



DASNY

515 BROADWAY
ALBANY, NY 12207-2964
518.257.3000

28 LIBERTY STREET
55TH FLOOR
NEW YORK, NY 10005-1400
212.273.5000
800.992.2788

6047 TRANSIT ROAD
SUITE 103
EAST AMHERST, NY 14051
716.566.4400

3495 WINTON PLACE
BUILDING C, SUITE 1
ROCHESTER, NY 14623
585.450.8400

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PROJECT MANUAL

CCNY The City College of New York

CCNY – HARRIS HALL IT UPGRADE

HARRIS HALL

THE CITY COLLEGE OF NEW YORK

160 CONVENT AVENUE NEW YORK, NY 10031

DASNY PROJECT NUMBER: 3822309999 /CR163

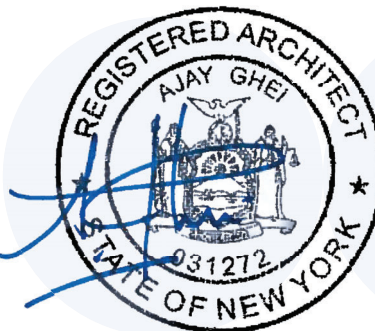
DATE: 09/24/2024

BID DOCUMENTS

AHUJA PARTNERSHIP ARCHITECTS

200 VARICK STREET, SUITE 512
NEW YORK, NY 10014
(212) 675-5560

Seals & Signatures



D A S N Y

DORMITORY AUTHORITY STATE OF NEW YORK

WE FINANCE, BUILD AND DELIVER.

Construction Front End Documents

ALBANY (HEADQUARTERS): 515 Broadway, Albany, NY 12207 | 518-257-3000

BUFFALO: 6047 Transit Road, Suite 103, East Amherst, NY 14051 | 716-566-4400

NEW YORK CITY: 28 Liberty Street, Fl 55, New York, NY 10005 | 212-273-5000

ROCHESTER: 3495 Winton Place, Building C, Suite 1, Rochester, NY 14623 | 585-461-8400

DASNY

**WE FINANCE, DESIGN & BUILD
NEW YORK'S FUTURE.**

www.dasny.org

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DIVISION 01

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D A S N Y

DORMITORY AUTHORITY STATE OF NEW YORK

WE FINANCE, BUILD AND DELIVER.

Construction Bidding Requirements

ALBANY (HEADQUARTERS): 515 Broadway, Albany, NY 12207 | 518-257-3000

BUFFALO: 6047 Transit Road, Suite 103, East Amherst, NY 14051 | 716-566-4400

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NOTICE TO BIDDERS
DORMITORY AUTHORITY OF THE STATE OF NEW YORK (“DASNY”)
City University of New York
City College of New York
Harris Hall IT Upgrade
CR3 General Construction
Project Number 3822309999

Sealed bids for the above Work located at **City College of New York, 1589 Amsterdam Avenue, New York, New York 10031**, will be received by DASNY at its office located at 515 Broadway, Albany, NY 12207. Each bid must be identified, on the outside of the envelope, with the name and address of the bidder and designated a bid for the Project titled above. When a sealed bid is placed inside another delivery jacket, the bid delivery jacket must be clearly marked on the outside **“BID ENCLOSED”** and **“ATTENTION: CONSTRUCTION CONTRACTS – LIANNE ALCANTARA.”** DASNY will not be responsible for receipt of bids which do not comply with these instructions.

All individuals who plan to attend pre-bid meetings or bid openings in person will be required to present government-issued picture identification to building security officials and obtain a visitors pass prior to attending the bid opening.

Individuals and entities submitting bids in person or by private delivery services should allow sufficient time for processing through building security to assure that bids are received prior to the deadline for submitting bids.

All bid openings will be made available for viewing live via Zoom at www.zoom.us. To enter the meeting, select “Join a Meeting” then enter Meeting Id 550 592 4065, Password 730959. Individuals are strongly encouraged to utilize this public viewing option as an alternative to in person attendance at bid openings.

Only those bids in the hands of DASNY, available to be read at **2:00 PM** local time on **January 15, 2025**, will be considered. Bids shall be publicly opened and read aloud. Bid results can be viewed at DASNY’s website; <http://www.dasny.org>.

