF EQUIPMENT SHALL BE PERFORMED & DOCUMENTED BY FACTORY AUTHORIZED PERSONNEL.	<u>DIVISION 11</u> EQUIPMENT
	DANGEROUS CONDITIONS. THE CONTRACTOR(S) SHALL FOLLOW O.S.H.A. STANDARDS DURING THE COURSE OF THE PROJECT.		01.25 DETAILS & SECTIONS ON THE DRAWINGS ARE SHOWN AT SPECIFIC LOCATIONS & ARE INTENDED TO SHOW GENERAL REQUIREMENTS THROUGHOUT. DETAILS NOTED "TYPICAL" IMPLY ALL "LIKE-CONDITIONS" ARE TO BE TREATED SIMILARLY.	DIVISION 26
	01.07 DO NOT SCALE THE DRAWINGS. USE CALCULATED DIMENSIONS ONLY. NOTE THAT NOT ALL DIMENSIONS ARE GIVEN ON THE CONSTRUCTION DOCUMENTS. SOME DIMENSIONS ARE IMPLIED. IF THE CONTRACTOR IS NOT SURE OF A GIVEN DIMENSION, HE/SHE SHALL SUBMIT A REQUEST FOR INFORMATION (R.F.I.) AND/OR SHALL FIELD VERIFY EXISTING		01.26 WORK NOT INDICATED IN PART OF THE DRAWING, BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PLACES SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST.	ELECTRICA
	DIMENSIONS. 01.08 ALL INFORMATION FOR ALL TRADES CONTAINED WITHIN THE CONSTRUCTION DOCUMENTS SHALL BE USED TOGETHER	2	01.27 MINOR DETAILS OR INCIDENTAL ITEMS NOT USUALLY SHOWN OR SPECIFIED, BUT NECESSARY FOR THE PROPER & COMPLETE EXECUTION OF ANY PART OF THE WORK SHALL BE INCLUDED AS IF THEY WERE SPECIFICALLY INDICATED IN THE CONSTRUCTION DOCUMENTS.	COVID-19
	& IN CONCERT WITH ONE ANOTHER AS A WHOLE BODY OF INFORMATION FOR THE PROJECT. THE DRAWINGS & PROJECT MANUAL ARE COMPLEMENTARY & WHAT IS REQUIRED BY ONE, SHALL BE REQUIRED BY BOTH. NEITHER THE PRIME CONTRACTOR(S) NOR ANY SUBCONTRACTOR(S) SHALL BE RELIEVED OF THE RESPONSIBILITY TO PROVIDE ALL ITEMS REQUIRED BY THE INFORMATION & DESIGN INTENT INDICATED & IMPLIED. IN THE EVENT OF CONFLICTS BETWEEN DOCUMENTS, THE GREATER QUANTITY OR HIGHER QUALITY OF WORK SHALL PREVAIL AND BE PROVIDED.	CUTTING AND PATCHING	01.28 UNLESS OTHERWISE INDICATED: CUTTING AND PATCHING (EXCEPT FOR FINISHES) IS TO BE PERFORMED BY THE PRIME CONTRACTOR REQUIRING CUTTING AND PATCHING, WHETHER AS SELECTIVE DEMOLITION, OR AS A MEANS OF ACCESSING OR CORRECTING UNSATISFACTORY WORK. PATCHING OF THE SUBSTRATE IS ALSO THE WORK OF THAT PRIME CONTRACTOR, HOWEVER THE PATCHING OF ALL FINISHES EXPOSED TO VIEW IS TO BE DONE BY THE GENERAL CONTRACTOR	
	01.09 ALL ITEMS LABELED "EXISTING" ARE EXISTING "TO REMAIN" UNLESS OTHERWISE INDICATED. ITEMS NOT LABELED "EXISTING" ARE TO BE PROVIDED. THE TERM "PROVIDE" SHALL MEAN FURNISH & INSTALL AS IT IS USED THROUGHOUT THE	SUBMITTALS	USING SKILLED TRADESMAN TRAINED FOR PATCHING THE PARTICULAR FINISH INVOLVED. 01.29 THE PROJECT HAS BEEN DESIGNED TO MEET A CERTAIN PROFESSIONAL STANDARD AND PRODUCTS HAVE BEEN	
SUMMARY WORK	AND IN THE PROJECT MANUAL. THE SINGLE OVERALL PRIME CONTRACTOR BEARS SOLE SOURCE RESPONSIBILITY FOR THE	AND SUBSTITUTIONS	SELECTED TO MEET SUCH STANDARDS. THE PRODUCTS SPECIFIED ARE THE PRODUCTS INTENDED TO BE USED. IN THE EVENT THAT SUBSTITUTIONS ARE SUBMITTED FOR REVIEW, A PROPER COMPARATIVE INFORMATION SHEET SHALL ALSO BE SUBMITTED. ALL REQUESTS FOR SUBSTITUTION SHALL BE MADE WITHIN THE FIRST 90 DAYS AFTER THE CONTRACTOR HAS BEEN AWARDED THE CONTRACT FOR CONSTRUCTION. NO SUBSTITUTION WILL BE CONSIDERED AFTER THIS PERIOD.	
PROJECT COORDINATION	DELIVERY OF THE PROJECT TO 100% COMPLETION. 01.11 THE SINGLE OVERALL PRIME CONTRACTOR BEARS SOLE SOURCE RESPONSIBILITY FOR THE COORDINATION OF THE ACTIVITIES OF ALL SUBCONTRACTORS, SUB-SUBCONTRACTORS, MATERIAL SUPPLIERS, AND ALL PARTIES INVOLVED IN THE EXECUTION OF THE PROJECT.		01.30 THE PRIME CONTRACTOR SHALL PROVIDE ALL REQUIRED SCHEDULES, SUCH AS BUT NO LIMITED TO: SUBMISSION SCHEDULE, CONSTRUCTION SCHEDULE, & SCHEDULE OF VALUES PRIOR TO SUBMISSION OF THE FIRST APPLICATION FOR PAYMENT. NO APPLICATION FOR PAYMENT WILL BE APPROVED BY THE ARCHITECT UNTIL THIS PREREQUISITE IS COMPLIED	
	01.12 ENGINEERING DRAWINGS (STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION, COMMUNICATIONS, AND SECURITY SYSTEM DRAWINGS, ETC.) ARE SHOWN DIAGRAMMATICALLY AND ARE NOT TO SCALE, NOR DO THEY SHOW THE EXACT LOCATION OF THEIR COMPONENTS. THE EXACT LOCATION AND CLEARANCES FOR EACH SUCH SYSTEM OF COMPONENTS SHALL BE COORDINATED BY THE CONTRACTOR(S). ALL PRIME CONTRACTORS, PRIOR TO		WITH PROPERLY. 01.31 THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SUFFICIENTLY IN ADVANCE OF THE WORK TO ALLOW PROPER TIME FOR REVIEW. MATERIALS SHALL NOT BE FABRICATED OR DELIVERED TO THE SITE BEFORE THE SHOP DRAWINGS HAVE BEEN APPROVED.	
	PURCHASE, FABRICATION, OR INSTALLATION OF THESE ITEMS SHALL PREPARE COORDINATION DRAWINGS SHOWING THE DIFFERENT TRADES BY COLORS AND SHALL CONDUCT A COORDINATION MEETING WITH ALL OTHER CONTRACTOR(S) AFFECTED FOR A TOTAL UNDERSTANDING OF THE DESIGN INTENT. THE ARCHITECTS AND THE ENGINEERS(S) SHALL BE INVITED TO ATTEND THIS MEETING AND OFFER INPUT PRIOR TO ANY WORK BEING FABRICATED OR INSTALLED.		01.32 SHOP DRAWINGS SHALL BE REVIEWED BY THE ARCHITECT/ENGINEER FOR BASIC CONFORMANCE TO THE DESIGN INTENT ONLY AFTER PRIOR APPROVAL BY THE RESPONSIBLE PRIME CONTRACTOR. THIS REVIEW DOES NOT RELIEVE THE CONTRACTOR OR HIS SUB-CONTRACTOR(S) OF RESPONSIBILITY FOR FULL COMPLIANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DIMENSIONS & CLEARANCES TO BE CONFIRMED &	
QUALITY REQUIREMENTS	01.13 THE CONTRACTOR SHALL PROVIDE ALL MATERIAL, LABOR, SERVICES, ETC. TO COMPLETE THE ENTIRE WORK IN A MANNER ACCEPTABLE TO THE OWNER AND THE ARCHITECT. IT IS UNDERSTOOD THAT NOT EVERY DETAIL OR DIMENSION IS SHOWN IN THE CONTRACT DOCUMENTS, NOR ARE THEY NECESSARY FOR THE CONTRACTOR(S) TO PROVIDE A QUALITY PRODUCT. THE CONTRACTOR SHALL SUBMIT A REQUEST FOR INFORMATION (R.F.I.) IF NEEDED TO CLARIFY THE INTENT OF		CORRELATED AT THE JOB SITE, FOR MATERIALS QUANTITIES & PROPER FABRICATION, FOR PROPER MEANS & METHODS, FOR PROPER SEQUENCES OF CONSTRUCTION, FOR THE PROPER COORDINATION WITH OTHER TRADES, AND FOR PROVIDING SAFE AND SATISFACTORY CONSTRUCTION OPERATIONS.	
	ANY DETAIL OR OTHER INFORMATION. HOWEVER, SUCH REQUEST FOR INFORMATION (K.P.I.) IF NEEDED TO CLARIFT THE INTENT OF ANY DETAIL OR OTHER INFORMATION. HOWEVER, SUCH REQUEST FOR INFORMATION SHALL NOT CONSTITUTE A CHANGE IN THE SCHEDULE, OR IN THE CONTRACT AMOUNT. NO WORK SHOULD BE INSTALLED IF THE CONTRACTOR IS UNSURE OF THE DESIGN INTENT. INSTALLATION OF ANY WORK THAT DOES NOT COMPLY WITH THE DESIGN INTENT, AS DETERMINED BY THE ARCHITECT, SHALL BE SUBJECT TO REPLACEMENT AT THE CONTRACTOR'S EXPENSE.		01.33 EACH CONTRACTOR IS ADVISED THAT CERTAIN COLOR SCHEDULE SELECTIONS MAY HAVE PREVIOUSLY BEEN MADE, REVIEWED, AND APPROVED BY THE OWNER & RETURNED TO THE CONTRACTOR FOR EXECUTION. ALL CONTRACTORS SHALL TAKE NOTE & HEREAFTER STRONGLY BE ADVISED THAT MATERIAL SUBSTITUTIONS SUBMITTED LATER MAY BE REQUIRED TO BE PROVIDED WITH CUSTOM COLORS, TEXTURES, & FINISHES BASED UPON SELECTIONS PREVIOUSLY APPROVED. MATERIAL SUBSTITUTIONS ARE SUBJECT TO REJECTION SOLELY ON APPEARANCE.	

PROJECT LOCATION: 27 ELIZABETHTOWN PLAZA ELIZABETH, NJ 07202



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1 SCALE: N.T.S.

COUNTY OF UNION

27 Elizabethtown Plaza Elizabeth, NJ 07202

	01.34 THE ARCHITECT WILL TAKE APPROPRIATE ACTION UP TO THREE (3) TIMES FOR EACH I REQUIRING MORE THAN THREE (3) REVIEWS DUE TO INCORRECT OR INCOMPLETE INFORMAT REVIEW FEE FOR EACH SUBSEQUENT SUBMITTAL. THIS FEE SHALL BE AT THE HOURLY RATE AND SHALL BE PRE-PAID TO THE ARCHITECT BY THE CONTRACTOR PRIOR TO ANY ADDITIONA SHALL IN NO WAY CONSTITUTE AN OBLIGATION BY THE ARCHITECT TO APPROVE ANY SUBMIT DOES NOT COMPLY WITH THE DESIGN INTENT OF THE CONTRACT DOCUMENTS. FURTHERMO REVIEW TIME SHALL NOT BE A BASIS FOR AN EXTENSION OF TIME.
	01.35 IF SUBSTITUTIONS ARE APPROVED, THE CONTRACTOR SHALL NOTIFY ALL OTHER TRA SUBSTITUTION & FULLY COORDINATE THE IMPACT ON THE PROJECT. ANY ADDITIONAL COST I SUBSTITUTIONS SHALL BE PAID BY THE CONTRACTOR PROPOSING THE SUBSTITUTION.
FANDARD ARRANTY	01.36 EACH PRIME CONTRACTOR SHALL PROVIDE, AS PART OF ITS REQUIRED CLOSE-OUT D WARRANTY COVERING ALL MATERIALS, PRODUCTS, AND WORKMANSHIP FOR A PERIOD OF O FINAL ACCEPTANCE BY THE ARCHITECT. THIS STANDARD WARRANTY IS A BASIC REQUIREMEN AND SHALL BE EXTENDED BY SPECIFIC WARRANTY REQUIREMENTS OF THE VARIOUS PRODU INDICATED THROUGHOUT THE CONTRACT DOCUMENTS.
<u>VISION 02</u> EMOLITION	02.01 THE ACTUAL SCOPE OF DEMOLITION SHALL NOT BE LIMITED TO WHAT IS SPECIFICALLY OR WITHIN THE PROJECT MANUAL, BUT SHALL INCLUDE ANY AND ALL COMPLETE OR SELECTINECESSARY TO ACCOMPLISH THE INTENDED CONSTRUCTION. THIS APPLIES TO THE WORK O
<u>VISION 06</u> OOD BLOCKING	06.01 EVERY HOLLOW WALLBOARD PARTITION THAT IS INDICATED TO RECEIVE ANY ACCESS LIMITED TO, TOILET ACCESSORIES, HANDICAP RAILS, CABINETS, WALL MOUNTED BACK-BOAR WITH SOLID BLOCKING AND REINFORCEMENT WITHIN THE FRAMING TO ADEQUATELY SUPPORITEMS.
<u>VISION 07</u> EALANTS	07.01 ANY AND ALL CONSTRUCTION JOINTS INCLUDING JOINTS BETWEEN DIFFERENT ITEMS. SURROUNDING PENETRATIONS THROUGH MATERIALS, AND CRACKS WITHIN MATERIALS, ETC OR EXTERIOR OF THE BUILDING, SHALL BE FILLED WITH AN APPROPRIATE SEALANT AS REQU BUILDING, SAID SEALANT SHALL BE PAINTABLE. ON THE EXTERIOR OF THE BUILDING, SAID SE WEATHERPROOF AND IN A COLOR SELECTED BY THE ARCHITECT.
<u>VISION 09</u>	09.01 UNLESS FACTORY FINISHED, OR OTHERWISE SPECIFICALLY NOTED ON THE CONSTRUCT EXPOSED SURFACES (BOTH INTERIOR & EXTERIOR OF THE BUILDING) SHALL BE PAINTED/COA SELECTED BY THE ARCHITECT/OWNER. NO SURFACES ARE TO BE LEFT UNFINISHED UNLESS CONTRACT DOCUMENTS.
<u>VISION 11</u> QUIPMENT	11.01 EQUIPMENT SUPPORT MEMBERS AS WELL AS PLUMBING & ELECTRICAL REQUIREMEN PRE-INSTALLATION CONFERENCE BY THE GENERAL CONTRACTOR WITH SUPPLIER/INSTALLER CONTRACTOR AFFECTED BY THIS WORK.
<u>VISION 26</u> ECTRICAL	26.01 CONVENIENCE & DATA OUTLETS, WALL SWITCHES, AND FIXTURES SHALL BE COORDIN FURNITURE, MILLWORK, CASEWORK, ETC. PRIOR TO INSTALLATION. FAILURE TO COORDINATE CHANGES IN THE FIELD AT THE EXPENSE OF THE PRIME CONTRACTOR.



USA ARCHITECTS, PLANNERS AND INTERIOR DESIGNERS, LTD. 20 NORTH DOUGHTY AVE. SOMERVILLE, NJ 08876 PHONE #: 908-722-2300

BUILDING	CODE INFORMA	<u>ATION</u>				
NEW JERS	SEY ADMINISTR	ATIVE CO	<u>DDE</u>	<u>S</u>		
APPLICABLE CONS	TRUCTION CODES - NEW JERSI		TIVE CO	DE ("N.J.A.C.")		
N.J.A.C. 5:23	UNIFORM CONSTRUCTION	CODE (UCC)				
N.J.A.C. 5:23-3.14			021 NE	W JERSEY EDITION ("NJ IBC 202		
N.J.A.C. 5:23-3.15	PLUMBING SUBCODE -			021 NEW JERSEY EDITION ("NJ N		
N.J.A.C. 5:23-3.16	ELECTRICAL SUBCODE -					
N.J.A.C. 5:23-3.18	- NATIONAL ELECTRI ENERGY SUBCODE -			OTHER RESIDENTIAL)		
N.J.A.C. 5:23-3.20	MECHANICAL SUBCODE -					
N.J.A.C. 5:23-3.22	- INTERNATIONAL ME FUEL GAS SUBCODE -					
N.J.A.C. 5:23-6	- INTERNATIONAL FU	-	2021 ("IF	·GC 2021")		
N.J.A.C. 5:23-7						
N.J.A.C. 5:70	- CHAPTER 11 OF NJ IBC 2021 AND ICC/ANSI A117.1-2009 N.J.A.C. 5:70 UNIFORM FIRE CODE (UFC) AND THE STATE FIRE PREVENTION CODE					
CHAPTER :	<u>3: USE AND OCC</u>		Y CL	<u>ASSIFICATION</u>		
USE GROUP:	EXISTING "BUSINESS"					
CHAPTER	5: GENERAL BU	ILDING F	IEIG	HTS AND AREAS		
EXISTING BUILDING						
			סודר			
CHAPTER	<u>6: TYPES OF CC</u>	NSIRU(<u>VIN</u>		
CONSTRUCTION TYP	E: EXISTING "TYPE IIB"					
CHAPTER	8: INTERIOR FIN	ISHES				
IBC REFERENCE	CLASSIFICATION	FLAME SPREA	<u>\D</u>	SMOKE DEVELOPMENT		
803.1.2	CLASS A INTERIOR FINISH:	0-25		0-450		
	CLASS B INTERIOR FINISH:	26-75		0-450		
	CLASS C INTERIOR FINISH:	76-200		0-450		
TABLE 803.11 - INTER	NOR WALL AND CEILING FINISH	REQUIREMENTS	<u> </u>			
LOCATION	OCCUPAN	CY REC	UIREME	ENT		
EXIT ENCLOSURES A PASSAGEWAYS	ND B	CLA	SS B			
CORRIDORS	В	_	SS C			
ROOMS AND ENCLOS			SS C			
IBC REFERENCE	INTERIOR FLOOR FINISH CLA	SSIFICATION				
804.2	CLASS I INTERIOR FLOOR FIN CLASS II INTERIOR FLOOR FI					
	(CLASSIFICATION AS DETERI	MINED BY NFPA	253)			



01.34 THE ARCHITECT WILL TAKE APPROPRIATE REQUIRING MORE THAN THREE (3) REVIEWS DUE REVIEW FEE FOR EACH SUBSEQUENT SUBMITTA AND SHALL BE PRE-PAID TO THE ARCHITECT BY SHALL IN NO WAY CONSTITUTE AN OBLIGATION E DOES NOT COMPLY WITH THE DESIGN INTENT OF	TO INCORRECT OR INCOMPLETE INFORM THIS FEE SHALL BE AT THE HOURLY RAT THE CONTRACTOR PRIOR TO ANY ADDITION THE ARCHITECT TO APPROVE ANY SUBM	ATION SHALL BE SUBJECT TO A E OF THE ARCHITECT & ENGINEER, NAL CONSIDERATION. FEES PAID //ITTAL THAT IN HIS/HER OPINION		DRAWING LIST ARCHITECTURAL	
REVIEW TIME SHALL NOT BE A BASIS FOR AN EXTENSION OF TIME.		, <u> </u>	A-1	GENERAL NOTES, CODE INFO., LOCATION MAP AND KEY PLAN	
01.35 IF SUBSTITUTIONS ARE APPROVED, THE C SUBSTITUTION & FULLY COORDINATE THE IMPAC SUBSTITUTIONS SHALL BE PAID BY THE CONTRAC	T ON THE PROJECT. ANY ADDITIONAL COS		A-2	KEY PLANS 2ND & 5TH, PARTIAL ENLARGED BASEMENT, 1ST THRU 5TH ELEVATOR PLANS	
01.36 EACH PRIME CONTRACTOR SHALL PROVI	DE AS PART OF ITS REQUIRED CLOSE-OUT	DOCUMENTS A STANDARD	A-3	SECOND FLOOR DEMOLITION PLAN	
WARRANTY COVERING ALL MATERIALS, PRODUC FINAL ACCEPTANCE BY THE ARCHITECT. THIS ST AND SHALL BE EXTENDED BY SPECIFIC WARRAN	TS, AND WORKMANSHIP FOR A PERIOD OF ANDARD WARRANTY IS A BASIC REQUIREN	ONE YEAR FROM THE DATE OF IENT OF EACH PRIME CONTRACT	A-4 A-5	FIFTH FLOOR DEMOLITION PLAN PARTIAL SECOND FLOOR CONSTRUCTION PLAN AND NOTES	
INDICATED THROUGHOUT THE CONTRACT DOCU			A-6	SECOND FLOOR REFLECTED CEILING PLAN	
02.01 THE ACTUAL SCOPE OF DEMOLITION SHAL OR WITHIN THE PROJECT MANUAL, BUT SHALL IN NECESSARY TO ACCOMPLISH THE INTENDED CO	CLUDE ANY AND ALL COMPLETE OR SELEC	CTIVE DEMOLITION AS MAY BE	A-0 A-7	SECOND FLOOR FINISH PLAN, SCHEDULE AND LEGEND	
06.01 EVERY HOLLOW WALLBOARD PARTITION T NG LIMITED TO, TOILET ACCESSORIES, HANDICAP RA WITH SOLID BLOCKING AND REINFORCEMENT WI	AILS, CABINETS, WALL MOUNTED BACK-BOA	ARDS, ETC. SHALL BE PROVIDED		FIRE PROTECTION	
			FP01	FIRE PROTECTION GENERAL INFORMATION	
07.01 ANY AND ALL CONSTRUCTION JOINTS INCI SURROUNDING PENETRATIONS THROUGH MATER		,	FP11	FIRE PROTECTION FLOOR PLAN NEW WORK	
OR EXTERIOR OF THE BUILDING, SHALL BE FILLE BUILDING, SAID SEALANT SHALL BE PAINTABLE. (WEATHERPROOF AND IN A COLOR SELECTED BY	D WITH AN APPROPRIATE SEALANT AS REC ON THE EXTERIOR OF THE BUILDING, SAID	QUIRED. ON THE INTERIOR OF THE	LLTT		
09.01 UNLESS FACTORY FINISHED, OR OTHERW		RUCTION DOCUMENTS, ALL		PLUMBING	וו
EXPOSED SURFACES (BOTH INTERIOR & EXTERIO SELECTED BY THE ARCHITECT/OWNER. NO SURF CONTRACT DOCUMENTS.	OR OF THE BUILDING) SHALL BE PAINTED/C	OATED IN COLORS & TEXTURES AS	P12	PLUMBING ELEVATOR PART PLAN	
11.01 EQUIPMENT SUPPORT MEMBERS AS WEL	L AS PLUMBING & ELECTRICAL REQUIREM	ENTS SHALL BE COORDINATED IN A	ΓIΖ		
PRE-INSTALLATION CONFERENCE BY THE GENER CONTRACTOR AFFECTED BY THIS WORK.				MECHANICAL	
26.01 CONVENIENCE & DATA OUTLETS, WALL SI					
FURNITURE, MILLWORK, CASEWORK, ETC. PRIOR CHANGES IN THE FIELD AT THE EXPENSE OF THE		ATE THESE ITEMS MAY RESULT IN	M01	MECHANICAL GENERAL INFORMATION	
			M02	MECHANICAL SPECIFICATIONS	
CONTRACTOR TO COMPLY WITH ALL COVID-19 RI	EGULATIONS AS STIPULATED BY LOCAL, CO	OUNTY AND STATE GUIDELINES.	M11	MECHANICAL SECOND FLOOR PLAN DEMOLITION AND NEW WORK	
			M21	MECHANICAL SCHEDULES & DETAILS	
				ELECTRICAL	
			E01	ELECTRICAL SYMBOLS, ABBREVIATIONS, NOTES AND SPECIFICATIONS	
			E02	ELECTRICAL DETAILS	
			E03	ELECTRICAL DETAILS	
			E11	ELECTRICAL SECOND FLOOR PLAN DEMOLITION AND NEW WORK	
DESIGN TEAM			E12	ELECTRICAL ELEVATOR PART PLAN	
			E12	ELECTRICAL FIRST THRU FIFTH FLOOR ELEVATOR PART PLAN	
ARCHITECT	MEP	ENVIRONMENTAL	E14	ELECTRICAL PENTHOUSE MACHINE ROOM PLAN	
		-			

MEP	



RB

ENVIRONMENTAL, INC.

<u>RJB ENVIROMENTAL INC</u>

LEVINTTOWN, PA 19058

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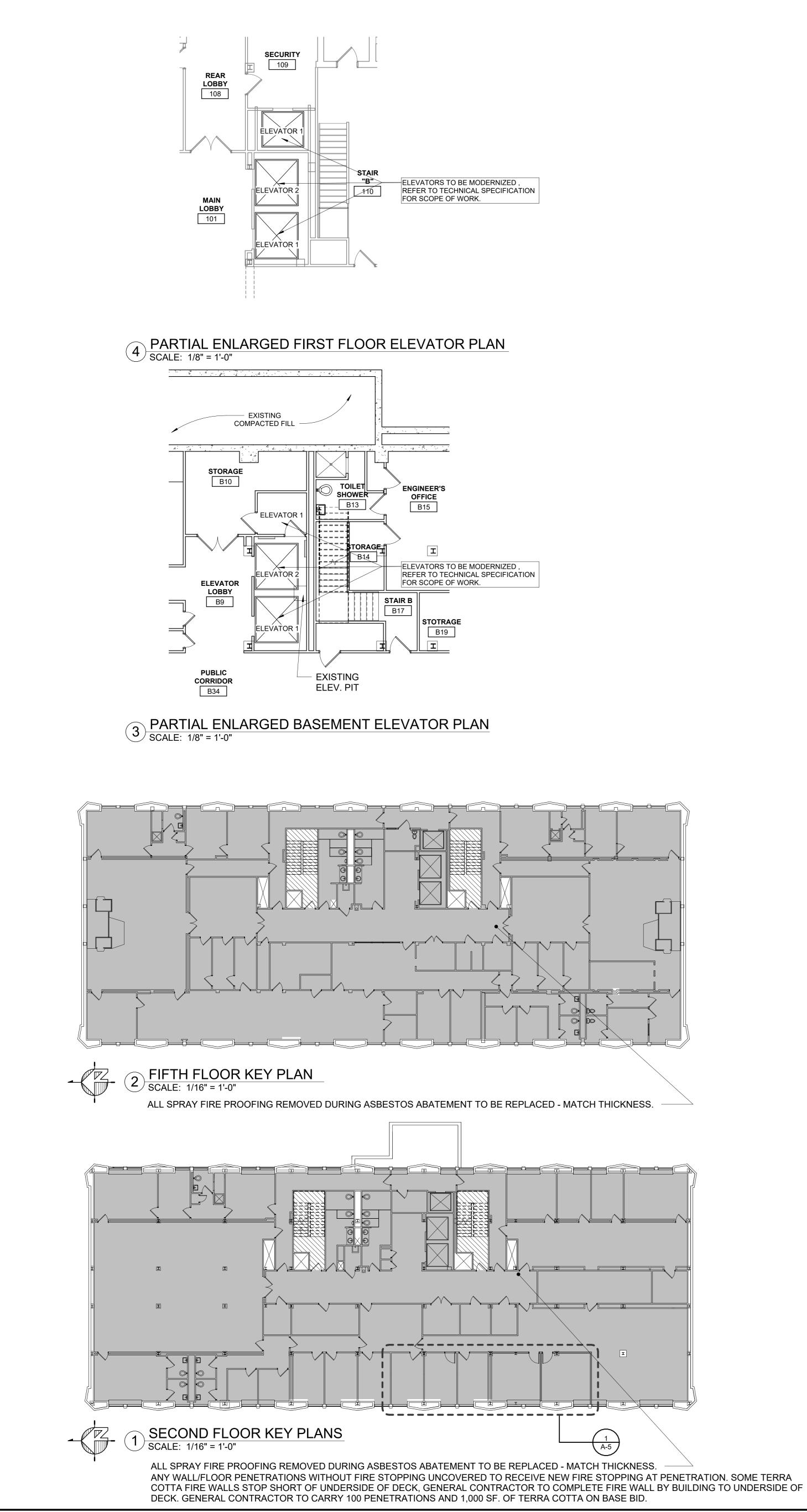
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- AREAS

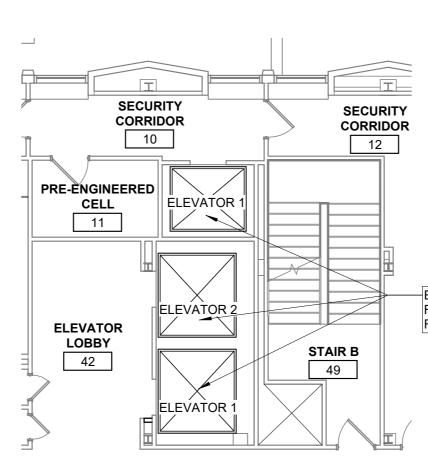
CHAPTER 9: FIRE PROTECTION SYSTEMS

903	AUTOMATIC SPRINKLER SYSTEMS B USE GROUP		<u>REQUIRED</u> NO	<u>PROVIDED</u> YES
906	PORTABLE FIRE EXTINGUISHERS B USE GROUP		<u>REQUIRED</u> YES	<u>PROVIDED</u> YES (UNCHANGED
	.1 - ADDITIONAL REQUIRED PORTABLE I ORTABLE FIRE EXTINGUISHERS	FIRE EXTINGUIS	HERS IN THE INTERN	IATIONAL FIRE CODE
<u>TABLE 906</u>	.3(1) - FIRE EXTINGUISHER SIZE AND PL	ACEMENT FOR	CLASS A HAZARDS	
		LIGHT (LOW OCCUPANC		
MINIMUM F	RATED SINGLE EXTINGUISHER	2-A		
MAXIMUM	FLOOR AREA PER UNIT OF A	3000 SF.		
MAXIMUM	FLOOR AREA FOR EXTINGUISHER	11,250 SF.		
MAXIMUM	TRAVEL DISTANCE TO EXTINGUISHER	75 FT.		
907	MANUAL FIRE ALARM SYSTEM B USE GROUP		<u>REQUIRED</u> NO	<u>PROVIDED</u> NO (UNCHANGED
	AUTOMATIC SMOKE DETECTION S B USE GROUP	<u>YSTEM</u>	<u>REQUIRED</u> YES	<u>PROVIDED</u> YES (UNCHANGEI
	SMOKE ALARMS B USE GROUP		<u>REQUIRED</u> YES	<u>PROVIDED</u> YES (UNCHANGEI
<u>CHAF</u>	TER 10: MEANS OF	EGRES	<u>S</u>	
BUILDING	AREA: EXISTING / NO CHANGE			
TABLE 101	7.2 EXIT ACCESS TRAVEL DISTANCE, \	WITH SPRINKLE	R SYSTEM	
	OCCUPANCY B (BUSINESS)	<u>MAXIMUM D</u> 250 FEET	ISTANCE	
CHAF	TER 7:PLUMBING FI	XTURES	5	
	ING SHARED COMMON TOILET FACILITI		_	SHALL REMAIN UNCHAN

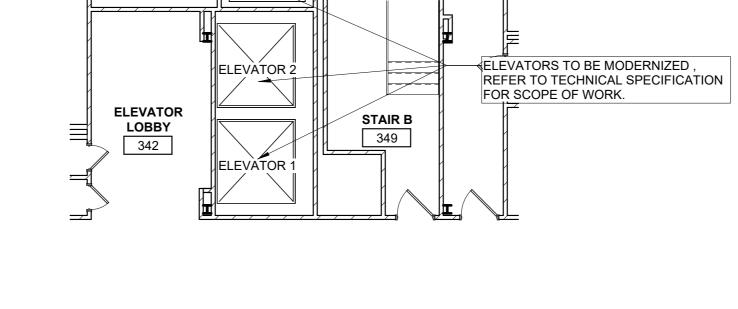
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GED)	Signature & License Nor This Document is the property and conspecified project and shall not be used authorization. RENOVATION MODERNIZATION ABATEMENT SPRINKLER IN AT T NEW ANNEX FOR COUNTY CONSTRUCTION 27 Elizabeth Elizabeth, CONSTRUCTION COUNTY CONSTRUCTION CONSTRUCTION COUNTY CONSTRUCTION CONSTRUC	opyright of USA Architects for the ed or reproduced without S, ELEVATOR ON, ASBESTOS TAND FIRE NSTALLATION THE SOULDING THE OF UNION itown Plaza
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GED) IANGED.	1 09.20.24 ISSUED 1 09.20.24 ISSUED No. Date Issue or Re Drawing Title GENERAL CODE LOCATIC AND KE Scale As indicated Drawing Date 09.20.24	- NOTES, INFO., DN MAP
	Drawn By Checked By JLG APA	A-1



5 PARTIAL ENLARGED SECOND FLOOR ELEVETOR PLAN SCALE: 1/8" = 1'-0"



ELEVATORS TO BE MODERNIZED , REFER TO TECHNICAL SPECIFICATION FOR SCOPE OF WORK.