In accordance with State Finance Law § 139-j and § 139-k, this solicitation includes and imposes certain restrictions on communications between DASNY personnel and a prospective bidder during the procurement process. Designated staff for this solicitation is: **Miriam Narouz, Sr. Field Representative, 138th Street and St. Nicholas Terrace, DASNY Red Trailer, New York, New York 10031, 518-925-6194, MNarouz@dasny.org** (the Owner’s Representative) **and DASNY at ccontracts@dasny.org**. Contacts made to other DASNY personnel regarding this procurement may disqualify the prospective bidder and affect future procurements with governmental entities in the State of New York. For more information pursuant to this law, refer to DASNY’s website; <http://www.dasny.org> or the OGS website; <http://www.ogs.state.ny.us>.

A Pre-Bid Meeting will be held on **Tuesday, November 19, 2024, at 11:00 AM via Microsoft Teams (Meeting ID: 265 669 416 278; Passcode: 6SKZTo)**. Contact Miriam Narouz at 518-925-6194. All prospective bidders are strongly encouraged to attend.

A complete set of Contract Documents may be viewed and/or purchased online from Camelot Print and Copy Centers. Only those Contract Documents obtained in this manner will enable a prospective bidder to be identified as an official plan holder of record. DASNY takes no responsibility for the completeness of Contract Documents obtained from other sources. Contract Documents obtained from other sources may not be accurate or may not contain addenda that may have been issued. In addition, prospective bidders are

advised that the Contract Documents for this Project contain new "GENERAL CONDITIONS for CONSTRUCTION" dated June 17, 2021, that contain significant revisions from those documents previously contained in DASNY's Contract Documents. Prospective bidders are further advised to review applicable sections of these General Conditions for any potential impact on their bid price prior to submittal of the bid. The plan holders list and a list of interested subcontractors and material suppliers may be viewed at DASNY's website: <http://www.dasny.org>. For Bid Opportunities and other DASNY related news, follow us on Twitter @NYS_DASNY and Facebook <https://www.facebook.com/pages/DASNY-Dormitory-Authority-of-the-State-of-New-York/307274192739368>.

To view the Contract Documents online, click the following link: www.camelotplanroom.com or type it into your web browser. Then click on the Public Jobs link on the left side of the page. If you would like to purchase the Contract Documents and become a registered planholder click the link "Register for an account" and follow the steps to create a free account (if you have not previously set one up). Once you have a Login and Password, log in to the planroom. To order a **DIGITAL DOWNLOAD** of the Contract Documents and be placed on the bidder's list, add the Contract Document(s) to your cart and proceed to the checkout. All major credit cards are accepted online. A purchase of a digital download is **required** to become a registered planholder. Printed sets of the Contract Documents are also available to planholders for an additional cost and may be ordered through the online planroom or by mailing a check. The purchase of the digital downloads and printed sets are non-refundable and non-returnable. Please contact Camelot's Bid Department at (518) 435-9696 or email them at camelotbids@teamcamelot.com for more information.

If you prefer to order a CD of the Contract Documents in place of the digital download, please send your non-refundable check/money order in the amount of \$15.00 payable to Camelot Print and Copy Centers to: Camelot Print & Copy Centers, Attn: Bid Department, 630 Columbia St. Ext., Latham, NY 12110

If you are ordering by mail, please include ALL the following on a transmittal with your check or money order:

Company Name
Address (physical address only)
Contact Person
Phone Number
Email (for communication including addendum notifications)
Company Fax number
FedEx or UPS shipping account number

If you do not have a shipping account, please send an additional non-refundable check for \$20 payable to Camelot Print and Copy Centers. Please include your Federal ID number, telephone and fax numbers on your Bank Check or Postal Money Order. NOTE: Bid due date is subject to change if Contract Documents are not available when requested, therefore, please call to confirm the availability of Contract Documents. If the Contract Documents will not be picked up by the purchaser, the purchaser will need to provide an account number for shipping of the documents or send an additional non-refundable check for \$20 payable to Camelot Print and Copy Centers.

For the convenience of prospective bidders, subcontractors and material suppliers, the Contract Documents will be displayed at the following locations:

Construction Journal
Contact information for hard copy distribution
bids@constructionjournal.com
400 SW 7th St.