6 PARTIAL ENLARGED THIRD FLOOR ELEVETOE PLAN SCALE: 1/8" = 1'-0"

7 PARTIAL ENLARGED FOURTH FLOOR ELEVATOR PLAN SCALE: 1/8" = 1'-0"

SECURITY

CORRIDOR

312

SECURITY

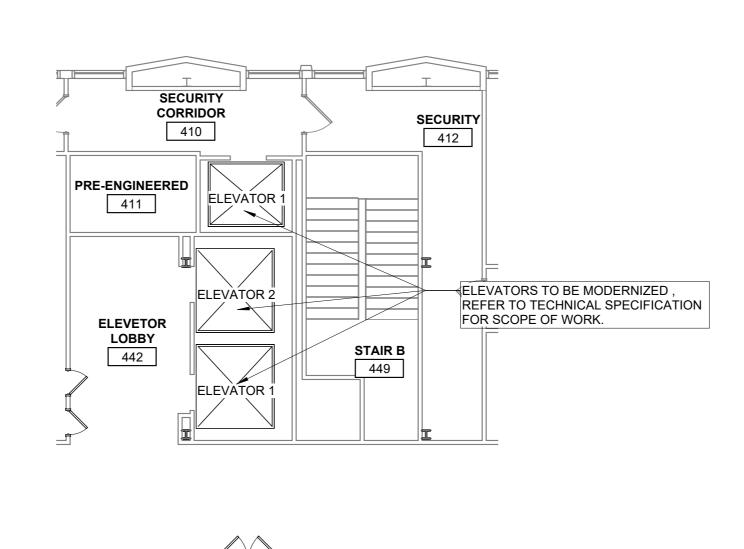
CORRIDOR

310

FLEVATOR

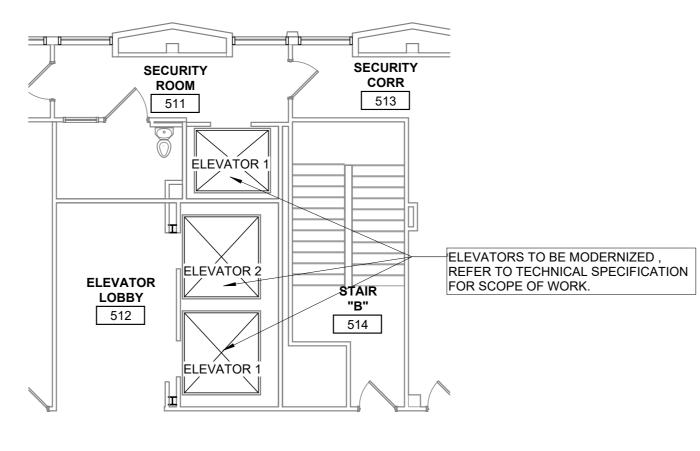
PRE-ENGINEERED

311



8 PARTIAL ENLARGED FIFTH FLOOR ELEVATOR PLAN SCALE: 1/8" = 1'-0"



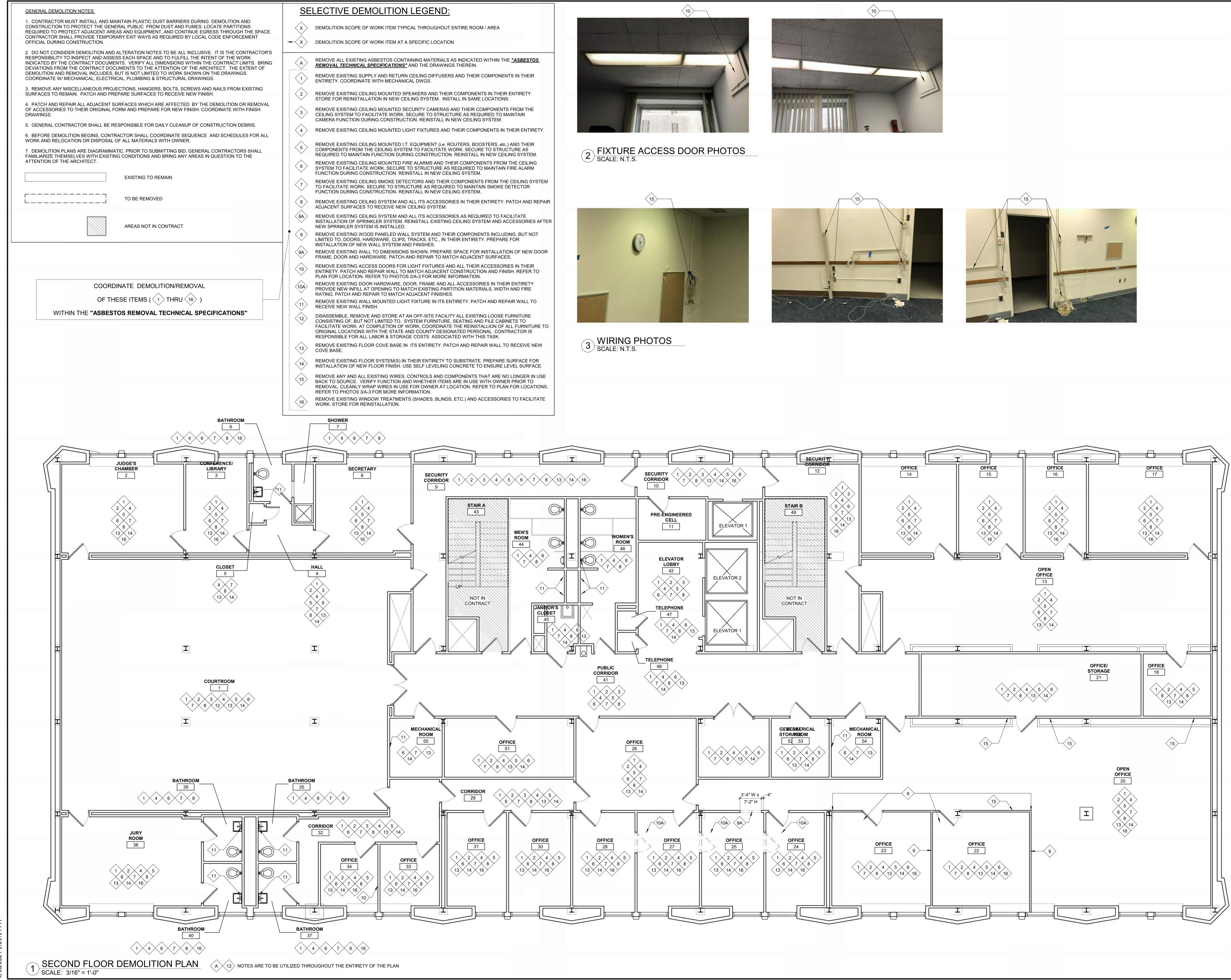


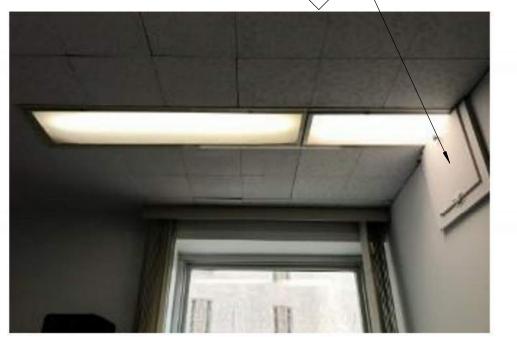
SCOPE OF WORK LEGEND

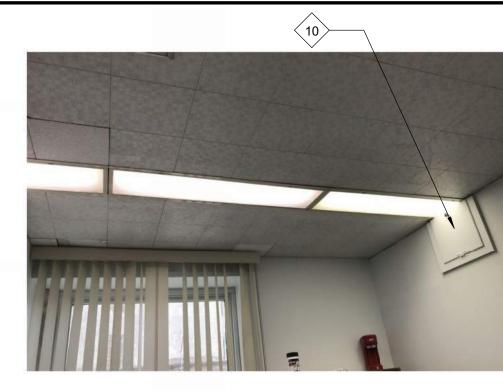
AREA OF WORK

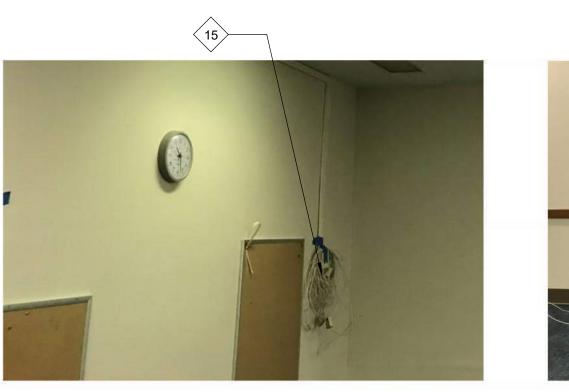
AREAS NOT IN SCOPE

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27 Elizabethtown Plaza Elizabeth, NJ 07202
1 09.20.24 ISSUED FOR BID No. Date Issue or Revision
Drawing Title KEY PLANS 2ND & 5TH, PARTIAL ENLARGED BASEMENT, 1ST THRU 5TH ELEVATOR PLANS
Scale USA Project No. As indicated 2020-047 Drawing Date Drawing No.
Drawing Date Drawing No. 09.20.24 Drawn By Checked By A-2
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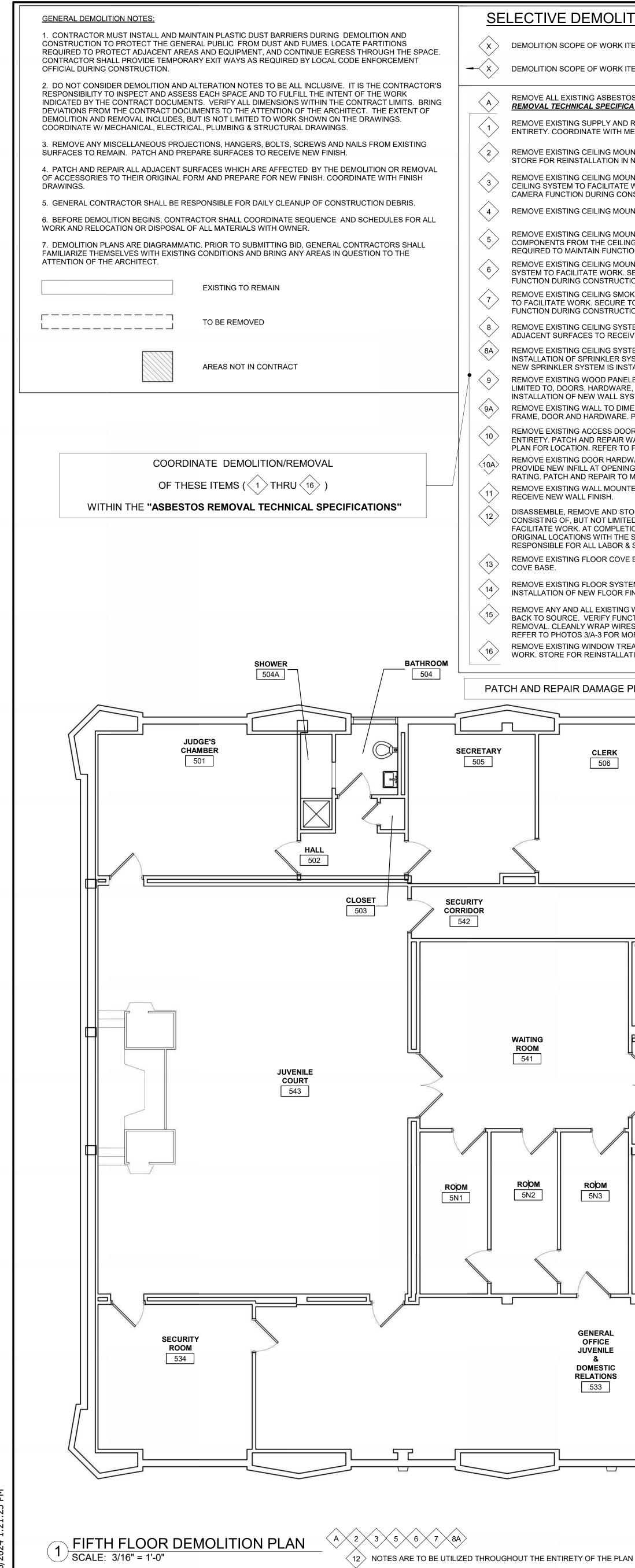




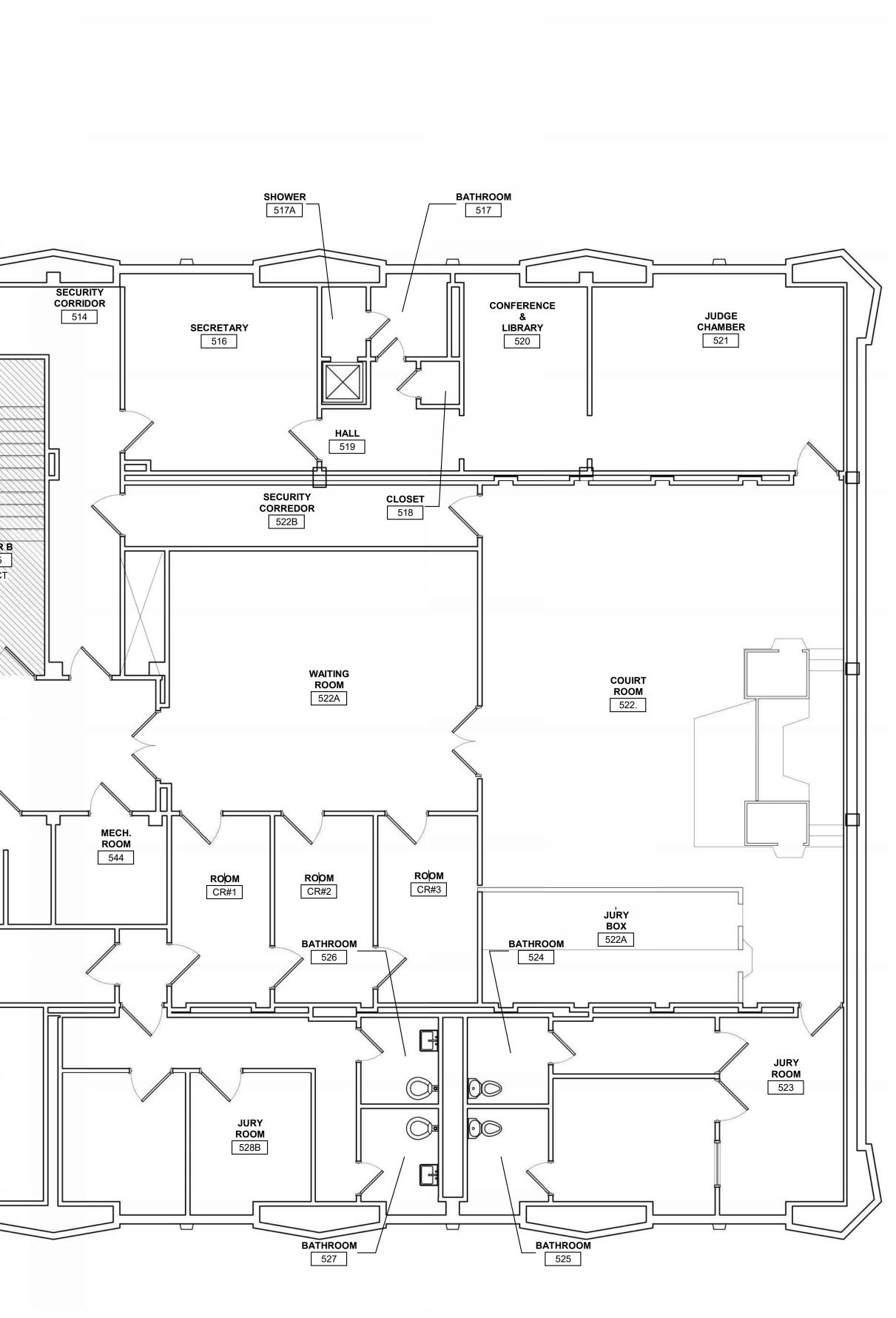


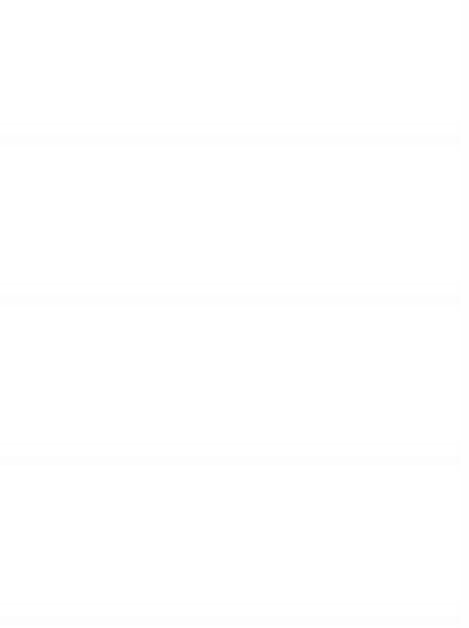


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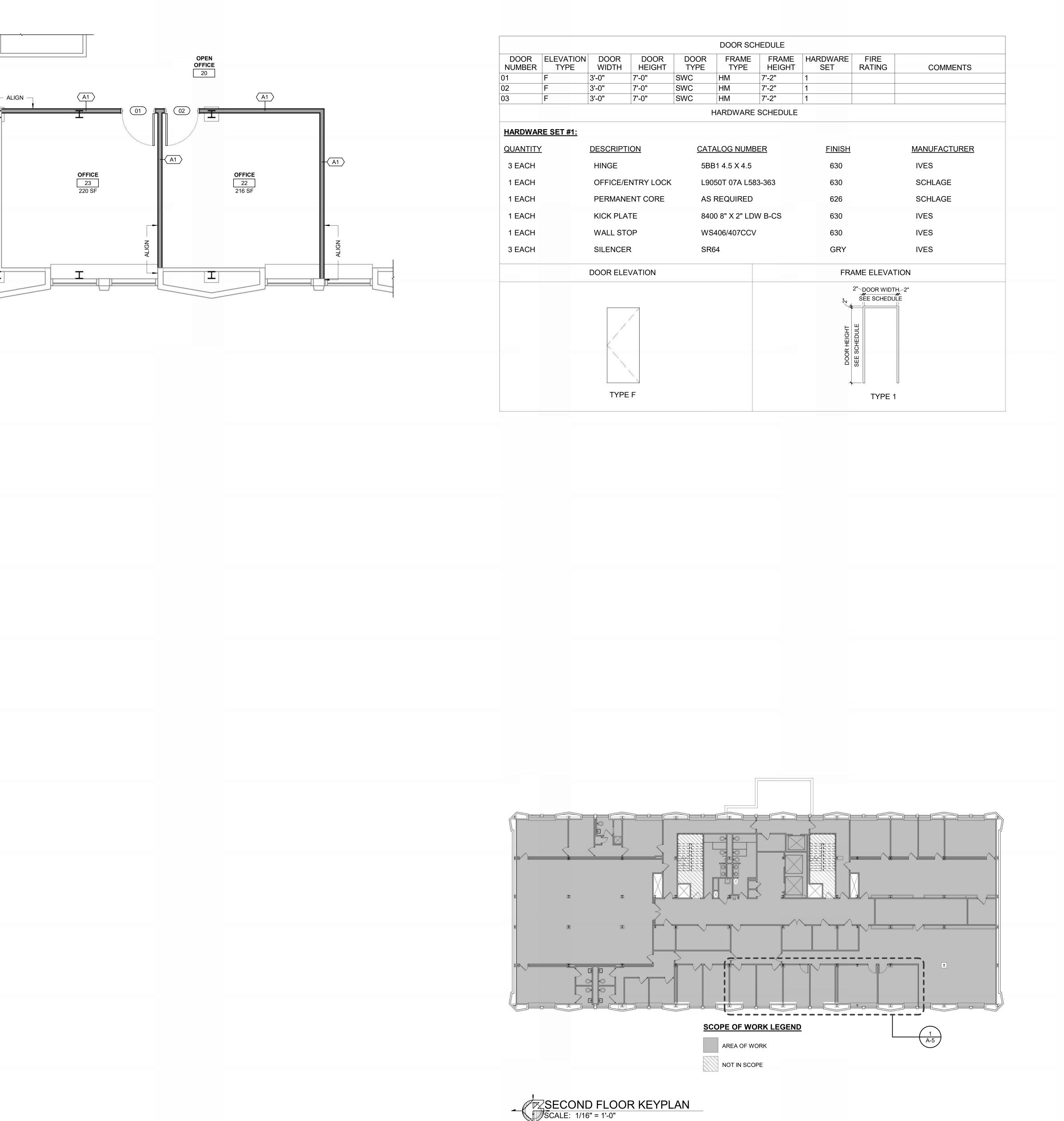
LITION LEGEND:	
RK ITEM TYPICAL THROUGHOUT ENTIRE ROOM / AREA	
STOS CONTAINING MATERIALS AS INDICATED WITHIN THE "ASPESTOS	
STOS CONTAINING MATERIALS AS INDICATED WITHIN THE <u>"ASBESTOS</u> IFICATIONS" AND THE DRAWINGS THEREIN. ND RETURN CEILING DIFFUSERS AND THEIR COMPONENTS IN THEIR	
TH MECHANICAL DWGS. MOUNTED SPEAKERS AND THEIR COMPONENTS IN THEIR ENTIRETY. IN NEW CEILING SYSTEM. INSTALL IN SAME LOCATIONS.	
ATE WORK. SECURE TO STRUCTURE AS REQUIRED TO MAINTAIN	
CONSTRUCTION. REINSTALL IN NEW CEILING SYSTEM.	
AOUNTED I.T. EQUIPMENT (i.e. ROUTERS, BOOSTERS, etc.) AND THEIR EILING SYSTEM TO FACILITATE WORK. SECURE TO STRUCTURE AS ICTION DURING CONSTRUCTION. REINSTALL IN NEW CEILING SYSTEM.	
AOUNTED FIRE ALARMS AND THEIR COMPONENTS FROM THE CEILING RK. SECURE TO STRUCTURE AS REQUIRED TO MAINTAIN FIRE ALARM JCTION. REINSTALL IN NEW CEILING SYSTEM.	
MOKE DETECTORS AND THEIR COMPONENTS FROM THE CEILING SYSTEM RE TO STRUCTURE AS REQUIRED TO MAINTAIN SMOKE DETECTOR JCTION. REINSTALL IN NEW CEILING SYSTEM.	
SYSTEM AND ALL ITS ACCESSORIES IN THEIR ENTIRETY. PATCH AND REPAIR ECEIVE NEW CEILING SYSTEM. SYSTEM AND ALL ITS ACCESSORIES AS REQUIRED TO FACILITATE	
R SYSTEM. REINSTALL EXISTING CEILING SYSTEM AND ACCESSORIES AFTER INSTALLED. INELED WALL SYSTEM AND THEIR COMPONENTS INCLUDING, BUT NOT	
ARE, CLIPS, TRACKS, ETC., IN THEIR ENTIRETY. PREPARE FOR . SYSTEM AND FINISHES. DIMENSIONS SHOWN. PREPARE SPACE FOR INSTALLATION OF NEW DOOR	
RE. PATCH AND REPAIR TO MATCH ADJACENT SURFACES. DOORS FOR LIGHT FIXTURES AND ALL THEIR ACCESSORIES IN THEIR IR WALL TO MATCH ADJACENT CONSTRUCTION AND FINISH. REFER TO	
TO PHOTOS 2/A-3 FOR MORE INFORMATION. RDWARE, DOOR, FRAME AND ALL ACCESSORIES IN THEIR ENTIRETY. INING TO MATCH EXISTING PARTITION MATERIALS, WIDTH AND FIRE TO MATCH ADJACENT FINISHES.	
UNTED LIGHT FIXTURE IN ITS ENTIRETY. PATCH AND REPAIR WALL TO	
O STORE AT AN OFF-SITE FACILITY ALL EXISTING LOOSE FURNITURE MITED TO, SYSTEM FURNITURE, SEATING AND FILE CABINETS TO LETION OF WORK, COORDINATE THE REINSTALLION OF ALL FURNITURE TO ITHE STATE AND COUNTY DESIGNATED PERSONAL. CONTRACTOR IS OR & STORAGE COSTS ASSOCIATED WITH THIS TASK. OVE BASE IN ITS ENTIRETY. PATCH AND REPAIR WALL TO RECEIVE NEW	
YSTEM(S) IN THEIR ENTIRETY TO SUBSTRATE. PREPARE SURFACE FOR DR FINISH. USE SELF LEVELING CONCRETE TO ENSURE LEVEL SURFACE.	
ING WIRES, CONTROLS AND COMPONENTS THAT ARE NO LONGER IN USE UNCTION AND WHETHER ITEMS ARE IN USE WITH OWNER PRIOR TO VIRES IN USE FOR OWNER AT LOCATION. REFER TO PLAN FOR LOCATIONS.	
R MORE INFORMATION. TREATMENTS (SHADES, BLINDS, ETC.) AND ACCESSORIES TO FACILITATE LLATION.	
E PLASTER WALLS AT BOTH STAIRWELLS (300 SF.)	
	ELEVATOR 1
	ELEVATOR LOBBY
	513 ELEVATOR 2
	STAIR B NOT IN 5 CONTRACT
	ELEVATOR 1
PUBLIC CORRIDOR 537	
П	
FILE ROOM 540	ROOM ELECT. 546 545
	INTERVIEW COURT COURT REPORTER CLERK

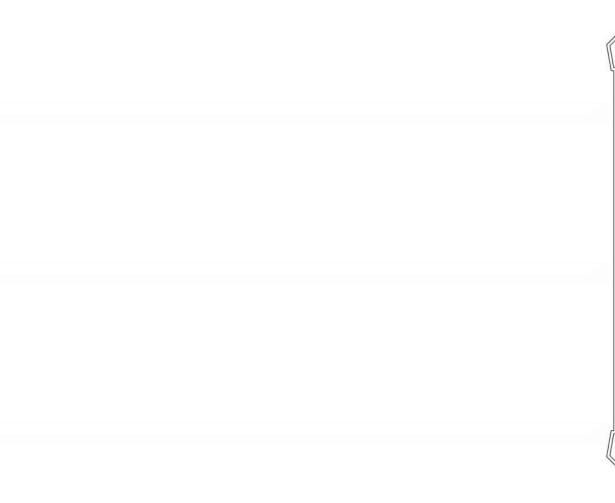




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FOR	
27 Elizabeth Elizabeth,	ntown Plaza
1 09.20.24 ISSUED No. Date Issue or Re	
Drawing Title	
FIFTH FLOOR DE	MOLITION PLAN
_{Scale} As indicated	USA Project No. 2020-047
Drawing Date 09.20.24	Drawing No.
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OFFICE 26	
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OFFICE 27 OFFICE 24 24	
1 SECOND FLOOR CONSTRUCTION PLAN 1 SCALE: 1/4" = 1'-0" REFER TO ELECTRICAL DRAWINGS FOR ALL POWER, DATA AND SWITCHING INFORMATION.	
PROVIDE SOLID BLOCKING AT TOP OF SHEATHING SCHEDULED CEILING SYSTEM	
ONE LAYER GYPSUM BOARD, EACH SIDE METAL STUD ACOUSTIC INSULATION WHERE SCHEDULED	
CONTINUOUS METAL BOTTOM RUNNER SEALANT BOTH SIDES SUBFLOOR SEALANT BOTH SIDES	
MARK STUD SIZE GYP. BD. THICKNESS GYPSUM BOARD HEIGHT TOTAL PARTITION THICKNESS ACOUSTIC INSULATION Comments A1 3-5/8" 5/8" 6" ABOVE FINISHED CEILING 4 7/8" YES PARTITION TYPE SCAL F: 1 1/2" = 1'-0"	
SCALE: 1 1/2" = 1'-0"	





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27 Elizabethtown Plaza
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PARTIAL SECOND FLOOR CONSTRUCTION PLAN AND NOTES
Scale USA Project No. As indicated 2020-047
Drawing Date Drawing No. 09.20.24
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1. MEASURE EACH CEILING AREA PRIOR TO INSTALLATION AND ESTABLISH THE LAYOUT OF THE ACOUSTICAL PANEL SYSTEM SO THAT THE PANELS AT THE PERIMETER ARE CUT TO EQUAL SIZES TO THE OPPOSITE WALL AND PROVIDE MINIMUM DIMENSION OF 6" FOR CUT PIECES, UNLESS NOTED OTHERWISE BY SPECIFIC DIMENSIONS OR LAYOUT REQUIREMENTS.

2. G.C. TO COORDINATE WITH RECOVERY SERVICES AND THEIR DUCK CLEANING VENDOR TO HAVE EXISTING DUCTWORK TO REMAIN CLEANED PRIOR TO THE INMSTALLATION ON NEW CEILING GRID. 3. REFER TO ELECTRICAL DRAWINGS FOR TYPES OF FIXTURES. UTILIZE REFLECTED CEILING PLANS FOR LOCATIONS AND COORDINATION OF FIXTURES. ANY DISCREPANCY BETWEEN ELECTRICAL AND ARCHITECTURAL DRAWINGS SHOULD BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IMMEDIATELY.

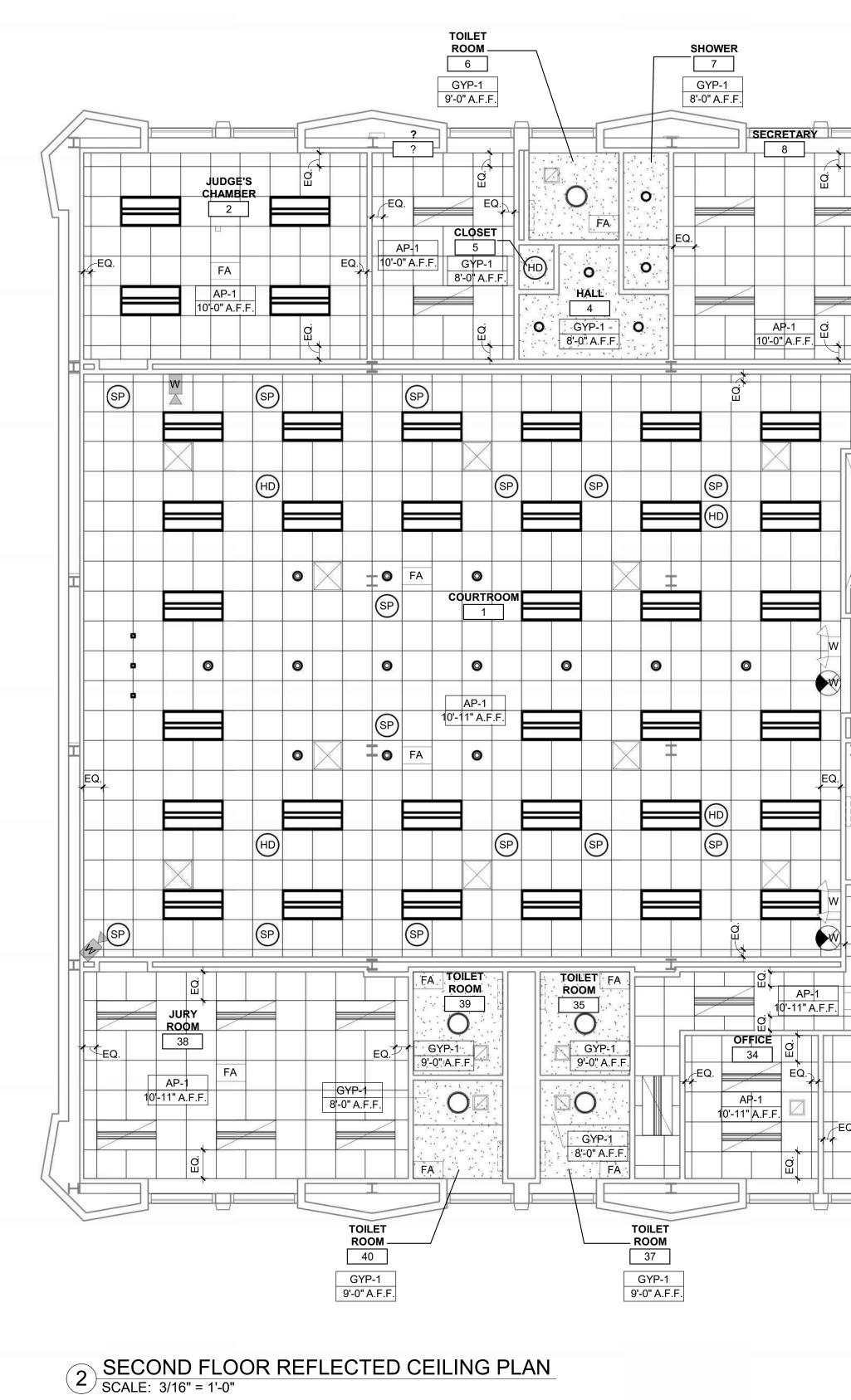
4. REFER TO ELECTRICAL DRAWINGS FOR NIGHT LIGHT LOCATIONS.

5. REFER TO MECHANICAL DRAWINGS FOR CEILING DIFFUSERS. UTILIZE REFLECTED CEILING PLAN FOR LOCATION AND COORDINATION OF ITEMS. ANY DISCREPANCY BETWEEN THE MECHANICAL AND ARCHITECTURAL DRAWINGS SHOULD BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IMMEDIATELY. 6. ALL CEILING HEIGHTS TO BE ABOVE FINISHED FLOOR FOR EACH ROOM. THESE ARE +/- THE CURRENT CEILING HEIGHTS. NEW CEILINGS ARE TO BE INSTALLED AT SAME HEIGHT.

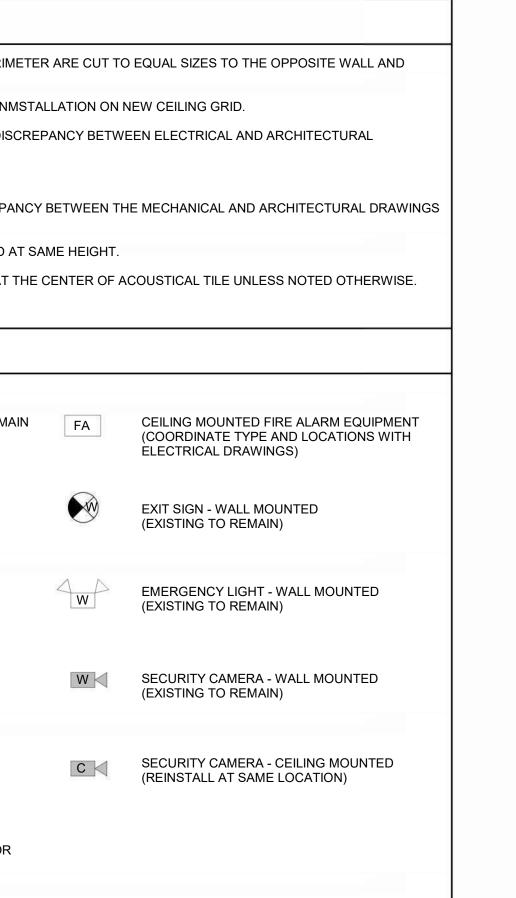
7. THE ENTIRETY OF THE 2ND FLOOR IS TO BE SPRINKLERED. COORDINATE WITH FIRE PROTECTION DRAWINGS. PLACEMENT OF SPRINKLER HEADS SHALL BE AT THE CENTER OF ACOUSTICAL TILE UNLESS NOTED OTHERWISE. NOTED COORDINATE LOCATION WITH ELECTRICAL, H.V.A.C. FIXTURES AND EQUIPMENT.

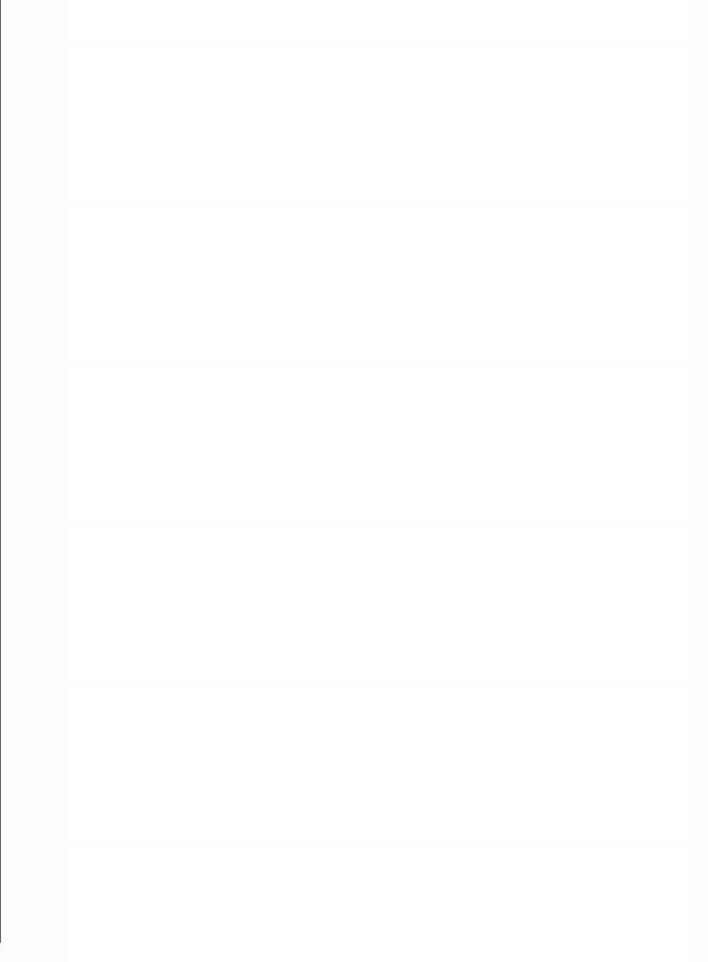
CEILING LEGEND

AP-1 2' x 2' ACOUSTICAL PANEL CEILING		3' DIA. CEILING MOUNTED LED LIGHT FIXTURE	O	EXISTING SPRINKLER HEAD TO REMAI
<u>AP-2</u> 2' x 2' ACOUSTICAL PANEL CEILING (WET AREA)		6" x 4' SURFACE MOUNTED LED LIGHT FIXTURE	\sum	SUPPLY DIFFUSER (COORDINATE LOCATIONS WITH MECHANICAL DRAWINGS)
<u>GYP-1</u> PAINTED GYPSUM BOARD ON COLD FORMED METAL FRAMING		4' COVE LED LIGHT FIXTURE		RETURN DIFFUSER (COORDINATE LOCATIONS WITH MECHANICAL DRAWINGS)
EXP NO CEILING (UNDERSIDE OF DECK EXPOSED)	\bigcirc	2' DIA. SURFACE MOUNTED ROUND LED LIGHT FIXTURE		RETURN DIFFUSER (COORDINATE LOCATIONS WITH MECHANICAL DRAWINGS)
2' x 4' RECESSED LED LIGHT FIXTURE	Ø	6" DIA. RECESSED LED DOWNLIGHT	(SP)	CEILING MOUNTED SPEAKER (COORDINATE LOCATIONS WITH ELECTRICAL DRAWINGS)
2' x 4' RECESSED LED LIGHT FIXTURE		3" SQ. WALL WASHER LED LIGHT FIXTURE	HD	CEILING MOUNTED HEAT DETECTOR (COORDINATE LOCATIONS WITH ELECTRICAL DRAWINGS)
2' x 4' RECESSED LED LIGHT FIXTURE (HIGH ABUSE)		WALL MOUNTED LED LIGHT FIXTURE	SD	CEILING MOUNTED SMOKE DETECTOR (COORDINATE TYPE AND LOCATIONS V ELECTRICAL DRAWINGS)



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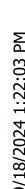


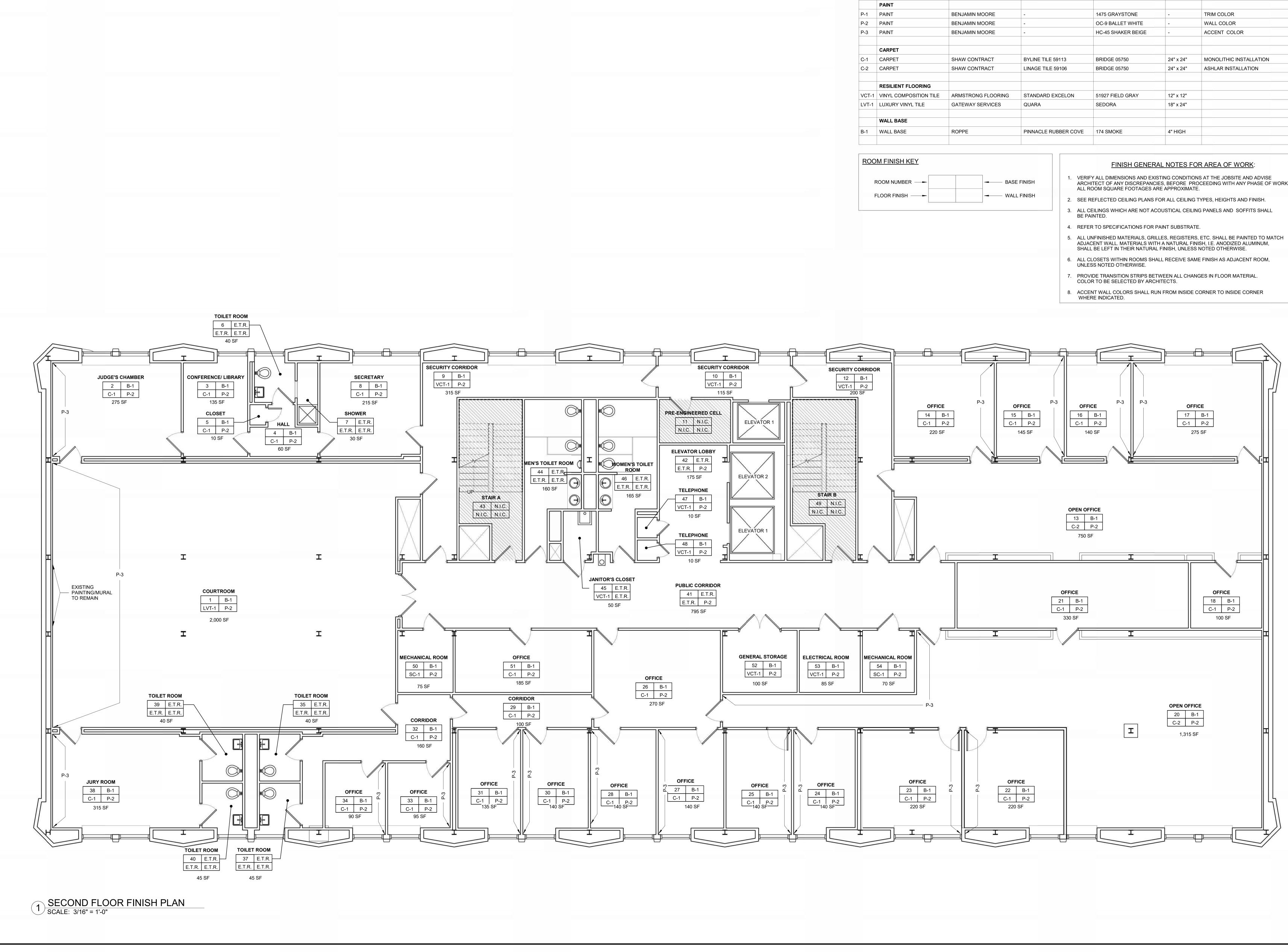


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	$\begin{bmatrix} A \\ FA \\ CONTRACT \\ CONTR$
JANITOR'S JANITOR'S CLOSET 45 W SD FA 8'-0" A.F.F. W W Image: Close of the second sec	TELEPHONE 47 GYP-A 8-0°-A.F.F. 41 FA 50 6VP-1 8-0°-A.F.F. 6VP-1 70
FA SP SD	
EQ. EQ. AP-1 32 0 0 10'-11" A.F.F. 32 0 0 0 0 FA 0 0 0 0 0 OFFICE 0 0 0 0 0 33 0 0 0 0 0 0 AP-1 0'-11" A.F.F. 0'-11" A.F.F. 0'-11" A.F.F. 0'-11" A.F.F.	OFFICE OFFICE OFFICE OFFICE OFFICE OFFICE 20 AP-1 FC. AP-1 FC. FC. FC. 9-0"A.F.F. 9-0"A.F.F. 9-0"A.F.F. 9-0"A.F.F. 9-0"A.F.F. FC. AP-1

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SECOND FLOOR REFLECTED CEILING PLAN			
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	1		FINISH MATERIAL	LEGEND		
TAG	FINISH	MANUFACTURER	STYLE	COLOR	SIZE	COMMENTS
	GENERAL					
E.T.R.	EXISTING TO REMAIN	-	-	-	-	
N.I.C.	NOT IN CONTRACT	-	-	-	-	
	PAINT					
P-1	PAINT	BENJAMIN MOORE	-	1475 GRAYSTONE	-	TRIM COLOR
P-2	PAINT	BENJAMIN MOORE	-	OC-9 BALLET WHITE	-	WALL COLOR
P-3	PAINT	BENJAMIN MOORE	-	HC-45 SHAKER BEIGE	-	ACCENT COLOR
	CARPET					
C-1	CARPET	SHAW CONTRACT	BYLINE TILE 59113	BRIDGE 05750	24" x 24"	MONOLITHIC INSTALLATION
C-2	CARPET	SHAW CONTRACT	LINAGE TILE 59106	BRIDGE 05750	24" x 24"	ASHLAR INSTALLATION
	RESILIENT FLOORING					
VCT-1	VINYL COMPOSITION TILE	ARMSTRONG FLOORING	STANDARD EXCELON	51927 FIELD GRAY	12" x 12"	
LVT-1	LUXURY VINYL TILE	GATEWAY SERVICES	QUARA	SEDORA	18" x 24"	
	WALL BASE					
B-1	WALL BASE	ROPPE	PINNACLE RUBBER COVE	174 SMOKE	4" HIGH	

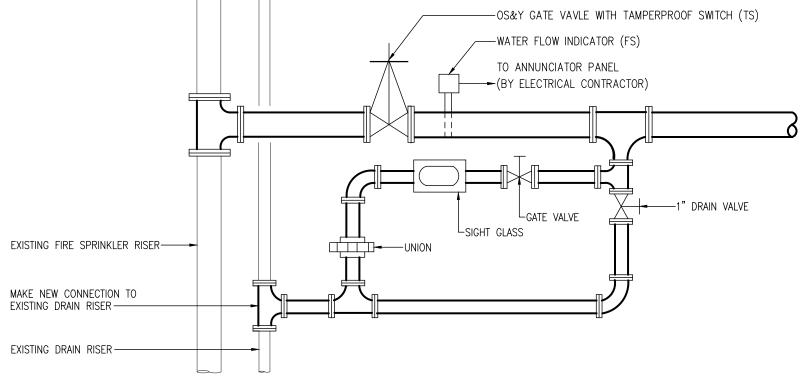
ROOM FINISH KEY			
			BASE FINISH
FLOOR FINISH		-	WALL FINISH

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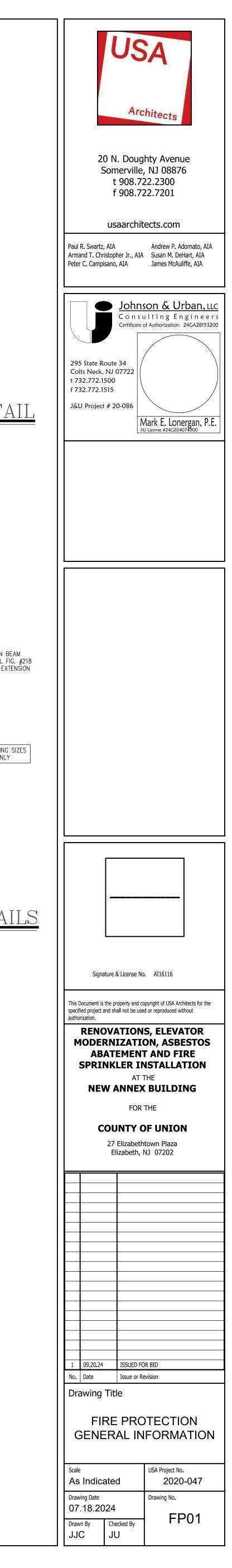
<u>COORDINATION DRAWINGS</u>	1.) <u>GENERAL REQUIREMENTS;</u>
CONTRACTOR IS ADVISED THAT CEILING AND CHASE SPACE TO ROUTE DUCTWORK, PIPING AND CONDUIT IS LIMITED AND CONGESTED. THE GENERATION AND SUBMISSION OF COORDINATION DRAWINGS REFLECTING	A. DRAWINGS ARE DIAGRAMMATIC AND GENERAL ARRANGEMENT.
THE WORK OF ALL TRADES IS REQUIRED. EACH TRADE SHALL INDICATE THEIR WORK IN AUTOCAD FORMAT ON ½ SCALE FLOOR PLANS IN A COMBINED DRAWING FILE CONTRACTORS SHALL MAKE A GOOD FAITH FEFORT TO RESOLVE CONFLICTS BETWEEN	B. VERIFY ALL GOVERNING DIMENSION BUILDING.
DRAWING FILE. CONTRACTORS SHALL MAKE A GOOD FAITH EFFORT TO RESOLVE CONFLICTS BETWEEN TRADES PRIOR TO SEEKING RESOLUTION FROM THE ARCHITECT OR ENGINEER. DRAW SECTIONS AND ELEVATIONS AS REQUIRED TO ACCURATELY REPRESENT THE WORK.	C. COORDINATE ALL WORK WITH OTHE MINIMIZE INTERFERENCE WITH EXIS FACILITIES. TO FACILITATE TIMELY (AVOID NECESSITY FOR CUTTING AN
PIPING AND CONDUIT SHALL BE RUN BETWEEN JOISTS (ABOVE RATED SHEETROCK) WHERE REQUIRED TO COORDINATE THE WORK AT NO ADDITIONAL COST.	FURNISH TO OTHER AFFECTED TRA NECESSARY INFORMATION WORKING MATERIALS REQUIRED FOR INSTALL
CONSTRUCTION MANAGER SHALL CONDUCT COORDINATION MEETINGS ATTENDED BY A KNOWLEDGEABLE REPRESENTATIVE OF EACH TRADE TO REVIEW COORDINATION DRAWINGS AND RESOLVE ANY CONFLICTS.	COMPLETION OF ALL WORK. D. PROVIDE WORKMANSHIP OF HIGHE
REFER TO INDIVIDUAL SPECIFICATION SECTIONS FOR ADDITIONAL REQUIREMENTS.	PIPING AND SPRINKLER HEADS IN MANUFACTURER'S RECOMMENDATIO NFPA-13 2016, LOCAL FIRE DEPA
 DUCTWORK AND DAMPERS PIPING AND VALVES 	INSURANCE UNDERWRITERS AND A BUILDING CODES LATEST EDITION.
 CONDUIT EQUIPMENT STRUCTRUAL MEMBERS ARCHITECTURAL COMPONENTS 	E. PROVIDE ONE YEAR GUARANTEE AU WORKMANSHIP AND MATERIALS.
 7. SPRINKLER HEADS 8. LIGHTING 9. ACCESS PANELS 	F. NO SHUT-DOWN OF EXISTING FIRE SYSTEMS SHALL BE DONE WITHOU PERMISSION FROM BUILDING MANA
10. FIRE AND SMOKE DAMPERS 11. ALL REQUIRED CLEARANCES FOR ACCESS AND MAINTENANCE 12. DIFFUSERS, REGISTERS AND GRILLES	FOR SHUT DOWNS MUST BE DELIN OWNERS REP, AT LEAST (7) WOF TO THE REQUESTED SHUTDOWN A SUBJECT TO THE FINAL APPROVAL
13. SUPPORTS AND ANCHORS 14. EXPANSION FITTINGS AND LOOPS	KEEP THE SHUT DOWN TIME TO A SHALL BE TO A PROPERLY CONNE WITHOUT CAUSING DAMAGE TO OTH
	PROPERTY. G. THIS IS A PERFORMANCE SPRINKLER I
SPRINKLER GENERAL NOTES:	CONTRACTOR SHALL FOLLOW NFPA 13 THE GUIDELINES SHOWN ON THESE DF SPRINKLER DESIGN FOR THIS PROJECT
1. ALL CONCEALED SPRINKLER HEADS SHALL HAVE WHITE FINISH CAPS UNLESS OTHERWISE NOTED ON DRAWINGS OR AS OTHERWISE DIRECTED BY ARCHITECT.	PROVIDE SIGNED AND SEALED HYDRAU SHOP DRAWINGS INCLUDING DETAILS F CODE OFFICIAL, DCA-STATE OF NEW J ARCHITECT.
2. ALL SPRINKLER HEAD LOCATIONS TO BE COORDINATED WITH ARCHITECTURAL REFLECTED CEILING PLANS – IN GYP. BD CEILING AREAS SPRINKLERS TO BE ALIGNED WITH OR CENTERED BETWEEN ADJACENT LIGHT FIXTURES.	
 SPRINKLER HEAD LOCATIONS SHALL BE LOCATED TO AVOID OBSTRUCTIONS (LIGHTING FIXTURES, BEAMS, ETC.) WITH MINIMUM ALLOWABLE DISTANCES AS REQUIRED PER NFPA-13 AND LOCAL JURISDICTION. 	H. FIRE PROTECTION CONTRACTOR IS RES COMPLYING WITH THE REQUIREMENTS (MARSHALL CONCERNING FIRE ALARM S SPRINKLER SHITDOWN PLANS PROCEI
4. ADDITIONAL PENDENT SPRINKLER HEADS TO BE INSTALLED WHERE THE SOFFITS USED FOR THE INSTALLATION OF	SPRINKLER SHUTDOWN PLANS, PROCED WATCH PLANS THAT WILL BE IMPLEMEN INTERRUPTIONS DURING DEMOLITION AN
SIDEWALL SPRINKLER HEADS EXCEEDS 8". 5. ALL SPRINKLER HEAD LOCATIONS SHALL BE COORDINATED WITH ARCHITECTURAL REFLECTED CEILING PLANS.	2.) <u>SCOPE OF WORK;</u>
6. WALL PENETRATION SEALING NOTE: ALL NEW AND EXISTING PENETRATIONS THROUGH WALL TO ADJACENT AREAS	A. PROVIDE ALL REQUIRED LABOR, M EQUIPMENT, HYDRAULIC CALCULATI CERTIFICATES, INSPECTION, TESTIN
SHALL BE SEALED AIR TIGHT IN FASHION TO SMOKE BARRIER CONSTRUCTION.	SERVICES NECESSARY OR REQUIRE SAFE INSTALLATION OF WORK IN F WITH NFPA-13 REQUIREMENTS ALI
SPRINKLER DESIGN CRITERIA	DRAWINGS AND/OR HEREIN SPECIF B. CUTTING AND PATCHING.
1) LIGHT HAZARD SPRINKLER CRITERIA	3.) <u>WORK NOT INCLUDED;</u> 1.) FINISHED PAINTING.
-MAX. SPRINKLER HEAD COVERAGE - 225 SQ.FT. -DESIGN DENSITY 0.10 GPM/SQ. FT.	4.) <u>SUBMITTALS;</u>
-DESIGN AREA 1500 SQ. FT. 2) ORDINARY HAZARD SPRINKLER CRITERIA	A. SHOP DRAWINGS 1.) SPRINKLERS
–MAX. SPRINKLER HEAD COVERAGE – 130 SQ.FT. –DESIGN DENSITY 0.15 GPM/SQ. FT.	2.) VALVES 3.) HANGERS
-DESIGN AREA 1500 SQ. FT.	4.) PIPING LAYOUT COORDINATED TRADES INCLUDE ON EACH W
UNLESS OTHERWISE SPECIFICALLY APPROVED,	LAYOUT CERTIFICATE THAT ALL CONDITIONS HAVE BEEN CHEC TRADES, AND THAT NO CONFL
HANGER SIZE AND SPACING SHALL BE WITHIN FOLLOWING LIMITS:	SUBMISSION WILL NOT BE API SUCH CERTIFICATION. 5.) HYDRAULIC CALCULATIONS BROUGHT BACK
PIPE SIZE MAX. HANGER SPACING MIN. ROD SIZE 1" 8 FT. O.C. 3/8" 1-1/4" TO 2" 10 FT. O.C. 3/8"	CONNECTION TO THE RISER. VERIFY PRES RISER, PROVIDE COVER SHEET AS PER FIG NFPA 13 2016. INDICATE SOURCE OF WA
2-1/2" TO 3-1/2" 12 FT. O.C. 1/2"	WATER RESERVE AND ELEVATION. DESIGN S FLOW PRESSURE MARGIN OF SAFETY.
THE ABOVE HANGER SPACINGS APPLY TO STRAIGHT RUNS OF PIPE ONLY. AT POINTS WHERE VALVES, SPECIALTIES OR BRANCH CONNECTIONS ARE LOCATED, ADDITIONAL	B. <u>AS BUILT DRAWINGS;</u> 1.) FURNISH AND INSTALL "AS-BU DRAWINGS FOR SPRINKLER IN
HANGERS OR SUPPORTS SHALL BE USED TO PROPERLY SUPPORT THE LOAD.	DRAWINGS FOR SPRINKLER IN: C. <u>SPRINKLER HYDRAULIC CALCULATIC</u>
CONTRACTOR SHALL CERTIFY THAT ALL COMPONENTS/DEVICES TO BE INSTALLED AS PART	1.) THE CONTRACTOR SHALL SUB SEALED SPRINKLER HYDRAULIO FOR REVIEW AND APPROVAL E
OF THE AUTOMATIC FIRE SPRINKLER SYSTEM ARE LISTED FOR FIRE SPRINKLER SYSTEM USE AND THAT CHANGES OR MODIFICATIONS BEING MADE DO NOT CAUSE THE SYSTEM	ARCHITECT/ENGINEER OF REC 2.) PREPARE FOR SUBMITTAL PLANS EXISTING DISTRIBUTION RIDING SU
DEMAND TO EXCEED THE AVAILABLE WATER SUPPLY IN EXISTING CALCULATED REMOTE AREAS, CAUSE A NEW REMOTE AREA DEMAND THAT EXCEEDS THE AVAILABLE WATER SUPPLY, OR AFFECT THE AVAILABLE GPM OR PSI AVAILABLE TO EXISTING SYSTEMS. IF	EXISTING DISTRIBUTION PIPING, SI ELEVATIONS, ETC.
THE CHANGES BEING PROPOSED MAKE THE DEMAND EXCEED THE AVAILABLE SUPPLY OR OTHERWISE AFFECT THE HYDRAULIC DESIGN, THEN NEW HYDRAULIC CALCULATIONS SHALL BE PROVIDED FOR REVIEW. THE SUBMISSION MUST BE SIGNED AND SEALED BY A	
LICENSED NJ PROFESSIONAL ENGINEER.	
CONTRACTOR SHALL CONTACT AND COORDINATE WITH NEW SUPPRESSION AND SECURITY	
VENDORS. SUPPRESSION VENDOR	
JOHN CONTROLS (888)746–7539 930 Riverview Drive	 SHOP DRAWINGS SHALL BE SUBMITTED FO a) SUBMIT MANUFACTURES SPECIFICATIONS
Suite 800 Totowa NJ 07512 USA	PIPE, FITTINGS, VALVES, GAUGES, PUMPSb) SUBMIT NOMINAL PIPE SIZE, SCHEDULE,
(973)664 2536 Direct	c) INCLUDE THE TYPE AND LOCATION OF Ad) INDICATE REQUIRED SWAY BRACING ON
SECURITY & DOOR HARDWARE VENDOR MAFFEY'S SECURITY GROUP 1172–80 E. GRAND ST.,	e) PROVIDE THE TYPE AND LOCATION OF A
ELIZABETH, NJ 07201 908–351–1172	f) CLARIFY TYPE AND TEMPERATURE RATINA) INCLUDE A FIRE STANDPIPE DIAGRAM AI
	J) SHOP DRAWING FOR AUTOMATIC SPRINKLE
	2. THE SUBMITTAL SHALL INCLUDE THE FOLLA) SUBMIT MANUFACTURES SPECIFICATIONS
	 B) INCLUDE A CURRENT WATER FLOW TEST POINT, FLOW LOCATION, STATIC PRESSURE, R
	MAIN SIZE, TIME AND DATE. PROVIDE DRAWIN CURRENT OR PROPOSED SPRINKLER RISER C OBTAIN A MINIMUM PRESSURE DROP OF 25%
	DAILY AND SEASONAL FLUCTUATIONS, POSSIBL OR ANY OTHER CONDITION THAT COULD AFFE
	C) INDICATE THE TYPE OF HAZARD AND THD) PROVIDE A FLOW AND PRESSURE SUMM
	E) INCLUDE A WATER ANALYSIS GRAPH.
	ALL DOCUMENTS PREPARED BY PEOPLE OTHE INDICATING THAT THEY HAVE BEEN REVIEWED
	F) HYDRAULIC CALCULATIONS FOR AUTOMAT3. ANY CONTRACTOR PERFORMING FIRE PRO
	OF FIRE ALARM SYSTEM WORK, DFS CERTIFIC SUPPRESSION, OR OTHER RELATED WORK SH
	<u> </u>

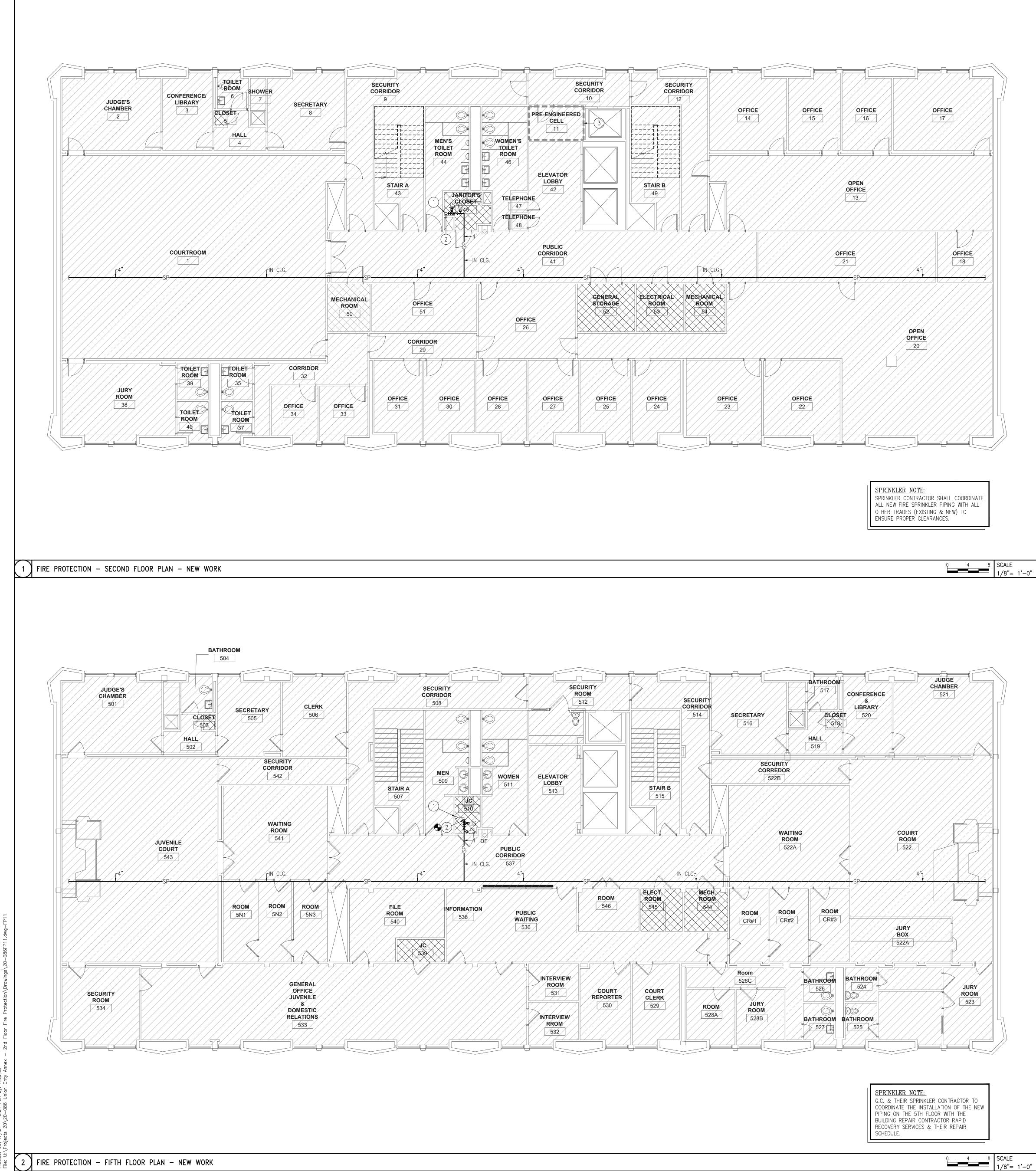
PERFORMANCE FIRE SPRINKLER SPEC	CIFICATIONS	FIRE SPRINKLER GENERAL NOTES	
 CONNECTION TO EXISTING WORK CONNECTION WORK CONNECTION TO EXISTING WORK SUBJECTION TO	 15.) <u>DENIMAGE</u> 16.) <u>DENIMAGE</u> 16.) <u>LEST</u> 16.) <u>LEST</u> 16.) <u>LEST</u> 16.) <u>LEST</u> 16.) <u>LEST</u> 16.) <u>LEST</u> 17. DELEMINATION PRESSURE, MEAN DELEMING OF THE SYSTEM SINGLAD UNDER SYSTEM SINGLAD UNDER SYSTEM SINGLAD UNDER SYSTEM SINGLAD UNDER SINGLAD UNDER SYSTEM SINGLAD UNDER SYSTE	 DER SPRINKLER GENERAL NOTES I. I. S. I. I. CHTH OF ILES IRRAMIS AND SPRINGPINGS FOR THE CONTRACTS IN CLAMES AND SPRINGPING AND AND SPRINGPING AND AND SPRINGPING AND AND AND AND AND AND AND AND AND AND	PHONE BRANCH AND SERVICE AND ALTER SPECIAL SERVICE AND
BY THE CORD. S SHOWING SIZES, C. SPRINKLERS IN AREAS WITH HUNG CEILINGS SHALL MA EXISTING. B. HIGHER TEMPERATURE RATING WHERE SUBJECT TO ABI HEATING CONDITIONS AND/OR WHERE INDICATED. C. SPRINKLER HEADS TO BE CENTERED ON CEILING TILES AS PER CONTRACT DWGS.		 SPRINKLER CONTRACTOR SHALL PROVIDE AND PAY FOR HOLES THROUGH STRUCTURAL MEMBERS WHERE AND WHEN REQUIRED, AND ONLY AFTER COORDINATED SIGNED-OFF SHOP DRAWINGS ARE PREPARED WITH ALL OTHER TRADES INDICATING THE NEED FOR CUTS. DRAWINGS INDICATING CUTS, ALONG WITH WRITTEN REQUEST SHALL BE SENT TO THE ARCHITECT/ENGINEERS FOR THEIR APPROVALS. NO ADDITIONAL COMPENSATION WILL BE APPROVED DUE TO LACK OF COORDINATION OR ACTUAL FIELD CONDITIONS. ALL PIPING SYSTEMS SHOWN ON THESE DRAWINGS ARE DIAGRAMMATIC AND NO ATTEMPT HAS BEEN MADE TO INDICATE OFFSETS AND PIPING ARRANGEMENTS TO SUIT ACTUAL INSTALLATION REQUIREMENTS. SPRINKLER CONTRACTOR SHALL COORDINATE WITH THE G.C. AND ALL OTHER TRADES WHEN LAYING OUT HIS WORK. ALL REQUIRED DRAINAGE SHALL BE PIPED TO THE OUTSIDE UNLESS NOTED OTHERWISE. AS THE ACTUAL LIFE SPAN OF THE SPRINKLER SYSTEM IS DEPENDENT ON MANY VARIABLES, INCLUDING BUT NOT LIMITED TO WATER QUALITY AND ATMOSPHERIC CONDITIONS. THE ENGINEER ASSUMES NO LIABILITY OR RESPONSIBILITY OF THE LIFE SPAN OF THE SPRINKLER SYSTEM DO TO 	3. HANGER COMPONENTS SHALL ALL BE AS INDICATED OR APPROVED EQUAL (WITH REQUIRED APPROVALS). <u>TYPICAL SPRINKLER HANGER DETAIL</u> NOT TO SCALE
FIRE SPRINKLER NOTES OR REVIEW AND APPROVAL PRIOR TO SYSTEM INSTALLATION, AND SHALL INCLUDE, BUT N S FOR ALL SPRINKLER SYSTEM COMPONENTS INCLUDING; SPRINKLER HEADS, PS, BACKFLOW PREVENTION DEVICE, AND TRIM.	OT BE LIMITED TO, ALL OF THE FOLLOWING:	ASSUMES NO LIABILITY OR RESPONSIBILITY OF THE LIFE SPAN OF THE SPRINKLER SYSTEM DO TO MICRO-BIOLOGICALLY INFLUENCED CORROSION (MIC). THE SPRINKLER CONTRACTOR AND/OR THE GENERAL CONTRACTOR SHALL HAVE THE SPRINKLER SYSTEM TESTED AND TREATED (IF NECESSARY) FOR PROTECTION AGAINST MICRO-BIOLOGICALLY INFLUENCED CORROSION (MIC).	
E, LENGTH, AND CENTERLINE DIMENSIONS. ALL FASTENERS, HANGERS, AND SWAY BRACING. N ALL THE SPRINKLER RISERS. ALL FITTINGS, JOINTS, WELDS AND BENDS. NG OF THE SPRINKLERS HEADS. AND CALCULATIONS. ER SYSTEMS SHALL BE SIGNED AND SEALED BY A NEW JERSEY LICENSED PROFESSIONAL LOWING: S AND INSTALLATION INSTRUCTIONS.	ARCHITECT OR ENGINEER.		OS&Y GATE VAVLE WITH TAMPERPROOF SWITCH (TS) WATER FLOW INDICATOR (FS) TO ANNUNCIATOR PANEL (BY FLECTRICAL CONTRACTOR)

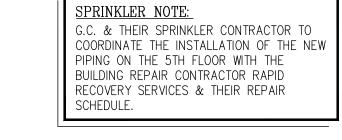
- ING:
- D INSTALLATION INSTRUCTIONS.
- ITHIN ONE YEAR] INCLUDING LOCATION AND ELEVATION OF STATIC AND RESIDUAL TEST GAUGE WITH RELATION TO THE RISER REFERENCE [WITHIN ONE YEAR] INCLUDING LOCATION AND ELEVATION OF STATIC AND RESIDUAL TEST GAUGE WITH RELATION TO THE RISER REFERENCE SIDUAL PRESSURE, FLOW [PITOT] PRESSURE, OUTLET SIZE USED, MAKE AND MODEL OF FLOW HYDRANT, HYDRANT COEFFICIENT, WATER OR SKETCH OF TEST AND FLOW HYDRANTS IN RELATION TO PROPOSED SITE. PRESSURE HYDRANT SHALL BE HYDRANT CLOSEST TO INNECTION; FLOW HYDRANT SHALL BE DOWNSTREAM OF THE PRESSURE HYDRANT. SUFFICIENT FLOW HYDRANTS SHALL BE OPERATED TO AT THE PRESSURE HYDRANT TO INSURE ACCURACY OF THE FLOW TEST RESULTS. AN ADJUSTMENT TO THE WATER FLOW TEST DATA FOR INTERRUPTIONS BY FLOOD OR ICE CONDITIONS, LARGE SIMULTANEOUS INDUSTRIAL USE, FUTURE DEMAND ON THE WATER SUPPLY SYSTEM, IT HE WATER SUPPLY SHALL BE MADE AS APPROPRIATE.
- EQUIRED DENSITY.
- HAN THE DESIGN PROFESSIONAL SHALL BE REVIEWED BY THE DESIGN PROFESSIONAL AND A SIGNED AND SEALED LETTER SUBMITTED FOUND TO BE IN CONFORMANCE WITH THE REGULATIONS FOR THE DESIGN OF THE BUILDING PER N.J.A.C. SPRINKLER SYSTEMS SHALL BE SIGNED AND SEALED BY A NEW JERSEY LICENSED PROFESSIONAL ARCHITECT OR ENGINEER. ECTION EQUIPMENT WORK SHALL HAVE THE APPROPRIATE CERTIFICATION ISSUED BY THE NJ DIVISION OF FIRE SAFETY, OR IN THE CASE FION, LICENSED ELECTRICAL CONTRACTORS OR LICENSED FIRE ALARM CONTRACTORS. CERTIFICATION INFORMATION FOR SPRINKLER, HOOD L BE PROVIDED WHEN SHOP DRAWINGS ARE SUBMITTED. FIRE ALARM CERTIFICATION SHALL BE AT TIME OF PERMIT APPLICATION.



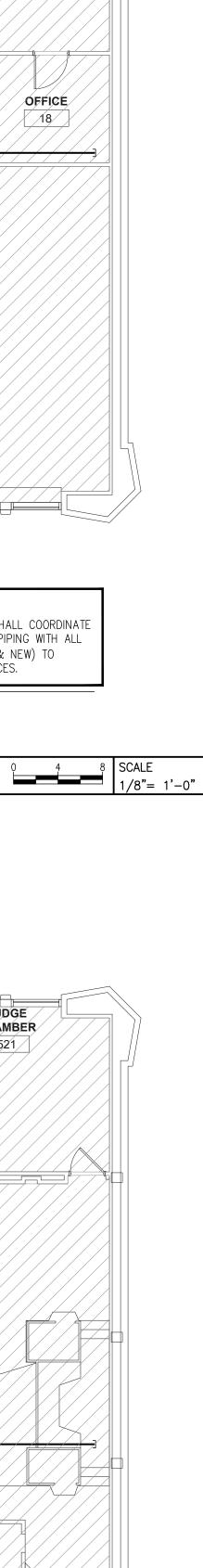
DETAIL OF WATER FLOW INDICATOR ASSEMBLY NOT TO SCALE







FIR	E PROTECTION CRITERIA SYMBOLS	NEW WORK KEY NOTES ((1) , (2) , ETC.)	
	COMMON_SPACE/CORRIDORSWET_TYPENFPA 13SYSTEM_TYPE:WET_PIPE_SYSTEMOCCUPANCY_CLASS:LIGHT_HAZARDDENSITY:0.10 GPM/SQ_FTAREA_OF_APPLICATION:1,500 SQ_FTMAXSPRINKLER_HEAD_COVERAGE_225 SQ_FT	 EXISTING 4" SPRINKLER RISER TO REMAIN. COORDINATE CONNECTION IN FIELD. MAKE NEW CONNECTION TO EXISTING 4" SPRINKLER RISER AT CEILING. SPRINKLER CONTRACTOR TO INSPECT EXISTING SECURITY TYPE SPRINKLER HEAD THIS AREA FOR FUNCTIONALITY. SPRINKLER HEAD IS TO REMAIN CONNECTED TO EXISTING WATER SOURCE. 	
	STORAGE SPACES & MECHANICAL ROOMS WET TYPE SPRINKLER SYSTEM – NFPA 13 SYSTEM TYPE: WET PIPE SYSTEM OCCUPANCY CLASS: ORDINARY HAZARD GROUP-1 DENSITY: 0.15 GPM/SQ FT AREA OF APPLICATION: 1,500 SQ FT MAX. SPRINKLER HEAD COVERAGE 130 SQ FT		



AD IN TO	USA Architects
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	usaarchitects.comPaul R. Swartz, AIAAndrew P. Adornato, AIAArmand T. Christopher Jr., AIASusan M. DeHart, AIAPeter C. Campisano, AIAJames McAuliffe, AIA
	Johnson & Urban, LLCC o n s u l t i n g E n g i n e e r sCertificate of Authorization: 24GA28153200295 State Route 34Colts Neck, NJ 07722t 732.772.1500f 732.772.1515J&U Project # 20-086Mark E. Lonergan, P.E.NJ License #24GE04074900
	Signature & License No. AI16116 This Document is the property and copyright of USA Architects for the specified project and shall not be used or reproduced without authorization.
	RENOVATIONS, ELEVATOR MODERNIZATION, ASBESTOS ABATEMENT AND FIRE SPRINKLER INSTALLATION AT THE NEW ANNEX BUILDING
	FOR THE COUNTY OF UNION 27 Elizabethtown Plaza Elizabeth, NJ 07202
	1 09.20.24 ISSUED FOR BID No. Date Issue or Revision Drawing Title FIRE PROTECTION FLOOR PLAN NEW WORK
	Scale USA Project No. As Indicated 2020-047 Drawing Date Drawing No. 07.18.2024 FP11 JJC JU

MARK

PART 1 GENERAL

1.01 GENERAL REQUIREMENTS

THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER.

A. MATERIALS AND WORKMANSHIP, UNLESS OTHERWISE NOTED, SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS. ALL MATERIALS AND EQUIPMENT TO BE NEW UNLESS OTHERWISE NOTED.

B. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST ADOPTED UNIFORM CONSTRUCTION CODE OF NEW JERSEY, INTERNATIONAL BUILDING CODE 2018, INTERNATIONAL FUEL GAS CODE 2018, NATIONAL STANDARD PLUMBING CODE 2018, AND ALL OTHER APPLICABLE LOCAL, STATE, AND FEDERAL CODES. THESE PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR WHO SHALL INFORM THE OWNER. PRIOR TO SUBMITTING A PROPOSAL, OF ANY WORK OR MATERIALS WHICH VIOLATE ANY OF THE LAWS AND REGULATIONS. ANY WORK DONE BY THE CONTRACTOR CAUSING SUCH VIOLATIONS SHALL BE CORRECTED BY

C. FURNISH ALL MATERIALS, LABOR, TOOLS AND EQUIPMENT NECESSARY TO COMPLETE AND MAKE READY FOR OPERATION BY OWNER ALL PLUMBING WORK INDICATED ON THE CONTRACT DOCUMENTS.

D. THIS CONTRACTOR IS TO ASSUME COMPLETE RESPONSIBILITY FOR STORING, HANDLING, INSTALLATION FOR ALL EQUIPMENT IN HIS SCOPE OF WORK.

E. ALL WORK SHALL BE INSTALLED IN ACCORDANCE TO MANUFACTURERS' INSTRUCTIONS AND RECOMMENDED OR REQUIRED SERVICE AND SAFETY CLEARANCES.