Stuart, FL 34994
Contact information after documents have been issued
efrance@constructionjournal.com
Phone: 772-781-2144, ext 426
Fax: 772-781-2145

ConstructConnect
Attn: Production
30 Technology Parkway S. Suite 500
Norcross, GA 30092
Contact: Vera Bifulco
Email: projects@cmdgroup.com
Ph: (800) 364-2059

Dodge Data & Analytics
3315 Central Avenue
Hot Springs, AR 71901
Contact: William Fleming
william.fleming@construction.com
Ph: (518) 269-7735

Robert J. Rodriguez, President & CEO
November 12, 2024

BIDDING REQUIREMENTS for CONSTRUCTION

INFORMATION FOR BIDDERS

Section 1.0 - Pre-Bid Meeting, Bid Opening & Pre-Award Meeting

A pre-bid meeting will be held on Tuesday, November 19, 2024, at 11:00 AM via Microsoft Teams (Meeting ID: 265 669 416 278; Passcode: 6SKZTo). Contact Miriam Narouz at 518-925-6194. Prospective bidders are strongly encouraged to attend. The purpose is to observe actual Site conditions and review Contract Document requirements.

All individuals who plan to attend pre-bid meetings or bid openings in person will be required to present government-issued picture identification to building security officials and obtain a visitors pass prior to attending the bid opening.

Individuals and entities submitting bids in person or by private delivery services should allow sufficient time for processing through building security to assure that bids are received prior to the deadline for submitting bids.

All bid openings will be made available for viewing live via Zoom at www.zoom.us. To enter the meeting, select "Join a Meeting" then enter Meeting Id 550 592 4065, Password 730959. Individuals are strongly encouraged to utilize this public viewing option as an alternative to in person attendance at bid openings.

A mandatory pre-award meeting for the apparent low bidder will be held on Tuesday, January 28, 2025 at 10:00 AM at CCNY, DASNY Red Trailer, 138th Street & St. Nicholas Terrace, New York, NY 10031. Contact Miriam Narouz at 518-925-6194.

Section 2.0 - Examination of the Contract Documents and Site

- A. Prospective bidders shall examine the Contract Documents carefully and, before bidding, shall make a written request to the Owner and Design Professional, for an interpretation or correction of any ambiguity, inconsistency, or error therein which should be discovered by a reasonably prudent bidder. Every request for such interpretation must be received at least ten (10) days prior to the date fixed for the opening of the bid. Such interpretation or correction, as well as additional Contract provisions the Owner shall decide to include, shall be issued in writing by the Owner as an Addendum, which shall be provided to each prospective bidder recorded as having received a copy of the Contract Documents from the Owner and shall be available at the places where the Contract Documents are available for inspection by prospective bidders. Such Addendum shall become a part of the Contract Documents and shall be binding on prospective bidders whether or not the bidder receives or acknowledges the actual notice of such Addendum. Requirements of the Contract Documents shall apply to Addenda.
- B. Only interpretations, corrections or additional Contract provisions issued in writing by the Owner as Addenda shall be binding. No officer, agent or employee of the Owner or the Design Professional is authorized to explain or to interpret the Contract Documents by any other method and any such explanation or interpretation, if given, must not be relied upon by the bidder.
- C. At the time of the opening of bids, each bidder shall be presumed to have inspected the Site and to have read and to be familiar with the Contract Documents. The failure or omission of any bidder to receive or to examine any Contract Document shall in no way relieve any bidder from any obligation in respect to the bid of such bidder.