F. ALL WORK SHALL BE INSTALLED IN A MANNER AS TO CONSERVE AS MUCH SPACE AS POSSIBLE WITHOUT VIOLATING CODE REQUIREMENTS AND/OR MANUFACTURER'S RECOMMENDED SERVICE AND SAFETY

G. THE DRAWINGS INDICATE REQUIRED SIZE, POINTS OF TERMINATIONS AND SUGGEST PROPER CONFIGURATION FOR FLUID FLOW, ROUTES TO CONFORM TO STRUCTURES, AVOID OBSTRUCTIONS AND PRESERVE CLEARANCES. HOWEVER, THE DRAWINGS DO NOT INDICATE EXACT LOCATION AND ALL NECESSARY OFFSETS

H. IT IS NOT THE INTENTION OF THESE SPECIFICATIONS TO DESCRIBE. NOR THE CONTRACT DRAWINGS TO SHOW IN DETAIL, ALL THE VARIOUS PIECES OF APPARATUS AND APPURTENANCES AND THEIR CONNECTIONS. THIS CONTRACTOR SHALL, AS PART OF THE CONTRACT, FURNISH AND INSTALL ALL INCIDENTALS, SUCH AS PIPING FITTINGS, VALVES, ETC. REQUIRED TO COMPLETE THE INSTALLATION OF THE EQUIPMENT. THIS CONTRACTOR SHALL REFER TO ARCHITECTURAL DRAWINGS AND PLUMBING DRAWINGS FOR EXACT LOCATION OF FIXTURES

I. SECURE PERMITS, LICENSES AND CERTIFICATES. PAY ALL FEES AND CHARGES FOR ALL WORK INSTALLED CERTIFYING COMPLIANCE WITH LOCAL CODES AND GOVERNING AUTHORITIES. DELIVER CERTIFICATES TO OWNER OR ARCHITECT PRIOR TO THE COMMENCEMENT OF ALL WORK.

J. GUARANTEE: CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE TO REPLACE OR REPAIR PROMPTLY, AND ASSUME FULL RESPONSIBILITY OF ALL EXPENSES INCURRED FOR WORKMANSHIP AND/OR EQUIPMENT IN WHICH DEFECTS OCCUR WITHIN ONE YEAR FROM DATE OF ACCEPTANCE BY OWNER.

K. CONTRACTOR BIDDING THIS JOB SHALL VISIT AND INSPECT THE JOB SITE TO BECOME FULLY KNOWLEDGEABLE OF EXISTING CONDITIONS PRIOR TO SUBMITTING HIS BID. CONTRACTOR SHALL COORDINATE THE SITE VISIT WITH THE ARCHITECT.

L. BY SUBMISSION OF THE BID, IT IS UNDERSTOOD THAT SUCH INSPECTION HAS BEEN MADE AND INCLUDES ALL THE MATERIALS, LABOR AND EQUIPMENT FOR ALL WORK.

M. CONTRACTOR SHALL ONLY STORE MATERIALS IN SPACES DESIGNATED BY THE OWNER'S REPRESENTATIVE. N. CONTRACTOR IS RESPONSIBLE TO REMOVE RUBBISH & DEBRIS FROM PREMISES AS OFTEN AS NECESSARY

OR AS DIRECTED BY OWNERS REP. AREA OF WORK IS TO BE LEFT "BROOM-CLEAN" EACH DAY. 1.02 SCOPE OF WORK

A. PROVIDE ALL REQUIRED LABOR, MATERIALS, EQUIPMENT, APPARATUS, TOOLS, CERTIFICATES, SUBMITTALS, TEMPORARY WORK AND SERVICES NECESSARY FOR A COMPLETE AND SAFE INSTALLATION OF PLUMBING WORK READY FOR USE AND OPERATION BY THE OWNER. ALL WORK SHALL BE IN FULL CONFORMITY WITH THE REQUIREMENTS OF BUILDING CODES AND ALL AUTHORITIES HAVING JURISDICTION WHETHER OR NOT SUCH WORK HAS BEEN SHOWN OR INDICATED ON THE CONTRACT DOCUMENTS.

B. THIS CONTRACTOR IS RESPONSIBLE FOR FIELD COORDINATION WITH ALL OTHER TRADES, EXERCISING CARE IN LOCATING EQUIPMENT AND MATERIAL SO AS NOT TO INTERFERE WITH ARCHITECTURAL, STRUCTURAL, HVAC OR ELECTRICAL FEATURES, DEVICES OR INSTALLATION IN THEIR FUNCTION. FAILURE TO DO SO SHALL REQUIRE THE RELOCATION AND/OR MODIFICATION OF AN INSTALLATION AT THIS CONTRACTOR'S COST.

C. CONTRACTOR SHALL FURNISH AND INSTALL ALL EQUIPMENT AND SUPPORTS, FURNISH AND INSTALL ALL PIPING, FITTINGS, APPURTENANCES, ACCESSORIES, INSULATION, ETC. AS REQUIRED FOR A COMPLETE AND OPERABLE INSTALLATION.

D. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION INCLUDING ABOVE AND UNDERGROUND PIPING, EQUIPMENT, ETC. THE CONTRACTOR SHALL INCLUDE IN THEIR SCOPE OF WORK ANY MODIFICATIONS TO THE BASE DESIGN TO ACCOMMODATE THE ACTUAL FIELD CONDITIONS.

E. CONTRACTOR SHALL SUBMIT REPRODUCIBLE "AS-BUILT" RECORD DRAWINGS, MINIMUM SCALE 1/4" = 1'-0", INDICATING THE ACTUAL AND TRUE INSTALLATION OF ALL PIPING AND EQUIPMENT.

1.03 SUBMITTALS

A. SUBMIT COORDINATED SHOP DRAWINGS ON 1/4" SCALE IND OTHER TRADES.

B. SUBMIT ALL SHOP DRAWINGS FOR REVIEW AND APPROVAL INSTALLATION.

C. IF SUBMISSIONS ARE CATALOG CUTS: SUBMIT ONE ORIGINAL BE COMPLETE. SUBMIT SHOP DRAWINGS FOR ALL PIPING MA HANGERS, SUPPORTS AND IDENTIFICATION.

PART 2 PRODUCTS 2.02 PIPING MATERIALS AND SPECIALTIES

A. STORM PIPING SHALL BE SERVICE WEIGHT HUBLESS CAST SHALL BE MARKED WITH THE COLLECTIVE TRADEMARK OF BE LISTED BY NSF. (ASTM A888).

2.03 VALVES AND SPECIALTIES

1. VALVES SHALL BE AS MANUFACTURED BY WATTS WATE (APOLLO VALVES), NIBCO INCORPORATED, OR EQUAL.

2. BALL VALVES SHALL BE TWO-PIECE, ALL BRONZE CON OR SOLDER ENDS RATED AT 600 PSI WOG, 150 PSI 3. GATE VALVES SHALL BE CLASS 125, NON-RISING STEN

OR SOLDER ENDS RATED AT 200PSI WOG, 125 PSI

4. CHECK VALVES SHALL BE CLASS 125, Y-PATTERN, AL AND THREADED OR SOLDER ENDS.

5. GLOBE VALVES SHALL BE CLASS 125, ALL BRONZE RENEWABLE SEAT, BRONZE DISC AND THREADED OR

PROVIDE ALL SPECIALTIES AND SPECIAL EQUIPMENT CALLED FOR ON THE DRAWINGS AND IN THIS SPECIFIC

2.04 HANGERS AND SUPPORTS A. SUPPORTS AND HANGERS SHALL BE PROVIDED FOR HORIZO SHALL CONFORM TO THE LATEST ASA CODE FOR PRESSUR

PIPE INSULATION. B. PIPE HANGERS AND SUPPORTS SHALL BE SECURELY MOUNT

C. INSULATION PROTECTION: FOR ALL INSULATED PIPE, FURNISI SHIELDS, INSTALLE BETWEEN THE HANGER AND INSULATION.

2.05 INSULATING MATERIALS AND IDENTIFICATION

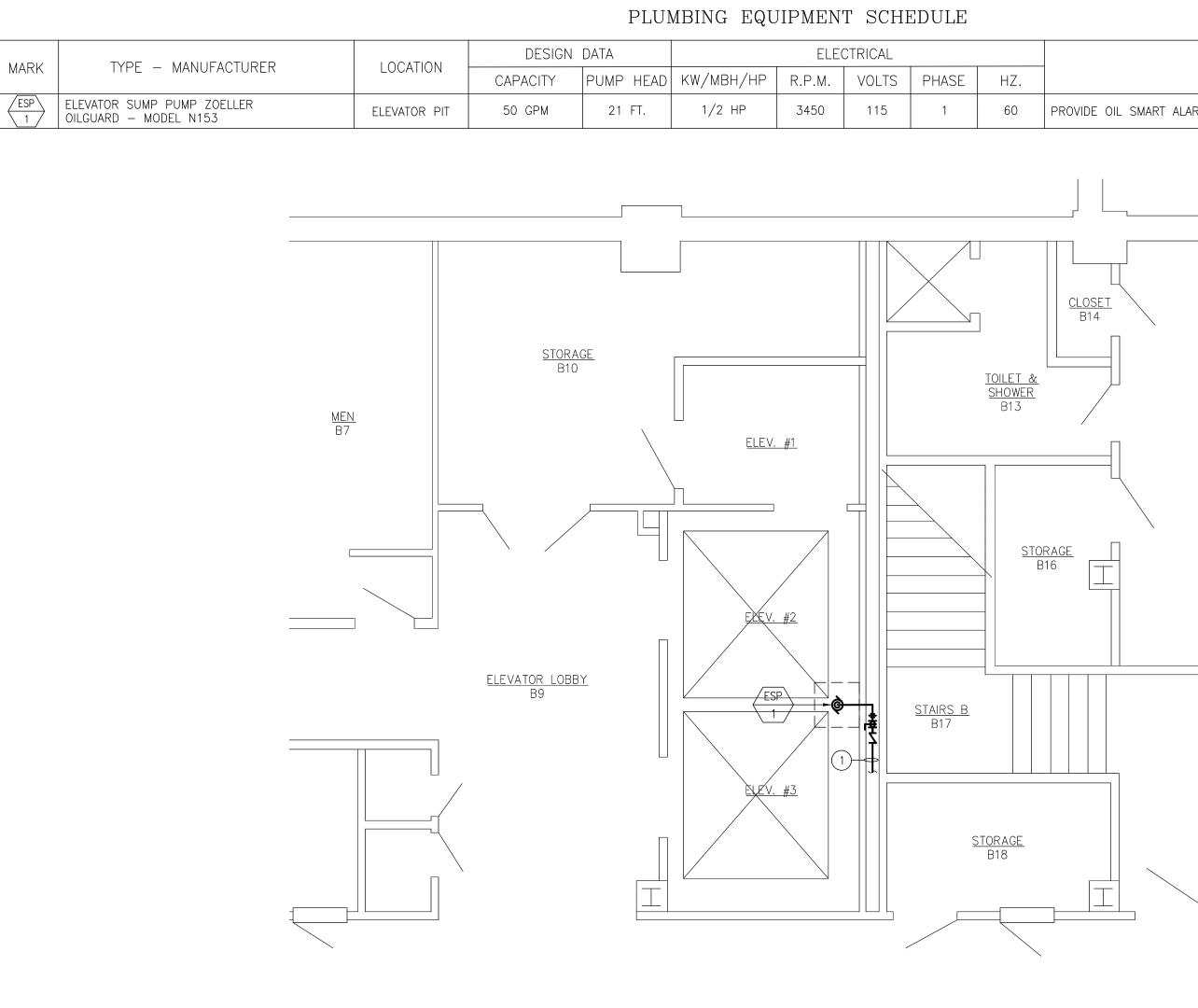
A. INSULATION FOR ALL ABOVE GROUND WATER PIPING SHALL OF 0.25 AT 75°F MEAN TEMPERATURE WITH A FACTORY APP BARRIER JACKET.

B. INSULATION FOR FITTINGS AND VALVES SHALL BE MINERAL RATED, 20 MIL PVC COVERS.

C. ALL TESTING SHALL BE PERFORMED AND ACCEPTED BEFORE

D. PROVIDE PRE-PRINTED PIPE LABELS WITH SELF-ADHESIVE SERVICE AND FLOW DIRECTION SPACED AT MAXIMUM INTERV

E. INSTALL TAGS ON VALVES AND CONTROL DEVICES IN PIPING SCHEDULE.



PUBLIC CORRIDOR B34

CLEARANCES.

WHICH MIGHT HAVE TO BE MADE IN ORDER TO CONFORM TO FIELD CONDITIONS.

INCLUDING TYPE AND QUANTITIES.

	PLUMBING GENERAL NOTES
IDICATING ALL EQUIPMENT, PIPING AND WORK BY PRIOR TO PURCHASE, FABRICATION AND	 DO NOT SCALE FROM THESE DRAWINGS. DO NOT MAKE ANY CHANGES OR SUBSTITUTIONS WITHOUT SPECIFIC WRITTEN APPROVAL FROM THE ARCHITECT OR ENGINEER. ALL INDICATED WORK SHALL BE PERFORMED BY THE PLUMBING CONTRACTOR UNLESS OTHERWISE NOTED ON PLUMBING DOCUMENTATION.
AL AND TWO COPIES. ALL CATALOG CUTS SHALL MATERIALS, VALVES, EQUIPMENT, INSULATION,	 4. REFER TO THE WRITTEN SPECIFICATIONS IN CONJUNCTION WITH THE PLANS FOR FULL PROJECT SCOPE. 5. IT IS THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO REVIEW THESE PLANS AND SPECIFICATIONS, AS WELL AS THE RELATED HVAC, FIRE PROTECTION, ELECTRICAL, STRUCTURAL, ARCHITECTURAL, INTERIOR DECOR AND SITE ENGINEERING DRAWING TO BECOME FAMILIAR WITH THE FULL PROJECT SCOPE. IN ADDITION, THIS CONTRACTOR MUST COORDINATE WITH AN OWNER REPRESENTATIVE TO FULLY UNDERSTAND ALL REQUIREMENTS WHICH MAY NOT BE SPECIFIED HEREIN AND WHICH THE TENANT MAY CONSIDER PART OF THIS CONTRACT. DURING THE COURSE OF CONSTRUCTION COORDINATION AND ACTUAL CONSTRUCTION, IT IS THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO WORK CLOSELY WITH ALL ACCOMPANYING
IRON PIPE AND FITTINGS. ALL CAST IRON PIPING THE CAST IRON SOIL PIPE INSTITUTE (CISPI) AND	 CONTRACTORS AND TRADESMEN IN ORDER TO ENSURE A SMOOTH RUNNING AND CAREFULLY COORDINATED INSTALLATION. ANY DISCREPANCIES OR INADEQUACIES WITHIN THESE BID DOCUMENTS OR BETWEEN THESE BID DOCUMENTS AND THE RELATED HVAC, FIRE PROTECTION, ELECTRICAL, STRUCTURAL, ARCHITECTURAL, INTERIOR DECOR AND SITE ENGINEERING DRAWINGS, OR BETWEEN THESE BID DOCUMENTS AND FIELD CONDITIONS MUST BE BROUGHT TO THE ATTENTION OF THE OWNER, ARCHITECT AND ENGINEER PRIOR TO BID SUBMISSION.
 FER TECHNOLOGIES, CONBRACO INDUSTRIES DNSTRUCTION, FULL PORT DESIGN WITH THREADED WSP. EM, ALL BRONZE CONSTRUCTION WITH BRONZE DISC CONSTRUCTION WITH SCREW IN BONNET, SOLDER ENDS. TO MAKE A COMPLETE PLUMBING SYSTEM AS ICATION. CONTAL AND VERTICAL PIPING. THE HANGER DESIGN RE PIPING. HANGER SHALL BE KEPT OUTSIDE OF NIED FROM THE BUILDING STRUCTURE. SH CLEVIS HANGERS WITH 12" INSULATION BE MINERAL FIBER WITH A MAXIMUM K-FACTOR PIPIED, FOIL BACKED, ALL SERVICE VAPOR FIBER INSULATION COVERED WITH ZESTON 25/50 RE INSTALLING INSULATION ON PIPING SYSTEMS. BACKING WITH LETTERING INDICATING THE PIPE VALS OF 50 FEET. IG SYSTEMS. LIST TAGGED VALVES IN A VALVE 	 ALL YORK SHALL BE PERFORMED IN ACCORDANCE WHICH ALL APPLICABLE REQUIRTIONS INCLUDING BUT NOT LIMITED TO MATIONAL CUT, STATL LODG LODES AND CREMANCES WHICH ANY BE IN EFFECT, ALL PLUMENG METARAS, INSTALLATION PROCEEDING AND TSTALL PLUMENG CONTINUES AS THE THE THE THE PLUMENG CONTINUES OF PLUMENG CONTINUES TO BE THE PLUMENG CONTINUES IN THE STATLE ADDITIONS TO A TRUNCING UNDERSTAND OF AND EXCIPCE AND CONDITIONS TO BE MALE APPLICABLE CONTINUES AS WELL AS ALL CONTROLOGY AS WELL AS ALL CONTROLOGY AS THE PLUMENG CONTINUES TO BE THE OR INTO A THRONGON TO A TRUNCING UNDERSTAND. OF AND EXCIPCE AND CONDITIONS TO BE MALE ADDITIONS TO BE MALE ADDITIONS THE PROFE TO BE DEVELOPED TO A TRUNCING WAS THE PROFE TO BE DEVELOPED TO THE DEVELOPED ADDITIONS TO BE DEVELOPED THE TAXE THE DEVELOPED AND THE PROFE TO BE DEVELOPED TO THE DEVELOPED ADDITIONS TO BE DEVELOPED THAN THE PLUMENG STREME AND THE CONTROLOGY AS THE DEVELOPED ADDITIONS TO BE DEVELOPED THAN THE DEVELOPED ADDITIONS TO BE DEVELOPED THE DEVELOPED ADDITIONS TO AN OWNER STREME. THE TAXE THE DEVELOPED ADDITIONS TO BE DEVELOPED THE DEVELOPED THE DEVELOPED ADDITIONS TO BE DEVELOPED THE DEVELOPED ADDITIONS TO AND DEVELOPS THE DEVELOPED ADDITIONS TO BE DEVELOPED THE DEVELOPED ADDITIONS TO AND DEVELOPS THE DEVELOPED ADDITIONS TO BE DEVELOPED THE DEVELOPED ADDITIONS TO AND DEVELOPS THE DEVELOPED ADDITIONS TO ADDITI
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⁰ ² ⁴ SCALE 1/4"=1'-0"	
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Architects 20 N. Doughty Avenue Somerville, NJ 08876 t 908.722.2300 f 908.722.7201 usaarchitects.com Paul R. Swartz, AIA Andrew P. Adornato, AIA Armand T. Christopher Jr., AIA Susan M. DeHart, AIA Peter C. Campisano, AIA James McAuliffe, AIA 🔵 🕒 Johnson & Urban, 📖 Consulting Engineers Certificate of Authorization: 24GA28153200 295 State Route 34 Colts Neck, NJ 07722 t 732.772.1500 f 732.772.1515 J&U Project # 20-086 Mark E. Lonergan, P.E NJ License #24GE04074900 Signature & License No. AI16116 This Document is the property and copyright of USA Architects for the specified project and shall not be used or reproduced without authorization. **RENOVATIONS, ELEVATOR MODERNIZATION, ASBESTOS** ABATEMENT AND FIRE SPRINKLER INSTALLATION AT THE **NEW ANNEX BUILDING** FOR THE COUNTY OF UNION 27 Elizabethtown Plaza Elizabeth, NJ 07202 1 09.20.24 ISSUED FOR BID No. Date Issue or Revision Drawing Title PLUMBING ELEVATOR PART PLAN USA Project No. Scale 2020-047 As Indicated Drawing No. Drawing Date 07.18.2024 P12 Drawn By Checked By MS

1.	GN CRITERIA APPLICABLE CODES AND REFERENCES:	DUCTWORK
	 A. INTERNATIONAL BUILDING CODE, 2018 – LATEST ADOPTED NEW JERSEY EDITION. B. INTERNATIONAL MECHANICAL CODE, 2018 – LATEST ADOPTED NEW JERSEY EDITION. C. INTERNATIONAL FUEL GAS CODE, 2018 – LATEST ADOPTED NEW JERSEY EDITION. D. ASHRAE 90.1, 2013 – LATEST ADOPTED NEW JERSEY EDITION. E. NATIONAL STANDARD PLUMBING CODE, 2018. 	 FURNISH AND IN ALL DUCTWORK,
	 F. NFPA No. 90A – AIR CONDITIONING AND VENTILATING SYSTEMS. G. ASHRAE HANDBOOKS – AMERICAN SOCIETY OF HEATING, REFRIGERATION, AND AIR CONDITIONING ENGINEERS. H. UNIFORM CONSTRUCTION CODE OF NEW JERSEY. 	TO THE LATEST OR GREATER SH. CONSTRUCTION. SEALED WITH HIG SIZE BY 1" ALL
2.	SUMMER OUTDOOR DESIGN CONDITIONS (1.0% FOR NEWARK, NJ PER ASHRAE 90.1 – 2016): A. DRY BULB: 90 DEG. F. B. WET BULB: 73 DEG. F.	3. ALL NEW FLEXIB MORE THAN 3' NFPA REQUIREME
3.	SUMMER INDOOR DESIGN CONDITIONS: A. DRY BULB: 75 DEG. F. (+/- 2 DEG. F.) B. RELATIVE HUMIDITY: 50%	ALL NEW FLEXIB 4. PROVIDE FLEXIBL
	WINTER OUTDOOR DESIGN CONDITIONS (1.0% FOR NEWARK, NJ PER ASHRAE 90.1 – 2016): A. DRY BULB: 10 DEG. F.	5. ALL NEW FIRE D AND BOCA. ALL AIRSTREAM (TYPI
5.	WINTER INDOOR DESIGN CONDITIONS: A. DRY BULB: 70 DEG. F. (+/– 2 DEG. F.) B. RELATIVE HUMIDITY: NO MINIMUM HUMIDITY CONTROL PROVIDED	6. ALL NEW DUCTW AND LEAKAGE C CONTRACTOR SH
	VENTILATION: A. OUTSIDE AIR VENTILATION DESIGN AIR QUANTITIES WILL BE AS REQUIRED BY THE INTERNATIONAL MECHANICAL CODE, 2018 – LATEST ADOPTED NEW JERSEY EDITION.	 INSTALL SUITABLI CONTROLS ETC. 8. EXTEND ALL BAL
	FILTRATION: A. MINMUM MERV 7 FILTER MEDIA.	MECHANICAL INSULATION
	THE CONTRACTOR SHALL FURNISH ALL EQUIPMENT AND MATERIALS AS INDICATED ON THE CONTRACT DRAWINGS AND THESE SPECIFICATIONS.	 ALL INSULATION APPLY INSULATIC
2.	AND THESE SPECIFICATIONS. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST ADOPTED EDITIONS OF THE UNIFORM CONSTRUCTION CODE OF NEW JERSEY, IBC, NFPA, SMACNA AND ASHRAE AND ALL OTHER APPLICABLE CODES.	3. ALL INSULATION SMOKE DEVELOP
3.	ALL NEW EQUIPMENT AND MATERIAL SHALL BE FREE OF DEFECTS AND SHALL PERFORM AS INTENDED. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL MAJOR MANUFACTURED ITEMS REQUIRED ON THIS PROJECT. SHEET METAL SHOP DRAWINGS SHALL BE SUBMITTED MINIMUM ¼" SCALE. SHOP DRAWINGS SHALL ILLUSTRATE COORDINATION OF ALL TRADES INVOLVED IN THE PROJECT. SHOP DRAWINGS SHALL BE COMPLETE IN ALL RESPECTS, INCORPORATING AND IDENTIFYING ALL INFORMATION REQUIRED FOR THE EVALUATION OF THE PROPOSED MECHANICAL EQUIPMENT AND SYSTEM'S COMPLIANCE WITH THE CONTRACT DOCUMENTS. PARTIAL, INCOMPLETE OR ILLEGIBLE SUBMISSIONS WILL BE RETURNED TO THE CONTRACTOR WITHOUT REVIEW FOR RESUBMITTAL.	 ALL INSULATION CONTAIN A COMF DUCTWORK INSUI A. ALL SUPF VALUE OF WRAP (AF
4.	THE CONTRACTOR SHALL VISIT THE SITE AND INSPECT THE EXISTING INSTALLATION PRIOR TO SUBMITTING A PROPOSAL FOR WORK. HE SHALL INVESTIGATE ALL CONDITIONS AND DIMENSIONS AND INCLUDE IN HIS PRICE THE COST FOR OVERCOMING ALL DIFFICULTIES DUE TO FIELD CONDITIONS. NO PART OF THE WORK SHALL BEGIN BEFORE EXISTING CONDITIONS ARE CAREFULLY CHECKED AND ALL DISCREPANCIES ARE REPORTED TO THE ARCHITECT OR ENGINEER.	B. ALL OUTE WITH A M (APPROXII C. WHERE IN
	THE CONTRACTOR SHALL PAY ALL FEES AND OBTAIN ALL PERMITS REQUIRED FOR CONSTRUCTION AND SHALL ARRANGE ALL REQUIRED INSPECTIONS.	MANVILLE PROVIDE MECHANIC INSIDE DI
	ALL WORK SHALL BE DONE DURING NORMAL WORKING HOURS UNLESS OTHERWISE REQUESTED BY OWNER. THE DRAWINGS DO NOT INDICATE ALL EQUIPMENT, PIPING, DUCTWORK AND CONDUIT LOCATED WITHIN THE SPACE OR ABOVE THE CEILING. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER TRADES PRIOR TO FABRICATION OF PIPING AND DUCTWORK AND INSTALLATION OF EQUIPMENT. THE CONTRACTOR SHALL, AT NO ADDITIONAL EXPENSE TO THE OWNER, MAKE ANY REQUIRED CHANGES AS A RESULT OF A FAILURE TO COORDINATE HIS WORK WITH ALL TRADES.	BARRIER
	SEE THE ARCHITECT'S REFLECTED CEILING PLAN FOR FINAL LOCATION OF CEILING DIFFUSERS, RETURN AIR GRILLES, LIGHT FIXTURES AND SPRINKLER HEADS.	WHITE AL
	ALL APPLIANCES REGULATED BY THE INTERNATIONAL MECHANICAL CODE SHALL BE LISTED AND LABELED FOR THE APPLICATION IN WHICH THEY ARE INSTALLED AND USED THE CONTRACTOR SHALL FURNISH THE QUALIFIED PERSONNEL, SUPPLIERS, EQUIPMENT REQUIRED TO MAKE ALL	TESTING, ADJUSTING & B
11.	NECESSARY TESTS AND VERIFICATION OF EQUIPMENT PERFORMANCE AND CONTROLS. ELECTRICAL POWER, WATER AND FUEL CONSUMPTION FOR TESTING SHALL BE FROM THE OWNER'S SUPPLY. CONTRACTOR SHALL PROVIDE ALL NECESSARY MISCELLANEOUS STEEL FOR THE SUPPORT OF ALL EQUIPMENT SUSPENDED FROM SLAB OR STEEL. CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING CEILING JOISTS, ETC. PRIOR TO SUSPENDING EQUIPMENT. THE CONTRACTOR SHALL SUBDIT FOR APPROVAL, SHOP DRAWINGS	A. OPERATE A DAMPERS, THROUGHO DATA, SUCI SUBMITTED DURING AD
12.	AND DETAILS, INDICATING THE PROPOSED EQUIPMENT, PIPING AND DUCT SUPPORTING METHODS PRIOR TO INSTALLATION. DAMAGE TO BUILDING AND EQUIPMENT, WHICH IS TO REMAIN, RESULTING FROM DEMOLITION SHALL BE	REGULATING WHO SHAL
13.	REPAINTED, REPAIRED AND/OR REPLACED BY THE CONTRACTOR. CONTRACTOR SHALL PERFORM ALL CUTTING AND PATCHING AS REQUIRED UNDER THIS CONTRACT, INCLUDING WORK FOR ROOF AND WALL PENETRATIONS OF PIPING AND DUCTWORK, CORE DRILLING FLOOR SLABS FOR THE PENETRATION OF DUCT AND PIPE RISERS, AND DUE TO EQUIPMENT, PIPING, AND DUCTWORK REMOVALS. SEAL OPENINGS WITH APPROVED MATERIALS TO MAINTAIN EXISTING FIRE RESISTANCE RATINGS OF STRUCTURE. SEAL ROOF AND EXTERIOR WALL OPENINGS WEATHER AND AIR TIGHT.	
14.	PATCH ALL WALL, ROOF AND FLOOR OPENINGS AS NECESSARY DUE TO PIPING, DUCTWORK OR EQUIPMENT REMOVALS TO MATCH EXISTING ADJACENT CONSTRUCTION. PAINT WALLS AND CEILINGS TO MATCH ADJACENT EXISTING FINISHES.	
15.	EQUIPMENT MANUFACTURERS NAMES AND MODEL NUMBERS ARE SHOWN FOR THE BASIS OF DESIGN. THE EQUIPMENT HAS BEEN SELECTED BY THE ENGINEER FOR CONFORMANCE TO VARIOUS CRITERIA SUCH AS, CAPACITIES, ELECTRICAL CRITERIA, STANDARD FEATURES, ETC. SUBSTITUTION OF ANY EQUIPMENT SHALL NOT BE ALLOWED UNLESS APPROVED BY THE ENGINEER. ALL COSTS RESULTING FROM SELECTION OF OTHER THAN SPECIFIED EQUIPMENT SHALL BE BORNE BY THE CONTRACTOR, INCLUDING BUT NOT LIMITED TO, WORK AFFECTING OTHER CONTRACTORS, OWNER, OR DESIGN, INCLUDING REVISING SUPPORTS AND STRUCTURES, ELECTRICAL PROVISIONS AND CONTROLS.	
16.	UNLESS OTHERWISE NOTED ON THE DRAWINGS, ALL MECHANICAL EQUIPMENT SHALL BE MOUNTED ON OR SUSPENDED FROM VIBRATION ISOLATORS TO PREVENT THE TRANSMISSION OF SOUND TO THE BUILDING STRUCTURE. VIBRATION ISOLATORS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS, LOCAL SEISMIC CODES AND ON ACTUAL WEIGHT DISTRIBUTION OF THE EQUIPMENT FURNISHED. DEFLECTIONS SHALL BE AS NOTED ON THE EQUIPMENT SHOP DRAWING SUBMITTALS.	
17.	THE CONTRACTOR SHALL PROVIDE THE OWNER WITH REPRODUCIBLE "AS-BUILT" DRAWINGS AND FOUR (4) COPIES OF AN OPERATING AND MAINTENANCE MANUAL AT THE CONCLUSION OF THE JOB.	
18.	THE CONTRACTOR SHALL PROVIDE THE OWNER WITH A ONE (1) YEAR WRITTEN GUARANTEE OF ALL WORK (LABOR AND MATERIALS) AND A 5 YEAR WARRANTY ON THE CONPRESSORS, STARTING FROM THE DATE OF THE OWNER ACCEPTANCE.	
	ALL AUTOMATIC TEMPERATURE CONTROL WIRING SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR. THE MECHANICAL CONTRACTOR SHALL FURNISH ALL LOCAL POWER DISCONNECT SWITCHES FOR ALL HVAC	
	EQUIPMENT. THE MECHANICAL CONTRACTOR SHALL COORDINATE THE ELECTRICAL REQUIREMENTS OF HIS WORK WITH THE GENERAL AND ELECTRICAL CONTRACTORS PRIOR TO SUBMISSION OF BIDS. UNLESS OTHERWISE SPECIFIED, ALL MOTORS ½ H.P. AND ABOVE SHALL BE 3 PHASE AND MOTORS UNDER ½	
21.	H.P. SHALL BE SINGLE PHASE. ALL MOTORS SHALL MEET MINIMUM EFFICIENCIES AS OUTLINED BY ASHRAE/ IESNA STANDARD 90.1–2013 "ENERGY EFFICIENT DESIGN OF NEW BUILDINGS EXCEPT LOW-RISE RESIDENTIAL BUILDINGS".	
22.	HVAC CONTRACTOR IS RESPONSIBLE FOR SUPPLYING ALL MOTOR STARTERS ASSOCIATED WITH HIS WORK. PROVIDE COMBINATION STARTER/DISCONNECTS WHEN EQUIPMENT IS NOT IN SIGHT OF ELECTRIC PANEL SERVING SAME. ALL STARTERS SHALL HAVE "HAND-OFF-AUTO" SELECTION SWITCHES WITH INDICATOR LIGHTS AND 120V HOLDING COILS. COORDINATE STARTER REQUIREMENTS WITH THE ATC CONTRACTOR.	
23.	ELECTRICAL CONTRACTOR SHALL PROVIDE DUCT MOUNTED SMOKE DETECTORS (SUPPLY & RETURN) TO BE INSTALLED BY THE MECHANICAL CONTRACTOR AND WIRED BY THE ELECTRICAL CONTRACTOR. DUCT MOUNTED SMOKE DETECTORS SHALL BE PRESENT IN THE MAIN RETURN DUCT FOR ALL AIR HANDLING UNITS SUPPLYING AIR QUANTITIES GREATER THAN OR EQUAL TO 2,000 CFM. DETECTORS SHALL BE PROVIDED IN BOTH SUPPLY AND RETURN MAINS IF THE SYSTEM IS GREATER THAN 15,000 CFM OR AN AIR HANDLING SYSTEM, WHICH EXHAUSTS GREATER THAN 50% OF THE SUPPLY AIR.	
	THE MECHANICAL CONTRACTOR SHALL PROVIDE CARBON MONOXIDE (CO) DETECTION AND ALARM SYSTEM IN ROOMS OR SPACES THAT CONTAIN FUEL—BURNING APPLIANCES OR ROOMS OR SPACES THAT ARE SERVED BY FUEL BURNING FORCED AIR FURNACES. CO DETECTORS SHALL BE HARD—WIRED BY THE ELECTRICAL	
24.	CONTRACTOR AND PROVIDED WITH BATTERY BACKUP.	

MECHANICAL SYMBOLS ____≁ ELBOW WITH DOUBLE THICKNESS TURNING VANES INSTALL SHEET METAL DUCTWORK WHERE INDICATED ON THE DRAWINGS. -1-BELLMOUTH TAKE-OFF W/ VOLUME DAMPER $\left\{ - \right\}$, UNLESS OTHERWISE NOTED, SHALL BE GALVANIZED SHEET METAL FABRICATED AND INSTALLED SMACNA STANDARDS AND SECURED WITH SHEET METAL SCREWS. ALL JOINTS 18" IN LENGTH HALL BE OF THE DUCTMATE SYSTEM OR THE SMACNA EQUIVALENT CONNECTION AND -1-PROVIDE GASKETS AT MATING FLANGES. ALL TRANSVERSE JOINTS AND SEAMS SHALL BE ┟┶┼ 45° BOOT TAKE-OFF W/ VOLUME DAMPER HIGH PRESSURE DUCT SEALANT. SIZES ON DRAWINGS ARE CLEAR INSIDE DIMENSIONS, INCREASE L AROUND TO ACCOMMODATE LINING IF REQUIRED. \sum CEILING DIFFUSER BLE DUCTWORK SHALL BE THERMAFLEX TYPE M-KE OR APPROVED EQUAL. SUPPORTED NOT -0" INTERVALS WITH 1" WIDE STRAPS. ALL FLEXIBLE DUCTWORK SHALL MEET ALL IMC AND MENTS FOR USE IN A RETURN AIR PLENUM. PROVIDE SPIN COLLARS WITH VOLUME DAMPERS AT EXHAUST OR RETURN REGISTER BLE CONNECTIONS. MAXIMUM ALLOWABLE RUN OF FLEX SHALL NOT EXCEED 6'-0". BLE DUCT CONNECTIONS AT ROTATING EQUIPMENT, "VENTGLASS" OR EQUAL. DUCT UNDER POSITIVE PRESSURE DAMPERS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITIONS OF NFPA, SMACNA L DAMPERS SHALL BE RUSKIN OR APPROVED EQUAL WITH THE BLADE STACK OUT OF THE DUCT UNDER NEGATIVE PRESSURE PE 'B'). FURTHERMORE, DAMPERS SHALL BEAR A U.L. RATING FOR "DYNAMIC OPERATION". \bigcirc WORK SHALL BE TESTED FOR AIR LEAKAGE. THE NEW DUCTWORK SHALL BE SEAL CLASS 'A' ROUND DUCT CLASS-12, AS DEFINED BY THE SMACNA "HVAC SYSTEMS DUCT DESIGN" MANUAL. THE HALL REPAIR ALL LEAKS AT HIS OWN EXPENSE AND RE-TEST SAME. _____or_ FLEXIBLE DUCT LE SIZED ACCESS DOORS WHERE REQUIRED AT ALL DAMPERS, COILS, FAN BEARINGS, VOLUME PROVIDE INSULATED DOORS WHERE DUCTWORK IS INSULATED. **→**► SUPPLY REGISTER ALANCING DAMPERS BEYOND INSULATION. ⊁**__**++ RETURN OR EXHAUST REGISTER I MUST BE APPLIED IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. VOLUME DAMPER _____ TION AFTER ALL TESTING HAS BEEN COMPLETED AND APPROVED. AIRFLOW THRU UNDERCUT I PROVIDED FOR THE PROJECT MUST MEET A MAXIMUM FLAME SPREAD RATING OF 25 AND OPED INDEX OF 50 OR LESS, AS TESTED IN ACCORDANCE WITH ASTM, NFPA & U.L. GUIDELINES. AIRFLOW THRU LOUVERED DOOR I FOR EQUIPMENT AND PIPING WITH A SURFACE TEMPERATURE BELOW 65 DEGREES F, SHALL MPLETE VAPOR BARRIER SEAL. (T)THERMOSTAT ULATION 12/8 PPLY DUCTS WITHIN THE BUILDING ENEVLOPE SHALL BE INSULATED WITH A MINIMUM INSULATION NECK SIZES IN DUCT SPLIT DF R-3.5 (INSTALLED) FOIL-SCRIM-KRAFT, FORMALDEHYDE FREE FLEXIBLE FIBERGLASS DUCT APPROXIMATE 1-1/2" THICK). 1 TDOOR AIR INTAKE DUCTS, PLENUMS AND DUCTS IN MECH. EQUIP. ROOMS SHALL BE INSULATED KEY NOTES APPLYING TO DEMOLITION WORK MINIMUM INSULATION VALUE OF R-3.5 RIGID FIBERGLASS BOARD AND FOIL-SCRIM-KRAFT FACING KIMATE 1" THICK). (1) (2)KEY NOTES APPLYING TO NEW WORK INDICATED ON THE DRAWINGS PROVIDE 1" THICK DUCT LINING AS MANUFACTURED BY JOHNS E CORP. "PERMACOTE LINACOUSTIC HP". PROVIDE METAL NOSINGS AT EXPOSED EDGES. *⊱//////////* PIPE TO BE DEMOLISHED MINIMUM 15'-0" LENGTH OF ACOUSTICAL DUCT LINING UPSTREAM AND DOWNSTREAM OF ICAL AIR HANDLING EQUIPMENT. DUCTWORK DIMENSIONS INDICATED ON THE PLANS ARE CLEAR DIMENSIONS, INCREASE DUCT SIZE TO ACCOMMODATE THE DUCT LINER. LINER THICKNESS TO BE ED TO MEET INSULATION REQUIREMENTS OR PROVIDE ADDITIONAL EXTERIOR DUCT INSULATION TO — AIR DEVICE TYPE X CFM ISATE. - AIR QUANTITY PPLY AND RETURN DUCTWORK OUTSIDE OF THE BUILDING ENVELOPE SHALL BE COVERED WITH A INSULATION VALUE OF R-6 RIGID FIBERGLASS BOARD AND FOIL-SCRIM-KRAFT FACING (IMATE 2" THICK). EXERIOR EXPOSED DUCTWORK TO BE INSTALLED WITH LAMINATED VAPOR _____ DUCTWORK W/INTERNAL LINING (SINGLE LINE) CONSISTING OF RUBBERIZED RESIN ON A CROSSLAMINATED POLYETHYLENE FIRM COVERED WITH LIMINUM-FOIL FACING SIMILAR TO VENTURE-CLAD OR ALUMA-GUARD. DUCTWORK TO BE DEMOLISHED BALANCING <u>SECTION TAG</u> E AIR SYSTEMS ----- DETAIL # ALL SYSTEMS FOR AS LONG AS NECESSARY TO TEST AIR FLOW AT ALL OPENINGS. ADJUST \M1.1/___ , FANS, AND SHEAVES UNTIL EVEN DISTRIBUTION AND REQUIRED CFM OF AIR IS OBTAINED OUT. SUBMIT FOR APPROVAL FOUR (4) TEST REPORTS SHOWING ALL PERTINENT OPERATING CH AS CFM AND FPM AT EACH OUTLÈT. FAN RPM, MOTOR CURRENT, ETC., SHALL BE) FOR PERMANENT RECORD. BALANCE AIR VOLUME TO WITHIN 10% OF DESIGN VALUES. ADJUSTMENT PERIOD, MAKE ALL NECESSARY SETTINGS AND ADJUSTMENTS OF TEMPERATURE NG EQUIPMENT. TEST REPORTS SHALL BE CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER LL BE A MEMBER OF THE BALANCING FIRM. drawing list M01 MECHANICAL-GENERAL INFORMATION M02 MECHANICAL-SPECIFICATIONS M11 MECHANICAL-SECOND FLOOR DEMOLITION AND NEW WORK PLAN M21 MECHANICAL-SCHEDULES & DETAILS

		1	
MECHAN	CAL ABBREVIATIONS	MECHANICAL DEMOLITION NOTES	PROJECT GENERAL NOTES
IDENTIFIER	DESCRIPTION	1. SCOPE OF WORK	1. MOTOR CONTROLLERS, MOTOR STARTERS & DISCONNE
CFM	CUBIC FEET PER MINUTE	A. CONTRACTOR SHALL SUPPLY ALL LABOR, MATERIALS, EQUIPMENT, AND SERVICES NECESSARY TO COMPLETE ALL	SHALL BE FURNISHED BY THE MECHANICAL CONTRACT FOR INSTALLATION BY THE ELECTRICAL CONTRACTOR.
CU	CONDENSING UNIT	REMOVALS AND RENOVATION WORK AS SHOWN ON THE CONTRACT DRAWINGS AND CALLED FOR IN THE	2. POWER WIRING TO MECHANICAL EQUIPMENT, MOTOR CONTROLLERS AND CONTROL PANELS SHALL BE
DB	DRY BULB	SPECIFICATIONS. THE WORK SHALL INCLUDE BUT IS NOT LIMITED TO THE FOLLOWING:	PROVIDED BY THE ELECTRICAL CONTRACTOR.
DN	DOWN	B. DISCONNECT, DEMOLISH, AND REMOVE ALL EXISTING DUCTWORK, PIPING, INSULATION, EQUIPMENT, AND OTHER	3. HVAC CONTROL WIRING SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR.
E/A	EXHAUST AIR	ASSOCIATED ITEMS.	4. DUCTWORK AND PIPING LAYOUTS ARE SCHEMATIC DIAGRAMS AND ARE INTENDED TO SHOW GENERAL
EAT EDB	ENTERING AIR TEMPERATURE	C. CAPPING ALL EXISTING PIPING NOT BEING REUSED (AT THE MAINS). WHERE REMOVAL OF PIPING LEAVES OPEN CONNECTIONS, PROVIDE SCREWED CAPS OR PLUGS OR	ARRANGEMENT, SIZE AND CAPACITY AND DO NOT INDICATE WHICH PIPE OR DUCT IS ABOVE OR BELOW
EER	ENERGY EFFICIENCY RATIO	WELDED CAPS TO CLOSE SUCH CONNECTIONS.	THE OTHER. ALL OFFSETS ARE NOT NECESSARILY SH CONTRACTOR SHALL ARRANGE AND COORDINATE THE WORK, FURNISH NECESSARY OFFSETS, VALVES, VENTS
EG	EXHAUST GRILLE	D. CAPPING ALL EXISTING DUCTWORK NOT BEING REUSED (AT THE MAINS).	AND FITTINGS TO AVOID CONFLICT WITH OTHER MECHANICAL AND ELECTRICAL SERVICES AND STRUCTU
EH	ELECTRIC HEATER	E. INSULATE DUCT CAPS AND PIPE CAPS TO MATCH THE EXISTING INSULATION.	AND ARCHITECTURAL ELEMENTS WITHOUT ADDITIONAL COST TO THE OWNER. IF AREAS OF CONFLICT ARE ENCOUNTERED, THE ARCHITECT SHALL BE NOTIFIED A
ESP	EXTERNAL STATIC PRESSURE	F. CAPPING ALL OPENINGS CREATED BY THE REMOVAL OF	CONTRACTORS RECOMMENDATIONS SHALL BE SUBMITT TO THE ARCHITECT FOR APPROVAL BEFORE WORK HA
EWB	ENTERING WET BULB	ROOFTOP HVAC EQUIPMENT. PROVIDE INSULATED CURB CAPS FOR ALL REMOVED ROOF FANS, ROOFTOP UNITS, ETC.	BEGUN.
EF	EXHAUST FAN	INSULATED CURB CAPS SHALL BE BRACED FROM BELOW AND SHALL BE CAPABLE OF WITH STANDING LIVE LOAD. PROVIDE NECESSARY FLASHING AND COORDINATE WITH ROOFING	 ENTIRE INSTALLATION SHALL COMPLY WITH ALL LOCAL AND STATE CODES AND OTHER AUTHORITIES HAVING JURISDICTION.
FC	FLEXIBLE CONNECTION	CONTRACTOR AND/OR EXISTING ROOF GUARANTEE.	6. CONTRACTOR SHALL SECURE AND PAY FOR ALL
BMS	BUILDING MANAGEMENT SYSTEM	G. PROVIDE ADDITIONAL HANGERS AND OTHER SUPPORTS AS REQUIRED BY THE REMOVAL OF EXISTING PIPING AND/OR	REQUIRED PERMITS AND SHALL ARRANGE ALL REQUIR INSPECTIONS.
ATC	AUTOMATIC TEMPERATURE CONTROL	DUCTWORK. ALL REMAINING PIPING AND/OR DUCTWORK SHALL BE SUPPORTED IN ACCORDANCE WITH THE SPECIFICATIONS.	7. PROPER FIRE PROTECTION MEASURES, SATISFACTORY THE LOCAL FIRE DEPARTMENT SHALL BE TAKEN WHEN
FD FPM	FIRE DAMPER WITH ACCESS DOOR	H. REMOVAL OF HVAC EQUIPMENT'S ASSOCIATED CONCRETE PADS.	WELDING OR CUTTING WITH TORCHES OR ELECTRIC A
G	GAS	2. VERIFICATION OF FIELD CONDITIONS	8. PROVIDE FLEXIBLE CONNECTIONS ON ALL ROTATING EQUIPMENT.
GPM	GALLONS PER MINUTE	A. LOCATION, SIZE, AND DIMENSIONS OF EXISTING EQUIPMENT, PIPING, DUCTWORK, AND ACCESSORIES SHOWN ARE APPROXIMATE. NOT ALL EXISTING PIPING, DUCTWORK AND	9. CONTRACTOR SHALL PROVIDE ALL NECESSARY MISCELLANEOUS SUPPORTS FOR ALL EQUIPMENT, PIP
LAT	LEAVING AIR TEMPERATURE	EQUIPMENT ARE SHOWN ON DRAWINGS.	CONDUIT, AND DUCTWORK. SUSPEND FROM SLAB, STE WALL, OR TRUSS WORK.
MBH	THOUSAND BTU PER HOUR	B. CONTRACTOR SHALL VERIFY EXACT LOCATIONS AND DIMENSIONS OF EXISTING EQUIPMENT, PIPING, DUCTWORK AND ACCESSORIES IN FIELD PRIOR TO PREPARATION OF DETAILED	10. BALANCE AND CERTIFY ALL AIR AND WATER FLOWS AN PER SPECIFICATIONS. REFER TO DRAWINGS FOR CFM
NK	NECK	SHOP DRAWINGS AND ANY REMOVALS AND RELOCATIONS.	REQUIREMENTS.
0/A	OUTSIDE AIR	3. SEQUENCING & SCHEDULING	11. CONTRACTOR SHALL COORDINATE HIS WORK WITH THE WORK OF ALL OTHER TRADES AND THE FIELD CONDITIONS.
OAI	OUTSIDE AIR INTAKE	A. EXISTING MECHANICAL SYSTEMS NOT RELATED TO NEW CONSTRUCTION SHALL REMAIN IN SERVICE UNLESS OTHERWISE NOTED.	12. ALL AIR MOVING DEVICES, INCLUDING NOT LIMITED TO
R/A	RETURN AIR	B. CONTRACTOR SHALL COORDINATE ALL REQUIRED REMOVAL AND	AIR HANDLING UNITS AND AIR CONDITIONING UNITS M COMPLY WITH AMCA STANDARD 210 AND ASHRAE.
RAV	RELIEF AIR VENT	RELOCATIONS OF MECHANICAL SYSTEMS IN THE EXISTING BUILDING, RELATED TO NEW CONSTRUCTION, AS SHOWN ON CONTRACT DRAWINGS.	13. CONTRACTOR SHALL ENSURE THAT ALL MECHANICAL DEVICES WILL BE INSTALLED IN A LOCATION WHICH
RG RH	RETURN GRILLE RELATIVE HUMIDITY	C. PROVIDE RELOCATIONS, REMOVALS AND RE-ROUTING OF ANY	AFFORDS ACCESSIBILITY FOR MAINTENANCE AND REPA COORDINATE INSTALLATION AMONG ALL TRADES TO AV
RR	RETURN REGISTER	EXISTING EQUIPMENT THAT INTERFERES WITH INSTALLATION OF THE NEW EQUIPMENT. COORDINATE IN ADVANCE AND OBTAIN	INTERFERENCE, AND LOCATE EQUIPMENT TO MEET OR EXCEED CLEARANCE RECOMMENDED BY THE MANUFACTURER. PRIOR TO PROJECT COMPLETION,
S/A	SUPPLY AIR	OWNERS APPROVAL FOR THESE RELOCATIONS, EITHER TEMPORARY OR PERMANENT.	REPRESENTATIVES OF OWNER AND JOHNSON & URBA
SR	SUPPLY REGISTER	D. CONTRACTOR TO REMOVE EXISTING PARTITIONS, CEILING TILES AND SUPPORTS AS NECESSARY TO PERFORM REMOVALS AND	INSTALLATION AND WILL DIRECT CHANGES WHENEVER ACCESS OR SERVICEABILITY IS, IN THEIR OPINION, UNACCEPTABLE.
Т	THERMOSTAT	NEW INSTALLATION IN EXISTING AREAS. REINSTALL EXISTING AND REPLACE THOSE DAMAGED DUE TO THE NEW WORK.	14. FURNISH LOCAL DISCONNECT SWITCHES FOR ALL
TF	TRANSFER FAN	4. COORDINATION WITH OWNER	ELECTRICALLY DRIVEN HVAC EQUIPMENT. DISCONNEC SWITCH SHALL BE IN ACCORDANCE WITH
WMS	WIRE MESH SCREEN	E. THE CONTRACTOR SHALL CAREFULLY INSPECT ALL AREAS INVOLVED WITH REMOVALS AND PROVIDE THE PROPER	MANUFACTURER'S REQUIREMENTS. 15. WALL MOUNTED THERMOSTAT LOCATIONS SHALL BE
TR	TOP REGISTER	COORDINATION AND MANPOWER REQUIRED FOR AN EFFICIENT OPERATION WITHOUT INTERFERING WITH THE BUILDING FUNCTION.	COORDINATED WITH THE OWNER AND ARCHITECT'S FURNITURE PLANS PRIOR TO INSTALLATION.
VD	VOLUME DAMPER	F. EQUIPMENT AND MATERIALS DESIRED BY THE OWNER SHALL	16. THERMOSTAT WIRING SHALL BE INSTALLED IN CONCEA
WB	WET BULB	BE DELIVERED BY THE CONTRACTOR TO AN ON-SITE STORAGE LOCATION DESIGNATED BY THE OWNER.	SPACE, WALL OR CHASE. 17. ALL MECHANICAL COMPONENTS LOCATED BEHIND
WG	WATER GAUGE	G. REMOVED EQUIPMENT AND MATERIALS NOT DESIRED BY THE OWNER SHALL BECOME THE PROPERTY OF THE CONTRACTOR	WALLS/CHASES/HARD CEILINGS REQUIRING ACCESS SHALL BE PROVIDED WITH METAL ACCESS DOORS AT
		AND SHALL BE PROMPTLY REMOVED FROM THE SITE.	WALL/CEILING SURFACES. THESE COMPONENTS SHALL INCLUDE BUT NOT BE LIMITED TO VALVES, ACTUATORS
		 DISPOSAL OF MATERIALS REMOVED A. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL DEBRIS 	VOLUME DAMPERS, FIRE DAMPERS, SMOKE DAMPERS COMBINATION FIRE/SMOKE DAMPERS. ACCESS DOOR SHALL MATCH FIRE RATING OF WALL/CHASE. COORDIN
		RESULTING FROM DEMOLITION WORK AND CONSTRUCTION FOR THIS PROJECT. THIS WILL INCLUDE, BUT NOT BE LIMITED	FULL REQUIREMENTS WITH ARCHITECT. MINIMUM DOOR SIZE SHALL BE 8x8 FOR HAND/ARM ACCESS AND 16
		TO PROVISIONS FOR PORTABLE CONTAINERS (DUMPSTERS) AND ALL CARTAGE AND DUMPING FEES.	FOR HEAD/ARM ACCESS.
		B. THE CONTRACTOR SHALL AT ALL TIMES MAINTAIN ALL AREAS IN AND ABOUT THE WORK IN A NEAT AND SAFE CONDITION.	18. ALL INSULATION PROVIDED FOR THE PROJECT MUST A MAXIMUM FLAME SPREAD RATING OF 25 AND SMOP DEVELOPED OF 50 OR LESS, AS TESTED IN ACCORDA
		TRASH AND OTHER WASTE RESULTING FROM THE WORK SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR. USE OF	WITH ASTM, NFPA & U.L. GUIDELINES.
		THE OWNER'S TRASH RECEPTACLES IS FORBIDDEN FOR DISPOSAL OF ANY REMOVALS, RUBBISH, OR WASTE RESULTING FROM WORK UNDER THIS CONTRACT.	19. ALL EQUIPMENT FOR THIS PROJECT SHALL BE LISTED A NATIONALLY RECOGNIZED TESTING LABORATORY.
		C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAFE	20. COORDINATION DRAWINGS SHALL BE PREPARED AT A MINIMUM 1/4 SCALE AND SHALL INDICATE ALL TRADE
		DISPOSAL AT HIS COST IN ACCORDANCE WITH ANY APPLICABLE STATE OR FEDERAL REGULATION.	SUBMIT COORDINATION DRAWINGS TO ENGINEER FOR APPROVAL PRIOR TO BEGINNING ANY WORK.
		D. REMOVAL AND DISPOSAL OF REFRIGERANT SHALL BE IN ACCORDANCE WITH NJDEP REGULATIONS. THE CONTRACTOR	21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREPARATION AND SUBMISSION OF THE NECESSARY FORM-N
		SHALL COMPLY WITH SECTION 608 OF THE CLEAN AIR ACT, WHICH IS AN EPA REGULATION TO LIMIT THE RELEASES OF ENVIRONMENTALLY HARMFUL REFRIGERANTS INTO THE	FOR THE PURPOSES OF SECURING SMART-START REBATES THE HVAC EQUIPMENT, MOTORS AND SYSTEMS. CONTRACTOR
		ENVIRONMENTALLY HARMFUL REFRIGERANTS INTO THE ENVIRONMENT DURING THE MAINTENANCE, SERVICE, REPAIR OR DISPOSAL OF AIR CONDITIONING AND REFRIGERATION	SHALL INCLUDE THIS WORK AS PART OF THEIR BID.
		EQUIPMENT TO THE "LOWEST ACHIEVABLE LEVEL".	
		6. DAMAGESA. CONTRACTOR SHALL EXERCISE SPECIAL CARE NOT TO DAMAGE	
		ANY OF THE OWNERS' FACILITIES OR EQUIPMENT WHILE PERFORMING CONSTRUCTION WORK. CONTRACTOR WILL BE	
		HELD RESPONSIBLE FOR ANY DAMAGE THAT OCCURS. B. ANY EXISTING OR NEW CONSTRUCTION THAT IS DAMAGED	
		DURING THE COURSE OF THE MECHANICAL WORK SHALL BE RESTORED TO ITS ORIGINAL CONDITION BY THE MECHANICAL	
		CONTRACTOR.	
		C. CONTRACTOR SHALL PROVIDE AND INSTALL NEW INSULATION FOR ALL EXISTING DUCT AND PIPE INSULATION THAT IS DAMAGED DUE TO THE IMPLEMENTATION OF THIS CONTRACT.	
		7. CUTTING & PATCHING	
		A. CONTRACTOR SHALL PERFORM ALL CUTTING AND PATCHING AS REQUIRED UNDER THIS CONTRACT, INCLUDING WORK DUE TO	
		EQUIPMENT, PIPING, AND DUCTWORK REMOVALS TO MATCH ADJACENT CONSTRUCTION.	
		B. PATCH AND SEAL OPENINGS WITH APPROVED MATERIALS TO	
		MAINTAIN EXISTING FIRE AND/OR SMOKE RESISTANCE RATINGS OF THE EXISTING STRUCTURE.	
		C. SEAL ROOF AND EXTERIOR WALL OPENINGS WEATHER AND AIR TIGHT.	
		D. PATCH ALL WALL, ROOF AND FLOOR OPENINGS AS NECESSARY DUE TO PIPING, DUCTWORK, OR EQUIPMENT REMOVALS TO	
		MATCH EXISTING ADJACENT CONSTRUCTION.	
		8. RESTORING SURFACE FINISHES A. WHERE CONCRETE PADS ARE REMOVED OR ATTACHMENTS TO	
		FLOORS, WALLS, AND CEILINGS ARE REMOVED, THE FLOORS, WALLS, AND CEILINGS SHALL BE PATCHED AND FINISHED AS	
		NECESSARY TO PROVIDE A SMOOTH FINISHED SURFACE, INCLUDING PAINT, TO MATCH THE ADJACENT FINISHES OF THE	
		SURROUNDING AREA. 9. CONTROLS	
		A. REMOVE CONTROLS, WHICH DO NOT REMAIN AS PART OF THE	
		BUILDING AUTOMATION SYSTEM, ALL ASSOCIATED ABANDONED WIRING AND CONDUIT, AND ALL ASSOCIATED PNEUMATIC TUBING. THE OWNER WILL INFORM THE CONTRACTOR OF ANY	
		EQUIPMENT, WHICH IS TO BE REMOVED, THAT WILL REMAIN THE PROPERTY OF THE OWNER. ALL OTHER EQUIPMENT,	
		WHICH IS REMOVED, WILL BE DISPOSED OF BY THE CONTRACTOR.	

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PART 1 – GENERAL	
1.1 SUMMARY	
A. SECTION INCLUDES:1. RECTANGULAR DUCTS AND FITTI2. ROUND DUCTS AND FITTINGS.	NGS.
 ROUND DUCTS AND FITTINGS. SHEET METAL MATERIALS. SEALANTS AND GASKETS. 	
5. HANGERS AND SUPPORTS.	
I.2 PERFORMANCE REQUIREMENTS A. AIRSTREAM SURFACES: SURFAC	CES IN CONTACT WITH THE AIRSTREAM SHALL COMPLY WITH
REQUIREMENTS IN ASHRAE 62.1–201	6.
I.3 SUBMITTALS A. PRODUCT DATA: FOR EACH TY	PE OF PRODUCT INDICATED.
3. SHOP DRAWINGS: 1. FABRICATION, ASSEMBLY, AND II COMPONENTS, AND ATTACHMENTS TO	NSTALLATION, INCLUDING PLANS, ELEVATIONS, SECTIONS,
2. FACTORY- AND SHOP-FABRICAT	
4. ELEVATION OF TOP OF DUCTS.	NS FROM BUILDING GRID LINES.
 FITTINGS. REINFORCEMENT AND SPACING. 	
 SEAM AND JOINT CONSTRUCTION PENETRATIONS THROUGH FIRE—I EQUIPMENT INSTALLATION BASED 	
	RIES, INCLUDING DAMPERS, TURNING VANES, AND ACCESS
2. HANGERS AND SUPPORTS, INCL	UDING METHODS FOR DUCT AND BUILDING ATTACHMENT. NS, DRAWN TO SCALE, ON WHICH THE FOLLOWING ITEMS ARE
	H OTHER, USING INPUT FROM INSTALLERS OF THE ITEMS
CONSTRUCTION, BUILDING COMPONEN	TED SPACES, INDICATING COORDINATION WITH GENERAL TS, AND OTHER BUILDING SERVICES. INDICATE PROPOSED
CHANGES TO DUCT LAYOUT. 2. SUSPENDED CEILING COMPONEN	
	CH DUCT WILL BE ATTACHED. ACCESS MODULES FOR ACOUSTICAL TILE. RIERS AND FIRE—RATED CONSTRUCTION.
	EILING INCLUDING THE FOLLOWING:
 AIR OUTLETS AND INLETS. SPEAKERS. 	
d. SPRINKLERS. 2. ACCESS PANELS.	
). WELDING CERTIFICATES.	
	LIFY PROCEDURES AND PERSONNEL ACCORDING TO "SHEET
METAL WELDING CODE," FOR DUCT JO 3. WELDING QUALIFICATIONS: QUA FOLLOWING:	DINT AND SEAM WELDING. LIFY PROCEDURES AND PERSONNEL ACCORDING TO THE
. AWS D9.1M/D9.1, "SHEET META	L WELDING CODE," FOR DUCT JOINT AND SEAM WELDING. BLE REQUIREMENTS IN ASHRAE 62.1–2013, SECTION 5 –
'SYSTEMS AND EQUIPMENT" AND SEC	TION 7 – "CONSTRUCTION AND SYSTEM START-UP." PPLICABLE REQUIREMENTS IN ASHRAE/IESNA 90.1–2013,
SECTION 6.4.4 – "HVAC SYSTEM COM	
PART 2 – PRODUCTS	
2.1 RECTANGULAR DUCTS AND FITTI A. GENERAL FABRICATION REQUIRE	NGS MENTS: COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION
STANDARDS – METAL AND FLEXIBLE" DTHERWISE INDICATED.	BASED ON INDICATED STATIC-PRESSURE CLASS UNLESS
	JOINT TYPES AND FABRICATE ACCORDING TO SMACNA'S "HVAC METAL AND FLEXIBLE," FIGURE 1–4, "TRANSVERSE (GIRTH)
	SS, APPLICABLE SEALING REQUIREMENTS, MATERIALS INVOLVED, ER PROVISIONS IN SMACNA'S "HVAC DUCT CONSTRUCTION
	SEAM TYPES AND FABRICATE ACCORDING TO SMACNA'S "HVAC
RECTANGULAR DUCTS," FOR STATIC-F	METAL AND FLEXIBLE," FIGURE 1–5, "LONGITUDINAL SEAMS – PRESSURE CLASS, APPLICABLE SEALING REQUIREMENTS,
DUCT CONSTRUCTION STANDARDS -	
SELECT TYPES AND FABRICATE ACCO	, BRANCH CONNECTIONS, AND OTHER DUCT CONSTRUCTION: RDING TO SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS
STATIC-PRESSURE CLASS, APPLICABL	, "FITTINGS AND OTHER CONSTRUCTION," FOR E SEALING REQUIREMENTS, MATERIALS INVOLVED,
DUCT-SUPPORT INTERVALS, AND OTH STANDARDS – METAL AND FLEXIBLE.'	ER PROVISIONS IN SMACNA'S "HVAC DUCT CONSTRUCTION
2.2 ROUND DUCTS AND FITTINGS	
STANDARDS – METAL AND FLEXIBLE,'	MENTS: COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION CHAPTER 3, "ROUND, OVAL, AND FLEXIBLE DUCT," BASED ON
NDICATED STATIC—PRESSURE CLASS . MANUFACTURERS: SUBJECT TO DNE OF THE FOLLOWING:	UNLESS OTHERWISE INDICATED. COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY
D. LINDAB INC. D. MCGILL AIRFLOW LLC.	
2. SEMCO INCORPORATED. 4. SHEET METAL CONNECTORS, INC	
3. TRANSVERSE JOINTS: SELECT DUCT CONSTRUCTION STANDARDS –	JOINT TYPES AND FABRICATE ACCORDING TO SMACNA'S "HVAC METAL AND FLEXIBLE," FIGURE 3–2, "TRANSVERSE JOINTS –
ROUND DUCT," FOR STATIC-PRESSUR	E CLASS, APPLICABLE SEALING REQUIREMENTS, MATERIALS , AND OTHER PROVISIONS IN SMACNA'S "HVAC DUCT
CONSTRUCTION STANDARDS - METAL	
	SEAM TYPES AND FABRICATE ACCORDING TO SMACNA'S "HVAC METAL AND FLEXIBLE," FIGURE 3–1, "SEAMS – ROUND DUCT
	RE CLASS, APPLICABLE SEALING REQUIREMENTS, MATERIALS , AND OTHER PROVISIONS IN SMACNA'S "HVAC DUCT
CONSTRUCTION STANDARDS – METAL . FABRICATE ROUND DUCTS LARG	
	TYPES AND FABRICATE ACCORDING TO SMACNA'S "HVAC DUCT
ATERALS," AND FIGURE 3-5, "CONIC	AND FLEXIBLE," FIGURE 3-4, "90 DEGREE TEES AND CAL TEES," FOR STATIC-PRESSURE CLASS, APPLICABLE SEALING
	DUCT-SUPPORT INTERVALS, AND OTHER PROVISIONS IN N STANDARDS – METAL AND FLEXIBLE."
2.3 SHEET METAL MATERIALS	ITC. COMPLY WITH CMACNIA'S "INVACIDUAT CONSTRUCTION
STANDARDS - METAL AND FLEXIBLE"	ITS: COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION FOR ACCEPTABLE MATERIALS, MATERIAL THICKNESSES, AND SS OTHERWISE INDICATED. SHEET METAL MATERIALS SHALL BE
	SS OTHERWISE INDICATED. SHEET METAL MATERIALS SHALL BE LER MARKS, STAINS, DISCOLORATIONS, AND OTHER
	MPLY WITH ASTM A 653/A 653M. ON: G90.
2. FINISHES FOR SURFACES EXPOS	SED TO VIEW: MILL PHOSPHATIZED. PLY WITH ASTM A 1008/A 1008M, WITH OILED, MATTE FINISH
FOR EXPOSED DUCTS.	MPLY WITH ASTM A 480/A 480M, TYPE 304 OR 316, AS
NDICATED IN THE "DUCT SCHEDULE"	ARTICLE; COLD ROLLED, ANNEALED, SHEET. EXPOSED NO. 2D, NO. 3, OR NO. 4 AS INDICATED IN THE "DUCT
SCHEDULE" ARTICLE.	PLATES: ASTM A 36/A 36M, STEEL PLATES, SHAPES, AND
BARS; BLACK AND GALVANIZED.	D-STEEL SHAPES AND PLATES ARE USED TO REINFORCE
	ERENT METALS WITH BUTYL RUBBER, NEOPRENE, OR EPDM
GASKET MATERIALS.	1/4–INCH MINIMUM DIAMETER FOR LENGTHS 36 INCHES OR

2.4 SEALANT AND GASKETS A. GENERAL SEALANT AND GASKET REQUIREMENTS: SURFACE-BURNING CHARACTERISTICS FOR SEALANTS AND GASKETS 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. B. WATER-BASED JOINT AND SEAM SEALANT: APPLICATION METHOD: BRUSH ON.

SOLIDS CONTENT: MINIMUM 65 PERCENT. SHORE A HARDNESS: MINIMUM 20. WATER RESISTANT. MOLD AND MILDEW RESISTANT.

VOC: MAXIMUM 75 G/L (LESS WATER). MAXIMUM STATIC-PRESSURE CLASS: 10-INCH WG (2500 PA), POSITIVE AND NEGATIVE. 8. SERVICE: INDOOR OR OUTDOOR. 9. SUBSTRATE: COMPATIBLE WITH GALVANIZED SHEET STEEL (BOTH PVC COATED AND BARE), STAINLESS STEEL, OR ALUMINUM SHEETS. FLANGED JOINT SEALANT: COMPLY WITH ASTM C 920. GENERAL: SINGLE-COMPONENT, ACID-CURING, SILICONE, ELASTOMERIC. TYPE: S.

USE: O. 6. FOR INDOOR APPLICATIONS, USE SEALANT THAT HAS A VOC CONTENT OF 250 G/L OR LESS WHEN CALCULATED ACCORDING TO 40 CFR 59, SUBPART D (EPA METHOD 24). D. FLANGE GASKETS: BUTYL RUBBER, NEOPRENE, OR EPDM POLYMER WITH POLYISOBUTYLENE

E. ROUND DUCT JOINT O-RING SEALS: 1. SEAL SHALL PROVIDE MAXIMUM LEAKAGE CLASS OF 3 CFM/100 SQ. FT. AT 1-INCH WG AND SHALL BE RATED FOR 10-INCH WG STATIC-PRESSURE CLASS, POSITIVE OR NEGATIVE. EPDM O-RING TO SEAL IN CONCAVE BEAD IN COUPLING OR FITTING SPIGOT. DOUBLE-LIPPED, EPDM O-RING SEAL, MECHANICALLY FASTENED TO FACTORY-FABRICATED COUPLINGS AND FITTING SPIGOTS.

2.5 HANGERS AND SUPPORTS A. HANGER RODS FOR NONCORROSIVE ENVIRONMENTS: CADMIUM-PLATED STEEL RODS AND B. HANGER RODS FOR CORROSIVE ENVIRONMENTS: ELECTROGALVANIZED, ALL-THREAD RODS OR GALVANIZED RODS WITH THREADS PAINTED WITH ZINC-CHROMATE PRIMER AFTER INSTALLATION. C. STRAP AND ROD SIZES: COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS -METAL AND FLEXIBLE," TABLE 4-1, "RECTANGULAR DUCT HANGERS MINIMUM SIZE," AND TABLE 4-2, "MINIMUM HANGER SIZES FOR ROUND DUCT." D. STEEL CABLES FOR GALVANIZED-STEEL DUCTS: GALVANIZED STEEL COMPLYING WITH ASTM A E. STEEL CABLES FOR STAINLESS-STEEL DUCTS: STAINLESS STEEL COMPLYING WITH ASTM A F. STEEL CABLE END CONNECTIONS: CADMIUM-PLATED STEEL ASSEMBLIES WITH BRACKETS, SWIVEL, AND BOLTS DESIGNED FOR DUCT HANGER SERVICE; WITH AN AUTOMATIC-LOCKING AND CLAMPING DEVICE. G. DUCT ATTACHMENTS: SHEET METAL SCREWS, BLIND RIVETS, OR SELF-TAPPING METAL SCREWS; COMPATIBLE WITH DUCT MATERIALS. H. TRAPEZE AND RISER SUPPORTS:

SUPPORTS FOR GALVANIZED-STEEL DUCTS: GALVANIZED-STEEL SHAPES AND PLATES. SUPPORTS FOR STAINLESS-STEEL DUCTS: STAINLESS-STEEL SHAPES AND PLATES. SUPPORTS FOR ALUMINUM DUCTS: ALUMINUM OR GALVANIZED STEEL COATED WITH ZINC

PART 3 – EXECUTION 3.1 DUCT INSTALLATION

GRADE: NS.

4. CLASS: 25.

PLASTICIZER.

NUTS.

60.3

492

CHROMATE.

DRAWINGS.

THICKNESS.

GUIDELINES."

A. DRAWING PLANS, SCHEMATICS, AND DIAGRAMS INDICATE GENERAL LOCATION AND ARRANGEMENT OF DUCT SYSTEM. INDICATED DUCT LOCATIONS, CONFIGURATIONS, AND ARRANGEMENTS WERE USED TO SIZE DUCTS AND CALCULATE FRICTION LOSS FOR AIR-HANDLING EQUIPMENT SIZING AND FOR OTHER DESIGN CONSIDERATIONS. INSTALL DUCT SYSTEMS AS INDICATED UNLESS DEVIATIONS TO LAYOUT ARE APPROVED ON SHOP DRAWINGS AND COORDINATION

B. INSTALL DUCTS ACCORDING TO SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE" UNLESS OTHERWISE INDICATED. INSTALL ROUND DUCTS IN MAXIMUM PRACTICAL LENGTHS. INSTALL DUCTS WITH FEWEST POSSIBLE JOINTS.

INSTALL FACTORY- OR SHOP-FABRICATED FITTINGS FOR CHANGES IN DIRECTION, SIZE, AND SHAPE AND FOR BRANCH CONNECTIONS. F. UNLESS OTHERWISE INDICATED, INSTALL DUCTS VERTICALLY AND HORIZONTALLY, AND PARALLEL AND PERPENDICULAR TO BUILDING LINES. G. INSTALL DUCTS CLOSE TO WALLS, OVERHEAD CONSTRUCTION, COLUMNS, AND OTHER STRUCTURAL AND PERMANENT ENCLOSURE ELEMENTS OF BUILDING.

H. INSTALL DUCTS WITH A CLEARANCE OF 1 INCH, PLUS ALLOWANCE FOR INSULATION I. ROUTE DUCTS TO AVOID PASSING THROUGH TRANSFORMER VAULTS AND ELECTRICAL EQUIPMENT ROOMS AND ENCLOSURES. J. WHERE DUCTS PASS THROUGH NON-FIRE-RATED INTERIOR PARTITIONS AND EXTERIOR WALLS

AND ARE EXPOSED TO VIEW, COVER THE OPENING BETWEEN THE PARTITION AND DUCT OR DUCT INSULATION WITH SHEET METAL FLANGES OF SAME METAL THICKNESS AS THE DUCT. OVERLAP OPENINGS ON FOUR SIDES BY AT LEAST 1-1/2 INCHES K. PROTECT DUCT INTERIORS FROM MOISTURE, CONSTRUCTION DEBRIS AND DUST, AND OTHER FOREIGN MATERIALS. COMPLY WITH SMACNA'S "DUCT CLEANLINESS FOR NEW CONSTRUCTION

3.2 DUCT SEALING A. SEAL DUCTS FOR DUCT STATIC-PRESSURE, SEAL CLASSES, AND LEAKAGE CLASSES SPECIFIED IN "DUCT SCHEDULE" ARTICLE ACCORDING TO SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS – METAL AND FLEXIBLE." B. SEAL DUCTS TO THE FOLLOWING SEAL CLASSES ACCORDING TO SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE": COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE."

OUTDOOR, SUPPLY-AIR DUCTS: SEAL CLASS A. OUTDOOR, EXHAUST DUCTS: SEAL CLASS C OUTDOOR, RETURN-AIR DUCTS: SEAL CLASS C. UNCONDITIONED SPACE, SUPPLY-AIR DUCTS IN PRESSURE CLASSES 2-INCH WG AND LOWER:

SEAL CLASS B. 6. UNCONDITIONED SPACE, SUPPLY-AIR DUCTS IN PRESSURE CLASSES HIGHER THAN 2-INCH WG: SEAL CLASS A. UNCONDITIONED SPACE, EXHAUST DUCTS: SEAL CLASS C. UNCONDITIONED SPACE, RETURN-AIR DUCTS: SEAL CLASS B.

9. CONDITIONED SPACE, SUPPLY-AIR DUCTS IN PRESSURE CLASSES 2-INCH WG AND LOWER: SEAL CLASS C. 10. CONDITIONED SPACE, SUPPLY-AIR DUCTS IN PRESSURE CLASSES HIGHER THAN 2-INCH WG SEAL CLASS B. 11. CONDITIONED SPACE, EXHAUST DUCTS: SEAL CLASS B. 12. CONDITIONED SPACE, RETURN-AIR DUCTS: SEAL CLASS C.