BIDDING REQUIREMENTS for CONSTRUCTION

INFORMATION FOR BIDDERS

Section 3.0 - Qualifications of Bidder

- A. The Owner shall investigate the responsibility of any bidder to determine the ability of any bidder to perform the Work. Bidders shall provide the Owner with all information requested to conduct such investigation. The Owner reserves the right to reject any bid if the requested items are not submitted as required or if the bidder fails to demonstrate to the Owner's satisfaction that the bidder is responsible or qualified to carry out the obligations of the Contract or to complete the Work as contemplated.
- B. The apparent low bidder must submit the required pre-award submittal package outlined below to the Procurement Unit within five (5) working days after receipt of the Pre-Award letter notification.
 - 1. **Workforce and Work Plan** – Provide a detailed written Work Plan which shall demonstrate the contractor's understanding of overall project scope and shall include, but not be limited, to the following:
 - a. Sequential listing of major project activities required to successfully complete the Work of the contract.
 - b. Include Critical Schedule Milestones and/or preliminary project schedule.
 - i. Include phasing of the Work, if required.
 - c. Include listing of long lead items.
 - d. Include a preliminary list of site-/project-specific safety hazards, and how such hazards will be considered in performance of the Work.
 - e. Résumés for Contractor's proposed supervisory staff, including qualifications for specialized expertise or any certification(s) required to perform the Work.
 - f. Names of all proposed sub-contractors and vendors and a listing of the related trade of work and value.
 - g. Any special coordination requirements with other trades.
 - h. Any special storage and staging requirements for construction materials.
 - i. Detailed bid breakdown showing costs per associated CSI divisions and/or required trade costs.
 - j. The bidder or its principals shall have a minimum of five (5) years' experience in similar work and shall provide to the Owner on the Minimum Qualifications Form a list of five (5) contracts of similar size, scope, and complexity to this Project completed or substantially completed within the last ten (10) years. Projects with complex technical specification sections may require additional experience in terms of both time as well as number of similarly completed projects.
- C. Experience will be viewed from both the perspective of completed projects of comparable size, scope and complexity, as well as the experience and qualifications of the bidder's personnel. The determination of relevant project experience in terms of size, scope and complexity will be at the sole and exclusive discretion of the Owner.
- D. Bidders shall, within the time specified by the Owner, submit to the Owner the names of the Subcontractors the Bidder proposes to use on the project. The Owner reserves the right to disapprove the use of any proposed Subcontractor. In such an event the Bidder shall submit the name of another Subcontractor in like manner within the time specified by the Owner. The Bidder shall have and will make no claim for compensation if the Owner disapproves any proposed Subcontractor. The Owner reserves the right to reject any bid if the names of proposed Subcontractors, or additional subcontract information, are not submitted as required.

BIDDING REQUIREMENTS for CONSTRUCTION

INFORMATION FOR BIDDERS

- E. In the event the bidder fails to establish to the satisfaction of the Owner, as set forth in (A) thru (C) above, that the bidder is both responsible and meets the qualification requirements of the solicitation, the Owner reserves the right, in its sole discretion, to reject any bid.

Section 4.0 - Executive Order No. 170.1 – Uniform Guidelines for Responsibility Determinations

The criteria contained in Executive Order No. 170.1 dated June 23, 1993 (9 NYCRR § 4.170, Context and Analysis, Historical Note 32) will also be applied in the bid review process. In the event of any conflict between the criteria in Executive Order No. 170.1 and the criteria in the Contract Documents, the stricter criteria shall apply.

Section 5.0 - Executive Order No. 125 – NYS Vendor Responsibility Questionnaire

- A. For any contract \$10,000 or more, the New York State Vendor Responsibility Questionnaire For-Profit Construction (CCA-2) Certification Page shall be submitted by the apparent low bidder to the Owner within five (5) business days of receipt of the Pre-Award Notification Letter. Executive Order No. 125 dated May 22, 1989 is found at 9 NYCRR §4.125.
- B. The apparent low bidder shall submit a New York State Vendor Responsibility Questionnaire For-Profit Construction (CCA-2) Certification Page to the Owner for each proposed subcontractor where the subcontract for the Work of the Project exceeds two million dollars and for any other subcontractor upon request of the Owner. **The Owner recommends that any subcontractors file the required Vendor Responsibility Questionnaire online via the New York State VendRep System (the “System”) prior to submission of the bid.**
- C. **The Owner recommends that vendors file the required Vendor Responsibility Questionnaire online via the New York State VendRep System (the “System”) prior to submission of the bid.** To enroll in and use the System, see the System Instructions at http://www.osc.state.ny.us/vendrep/vendor_index.htm or go directly to the VendRep System online at <https://portal.osc.state.ny.us>. Vendors must provide their New York State Vendor Identification Number when enrolling. To request assignment of a Vendor ID or for System assistance, contact the Office of the State Comptroller’s (“OSC”) Help Desk at 866-370-4672 or 518- 408-4672 or by email at ciohelpdesk@osc.state.ny.us. Vendors opting to complete and submit a paper questionnaire can obtain the appropriate questionnaire from the System website www.osc.state.ny.us/vendrep or may contact the Owner (DASNY) or OSC’s Help Desk for a copy of the paper form.
- D. As further described in Section 9.0 – Preparation of Bids of this Information for Bidders, the bidder shall submit with its bid a separately sealed list of the names of each subcontractor and the agreed upon amount to be paid to each subcontractor for the HVAC, plumbing and electric work. Upon notification of apparent low bid status and consistent with Article 6, Section 6.01 L. of the General Conditions, the apparent low bidder, shall submit a NYS Vendor Responsibility Questionnaire For-Profit Construction (CCA-2) Certification Page for each subcontractor named in accordance with Section 9.0 Preparation of Bids. **The Owner recommends that all named subcontractors file the required Vendor Responsibility Questionnaire online via the New York State VendRep System (the “System”) prior to submission of the bid.**