3.3 HANGER AND SUPPORT INSTALLATION A. COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE," CHAPTER 4. "HANGERS AND SUPPORTS." B. BUILDING ATTACHMENTS: CONCRETE INSERTS, POWDER-ACTUATED FASTENERS, OR STRUCTURAL-STEEL FASTENERS APPROPRIATE FOR CONSTRUCTION MATERIALS TO WHICH HANGERS

ARE BEING ATTACHED. 1. WHERE PRACTICAL, INSTALL CONCRETE INSERTS BEFORE PLACING CONCRETE. 2. INSTALL POWDER-ACTUATED CONCRETE FASTENERS AFTER CONCRETE IS PLACED AND COMPLETELY CURED.

3. USE POWDER-ACTUATED CONCRETE FASTENERS FOR STANDARD-WEIGHT AGGREGATE CONCRETES OR FOR SLABS MORE THAN 4 INCHES THICK. 4. DO NOT USE POWDER-ACTUATED CONCRETE FASTENERS FOR LIGHTWEIGHT-AGGREGATE CONCRETES OR FOR SLABS LESS THAN 4 INCHES THICK. 5. DO NOT USE POWDER-ACTUATED CONCRETE FASTENERS FOR SEISMIC RESTRAINTS. HANGER SPACING: COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS -

METAL AND FLEXIBLE," TABLE 4-1, "RECTANGULAR DUCT HANGERS MINIMUM SIZE," AND TABLE 4-2. "MINIMUM HANGER SIZES FOR ROUND DUCT." FOR MAXIMUM HANGER SPACING: INSTALL HANGERS AND SUPPORTS WITHIN 24 INCHES OF EACH ELBOW AND WITHIN 48 INCHES OF EACH BRANCH INTERSECTION. HANGERS EXPOSED TO VIEW: THREADED ROD AND ANGLE OR CHANNEL SUPPORTS.

SUPPORT VERTICAL DUCTS WITH STEEL ANGLES OR CHANNEL SECURED TO THE SIDES OF THE DUCT WITH WELDS, BOLTS, SHEET METAL SCREWS, OR BLIND RIVETS; SUPPORT AT EACH FLOOR AND AT A MAXIMUM INTERVALS OF 16 FEET. F. INSTALL UPPER ATTACHMENTS TO STRUCTURES. SELECT AND SIZE UPPER ATTACHMENTS WITH PULL-OUT, TENSION, AND SHEAR CAPACITIES APPROPRIATE FOR SUPPORTED LOADS AND BUILDING MATERIALS WHERE USED.

3.4 CONNECTIONS

A. MAKE CONNECTIONS TO EQUIPMENT WITH FLEXIBLE CONNECTORS. B. COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE FOR BRANCH, OUTLET AND INLET, AND TERMINAL UNIT CONNECTIONS.

3.5 START UP A. AIR BALANCE: COMPLY WITH REQUIREMENTS IN DIVISION 23 SECTION "TESTING, ADJUSTIN AND BALANCING FOR HVAC."

3.6 DUCT SCHEDULE A. FABRICATE DUCTS WITH GALVANIZED SHEET STEEL EXCEPT AS OTHERWISE INDICATED AND FOLLOWS: B. SUPPLY DUCTS:

1. DUCTS CONNECTED TO ROOFTOP UNITS, FURNACES, AND TERMINAL UNITS: PRESSURE CLASS: POSITIVE 2-INCH WG.

MINIMUM SMACNA SEAL CLASS: A. SMACNA LEAKAGE CLASS FOR RECTANGULAR: 12

SMACNA LEAKAGE CLASS FOR ROUND AND FLAT OVAL: 12. RETURN DUCTS:

DUCTS CONNECTED TO ROOFTOP UNITS, FURNACES, AND TERMINAL UNITS: PRESSURE CLASS: POSITIVE OR NEGATIVE 2-INCH WG .

MINIMUM SMACNA SEAL CLASS: A. SMACNA LEAKAGE CLASS FOR RECTANGULAR: 12.

SMACNA LEAKAGE CLASS FOR ROUND AND FLAT OVAL: 12. EXHAUST DUCTS:

DUCTS CONNECTED TO FANS EXHAUSTING (ASHRAE 62.1, CLASS 1 AND 2) AIR: PRESSURE CLASS: NEGATIVE 1-INCH WG.

MINIMUM SMACNA SEAL CLASS: A SMACNA LEAKAGE CLASS FOR RECTANGULAR: 12

SMACNA LEAKAGE CLASS FOR ROUND AND FLAT OVAL: 12. DUCTS CONNECTED TO COMMERCIAL KITCHEN HOODS: COMPLY WITH NFPA 96. EXPOSED TO VIEW: TYPE 304, STAINLESS-STEEL SHEET, NO. 4 FINISH.

CONCEALED: CARBON-STEEL SHEET. WELDED SEAMS AND JOINTS.

PRESSURE CLASS: POSITIVE OR NEGATIVE 4-INCH WG. MINIMUM SMACNA SEAL CLASS: WELDED SEAMS, JOINTS, AND PENETRATIONS. SMACNA LEAKAGE CLASS: 3. OUTDOOR-AIR DUCTS:

DUCTS CONNECTED TO FURNACES AND TERMINAL UNITS: PRESSURE CLASS: POSITIVE OR NEGATIVE 2-INCH WG.

MINIMUM SMACNA SEAL CLASS: A. SMACNA LEAKAGE CLASS FOR RECTANGULAR: 12.

SMACNA LEAKAGE CLASS FOR ROUND AND FLAT OVAL: 12. ELBOW CONFIGURATION: 1. RECTANGULAR DUCT: COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS

METAL AND FLEXIBLE," FIGURE 2-2, "RECTANGULAR ELBOWS." a. VELOCITY 1000 FPM OR LOWER: RADIUS TYPE RE 1 WITH MINIMUM 0.5 RADIUS-TO-DIAMETER RATIO.

MITERED TYPE RE 4 WITHOUT VANES. VELOCITY 1000 TO 1500 FPM:

RADIUS TYPE RE 1 WITH MINIMUM 1.0 RADIUS-TO-DIAMETER RATIO. RADIUS TYPE RE 3 WITH MINIMUM 0.5 RADIUS-TO-DIAMETER RATIO AND TWO VANES. MITERED TYPE RE 2 WITH VANES COMPLYING WITH SMACNA'S "HVAC DUCT CONSTRUCTION

STANDARDS – METAL AND FLEXIBLE," FIGURE 2-3, "VANES AND VANE RUNNERS," AND FIGURE 2-4, "VANE SUPPORT IN ELBOWS." 2. RECTANGULAR DUCT: COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS

METAL AND FLEXIBLE," FIGURE 2-2, "RECTANGULAR ELBOWS." a. RADIUS TYPE RE 1 WITH MINIMUM 1.5 RADIUS-TO-DIAMETER RATIO.

b. RADIUS TYPE RE 3 WITH MINIMUM 1.0 RADIUS-TO-DIAMETER RATIO AND TWO VANES. c. MITERED TYPE RE 2 WITH VANES COMPLYING WITH SMACNA'S "HVAC DUCT CONSTRUCTIO STANDARDS - METAL AND FLEXIBLE," FIGURE 2-3, "VANES AND VANE RUNNERS," AND FIGURE 2-4, "VANE SUPPORT IN ELBOWS." 3. ROUND DUCT: COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - MET.

AND FLEXIBLE," FIGURE 3-3, "ROUND DUCT ELBOWS." a. MINIMUM RADIUS-TO-DIAMETER RATIO AND ELBOW SEGMENTS: COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE," TABLE 3-1, "MITERED ELBC ELBOWS WITH LESS THAN 90-DEGREE CHANGE OF DIRECTION HAVE PROPORTIONATELY FEWER SEGMENTS.

1) VELOCITY 1000 FPM OR LOWER: 0.5 RADIUS-TO-DIAMETER RATIO AND THREE SEGMENT FOR 90-DEGREE ELBOW. 2) VELOCITY 1000 TO 1500 FPM: 1.0 RADIUS-TO-DIAMETER RATIO AND FOUR SEGMENTS 90-DEGREE ELBOW.

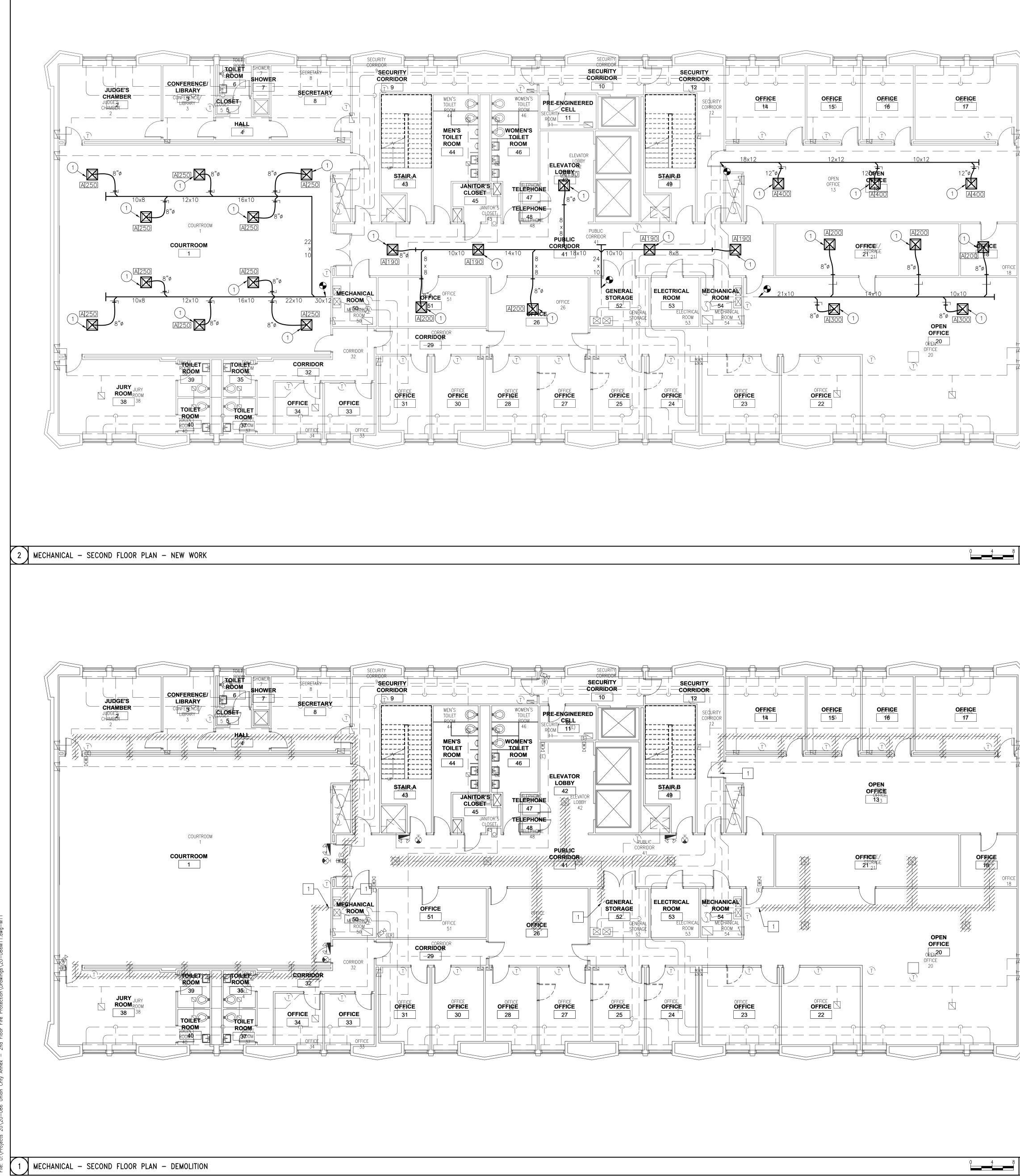
3) RADIUS-TO DIAMETER RATIO: 1.5. b. ROUND ELBOWS, 12 INCHES AND SMALLER IN DIAMETER: STAMPED OR PLEATED. c. ROUND ELBOWS, 14 INCHES AND LARGER IN DIAMETER: STANDING SEAM] BRANCH CONFIGURATION:

1. RECTANGULAR DUCT: COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS METAL AND FLEXIBLE," FIGURE 2-6, "BRANCH CONNECTIONS." a. RECTANGULAR MAIN TO RECTANGULAR BRANCH: 45-DEGREE ENTRY. b. RECTANGULAR MAIN TO ROUND BRANCH: SPIN IN.

2. ROUND: COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE," FIGURE 3-4, "90 DEGREE TEES AND LATERALS," AND FIGURE 3-5, "CONICAL TEES SADDLE TAPS ARE PERMITTED IN EXISTING DUCT. a. VELOCITY 1000 FPM OR LOWER: 90-DEGREE TAP.

b. VELOCITY 1000 TO 1500 FPM: CONICAL TAP.

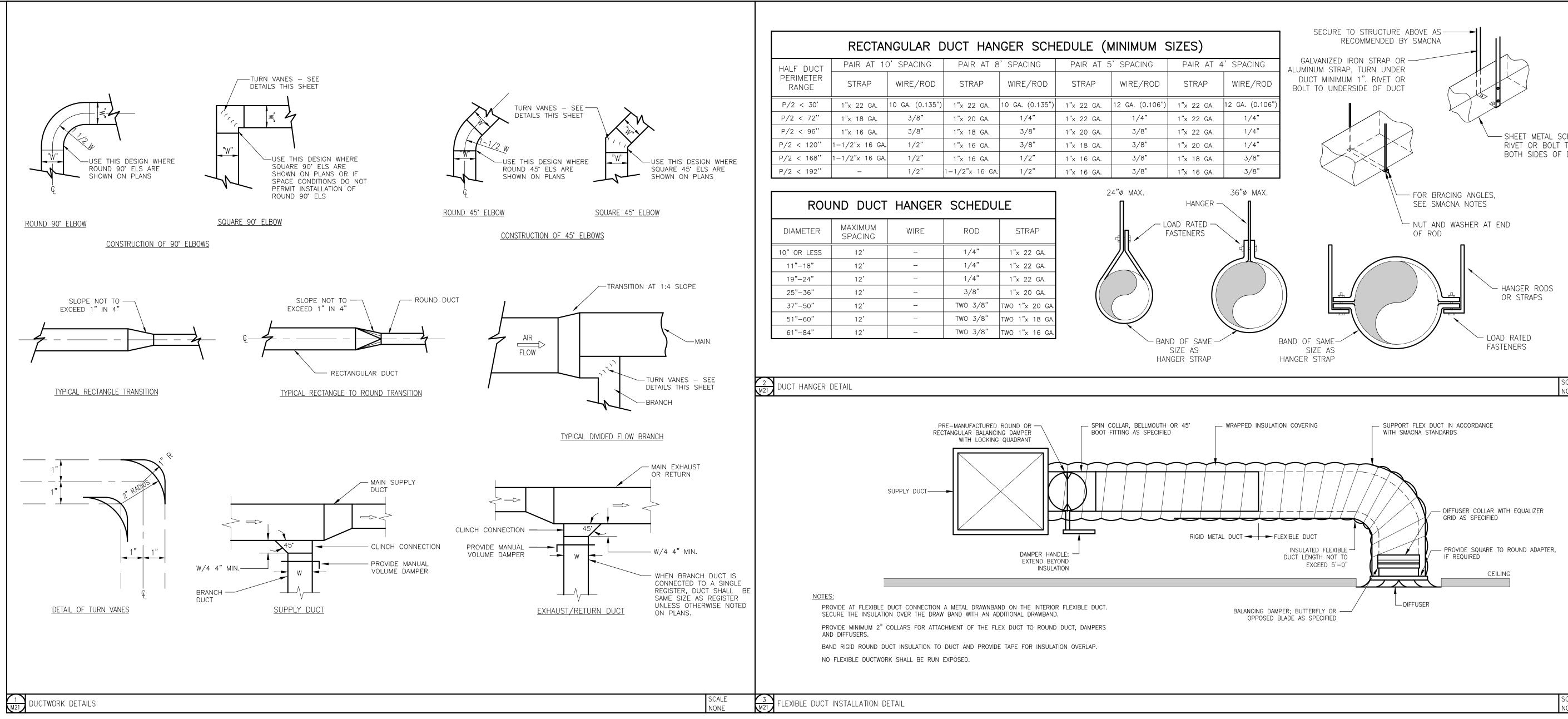
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_	Johnson & Urban, LLCC o n s ulting Engineers Certificate of Authorization: 24GA28I53200295 State Route 34 Colts Neck, NJ 07722 t 732.772.1515 J&U Project # 20-086J&U Project # 20-086Mark E. Lonergan, P.E. NJ License #24GE04074900
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		 DEMOLITION NOTES: CONTRACTOR SHALL VISIT THE SITE TO VERIFY EXISTING CONDITIONS PRIOR TO SUBMISSION OF BID. NO ADDITIONAL COMPENSATION SHALL BE CONSIDERED FOR FAILURE TO OBSERVE THIS REQUIREMENT. ALL EXISTING WORK SHALL REMAIN UNLESS OTHERWISE NOTED. EXISTING PROJECT CONDITIONS INDICATED ARE BASED ON FIELD OBSERVATION, EXISTING DESION / CONSTRUCTION DOCUMENTS AND EXISTING RECORD DOCUMENTS AND ARE INTENDED TO INDICATE THE SCOPE OF THE WORK AFFECTED BY THIS PROJECT. NOT ALL AREAS MAY HAVE BEEN ACCESSIBLE DURING SURVEY. EQUIPMENT SHOWN IS TO THE BEST OF THE SURVEYOR'S ABILITY DUE TO SITE CONSTRAINTS. CONTRACTOR IS RESPONSIBLE FOR FINAL FINAL SURVEY OF ALL AREAS IN SCOPE FOR DEMOLITION AS SHOWN. THE CONTRACTOR SHALL REFER TO ARCHITECTURAL DEMOLITION DRAWINGS FOR ADDITIONAL INFORMATION AND SCOPE OF DEMOLITION. ALL MATERIALS AND EQUIPMENT REMOVALS SHALL BE DISPOSED OF AS DIRECTED BY THE OWNER OR THE ARCHITECT. REFER TO ARCHITECT'S PHASING DRAWINGS AND NOTES PRIOR TO THE REMOVAL/DEMOLITION OF ANY MECHANICAL WORK. REPORT DISCREPANCIES TO ARCHITECT / ENGINEER BEFORE DISTURBING EXISTING INSTALLATION. REMOVE, RELOCATE AND REPAIR EXISTING INSTALLATIONS TO ACCOMMODATE NEW CONSTRUCTION. MAINTAIN ACCESS TO EXISTING ACTIVE MECHANICAL INSTALLATIONS. EXTEND EXISTING INSTALLATION USING MATERIALS AND METHODS COMPATIBLE WITH EXISTING MECHANICAL INSTALLATION USING MATERIALS AND METHODS COMPATIBLE WITH EXISTING MECHANICAL INSTALLATION SAND AS SPECIFIED. 	 GENERAL NOTES: ALL MECHANICAL WORK SHALL CONFORM TO THE LATEST ADOPTED EDITIONS OF NATIONAL MECHANICAL CODE. CONTRACTOR SHALL LOCATE AND CLEAN ALL EXISTING SUPPLY OR RETURN DIFFUSERS/REGISTERS. CONTRACTOR SHALL COORDINATE WITH ARCHITECT AND RELOCATE ANY EXISTING RETURN DIFFUSERS/REGISTERS THAT MAY INTERFERE WITH NEW REFLECTED CEILI AND REPORT ANY CHANGES TO THE ENGINEER. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT EQUIPMENT, DEVICE OR FIXTUR AND MOUNTING HEIGHTS, COLORS AND FINISHES.
1. OUL REPORT AND DAY ENDING SUPPLY ARE DECINICATE AND RELATED DEFIDIENT SECONDECTOR. 1. MED 212' SUPPLY ARE COLOR DEFIDIENT SECONDECTOR. 5. MED 212' SUPPLY ARE COLOR DEFIDIENT SECONDECTOR.			
SOME			
		1. CUT, REMOVE AND CAP EXISTING SUPPLY AIR DUCTWORK AND RELATED DIFFUSERS/REGISTERS BACK TO LOCATION SHOWN ON PLAN FOR FUTURE RECONNECTION.	1. NEW 2'x2' SUPPLY AIR CELLING DIFFUSER - REFER TO SCHEDULES FOR MORE COORDINATE COLOR AND FINAL LOCATION WITH ARCHITEC
	1/8"= 1'-0"		
	SCALE 1/8"= 1'–0"		
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DF THE G SUPPLY OR EILING PLAN URE LOCATIONS	Visit State Route 34 Consult in g Engineers Consult in g Engineers Consult in g Engineers Consult in g Engineers
	t 732.772.1500 f 732.772.1515 J&U Project # 20-086 Mark E. Lonergan, P.E. NU License #24GE04078900
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	Image: Sector
	1 09.20.24 ISSUED FOR BID No. Date Issue or Revision Drawing Title MECHANICAL SECOND FLOOR PLAN DEMOLITION AND NEW WORK Scale USA Project No. As Indicated Drawing No. O7 18 2024 Drawing No.
	07.18.2024 M11 Drawn By Checked By AR JU



INIT ID	MODEL	FACE SIZE	DESCRIPTION				NECK SI	ZE (AT CFM LIS	TED)					REMARK
				<100	<150	<200	<250	<300	<350	<400	<450	<500	<1000	
A	SPD	24" x 24"	STEEL, FULL FACE, ARCHITECTURAL SQUARE PANEL DIFFUSER WITH REMOVABLE FACE PANEL AND OPPOSED BLADE DAMPER	6"	8"	8"	8"	10"	10"	12"	12"	14"	-	1,2,3,4,5
2. 3. 4.	TABLE INDIC BAKED ENAM DIFFUSERS	MEL FINISH, COLO SHALL BE 4-WAY	ON PRICE. NOISE CRITERION RATING <nc 20="" areas,="" criter<br="" drawngs="" for="" general="" in="" noise="" see="" sizes="">OR TO BE SELECTED BY ARCHITECT. BLOW UNLESS OTHERWISE INDICATED ON PLANS. LL BE COORDINATED WITH CEILING AND/OR WALL CONSTRUCTION TYPE.</nc>	I RION RATING <nc15 acoustically="" in="" s<="" td=""><td>LENSITIVE AREAS.</td><td>1</td><td><u> </u></td><td><u></u></td><td>1</td><td>1</td><td>1</td><td>11</td><td></td><td>1</td></nc15>	LENSITIVE AREAS.	1	<u> </u>	<u></u>	1	1	1	11		1

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	1 09.20.24 ISSUED FOR BID No. Date Issue or Revision
	Drawing Title MECHANICAL SCHEDULES & DETAILS
	ScaleUSA Project No.As Indicated2020-047Drawing DateDrawing No.07.18.2024M21
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ELECTRIC	ELECTRICAL GENERAL NOTES
<u>GENERAL</u> A. ALL ELECTRICAL WORK SHALL CONFORM TO THE LATEST ADOPTED EDITIONS THE NATIONAL ELECTRICAL CODE, NFPA, IBC, UCC, NATIONAL ELECTRIC SAFE LOCAL CODES.	ALL ELECTRICAL WORK SHALL CONFORM TO THE LATEST ADOPTED EDITIONS OF THE NATIONAL ELECTRICAL CODE, NFPA, IBC, UCC, NATIONAL ELECTRIC SAFETY AND LOCAL CODES.
B. OBTAIN ALL PERMITS AND APPROVAL FROM AUTHORITIES HAVING JURISDICTIO PAYING ALL FEES REQUIRED.C. PROVIDE TEMPORARY POWER AS REQUIRED FOR THE PROJECT.D. ALL WORK SHALL BE DONE UNDER NORMAL WORKING HOURS, UNLESS OTHE	DRAWINGS ARE DIAGRAMMATIC AND DEFINE THE INTENT OF THE WORK. LOCATIONS OF EQUIPMENT, FIXTURES, DEVICES, PANELBOARDS, DUCTS, PIPING, DIFFUSERS, PARTITIONS, OPENINGS, ETC. ARE APPROXIMATE AND ARE SUBJECT TO MODIFICATIONS CAUSED BY STRUCTURAL CONDITIONS AND EQUIPMENT PROVIDED BY OTHER CONTRACTORS, SUBCONTRACTORS OR THE OWNER. COORDINATE ALL WORK WITH THE WORK OF OTHER TRADES. DETERMINE ROUGHING LOCATIONS FROM APPROVED SHOP DRAWINGS. MINOR
 NOTED. E. SECURITY DEVICES AND WIRING TO BE FURNISHED AND INSTALLED BY OTHER ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL J-BOX AND EMPTY CON WITH PULL STRING WHERE REQUIRED FOR ACCESSIBLE RACEWAY TO HEAD-E EQUIPMENT. ALL POWER TO DEVICES AND EQUIPMENT IS BY ELECTRICAL 	MODIFICATIONS OF LOCATIONS REQUIRED TO EFFECT SUCH COORDINATION SHALL BE MADE AT NO COST TO THE OWNER. DRAWINGS AND SPECIFICATIONS ARE INTENDED TO BE COMPLEMENTARY TO EACH OTHER. WHERE DISCREPANCIES OR CONFLICTS OCCUR, THE CONTRACTOR SHALL INCLUDE THE MORE COSTLY METHOD IN HIS PROPOSAL UNLESS CLARIFIED BY
CONTRACTOR COORDINATE WITH SECURITY VENDOR AND/OR OWNER. F. SOUND SYSTEM BY OTHERS. GROUNDING: A. GROUNDING SYSTEM: PERMANENTLY AND EFFECTIVELY GROUND ALL METALLIC CONDUITS, SUPPORTS, CABINETS, PANELBOARDS AND SYSTEM GROUNDING IN ACCORDANCE WITH THE REQUIREMENTS OF THE NEC. MAINTAIN CONTINU EQUIPMENT GROUND THREQUEGALLY DESIGNED FOR GROUNDING. WHERE GROUND CONDUCTOR IS ELECTED IN CONDUIT, GROUND CLAMPFS SHALL BE OF A T WHICH GROUNDING BOTH CONDUCTOR AND CONDUIT. ALL CREATES SHALL BE OF A T WHICH GROUNDING CONDUCTOR AND CONDUIT. ALL CREATES SHALL BE OF A T WHICH GROUNDING CONDUCTOR AND CONDUIT. ALL CREATES SHALL BE OROUND WIRE SIZED IN ACCORDANCE WITH "NEC" TABLE 250–122. B. EQUIPMENT GROUNDING CONDUCTORS SHALL BE PROVIDED FOR ALL FEEDER BRANCH CIRCUITS. USE GREEN GROUND. IDENTIFICATION: A. MODIFY DIRECTORIES OF EXISTING PANELS WHERE CHANGES AND/OR ADDITIC HAVE BEEN MADE. B. WIRE AND CABLE COLOR CODING. 1. POWER WIRING: CONSISTENT PHASE IDENTIFICATION OF ALL WIRES SHALL MAINTAINED AS FOLLOWS: 208/120 YOLT, 3# 60 HZ PHASE B RED PHASE C ORANGE NEUTRAL WIRE WHITE GROUND WIRE GREEN (THIS CHART SHALL BE POSTED ON PANEL BOARDS AND SIMILAR DISTRIBUTION EQUIPMENT) 2. CONTROL WIRES: WIRES OF CONTROL CIRCUITS SHALL BE CONSISTENTL' COLOR CODED TO PERMIT EASY IDENTIFICATION OF CONDUCTORS. C. PROVIDE IDENTIFICATION OF ALL STRUCTURAL SUPPORTS AND MOUNTIL DEVICES FOR THE PROFER ATACHMENTS OF EQUIPMENT SUPPLIED BY THE STRUE. D. PROVIDE PLASTIC ENGRAVED LABELS ON PANELS AND DISCONNECT SWITCHES: INDICATE POWER SUBLE AND VIDIAGE. POWER SUTCE AND VOLTAGE. D. PROVIDE PLASTIC ENGRAVED LABELS ON PANELS AND DISCONNECT SWITCHES: INDICATE POWER SUBLE AND VOLTAGE. D. PROVIDE PLASTIC ENGRAVED LABELS ON PANELS AND DISCONNECTS. CONTROLLERS FURNISHED BY THE WECHANICAL TRADE. D. PROVIDE PLASTIC SHALL PROVIDE ALL STRUCTURAL SUPPORTS AND MOUNTIL DEVICES FOR THE PROFER ATACHMENTS OF EQUIPMENT SUPPLIED BY THE SHALL ASSO INCLUDES SARTERS, DISCONNECTS, CONTROLLERS	 BULLETIN OR ADDENDUM ACKNOWLEDGED PRIOR TO RECEIPT OF BIDS. CONDUCTOR SIZES (PHASE AND GROUND) SHALL BE INCREASED DUE TO DE-RATING AND VOLTAGE DROP REQUIREMENTS AS NECESSARY. CONTRACTOR SHALL BE RESPONSIBLE DROP RECOVERNEMENTS AS NECESSARY. CONTRACTOR SHALL BE RESPONSIBLE DROP RECOVERNEMENTS AS NECESSARY. CONTRACTOR SHALL BE RESPONSIBLE DROP RECOVERNEMENT AS NECESSARY. CODES NOT EXCELD S% TOTAL. PROVIDE AND INSTALL SPUCE/TAP J-BOX BEFORE CONNECTION TO LOAD AND TRANSFER TO SMALLER CONDUCTORS (PER CODE) FOR CONNECTION TO DEVICE TERMINALS WHERE REQUIRED. ALL NEW ELECTRICAL SYSTEMS, INCLUDING LIGHTING, CONDUIT, PANELS, ETC., SHALL BE SEISMICALLY BRACED IN ACCORDANCE WITH INTERNATIONAL BUILDING CODE. SEPARATE NEUTRALS SHALL BE RUN FOR ALL CIRCUITS UTILIZING SWITCH MODE POWER SUPPLIES (EG. COMPUTERS, FLUORESCENT LIGHTING, CILC). AS-BUILTS SHALL BE PROVIDED WITHIN 30 DAYS OF SYSTEM ACCEPTANCE, INCLUDING BUT NOT LIMITED TO SINGLE-LINE OF ELECTRICAL DISTRIBUTION SYSTEM AND FLOOR PLAN WITH LOCATIONS OF DISTRIBUTION EQUIPMENT AND AREAS SERVED BY THAT EQUIPMENT. (ASHRAE STANDARD 90.1–2013.) O & M MANUALS MUST BE PROVIDED FOR THE ELECTRICAL DISTRIBUTION SYSTEM, INCLUDING BUT NOT LIMITED TO NAMEPLATE RATINGS, SCHEDULED MAINTENANCE, SPECIFIC COMPLETIN SUPPLIED, NAMES AND ADDRESSES OF QUALIFIED SERVICE ACENCES, COMPLIET NARTATIVE AND SCHEWATIC OF SYSTEM IN NORMAL OPERATION, (ASHRAE STANDARD 90.1–2013.) THE ELECTRICAL CONTRACTOR SHALL TRACE AFFECTED POWER PANEL BRANCH CIRCUITS IN CONTRACT AREAS TO DETERMINE WIRING CONTRACTOR SHALL DOCUMENT EXISTING CONDITIONS AREAS. ELECTRICAL CONTRACTOR SHALL DACUMERATE AND SCOMPLETED. NO REWRING CONTRACT AREAS IN COMPLIANCE, WITH ENCIDERENNG DOCUMENTS, TO THE ENGENERA SSOON AS COMPLETED. NO REWRING CONTRACTOR SHALL DEAD CUMPLENT ENTRY OF AND AD ADD REVERTING CONTRACT AREAS IN COMPLIANCE, WITH ENCIDERENNG DOCUMENTS, LOCAL CONTRACTOR SHALL DOCUMENT PRE-CONSTRUCTION YALLARDY WITH MARKED UP DRA
REMOVALS SHALL BE BASED ON ACTUAL FIELD INSPECTIONS.A.B. THE ELECTRICAL CONTRACTOR SHALL MAINTAIN CONTINUITY OF EXISTING CIRCUITS AFFECTED BY THIS WORK.A.C. IN THE EVENT ANY WIRING OR EQUIPMENT TO BE REMOVED IS IN ACTIN	ALL NEW SWITCHES SHALL BE FULLY RECESSED IN THE NEW OR EXISTING PARTITIONS (EXCEPT FOR EXTERIOR BLOCK WALLS). ALL WIRING SHALL BE FISHED AND CONCEALED WITHIN THE NEW OR EXISTING WALLS/PARTITIONS.
 A.C. IN THE EVENT ANY MINING ON EQUI MENT TO BE REMOVED IS IN ACTIVATION OF SERVICE OWNER, THIS CONTRACTOR SHALL PROVIDE TEMPORARY WIRING AS MAY BE REQUIRED TO MAINTAIN SUCH USE UNT PERMANENT RELOCATED WIRING IS INSTALLED. A.D. ALL WORK REQUIRING AN OUTAGE OR AN INTERRUPTION OF SERVICE (FILEPHONE, ETC.) SHALL BE DONE ONLY AT SUCH TIME AS PERMITTED 	FOR ANY EXISTING PARTITIONS THAT WILL BE FURRED-OUT, ELECTRICAL CONTRACTOR TO PROVIDE J-BOX EXTENSIONS AND/OR NEW J-BOXES TO ACCOMMODATE EXISTING TO REMAIN ELECTRICAL DEVICES. REFER TO ARCHITECT'S DRAWINGS FOR PARTITION WORK.
 THE OWNER. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 48 HO NOTICE TO THE OWNER FOR SUCH SHUTDOWNS. <u>EXISTING FIRE ALARM SYSTEM:</u> A. VERIFY THAT EXISTING FIRE—ALARM SYSTEM IS OPERATIONAL BEFORE MAKING CHANGES OR CONNECTIONS. NOTIFY ENGINEER AND OWNER OF ANY ISSUES PRIOR TO WORK. B. FURNISH AND INSTALL ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED FO CONNECTION OF DEVICES TO AN EXISTING FIRE ALARM SYSTEM, AS COVERED THESE SPECIFICATIONS, TO BE WIRED, CONNECTED AND LEFT IN FIRST CLAS OPERATING CONDITION. ALL EQUIPMENT SHALL BE UL LISTED, CONFORM TO NFPA CODES 70, 72, 90A, AND 101, AND MEET THE REQUIREMENTS OF TH 	 IN ALL AREAS WHERE WORK IS BEING PERFORMED UNDER THIS CONTRACT, CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPORTING ALL EXISTING ELECTRICAL DEVICES AND WIRING/CONDUIT ABOVE THE EXISTING CEILINGS, PER NEC. ALL TELE/DATA AND FIRE ALARM WIRING SHALL BE INDEPENDENTLY SUPPORTED FROM THE STRUCTURE WITH J-HOOKS AND NOT TIE-WRAPPED TO CONDUITS OR MECHANICAL PIPING. ALL EXISTING POWER WIRING/CONDUIT AND JUNCTION BOXES SHALL BE INDEPENDENTLY SUPPORTED TO THE STRUCTURE AND NOT TO THE CEILING GUIDE WIRES, HVAC DUCTS, PIPING, ETC. PROVIDE ALL REQUIRED SUPPORTS AND ACCESSORIES AS REQUIRED PER NEC. CONTRACTOR SHALL PROVIDE ALL REQUIRED FIRE-RATED SLEEVES FOR EXISTING AND NEW WIRING THAT IS TO PASS THROUGH NEW FIRE RATED WALLS. ALL CABLE MUST BE SUPPORTED ABOVE THE CEILING APPROXIMATELY EVERY (4)
 BUILDING AND ELECTRICAL CODES. THE EXISTING FIRE ALARM PANEL SHALL MODIFIED TO ACCOMMODATE ALL NEW DEVICES. SYSTEM MUST BE RE-CERT AT FINAL INSPECTION. ALL ABANDONED WIRING MUST BE TAGGED OR REMC C. FIRE ALARM DEVICES SHALL INCLUDE BUT NOT LIMITED TO ADA COMPLIANT OR SPEAKER/STROBES AS REQUIRED TO MATCH EXISTING DEVICES, MANUAL 	ALL CABLE MUST BE SUPPORTED ABOVE THE CEILING APPROXIMATELY EVERY (4) TO (6) FEET. USAGE OF METALLIC D-RINGS AND DRIVE RINGS ARE PERMITTED. ALL CABLE TIES ABOVE THE CEILING MUST BE PLENUM RATED. ALL CABLES MUST BE NEATLY BUNDLED AND SUPPORTED IN A PROFESSIONAL MANNER. ANY CABLE RUNS IN EXPOSED PUBLIC VIEWING AREAS, I.E., CLASSROOMS, HALLWAYS, ETC., MUST BE ENCLOSED IN RACEWAY.
STATIONS, SMOKE DETECTORS AND DUCT MOUNTED SMOKE DETECTORS. ALL DEVICES SHALL BE LISTED FOR USE WITH THE EXISTING SYSTEM.	. PREPARATION AND SUBMISSION OF THE NECESSARY FORM—WORK FOR THE PURPOSES OF SECURING SMART—START REBATES SHALL BE BY THE CONTRACTORS. CONTRACTOR SHALL INCLUDE THIS WORK AS PART OF THEIR BID.
	AMERICAN MANUFACTURED PRODUCTS SHALL BE USED WHERE POSSIBLE FOR ALL WORK IN ACCORDANCE WITH NJAC 40A:11-18. CONTRACTOR SHALL VERIFY THAT ALL SUBMITTED EQUIPMENT FOR ALL CONTRACTS FOR COUNTY OR MUNICIPAL WORK OR FOR WORK FOR WHICH IT WILL PAY ANY PART OF THE COST, OR WORK WHICH BY CONTRACT OR ORDINANCE IT WILL ULTIMATELY OWN AND MAINTAIN, THAT ONLY MANUFACTURED PRODUCTS OF THE UNITED STATES, WHEREVER AVAILABLE, BE USED IN SUCH WORK. ANY SUBSTITUTIONS OF BASIS OF DESIGN EQUIPMENT SHALL BE VERIFIED BY CONTRACTOR TO CONFORM TO THE ABOVE NOTED REQUIREMENTS.

EST ADOPTED EDITIONS OF IATIONAL ELECTRIC SAFETY AND	D.	FURNISH AND INSTALL DUCT SMOKE DETECTORS IN (SUPPLY) AND (RETURN) DUCTS AS SHOWN ON RISER. WIRE INTO FIRE ALARM SYSTEM AND SHUT DOWN UNIT UPON ACTIVATION.
TES HAVING JURISDICTION AND	E.	PROVIDE WIRING TO WATER FLOW AND TAMPER SWITCHES. REFER TO FIRE PROTECTION DRAWINGS FOR LOCATIONS. NOT ALL EXISTING DEVICES ARE SHOWN ON PLANS.
PROJECT.	F.	PROVIDE FULL RISER DIAGRAM SHOWING ALL DEVICES, WIRING, ETC. DEMONSTRATING A COMPLETE SYSTEM.
HOURS, UNLESS OTHERWISE	G.	PROVIDE BATTERY CALCULATIONS FOR ALL NEW EQUIPMENT.
ID INSTALLED BY OTHERS. -BOX AND EMPTY CONDUIT E RACEWAY TO HEAD-END IT IS BY ELECTRICAL ND/OR OWNER. GROUND ALL METALLIC SYSTEM GROUNDING NEUTRAL	<u>WIF</u> A.	RING METHODS: BRANCH CIRCUIT AND FEEDER WIRING RUN WITHIN THE BUILDING SHALL BE INSTALLED IN ELECTRO-METALLIC TUBING WITH COMPRESSION FITTINGS AND RUN CONCEALED WHERE POSSIBLE. ARMORED CABLE (TYPE MC OR HCF-90) SHALL BE PERMITTED IN CONCEALED AREAS ONLY AND TO THE EXTENT PERMITTED BY CODE. EXPOSED RACEWAY, IF PERMITTED, SHALL BE RUN TRUE, PLUMB AND PARALLEL OR PERPENDICULAR TO BUILDING LINES. EMT WITH RAINTIGHT STEEL FITTINGS, 3/4 INCH MINIMUM, SHALL BE USED OUTDOORS; EMT WITH COMPRESSION FITTINGS, 3/4 INCH MINIMUM, SHALL BE USED IN INDOOR UNFINISHED SPACES; SURFACE METAL RACEWAY (WIREMOLD) SHALL BE USED IN INDOOR FINISHED SPACES. U.O.N.
CC. MAINTAIN CONTINUITY OF DUND CLAMPS SHALL BE IDING. WHERE GROUNDING MPS SHALL BE OF A TYPE	В.	WIRING FOR CONTROLS, COMMUNICATIONS AND OTHER SYSTEMS SHALL BE IN RACEWAY SPECIFIED FOR BRANCH CIRCUITS UNLESS SPECIFICALLY NOTED
ALL CIRCUITS IN FLEXIBLE	C.	OTHERWISE. PROVIDE SEALS FOR RACEWAYS PASSING THROUGH FLOORS, ROOFS AND WALLS.
IDED FOR ALL FEEDERS AND		CONDUCTORS SHALL BE 600 VOLT INSULATION, COPPER, TYPE THHN OR THWN.
anges and/or additions	E.	U.O.N. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL POWER WIRING AND LOCAL DISCONNECTS (FUSED OR NON-FUSED AS APPLICABLE) AS REQUIRED FOR EQUIPMENT FURNISHED UNDER H.V.A.C., PLUMBING AND GENERAL TRADE SECTIONS, UON.
N OF ALL WIRES SHALL BE	F.	
	G.	INSTALL RACEWAYS FROM BOX TO BOX OR TERMINATIONS AS SHOWN ON THE DRAWINGS OR AS REQUIRED TO EFFECT CIRCUITING DESCRIBED WITH CIRCUIT NUMBERS ADJACENT TO EQUIPMENT. GROUPING HOME RUNS OR COMBINING WIRES IN COMMON RACEWAYS WILL BE ALLOWED WITH A MAXIMUM OF THREE SINGLE POLE BRANCH CIRCUITS IN A RACEWAY. INCREASE WIRE SIZES AND RACEWAYS WHERE REQUIRED TO AVOID LOSS OF AMPACITY AS REQUIRED BY NATIONAL ELECTRIC CODE.
OARDS AND SIMILAR	Н.	FLEXIBLE METAL CONDUIT WITH APPROVED TYPE FITTING MAY BE USED IN LIMITED LENGTHS FOR CONNECTIONS TO RECESSED FIXTURES WHERE IT IS NECESSARY TO PROVIDE FLEXIBLE CONNECTIONS. IT MAY ALSO BE USED WHERE STRUCTURAL MEMBERS PRECLUDE THE USE OF ELECTRICAL METALLIC TUBING OR CONDUITS.
HALL BE CONSISTENTLY	١.	INSTALL CONDUIT CONTINUOUS BETWEEN BOXES AND CABINETS WITH NO MORE THAN FOUR(4) 90 DEGREE BENDS. SECURELY FASTEN IN PLACE WITH STRAPS,
ES IN PULL BOXES AND AT DISCONNECT SWITCHES TO		HANGERS AND STEEL SUPPORTS AS REQUIRED. DO NOT SUPPORT CONDUIT FROM SUSPENDED CEILING GRID OR SUSPENSION WIRES. REAM CONDUIT ENDS BEFORE INSTALLATION AND THOROUGHLY CLEAN BEFORE INSTALLATION. OPENINGS SHALL BE PLUGGED OR COVERED TO KEEP CONDUIT CLEAN. TERMINALS ON SWITCHES AND RECEPTACLES SHALL NOT BE USED TO "FEED THRU" TO THE NEXT SWITCH
		OR RECEPTACLE. THE DISCONNECTIONS OR REMOVAL OF A DEVICE FROM A BOX SHALL NOT INTERFERE WITH OR INTERRUPT THE CONDUCTOR CONTINUITY.
UPPORTS AND MOUNTING NT SUPPLIED BY THIS NNECTS, CONTROLLERS, ETC.	J.	CONDUCTORS SHALL BE CONTINUOUS FROM ORIGIN TO PANEL OR EQUIPMENT WITHOUT SPLICES. WHERE TAP SPLICES ARE NECESSARY AND APPROVED, THEY SHALL BE MADE WITH SUITABLE CONNECTORS IN JUNCTION BOXES.
1 DISTANCE OF TEN (10)	К.	MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL CONTROL WIRING. ELECTRICAL CONTRACTOR TO PROVIDE 120V FOR ATC WHEREVER REQUIRED. REFER TO MECHANICAL DRAWING FOR ADDITIONAL INFORMATION.
RUCTURE ABOVE WITH METAL	L.	ALL WIRE AND CABLE AMPACITIES INDICATED ON DRAWINGS ARE BASED ON 75°C. TEMPERATURE RATING. ALL LUGS, BREAKERS, SWITCHES AND OTHER TERMINATIONS SHALL HAVE 75°C. RATINGS AS A MINIMUM.
10-36(B).	М.	
NS TO EXISTING SYSTEMS: NG WORK WILL BE	N.	SEPARATE NEUTRALS SHALL BE RUN FOR ALL CIRCUITS UTILIZING SWITCH MODE POWER SUPPLIES (EG. COMPUTERS, FLUORESCENT LIGHTING, ETC.).
OF THE GENERAL WORK. AWINGS, BUT SHALL BE TAKEN PROPOSAL. THE SCOPE OF NSPECTIONS. ONTINUITY OF EXISTING	0.	ANY COMMUNICATIONS CABLES IN A PLENUM SHALL BE PLENUM RATED. SUPPORTING DEVICES SUCH AS TIES AND WRAPS SHALL ALSO BE PLENUM RATED. ALL MATERIALS EXPOSED WITHIN PLENUMS SHALL BE NONCOMBUSTIBLE OR SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84. CONTRACTOR SHALL PROVIDE PROOF OF COMPLIANCE WITH REQUIREMENT UPON
E REMOVED IS IN ACTIVE USE		REQUEST.
OR SHALL PROVIDE AINTAIN SUCH USE UNTIL THE RUPTION OF SERVICE (POWER,	<u>WIF</u> A.	RING DEVICES – PLATES: DEVICES SHALL BE "SPEC GRADE" MANUFACTURED BY LEVITON OR EQUAL. ALL DEVICE COVER PLATES SHALL BE STAINLESS STEEL U.O.N. STANDARD DUPLEX RECEPTACLES SHALL BE GROUNDING TYPE, 20 AMP, NEMA 5–20R, BACK AND
CH TIME AS PERMITTED BY A MINIMUM OF 48 HOURS		SIDE WIRED U.O.N OTHER DEVICES SHALL BE AS INDICTED ON THE DRAWINGS OR AS REQUIRED BY THE EQUIPMENT ITEM INTENDED TO BE SERVED. WHERE SWITCHES ARE GROUPED, PROVIDE GANGED PLATES.
TIONAL BEFORE MAKING OWNER OF ANY ISSUES QUIPMENT REQUIRED FOR		<u>OSE OUT:</u> ALL ELECTRICAL EQUIPMENT SHALL BE ADJUSTED AND TESTED FOR PROPER OPERATION. AFTER WIRES ARE IN PLACE AND CONNECTED TO DEVICES AND EQUIPMENT. THE SYSTEM SHALL BE TESTED FOR SHORTS AND GROUNDS. ALL HOT AND NEUTRAL CONDUCTORS, IF SHORTED OR GROUNDED, SHALL BE REMOVED AND REPLACED. ALL METERS, INSTRUMENTS, CABLE CONNECTIONS, EQUIPMENT OR
N SYSTEM, AS COVERED BY ND LEFT IN FIRST CLASS L LISTED, CONFORM TO IBC,		APPARATUS NECESSARY FOR MAKING ALL TESTS, SHALL BE FURNISHED BY THIS CONTRACTOR AT HIS OWN EXPENSE.
REQUIREMENTS OF THE RE ALARM PANEL SHALL BE REM MUST BE RE-CERTIFIED	В.	EXPOSED TO VIEW.
BE TAGGED OR REMOVED. D TO ADA COMPLIANT HORN	C.	FURNISH WRITTEN ONE YEAR GUARANTEE FOR ALL ELECTRICAL WORK AND EQUIPMENT.
TING DEVICES, MANUAL PULL MOKE DETECTORS. ALL NEW NG SYSTEM.	D.	CONTRACTOR SHALL SUBMIT AS-BUILT DRAWINGS AT COMPLETION OF PROJECT.

E. CONTRACTOR SHALL SUBMIT (3) THREE COPIES OF OPERATION AND MAINTENANCE MANUALS.

ABBREVIATIONS	

A	AMPERE	GND, G	GROUND
AFF	ABOVE FINISHED FLOOR	ICIG	INTERRUPTING CAPACITY
AFG	ABOVE FINISHED GRADE		ISOLATED GROUND
С	CONDUIT(S)	I/L	INTERLOCKED
CB	CIRCUIT BREAKER	ŃС	MECHANICAL CONTRACTOR
СН	COUNTER HEIGHT	MOD	MOTOR OPERATED DAMPER
со	CONDUIT ONLY	NIC	NOT IN CONTRACT
СТ	CURRENT TRANSFORMER	NL	NIGHT LIGHT
ĊŬ	COPPER	NTS	NOT TO SCALE
EC	ELECTRICAL CONTRACTOR	RGS	RIGID GALVANIZED STEEL
EG	EQUIPMENT GROUND	SPD	SURGE PROTECTIVE DEVICE
EM	•	TVSS	TRANSIENT VOLTAGE
EMT	EMERGENCY	1422	
	ELECTRICAL METALLIC TUBING	_ /_	SURGE SUPPRESSOR
ETR	EXISTING TO REMAIN	T/C	TIME CLOCK
EWC	ELECTRIC WATER COOLER	UON	UNLESS OTHERWISE NOTED
FA	FIRE ALARM	V	VOLTS
FBO	FURNISHED BY OTHERS	W	WALL MOUNTED
GFI	GROUND FAULT INTERRUPTER	WP	WEATHERPROOF

	ELECTRICAL SYMBOL (FIRE ALARM)		ELECTRICAL SYMBOL (DEVICES)
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
F WP	FIRE ALARM MANUAL PULL STATION – 48"A.F.F. TO CENTER OF DEVICE. (SUBSCRIPT "WP" DENOTE WEATHERPROOF)	0 -	SINGLE RECEPTACLE; 20 AMP, 125 VOLT, 2P., 3W., NEMA 5–20R U.O.N. (SPECIALTY TYPE AS NOTED – A, B, C, ETC. SEE SPECIALTY SCHEDULE) (MOUNTED AT SAME HEIGHT AS DUPLEX, U.O.N.)
O F ₩P	COMBINATION FIRE ALARM BELL OR HORN/STROBE (ADA) AS PER SPECIFICATIONS – 80" A.F.F TO BOTTOM OF DEVICE. 15 CANDELA IN CORRIDORS, 110 CANDELA ELSEWHERE. U.O.N. (TYPICAL). (SUBSCRIPT "WP" DENOTE WEATHERPROOF) COMBINATION FIRE ALARM SPEAKER/STROBE (ADA) – 80" AFF TO BOTTOM OF DEVICE.	e	DUPLEX CONVENIENCE RECEPTACLE; 20 AMP, 125 VOLT, 2P., 3W., NEMA 5–20R, MOUNTED 1'-6" AFF TO CENTER. U.O.N. #/#A = DENOTES CIRCUIT NUMBER.
₩P F	COMBINATION FIRE ALARM SPEARER/STROBE (ADA) – 80 AFF TO BOTTOM OF DEVICE. 15 CANDELA IN CORRIDORS, 110 CANDELA ELSEWHERE. U.O.N. (TYPICAL). (SUBSCRIPT "WP" DENOTE WEATHERPROOF)		CH = 48" AFF OR 6" ABOVE BACK SPLASH U.O.N. DUPLEX RECEPTACLE; MOUNTED 48" AFF OR 6" ABOVE BACK SPLASH. U.O.N.
Ø	FIRE ALARM STROBE (ADA) – 80" AFF TO BOTTOM OF DEVICE. 15 CANDELA IN CORRIDORS, 110 CANDELA ELSEWHERE. U.O.N. (TYPICAL).		GROUND FAULT RECEPTACLE; ALL EXTERIOR RECEPTACLES WITH "WP" DENOTES ON THEM TO BE WEATHER-RESISTAN
F	COMBINATION FIRE ALARM HORN OR SPEAKER/STROBE – CEILING MOUNTED. 15 CANDELA IN CORRIDORS, 110 CANDELA ELSEWHERE. U.O.N.		GFCI TYPE IN WEATHERPROOF BOX WITH COVER.
Ð	FIRE ALARM STROBE – CEILING MOUNTED. 15 CANDELA IN CORRIDORS, 110 CANDELA ELSEWHERE. U.O.N.		GROUND FAULT RECEPTACLE; MOUNTED 48" AFF OR 6" ABOVE BACK SPLASH. U.O.N.
WP	MANUAL PULL STATION GUARD – STI STOPPER II OR EQUAL W/ HORN (SUBSCRIPT "WP" DENOTE WEATHERPROOF)		DOUBLE DUPLEX RECEPTACLE (QUAD); CH = MOUNTED 48" AFF OR 6" ABOVE BACK SPLASH. U.O.N.
(SD)	FIRE ALARM SMOKE DETECTOR (PHOTOELECTRIC U.O.N.), CEILING MOUNTED. (SUBSCRIPT "EL" DENOTES ELEVATOR RECALL) (SUBSCRIPT "U" DENOTES UNDER FLOOR)	# ▼ #	VOICE/DATA OUTLET; 2-GANG DEEP BACK BOX WITH BLANK FACEPLATE; 1-1/4"C. WIT PULL WIRE TO ABOVE NEAREST ACCESSIBLE CEILING SPACE OR WHERE THERE IS NO ACCESSIBLE CEILING, PROVIDE COMPLETE RACEWAY BACK TO EQUIPMENT, REFER TO PLANS OR COORDINATE WITH OWNER. BACK BOX CENTERED 18" AFF. SLASH THROU DEVICE OR "CH" NEXT TO DEVICE INDICATES BACK BOX CENTER 44" AFF.
HD	FIRE ALARM HEAT DETECTOR – FIXED TEMP. U.O.N. (SUBSCRIPT "H" DENOTES FIXED HIGH TEMPERATURE (190 DEGF)) (SUBSCRIPT "AC" DENOTES ABOVE CEILING)		
(0)	CARBON MONOXIDE DETECTOR		
\$/0	COMBINATION CARBON MONOXIDE/SMOKE DETECTOR		LIGHTING LEGEND
DD	FIRE ALARM DUCT SMOKE DETECTOR W/ REMOTE INDICATOR	SYMBOLS	
FSD	FIRE SMOKE DAMPER WITH FAN SHUTDOWN MODULE	<u> </u>	LIGHTING FIXTURE TYPE: SEE LIGHTING FIXTURE SCHEDULE FOR ADDITIONAL INFORMATION.
В	BEAM DETECTOR	S ^x	SINGLE POLE LIGHT SWITCH 20A, 120/277V. "X" INDICATES FIXTURE/ZONE CONTROLLED.
R	BEAM DETECTOR REFLECTOR	SLv1	1-BUTTON LOW VOLTAGE SWITCH (MANUAL ON); HUBBEL NXSW-1
WF	SPRINKLER WATER FLOW SWITCH	Sŵs	LOW VOLTAGE WIRELESS ON/OFF/RAISE/LOWER DIMMER SWITCH
TS	SPRINKLER TAMPER SWITCH		(MANUAL ON); HUBBEL NXSW-WRS LOW VOLTAGE ON/OFF/RAISE/LOWER DIGITAL DIMMER SWITCH;
FACP	FIRE ALARM PANEL	Slvd	HUBBEL NXSW-ORLO
ANN	FIRE ALARM REMOTE ANNUNCIATOR	Sõs	SWITCH MOUNTED 1-BUTTON ON/OFF OCCUPANCY SENSOR; HUBBEL LHMTS-N
GAP	FIRE ALARM GRAPHIC ANNUNCIATOR	Sgws	LOW VOLTAGE GRAPHIC WALL STATION; HUBBEL NXSW-TH3-WH
WD	WATER DETECTOR	RC1	1-RELAY ON/OFF ROOM CONTROLLER; HUBBEL NXRCFX2-1RD
	MONITOR MODULE	RCD1	1-RELAY ON/OFF 0-10 DIMMING ROOM CONTROLLER;
	DOOR HOLDER		HUBBEL NXRCFX2-1RD 2-RELAY ON/OFF 0-10 DIMMING ROOM CONTROLLER;
		RCD2	HUBBEL NXRCFX2-2RD
		RM	RADIO MODULE; HUBBEL NXRM-H
	ELECTRICAL SYMBOL	BRG	NETWORK BRIDGE MODULE; HUBBEL NXHNB2
SYMBOL	DESCRIPTION JUNCTION BOX, CEILING OR WALL MOUNTED AS NOTED, ELECTRICAL CONTRACTOR TO		CY SENSORS ARE SHOWN ON THE PLANS ONLY TO INDICATE ROOMS
	MAKE ALL REQUIRED CONNECTIONS TO DESIGNATED EQUIPMENT.	ARE THE	G COVERAGE AND QUANTITY OF SENSORS SHOWN ON THE DRAWINGS MINIMUM THAT MUST BE PROVIDED BY THE CONTRACTOR. EXACT OF SENSORS AND EXACT LOCATIONS WITHIN EACH ROOM SHALL BE
		BASED ON SPACE, B	N MANUFACTURERS RECOMMENDATIONS FOR TOTAL COVERAGE OF THE ASED ON THE SENSORS TO BE INSTALLED. SUBMIT SHOP DWG
30/3	FUSIBLE DISCONNECT SWITCH W/FUSE RATING		SENSOR CONVERGES AND DEMONSTRATING THAT EACH SPACE/ROOM SORS SHOWN IS COMPLETELY COVERED WITH NO "DEAD ZONES"
$\dot{\bigcirc}$	MOTOR	REQUIRED SENSORS.	ALL REQUIRED RELAYS, TRANSFORMERS, POWER PACKS, ETC AS FOR CONTROL OF THE RESPECTIVE ROOM BY THE OCCUPANCY PROVIDE ALL REQUIRED WIRING/CONDUIT AND MAKE ALL FINAL
Şī	MANUAL MOTOR STARTER (THERMAL ELEMENT)	TERMINATI	
	PANEL BOARD		
	- EXPOSED CONDUIT OR CABLE		ELECTRICAL SYMBOL (COMMUNICATION)
	- CONCEALED CONDUIT OR CABLE	SYMBOL	DESCRIPTION
	ELECTRICAL WIRING	SP	RECESSED CEILING SPEAKER, WALL MOUNTED SPEAKER (BACKBOX WHERE REQUIRED) WITH 3/4"CONDUIT TO NEAREST ACCESSIBLE CEILING, CREATING A COMPLETE PATH TO THE LOCAL HEAD END EQUIPMENT WITH PULLSTRING. (COORD. WITH OWNER),
	ITEMS TO BE DEMOLISHED OR REMOVED	#⊘#	DATA OUTLET CEILING MOUNTED; 2–GANG DEEP BACK BOX WITH BLANK FACEPLATE; CABLE TYPE AND CONFIGURATION PER SYMBOL.

	ELECTRICAL SYMBOL (FIRE ALARM)		ELECTRICAL SYMBOL (DEVICES)
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
F WP	FIRE ALARM MANUAL PULL STATION – 48"A.F.F. TO CENTER OF DEVICE. (SUBSCRIPT "WP" DENOTE WEATHERPROOF)	0 -	SINGLE RECEPTACLE; 20 AMP, 125 VOLT, 2P., 3W., NEMA 5–20R U.O.N. (SPECIALTY TYPE AS NOTED – A, B, C, ETC. SEE SPECIALTY SCHEDULE) (MOUNTED AT SAME HEIGHT AS DUPLEX, U.O.N.)
O F WP	COMBINATION FIRE ALARM BELL OR HORN/STROBE (ADA) AS PER SPECIFICATIONS – 80" A.F.F TO BOTTOM OF DEVICE. 15 CANDELA IN CORRIDORS, 110 CANDELA ELSEWHERE. U.O.N. (TYPICAL). (SUBSCRIPT "WP" DENOTE WEATHERPROOF) COMBINATION FIRE ALARM SPEAKER/STROBE (ADA) – 80" AFF TO BOTTOM OF DEVICE.	e	DUPLEX CONVENIENCE RECEPTACLE; 20 AMP, 125 VOLT, 2P., 3W., NEMA 5–20R, MOUNTED 1'-6" AFF TO CENTER. U.O.N. #/#A = DENOTES CIRCUIT NUMBER.
₩P F	15 CANDELA IN CORRIDORS, 110 CANDELA ELSEWHERE. U.O.N. (TYPICAL). (SUBSCRIPT "WP" DENOTE WEATHERPROOF)		CH = 48" AFF OR 6" ABOVE BACK SPLASH U.O.N. DUPLEX RECEPTACLE; MOUNTED 48" AFF OR 6" ABOVE BACK SPLASH. U.O.N.
Ð	FIRE ALARM STROBE (ADA) – 80" AFF TO BOTTOM OF DEVICE. 15 CANDELA IN CORRIDORS, 110 CANDELA ELSEWHERE. U.O.N. (TYPICAL).		GROUND FAULT RECEPTACLE;
F	COMBINATION FIRE ALARM HORN OR SPEAKER/STROBE – CEILING MOUNTED. 15 CANDELA IN CORRIDORS, 110 CANDELA ELSEWHERE. U.O.N.	—	ALL EXTERIOR RECEPTACLES WITH "WP" DENOTES ON THEM TO BE WEATHER-RESISTAN GFCI TYPE IN WEATHERPROOF BOX WITH COVER.
Ø	FIRE ALARM STROBE – CEILING MOUNTED. 15 CANDELA IN CORRIDORS, 110 CANDELA ELSEWHERE. U.O.N.		GROUND FAULT RECEPTACLE; MOUNTED 48" AFF OR 6" ABOVE BACK SPLASH. U.O.N. DOUBLE DUPLEX RECEPTACLE (QUAD); CH = MOUNTED 48" AFF OR 6" ABOVE BACK
WP	MANUAL PULL STATION GUARD – STI STOPPER II OR EQUAL W/ HORN (SUBSCRIPT "WP" DENOTE WEATHERPROOF)		SPLASH. U.O.N.
SD	FIRE ALARM SMOKE DETECTOR (PHOTOELECTRIC U.O.N.), CEILING MOUNTED. (SUBSCRIPT "EL" DENOTES ELEVATOR RECALL) (SUBSCRIPT "U" DENOTES UNDER FLOOR)	# ∀ #	VOICE/DATA OUTLET; 2-GANG DEEP BACK BOX WITH BLANK FACEPLATE; 1-1/4"C. WIT PULL WIRE TO ABOVE NEAREST ACCESSIBLE CEILING SPACE OR WHERE THERE IS NO ACCESSIBLE CEILING, PROVIDE COMPLETE RACEWAY BACK TO EQUIPMENT, REFER TO PLANS OR COORDINATE WITH OWNER. BACK BOX CENTERED 18" AFF. SLASH THROU DEVICE OR "CH" NEXT TO DEVICE INDICATES BACK BOX CENTER 44" AFF.
HD	FIRE ALARM HEAT DETECTOR – FIXED TEMP. U.O.N. (SUBSCRIPT "H" DENOTES FIXED HIGH TEMPERATURE (190 DEGF)) (SUBSCRIPT "AC" DENOTES ABOVE CEILING)		
0	CARBON MONOXIDE DETECTOR		LIGHTING LEGEND
\$/¢	COMBINATION CARBON MONOXIDE/SMOKE DETECTOR	SYMBOLS	
DD	FIRE ALARM DUCT SMOKE DETECTOR W/ REMOTE INDICATOR		LIGHTING FIXTURE TYPE: SEE LIGHTING FIXTURE SCHEDULE FOR
FSD	FIRE SMOKE DAMPER WITH FAN SHUTDOWN MODULE	×>	ADDITIONAL INFORMATION.
В	BEAM DETECTOR	S ^x	SINGLE POLE LIGHT SWITCH 20A, 120/277V. "X" INDICATES FIXTURE/ZONE CONTROLLED.
R	BEAM DETECTOR REFLECTOR	SLV1	1—BUTTON LOW VOLTAGE SWITCH (MANUAL ON); HUBBEL NXSW—1
WF TO	SPRINKLER WATER FLOW SWITCH	Sws	LOW VOLTAGE WIRELESS ON/OFF/RAISE/LOWER DIMMER SWITCH (MANUAL ON); HUBBEL NXSW-WRS
TS FACP	SPRINKLER TAMPER SWITCH	SLVD	LOW VOLTAGE ON/OFF/RAISE/LOWER DIGITAL DIMMER SWITCH; HUBBEL NXSW-ORLO
	FIRE ALARM REMOTE ANNUNCIATOR	Sös	SWITCH MOUNTED 1-BUTTON ON/OFF OCCUPANCY SENSOR;
GAP	FIRE ALARM GRAPHIC ANNUNCIATOR		HUBBEL LHMTS-N LOW VOLTAGE GRAPHIC WALL STATION;
WD	WATER DETECTOR	Sčws	HUBBEL NXSW-TH3-WH
MM	MONITOR MODULE	RC1	1-RELAY ON/OFF ROOM CONTROLLER; HUBBEL NXRCFX2-1RD
СМ	CONTROL MODULE	RCD1	1-RELAY ON/OFF 0-10 DIMMING ROOM CONTROLLER; HUBBEL NXRCFX2-1RD
DH	DOOR HOLDER	RCD2	2-RELAY ON/OFF 0-10 DIMMING ROOM CONTROLLER; HUBBEL NXRCFX2-2RD
		RM	RADIO MODULE; HUBBEL NXRM-H
	ELECTRICAL SYMBOL	BRG	NETWORK BRIDGE MODULE; HUBBEL NXHNB2
SYMBOL	DESCRIPTION		I
$H_{\rm J}$	JUNCTION BOX, CEILING OR WALL MOUNTED AS NOTED, ELECTRICAL CONTRACTOR TO MAKE ALL REQUIRED CONNECTIONS TO DESIGNATED EQUIPMENT.	REQUIRIN ARE THE	IG COVERAGE AND QUANTITY OF SENSORS SHOWN ON THE DRAWINGS MINIMUM THAT MUST BE PROVIDED BY THE CONTRACTOR. EXACT
	NON-FUSIBLE DISCONNECT SWITCH	BASED O	OF SENSORS AND EXACT LOCATIONS WITHIN EACH ROOM SHALL BE N MANUFACTURERS RECOMMENDATIONS FOR TOTAL COVERAGE OF THE BASED ON THE SENSORS TO BE INSTALLED. SUBMIT SHOP DWG
30/3	FUSIBLE DISCONNECT SWITCH W/FUSE RATING	SHOWING	SENSOR CONVERGES AND DEMONSTRATING THAT EACH SPACE/ROOM
	STARTER		ALL REQUIRED RELAYS, TRANSFORMERS, POWER PACKS, ETC AS D FOR CONTROL OF THE RESPECTIVE ROOM BY THE OCCUPANCY
Q^{\Box}	MOTOR		S. PROVIDE ALL REQUIRED WIRING/CONDUIT AND MAKE ALL FINAL
\$ 1	MANUAL MOTOR STARTER (THERMAL ELEMENT)		
	PANEL BOARD		ELECTRICAL SYMBOL (COMMUNICATION)
	EXPOSED CONDUIT OR CABLE	0/4/0.01	
	- CONCEALED CONDUIT OR CABLE	SYMBOL	DESCRIPTION RECESSED CEILING SPEAKER, WALL MOUNTED SPEAKER (BACKBOX WHERE REQUIRED)
	ELECTRICAL WIRING	(SP)	WITH 3/4"CONDUIT TO NEAREST ACCESSIBLE CEILING, CREATING A COMPLETE PATH TO THE LOCAL HEAD END EQUIPMENT WITH PULLSTRING. (COORD. WITH OWNER),
	ITEMS TO BE DEMOLISHED OR REMOVED	#⊘#	DATA OUTLET CEILING MOUNTED; 2-GANG DEEP BACK BOX WITH BLANK FACEPLATE; CABLE TYPE AND CONFIGURATION PER SYMBOL.
			CAMERA – "W" DENOTES WALL MTD., "C" DENOTES CEILING MTD. – PROVIDED 4"X4" J-BOX AND 3/4" CONDUIT TO ACCESSIBLE CEILING SPACE WITH PULL-WIRE FOR ALL WALL MOUNTED CAMERAS.

			LIGHTING FIXTURE SCHEDU	LE				
TYPE	DESCRIPTION	MANUFACTURER	CATALOG #		MP	MOUNTING	WATTS	NOTES
A	2x4 LOW PROFILE LED LUMINAIRE, CENTER BASKET	FINELITE	HPR-LED-ANR-2X4-RCO-B-835-120-SC-CX	VOLT 120	TYPE LED	RECESSED	35	PROVIDE FIXTURE WITH EMERGENCY BATTERY PACK WHE INDICATED WITH "EM" ON PLAN
A1	2x4 LOW PROFILE LED LUMINAIRE, CENTER BASKET	FINELITE	HPR-LED-ANR-2X4-RCO-S-835-120-SC-CX	120	LED	RECESSED	27	PROVIDE FIXTURE WITH EMERGENCY BATTERY PACK WHE INDICATED WITH "EM" ON PLAN
В	2x4 LOW PROFILE LED LUMINAIRE, CENTER BASKET	COLUMBIA	LCAT24-25-ML-G-ED1-VOLTS-NXSWM-R56	MVOLT	LED	RECESSED	36.1	PROVIDE FIXTURE WITH EMERGENCY BATTERY PACK WHE INDICATED WITH "EM" ON PLAN
B1	2x4 LOW PROFILE LED LUMINAIRE, CENTER BASKET	COLUMBIA	LCAT24-25-LW-G-ED1-VOLTS-NXSWM-R56	MVOLT	LED	RECESSED	26.5	PROVIDE FIXTURE WITH EMERGENCY BATTERY PACK WHE INDICATED WITH "EM" ON PLAN
B2	2x4 LOW PROFILE LED LUMINAIRE, CENTER BASKET	COLUMBIA	LCAT24-25-VL-G-ED1-VOLTS-NXSWM-R56	MVOLT	LED	RECESSED	52.9	PROVIDE FIXTURE WITH EMERGENCY BATTERY PACK WHE INDICATED WITH "EM" ON PLAN
С	LOW PROFILE LED WRAPAROUND	COLUMBIA	MPS-4-35-ML-C-W-ED1-VOLTS-NXWSM-R56	MVOLT	LED	SURFACE	31.6	
C1	LOW PROFILE LED WRAPAROUND	COLUMBIA	MPS-4-35-ML-C-W-ED1-VOLTS-NXWSM-R56	MVOLT	LED	SURFACE	31.6	
F	6" ROUND DOWNLIGHT	PRESCOLITE	LFR-6RD-15L-35K-8-WD-DM1-NXW-VOLTS-LFR-6RD-T-WD- SS-WT-R56	MVOLT	LED	RECESSED	11.4	PROVIDE FIXTURE WITH EMERGENCY BATTERY PACK WHE INDICATED WITH "EM" ON PLAN
G	4" SHOWER DOWNLIGHT	PRESCOLITE	LFR-4RD-10L-35K-8-WD-DM1-NXW-VOLTS-LFR-4RD-T-SH- WT-AML-R56	MVOLT	LED	RECESSED	7.6	
Η	RECESSED WALL WASH	USAI	MWF04-13H1-35KS-COLOR-WH-NC-VOLTS-D6E-CB27- R56	MVOLT	LED	RECESSED	13	
J	PERIMETER SLOT	FINELITE	HP-WS-4W-6D-X'-(ADV)-835-(ADV)- SC-TR-SW-TXL-L-TXL-R-CX	120	LED	RECESSED	14	
К	6" ROUND DOWNLIGHT	PRESOLITE	LFR-6RD-M-15L-35K-8-WD-DM1-NXW-VOLTS-LFR-6RD-T WD-SS-WT-R56	MVOLT	LED	RECESSED	19.5	
L	ROUND LOW PROFILE	KENALL	MR-17FL-PP-CTBS-25L35K-DV-PH	MVOLT	LED	SURFACE	29	
М	WALL MOUTH WITH INDIGO-CLEAN TECHNOLOGY	KENALL	MLHA5-48-F-CTBS-FA-55C32K-DDC-DV-PH-CMB	MVOLT	LED	SURFACE	25	
N	HIGH ABUSE WITH INDIGO-CLEAN TECHNOLOGY	KENALL	HASEDI-24-82C37K-DDC-DV-2F-2H-STM/9=PH	MVOLT	LED	RECESSED	45	PROVIDE FIXTURE WITH EMERGENCY BATTERY PACK WHE INDICATED WITH "EM" ON PLAN
Ρ	SURFACE CIRCLE	BETACALCO	MRGC1C03-LPF018-CR80-CTA35-VOLTS-DA01-COLOR-R56	120	LED	SURFACE	39	PROVIDE FIXTURE WITH EMERGENCY BATTERY PACK WHE INDICATED WITH "EM" ON PLAN . COORDINATE MOUNTING FIXTURE WITH CEILING INSTALLER
X1	EXIT SIGN	EMERGILITE	PNR6-AD	MVOLT	LED	SURFACE	_	
X2	EXIT SIGN	KENALL	METSU-MW-R-DT-EL-LP9500	MVOLT	LED	SURFACE	-	

	ELECTRICAL DRAWING LIST
DWG #	DRAWING TITLE
E01	ELECTRICAL - SYMBOLS, ABBREVIATIONS, NOTES & SPECIFICATIO
E02	ELECTRICAL – DETAILS
E03	ELECTRICAL – DETAILS
E11	ELECTRICAL - SECOND FLOOR PLAN DEMOLITION & NEW WORK
E12	ELECTRICAL – BASEMENT ELEVATOR PART PLAN
E13	ELECTRICAL – FIRST THRU FIFTH FLOOR ELEVATOR PART PLAN
E14	ELECTRICAL – MACHINE ROOM PLAN

	TYPIC	AL MOUNTING HEIGHTS
12'-0" —		EXTERIOR WALL MOUNTED LIGHTING FIXTURES
TBD —	•	BATTERY UNITS AND EMERGENCY REMOTE HEADS SHA BE MOUNTED 1'-0" BELOW FINISHED CEILING TO TOF OF FIXTURE
8'-6" —	-	PENDANT MOUNTED INDUSTRIAL AND STRIP LIGHTING FIXTURES
PER N.F.P.A. & A.D.A. CODE REQUIREMENTS 6'—8" (MIN.)	-•	WALL- MOUNTED CLOCKS, PROGRAM BELLS, BOTTOM FIRE ALARM AUDIBLE AND VISUAL DEVICES (OR AS SHOWN ON ARCHITECTURAL DETAILS)
CENTERED ABOVE DOOR OR WINDOW OPENING	-•	WARNING AND SIGNALING FIXTURES/SIGNS.
6'-6" —	-•	CENTERLINE OF INTERIOR WALL MOUNTED FIXTURES
6'-6" —	-	TOP OF FLUSH AND SURFACE MOUNTED ELECTRICAL PANELBOARDS, TELEPHONE CABINETS, OR FIRE ALARM CABINETS.
6'-3" —	-•	TOP OF BACK-MOUNTED WALL EXIT FIXTURES (NOT MOUNTED ABOVE DOORS)
6'-0" —	-	TOP OF HIGHEST ELECTRICAL SAFETY DISCONNECT SWITCHES, MAGNETIC STARTERS, CONTACTORS.
4'-6" —	-	WALL MOUNTED TELEPHONES AND PAY STATIONS (3'-6" AT HANDICAP LOCATIONS).
4'-0" —	-	TOP OF WALL MOUNTED ELECTRICAL LIGHT SWITCHES, MANUAL MOTOR STARTERS, THERMOSTATS, FIRE ALARM PULL STATIONS, GARAGE AREA RECEPTACLES AND TOP OF WIREMOLD.
2'-0" —	-	ELECTRICAL RECEPTACLE WITHIN ELECTRICAL/MECHANI SPACES AND ELEVATOR ROOMS.
1'-6" —	-	ELECTRICAL RECEPTACLES, TELEPHONE OUTLETS, COMPUTER OUTLETS
FINISHED FLOOR —		
		ENTER OF OUTLETS UNLESS OTHERWISE NOTED. IN CTION THE ABOVE MOUNTING HEIGHTS SHALL BE US

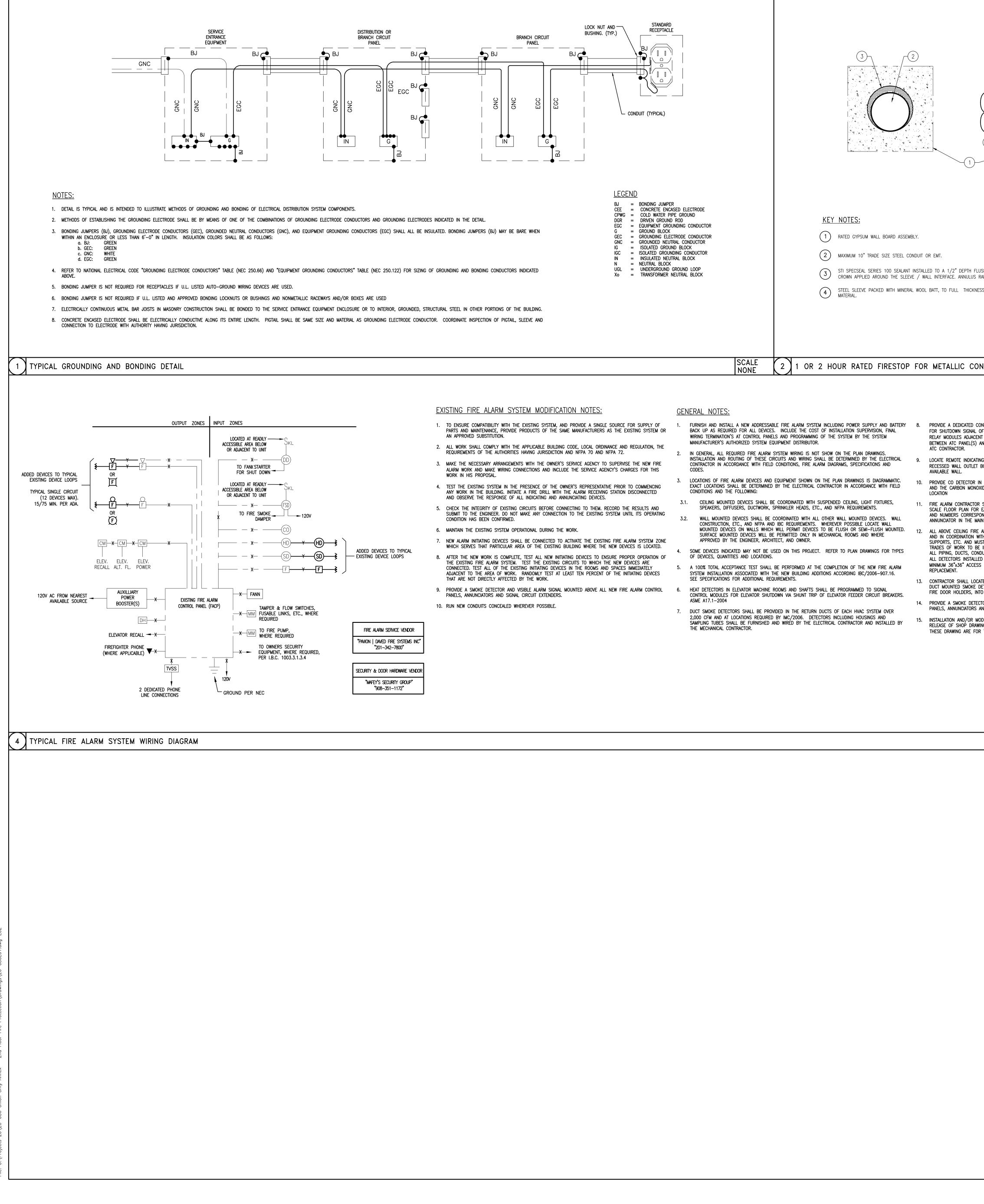
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2. THE ABOVE MOUNTING HEIGHTS SHALL BE ADHERED TO UNLESS SPECIFICA NOTED OR DETAILED OTHERWISE ON THE DRAWINGS OR SPECIFICATIONS.