Section 6.0 – 2005 Procurement Lobbying Law

- A. Pursuant to provisions of the General Conditions, Article 18 – 2005 Procurement Lobbying Law, for any contract \$15,000 or more, the 2005 PROCUREMENT LOBBYING LAW – CERTIFICATION as part of the Omnibus Procurement Certification form is to be submitted with the bid.

BIDDING REQUIREMENTS for CONSTRUCTION

INFORMATION FOR BIDDERS

- B. All bidders, domestic and foreign, must be in compliance with New York State business registration requirements. Contact the NYS Department of State regarding compliance.

Section 7.0 - Approval of Subcontractors/Subcontract Limits

- A. Pursuant to provisions of the General Conditions, Article 6 - Subcontracts, bidders shall within the time specified by the Owner, submit to the Owner the names of the subcontractors which the bidder proposes to use on the Contract. The Owner reserves the right to reject any bid if the names of proposed subcontractors, or additional subcontractor information, are not submitted as required.
- B. The Contractor shall not make Subcontracts totaling a dollar amount which is more than the percentage of the total Contract price indicated below. The Owner may modify these requirements at any time, including after receipt of bids, when determined to be in the best interest of the Owner.

Subcontract limits are as follows:

Contract Trade	%	Contract Trade	%
CR3 General Construction	75%		

Section 8.0 - Opportunity Programs Requirements

- A. Pursuant to provisions of the General Conditions, Article 20 – Opportunity Programs and Article 21 – Service-Disabled Veteran Owned Businesses, the Contractor agrees, in addition to any other nondiscrimination provision of the Contract and at no additional cost to the Owner, to fully comply and cooperate with the Owner in the implementation of NYS Executive Law ARTICLE 15-A, PARTICIPATION BY MINORITY GROUP MEMBERS AND WOMEN WITH RESPECT TO STATE CONTRACTS and Article 17-B, SERVICE DISABLED VETERAN OWNED BUSINESSES. These requirements will include: equal employment opportunities for minority group members and women (EEO), plus opportunities for minority and women-owned business enterprises (M/WBE). The Contractor’s demonstration of good faith efforts shall also be a part of these requirements.
- B. The Owner has adopted a goal oriented approach to ensure employment of EEO & M/WBE at a level commensurate with their capability and availability. The Owner has determined that the goals for EEO & M/WBE participation in the Work of the Contract are follows:

Percent of Total Work Force (EEO):

Minority & Women Workforce Goal (for all trades) **45%**

Percent of Total Contract (M/WBE):

Minority Business Enterprise Goal **18%**

Women's Business Enterprise Goal **12%**

Service Disabled Veteran Owned Businesses **6%**

The goals stated above, for each contract, do not apply to bids of less than \$100,000.

- C. The apparent low bidder shall submit within the specified time frames, the following:

BIDDING REQUIREMENTS for CONSTRUCTION

INFORMATION FOR BIDDERS

1. A Statewide Utilization Management Plan (“SUMP”) via the NYS Contract System. Hard copies of the plan will no longer be accepted and no payment can be made without an approved plan. Please login to the NYS Contract System at <https://ny.newnycontracts.com> to view and complete the SUMP. If you are a new user, click on **Account Lookup**” to identify your account by company name. You can then **Request New User** to be set up so that you can access the account. **It is important that the staff member who is responsible for reporting payment information for your firm is also set up as a user in the System.** Email notifications regarding the approval/denial of the plan will come from the New York State Contract System so please ensure the address is listed in your contacts to avoid messages being deleted as spam.
2. The Statewide Utilization Management Plan (“SUMP”) shall be submitted within ten business (10) days after being notified of the Notice to Proceed (NTP). The SUMP shall list all proposed Subcontractors and material suppliers the bidder intends to use to perform the Work of the Contract including an identification of the NYS Empire State Development Corporation (“ESD”) certified M/WBE Subcontractors and material suppliers the bidder intends to use to achieve the participation goals established above. The Scope Verification Form shall accompany the SUMP for each M/WBE Subcontractor listed on the SUMP. Only NYS ESD certified M/WBEs submitted in the SUMP will qualify for M/WBE credit. The Owner or ESD can assist the bidder in locating NYS certified M/WBEs.
3. The Owner will review the SUMP and issue the bidder a notice of acceptance or deficiency within twenty (20) days of its receipt. A notice of deficiency shall include (i) the name of any M/WBE which is not acceptable for the purpose of complying with the M/WBE participation goals and the reasons why it is not acceptable; (ii) elements of the Work of the Contract, which the Owner has determined can be reasonably structured by the bidder to increase the likelihood of participation in the Contract by M/WBEs; and (iii) other information which the Owner determines to be relevant to the SUMP.
4. The bidder shall respond to the notice of deficiency within seven (7) business days of receipt by submitting to the Owner a written remedy in response to the notice of deficiency. If the written remedy that is submitted is not timely or is found by the Owner to be inadequate, the Owner shall notify the bidder and direct the bidder to submit, within five (5) business days, a Request for Waiver. Failure to file the waiver form in a timely manner may be grounds for disqualification of the bid.
5. The bidder who has written documentation of good faith efforts to obtain commitments from M/WBE subcontractors and material suppliers prior to submitting the SUMP may submit a request for waiver form at the same time it submits the SUMP. If a Request for Waiver is submitted with the SUMP and is not accepted by the Owner, the provisions of clauses (i) and (ii) of paragraph 3 regarding the notice of deficiency and written remedy will apply. In this case, the bidder may submit a second Request for Waiver as directed by the Owner.
6. If the bidder does not submit a SUMP, remedy deficiencies in the SUMP, submit a Request for Waiver, or if the Owner determines that the SUMP does not indicate that the M/WBE participation goals will be met and/or that the bidder has failed to document good faith efforts, the Owner shall withhold payment to the contractor.
7. The bidder shall attempt to utilize, in good faith, any M/WBE identified within the SUMP, at least to the extent indicated in the SUMP.

BIDDING REQUIREMENTS for CONSTRUCTION

INFORMATION FOR BIDDERS

8. The bidder shall submit to the Owner, within thirty (30) days from the acceptance of the SUMP, copies of the executed Subcontract and the accepted schedule of values for each M/WBE Subcontract and the fully executed purchase order agreement to each M/WBE supplier identified on the accepted Utilization Plan. Each executed agreement shall include reference to the Contract.
 9. Six Month Workforce Utilization Schedule.
- D. Failure to provide the above plans and the aforementioned information shall result in the Owner withholding payment to the contractor. To become more familiar with the Opportunity Program Requirements, a Pre-Bid Meeting Outline is available on the Dormitory Authority's website.
- E. DASNY's Capital Management Plan assists New York State's MWBE, SDVOB, and smaller general contractors become prime contractors on DASNY construction projects statewide by accessing affordable capital and to qualify for bonding. To learn more about this program please click on the link for additional information <https://cayemittegroup.com/cayemitte-capital-management/> or contact David Cayemitte, President/CEO of the Cayemitte Group at (609) 521-4201 or Michael M. Clay Senior Director of OPG|Co-Leader of Procurement at mclay@dasny.org.

Section 9.0 - Preparation of Bids

- A. Bids must be submitted on the Form of Bid supplied by the Owner in the bidder's full legal name or the bidder's full legal name plus a registered assumed name. Bids shall be enclosed in a sealed envelope, addressed to the Owner, and marked with the name and address of the bidder, and the name of the Project. All blank spaces for bid prices must be filled in, using both words and figures, words to take precedence over figures. Conditional bids shall not be accepted. Bids shall not contain any recapitulation of the Work to be done. No oral, facsimile transmittal, electronic or telephonic bids or modifications of bids shall be considered. Bids shall contain an original signature of the bidder in the space provided on the Form of Bid.
- B. Bids that are illegible or that contain omissions, alterations, additions, or items not called for in the bidding documents may be rejected as not responsive. Any bid which modifies, limits, or restricts all or any part of such bid, other than as expressly provided for in the Contract Documents, may be rejected as not responsive.
- C. The Owner may reject any bid not prepared and submitted in accordance with the provisions of the Contract Documents.
- D. Any bid may be withdrawn prior to the scheduled time for the opening of bids or authorized postponement thereof and any bid received after such time and date shall not be considered.
- E. No bidder may withdraw a bid within sixty (60) days after the actual date of the opening thereof. After sixty (60) days, the Owner, at its sole discretion, may request that the bidder extend the expiration of the bid, as often as deemed necessary, to a date set by the Owner. After sixty (60) days, if the Contract has not been awarded and the Owner elects to not request an extension, the Owner may consider the bid as expired and return the bid security.
- F. No action or proceeding concerning in any way any bid for the Contract or the Contract shall be brought against the Owner in any location other than Albany County unless the Owner specifically consents, in writing, to a change of venue.