3. VERIFY ALL MOUNTING HEIGHTS WITH OWNER AND ARCHITECT PRIOR TO ROUGH-IN.

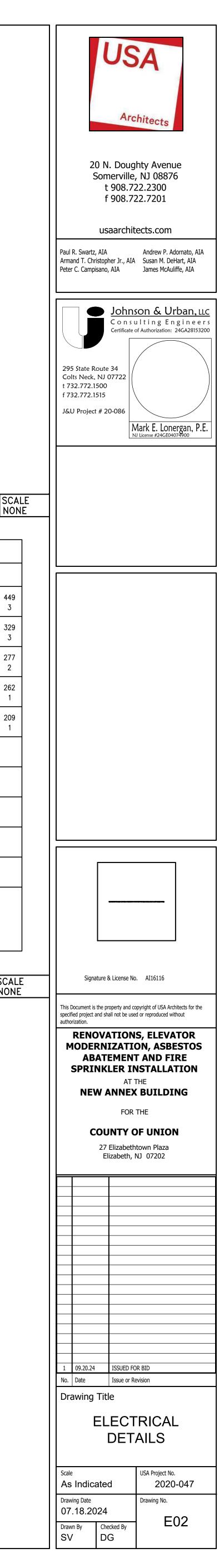
4. ALL MOUNTING HEIGHTS SHALL COMPLY WITH ANSI A117.1

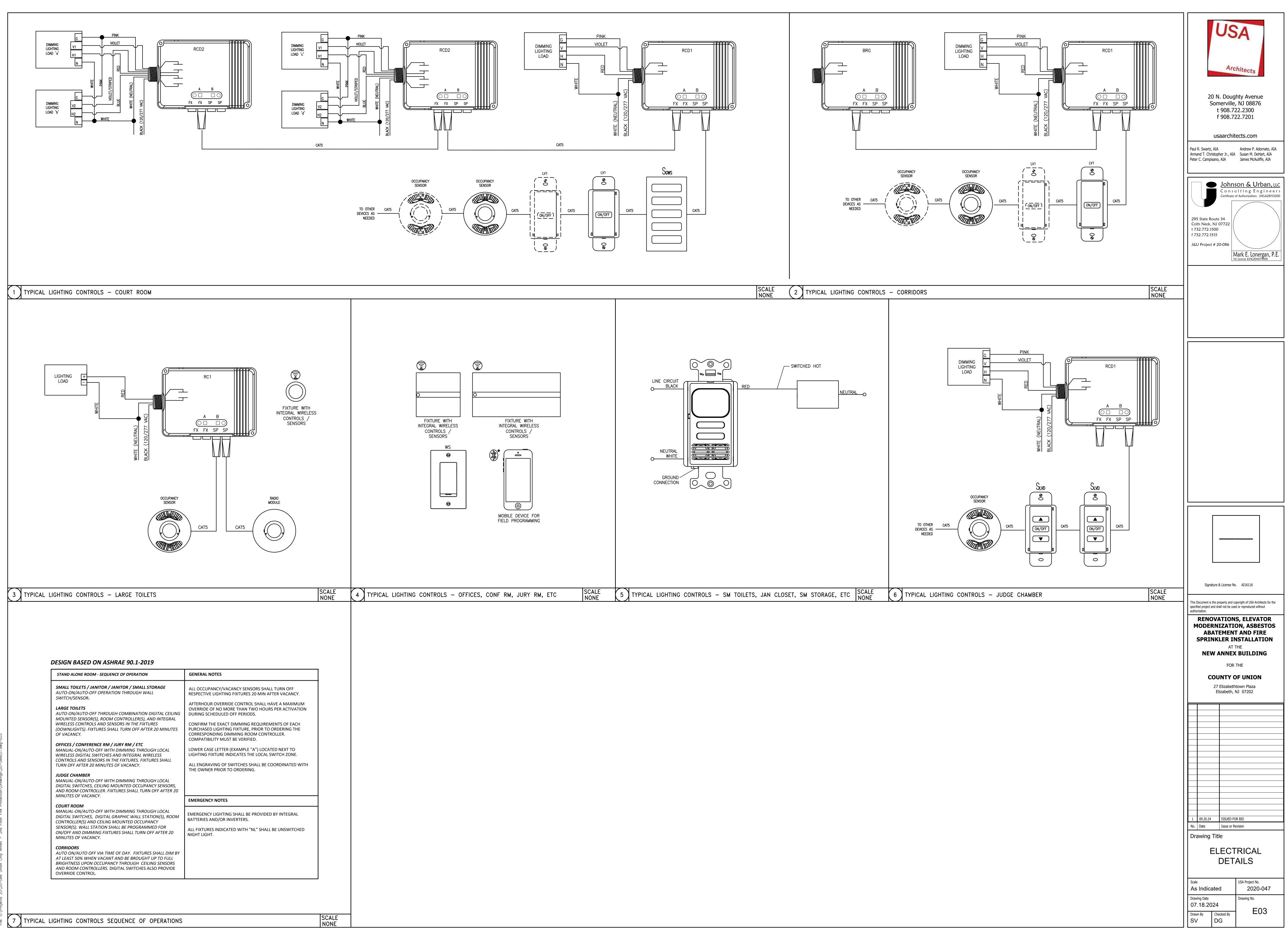
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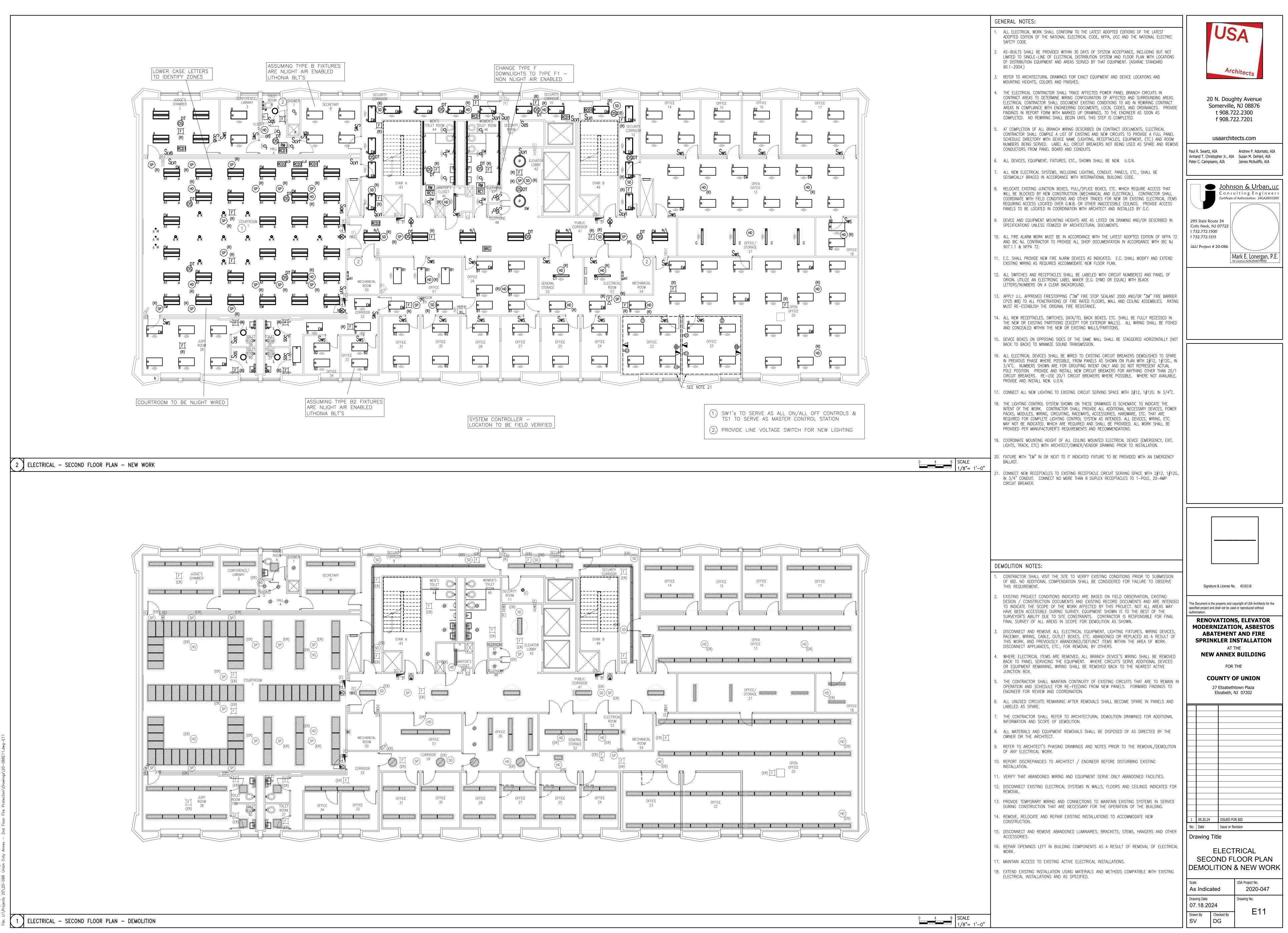
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- PROVIDE CO DETECTOR IN AND THE CARBON MONOXI
- SCALE FLOOR PLAN FOR E AND NUMBERS CORRESPO ANNUNCIATOR IN THE MAIN ALL ABOVE CEILING FIRE AND IN COORDINATION WI
- ALL PIPING, DUCTS, CONE ALL DETECTORS INSTALLED MINIMUM 36"x36" ACCESS 13. CONTRACTOR SHALL LOCAT
- FIRE DOOR HOLDERS, INT
- INSTALLATION AND/OR MOD RELEASE OF SHOP DRAW

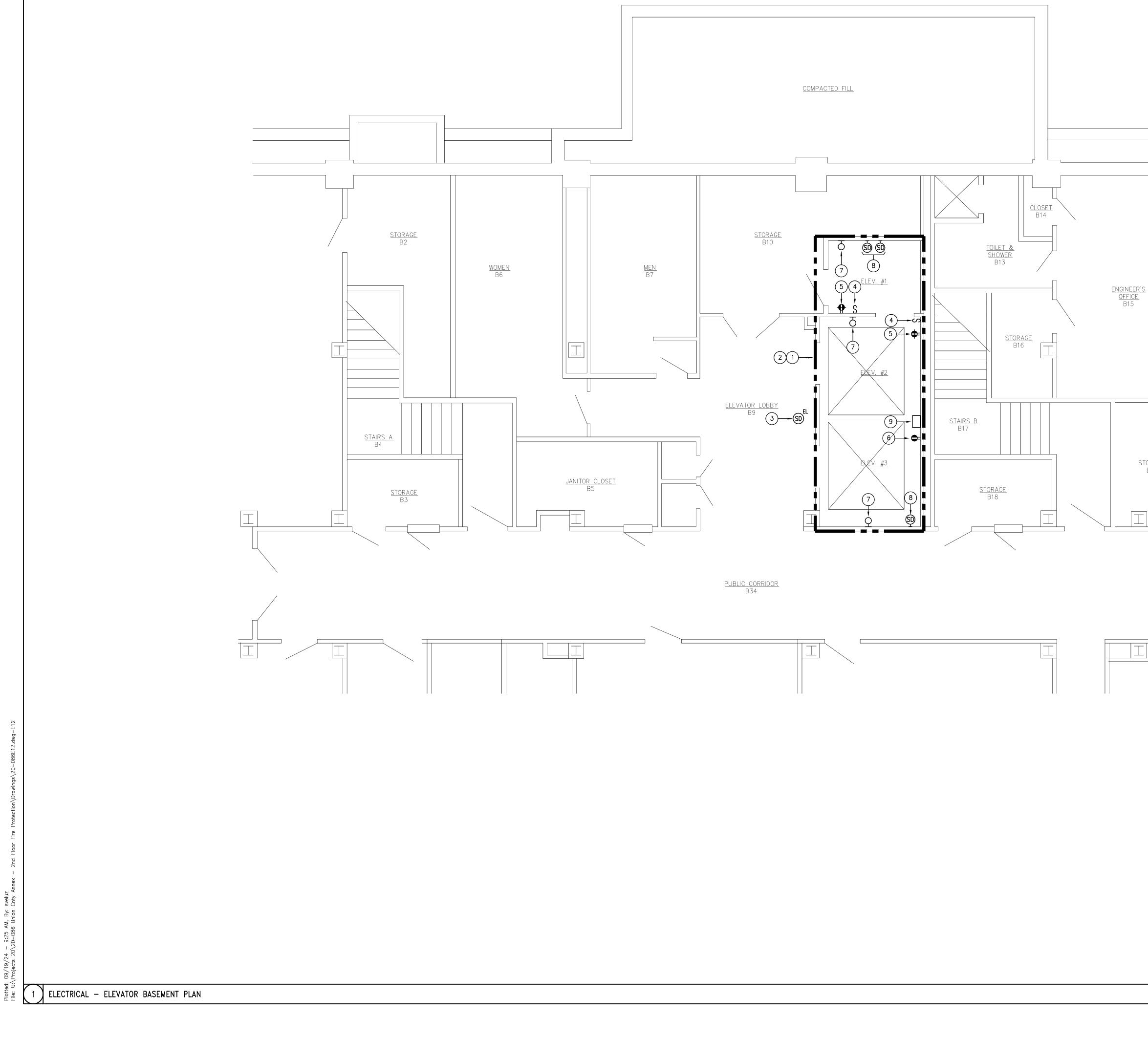
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	(1) (2) (3) (4)	CONCRETE SLAB OR CONCE MAXIMUM 8" TRADE SIZE S STI SPECSEAL SERIES 100 MINERAL WOOL BATT, NOMI	TEEL CONDU SEALANT IN	JIT. AN ISTALLED	NULUS RAN TO A 1/2	." DEPTH.	**					l Mater	IAL.		
FLUSH TO THE END OF THE SLEEVE WITH AN ADDITIONAL 1/4" S RANGING FROM 1/8" MINIMUM TO 2 1/4" MAXIMUM.	5	STEEL SLEEVE.													
NESS RECESSED FROM BOTH SIDES TO ACCOMODATE FILL		A MINIMUM ANNULAR SPACE	,									ATING.			
ONDUIT THRU GYPSUM	3 3 HOUR	RATED FIRESTOP	FOR M	IETAL	LIC C	ONDUI	T TH	IRU I	MASON	IRY					S N
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	СОР	PER BRANCH CIF		WIRE V, 3P,		1	208V,			- 3			GE L		
CONTROL RELAY MODULE FOR EACH DUCT SMOKE DETECTOR TO BE PROGRAMMED L OF HVAC SYSTEM TO INCLUDE FAN MOTOR(S) AND DAMPER(S). LOCATE CONTROL CENT TO RESPECTIVE ATC PANEL(S). LOW VOLTAGE ATC CONTROL CIRCUIT WIRING (5) AND CONTROL RELAY MODULES SHALL BE FURNISHED AND INSTALLED BY THE	C/B TRIP 15	DISTANCE IN FEET MINIMUM WIRE SIZE	120/2 109 12	08V, 3 173 10	P, 4W 275 8	94 12	0/208V 150 10		3W 379 6	54 12	87 10	138 8	219 6	348 4	44
ATING LIGHT/TEST SWITCH ASSOCIATED WITH EACH DUCT SMOKE DETECTOR IN ET BOX 1'0" BELOW SUSPENDED CEILING WITH IDENTIFICATION LABEL ON NEAREST	20	DISTANCE IN FEET MINIMUM WIRE SIZE	82 12	130 10	207 8		112 10	179 8	284 6	41 12	65 10	103 8	164 6	261 4	3:
R IN FIRST ROOM OR AREA SERVED BY EACH MAIN DUCT LEAVING THE FURNACE, NOXIDE ALARM SIGNAL SHALL BE AUTOMATICALLY TRANSMITTED TO APPROVED	30	DISTANCE IN FEET MINIMUM WIRE SIZE	87 10	138 8	219 6	75 10	119 8	190 6	301 4	43 10	69 8	109 6	174 4	219 3	2
OR SHALL PROVIDE PLEXIGLAS FRAMED GRAPHIC DISPLAYS INDICATING A SMALL DR EACH FLOOR OF THE ENTIRE BUILDING WITH FLOOR DESIGNATIONS, ROOM NAMES SPONDING TO PROGRAMMING AND SHALL LOCATE THEM ADJACENT TO EACH REMOTE MAIN AND REMOTE FIRE ALARM CONTROL PANELS.	40	DISTANCE IN FEET MINIMUM WIRE SIZE	103 8	164 6	261 4	89 8	142 6	226 4	285 3	52 8	82 6	130 4	164 3	207 2	20
RE ALARM HEAT DETECTORS SHALL BE LOCATED AND MOUNTED AS PER NFPA 72 WITH ALL ABOVE CEILING STRUCTURAL STEEL, PIPING, DUCTS, CONDUITS, MUST BE INCLUDED IN THE ABOVE CEILING COORDINATION DRAWINGS INDICATING ALL	50	DISTANCE IN FEET MINIMUM WIRE SIZE	83 8	131 6	209 4	72 8	114 6	181 4	228 3	41 8	66 6	104 4	132 3	166 2	20
BE INSTALLED. DETECTORS SHOULD BE INSTALLED AFTER THE INSTALLATION OF ONDUITS, ETC. SO AS TO PROVIDE FOR FUTURE ACCESSIBILITY TO THE DETECTORS. LED ABOVE INACCESSIBLE (GYP BOARD) CEILINGS SHALL BE PROVIDED WITH A ESS PANEL/DOOR TO FACILITATE FUTURE ACCESS FOR MAINTENANCE OR	60	DISTANCE IN FEET MINIMUM WIRE SIZE	109 6	174 4	219 3	95 6	151 4	190 3	240 2	55 6	87 4	110 3	138 2	174 1	
DCATE AND RE-CIRCUIT ALL EXISTING SPRINKLER FLOW AND TAMPER SWITCHES, ALL E DETECTORS, EXISTING KITCHEN HOOD FIRE PROTECTION SYSTEM, AND ALL EXISTING INTO THE NEW FIRE ALARM SYSTEM.	70	DISTANCE IN FEET MINIMUM WIRE SIZE	149 4	188 3	237 2	129 4	163 3	205 2	259 1	75 4	94 3	119 2	149 1		
TECTOR AND VISIBLE ALARM SIGNAL MOUNTED ABOVE ALL FIRE ALARM CONTROL S AND SIGNAL CIRCUIT EXTENDERS.	80	DISTANCE IN FEET MINIMUM WIRE SIZE	131 4	165 3	208 2	113 4	143 3	180 2	227 1	65 4	82 3	104 2	131 1		
MODIFICATION OF FIRE ALARM SYSTEM AND ASSOCIATED COMPONENTS REQUIRE DCA AWINGS BEFORE STARTING ANY INSTALLATION WORK. FIRE ALARM WORK SHOWN ON FOR "REFERENCE ONLY"	90	DISTANCE IN FEET MINIMUM WIRE SIZE	146 3	184 2	233 1	127 3	160 2	201 1		73 3	92 2	116 1			
	100	DISTANCE IN FEET MINIMUM WIRE SIZE	132 3	166 2	209 1	114 3	144 2	181 1		66 3	83 2	105 1			
	2. READ 3. DISTA	ACROSS TO THE RIGHT FROM DOWN TO MINIMUM WIRE SIZE NCES ARE TO THE CENTER OF DOR LIGHTING.													
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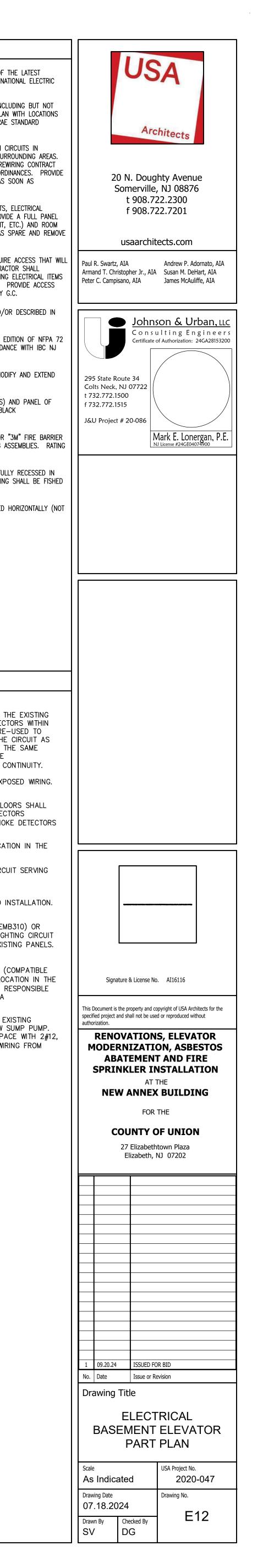
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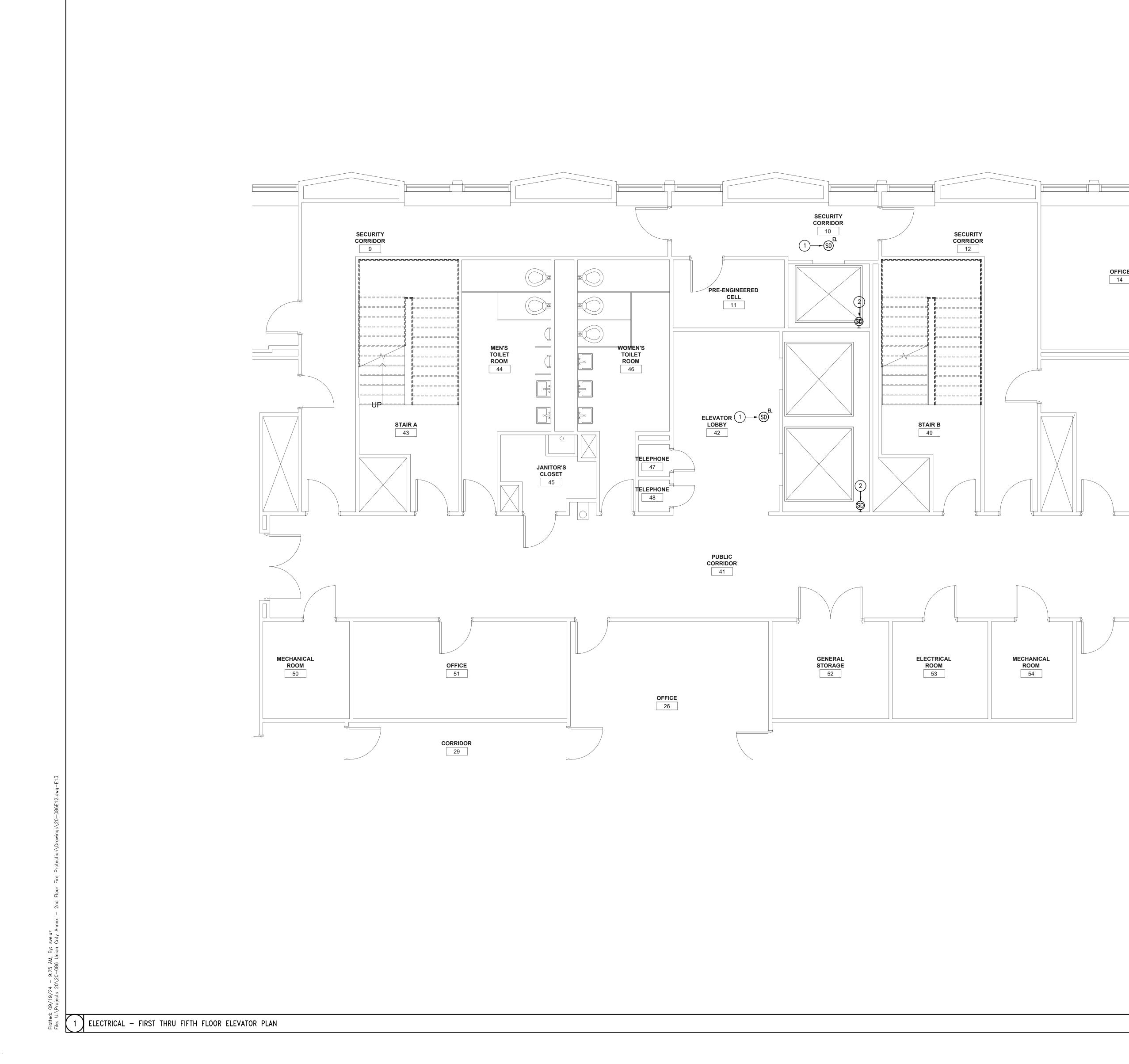




<u>STORAGE</u> B19

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		 Y NOTES: CONTRACTOR SHALL COMPLETELY DISCONNECT AND REMOVE THE INCHES, RECEPTACLES, SWITCHES, AND SMOKE DETECT THIS BOUNDARY, EXISTING CIRCUIT SHALL RENTED THE REQURED IF THERE ARE OTHER DEVICES BEING SERVED BY THE CIRCUIT NA NOTHER AREA, CONTRACTOR SHALL EXTROST THE VIRING/CONDUCT TO THE NEXT DEVICE IN LINE TO MAINTAIN CO EXOSTING SMOKE DETECTOR. IN LLEVATOR LOBBES ON ALL FLOO BED DISCONNECTED AND REMOVED. INSTALL, NEW SMOKE DETECT (COMPATIBLE WITH THE EXISTING DEVICES/SYSTEM). NEW SMOKE SHALL ACTIVATE ELEVATOR RECALL. UICHT SWITCH FOR LIGHTING IN PIT, COORDINATE EXACT LOCATIFIELD. CONNECT NEW RECEPTACLE(S) TO EVISTING RECEPTACLE CIRCUIS SHALL ACTIVATE ELEVATOR RECALL. CONNECT NEW RECEPTACLE(S) TO EVISTING RECEPTACLE CIRCUIS SPACE WITH 2#12, 1#12C, IN 3/4" CONDUIT. FOR SUMP PUMP, COORDINATE LOCATION IN FIELD PRIOR TO IN THE EXISTING SPACE WITH 2#12, 1#12C, IN 3/4" CONDUIT. FOR SUMP PUMP, COORDINATE LOCATION IN FIELD PRIOR TO IN SERVING SPACE WITH 2#12, 1#12C, IN 3/4" CONDUIT. WEY SMOKE DETECTORS SHALL ACTIVATE ELEVATOR RECALL (C) WITH THE EXISTING DEVICES/SYSTEM). COORDINATE EXACT LOC/ PIELD (PTI AND TOY OF HOSTWAY). COORDINATE EXACT LOC/ PIELD (PTI AND TOY OF HOSTWAY). COORDINATE EXACT LOC/ PIELD (PTI AND TOY OF HOSTWAY). COORDINATE EXACT LOC/ PIELD (PTI AND TOY OF HOSTWAY). COORDINATE EXACT LOC/ PIELD (PTI AND TOY OF DISTONY). COORDINATE EXACT LOC/ PIELD (PTI AND TOY OF HOSTWAY). COORDINATE EXACT LOC/ PIELD (PTI AND TOY OF DISTONY). COORDINATE EXACT LOC/ PIELD (PTI AND TOY OF HOSTWAY). COORDINATE EXACT LOC/ PIELD (PTI AND TOY OF HOSTWAY). COORDINATE EXACT LOC/ PIELD (PTI AND TOY OF HOSTWAY). COORDINATE EXACT LOC/ PIELD (PTI AND TOY OF HOSTWAY). COORDINATE EXACT LOC/ PIELD (PTI AND TOY OF HOSTWAY). COORDINATE EXACT LOC/ PIELD (PTI AND TOY OF HOSTWAY). COORDINATE EXACT LOC/ PIELD (PTI AND TOY OF HOSTWAY). COORDINATE EXACT LOC/ PIELD (PTI AND TOY OF HOSTWAY). COORDINATE EXACT LOC/ PIELD (PTI AND TOY OF HOSTWAY). COORDINATE EXACT LOC/ PIELD
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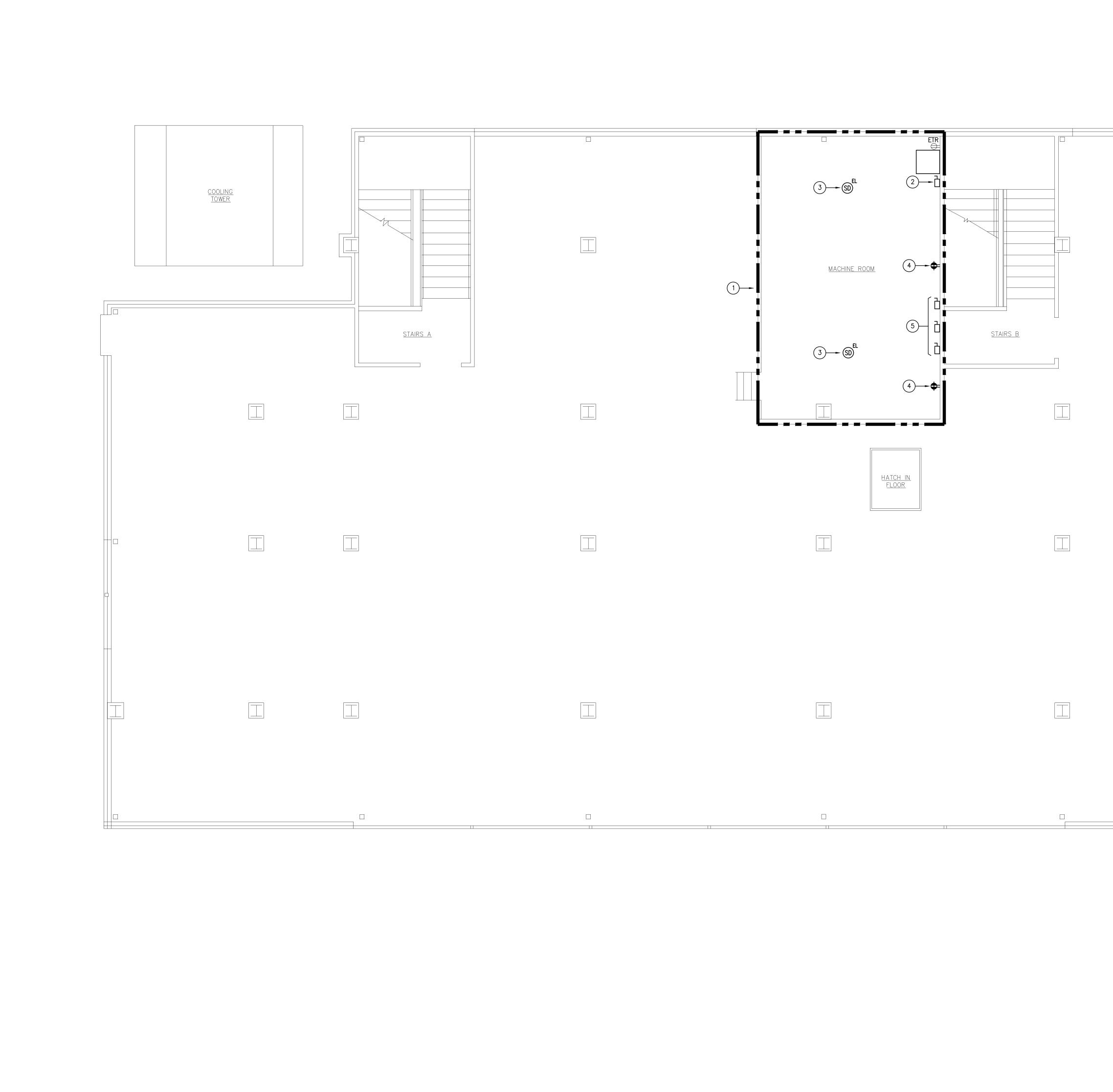


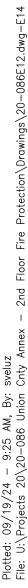


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KEY NOTES: ① CONTRACTOR SHALL PROVIDE RACEWAY COVERS FOR ALL EXPOSED ② CONTRACTOR TO PROVIDE EXISTING A/C UNIT WITH 208V, 1PH, 20A DISCONNECT SWITCH. ③ EXISTING SMOKE DETECTOR SHALL BE DISCONNECTED AND REMOVED DEVECES/SYSTEM. NEW SMOKE DETECTORS SHALL ACTIVATE ELEVAT RECAL ④ CONNECT NEW RECEPTACE(S) TO EXISTING RECEPTACE DEVECES/SYSTEM. NEW SMOKE DETECTORS SHALL ACTIVATE ELEVAT CONDITIONE TO EXISTING PARELS N COORDINATE EXACT LOCATION ON THE FELD. ④ CONNECT SWITCH FOR EACH ELEVATOR AND IDENTIFY ACCORDING ⑤ INTERCEPT CAB LIGHTING CIRCUIT AND PROVIDE A 120V, 1-POLE DISCONNECT SWITCH FOR EACH ELEVATOR AND IDENTIFY ACCORDING
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