BIDDING REQUIREMENTS for CONSTRUCTION

INFORMATION FOR BIDDERS

- G. The work of this Project is being bid as a single prime Contract. Each bidder must submit with its bid a separately sealed list of the names of each subcontractor and the agreed upon amount to be paid to each subcontractor for the Heating, Ventilating and Air Conditioning (“HVAC”), Plumbing and Electric work.**

The agreed upon amount to be paid to each subcontractor must be included in the total bid amount submitted by the Bidder in the space provided on page 1 of the Form of Bid.

Upon announcement of the low bid the sealed list of subcontractors for the HVAC, Plumbing and Electric work submitted with the low bid shall be opened and each subcontractor shall be announced. The remaining lists of subcontractors for the HVAC, Plumbing and Electric work submitted with each bid shall remain sealed and returned to each bidder upon award of the Contract.

Section 10.0 - Bid Security

- A. In the amount of five percent (5%) of the base bid amount, each bid must be accompanied by a certified check of the bidder made payable to the Dormitory Authority or by a bid bond prepared on the form of bid bond included in the Contract Documents, duly executed by the bidder as principal, and the surety thereon. Bidder failure to provide bid security as prescribed, may result in rejection of the bid. Bid bonds submitted as bid security shall contain an original signature of both the bidder and the surety providing the bid bond in the space provided on the Form of Bid Bond. The surety shall be authorized to do business in the State of New York by the New York State Department of Financial Services, rated at least A- by A. M. Best and Company, or meet such other requirements as are acceptable to the Owner in its sole and exclusive discretion.
- B. Any certified checks submitted as bid security shall be returned to all except the three (3) lowest bidders after the opening of bids, and the remaining checks shall be returned to the three (3) lowest bidders after the Owner and the accepted bidder have executed the Agreement, or if no Agreement has been executed within sixty (60) days after the date of the opening of bids, upon demand of the bidder at any time thereafter so long as such bidder has not been notified of the acceptance of such bid.
- C. Bid Bonds of all but the bidder executing the Agreement shall be destroyed by the Owner either 1) after the Owner and the accepted bidder have executed the Agreement, or 2) if no Agreement has been executed, sixty (60) days after the date of the opening of bids.

Section 11.0 – Compliance With Laws

The bidder shall sign and submit with the bid the COMPLIANCE WITH LAWS – CERTIFICATION as part of the Omnibus Procurement Certification form included in the Contract Documents.

Section 12.0 - Bid Designation

- A. Each bid shall bear on the outside of the envelope the name of the bidder, its address, its telephone number and designated as bid for the following:

**City University of New York
City College of New York
Harris Hall IT Upgrade
CR3 General Construction
Project Number 3822309999**

BIDDING REQUIREMENTS for CONSTRUCTION

INFORMATION FOR BIDDERS

- B. Bids submitted via; mail, express service, or messenger service shall indicate on the exterior of the envelope the words **"BID ENCLOSED."** Attention: **"Construction Contracts – Lianne Alcantara."**

Section 13.0 - Award of Contract

- A. Award of the Contract shall be made to the bidder submitting the lowest bid, if:
1. In the opinion of the Owner, the bid is responsive to the bid solicitation, and such bidder is qualified to perform the Work involved, is responsible and reliable.
 2. The bidder submits required documents as described under Section 17.0 – Forms and Documents.
 3. On contracts of One Million Dollars (\$1,000,000) or more, the bidder furnishes within five days after low bidder notification, documentation of efforts to encourage the participation of New York State enterprises as suppliers and subcontractors. Also, in a post-award compliance report, furnish documentation of efforts to provide notification to New York State residents of employment opportunities, through the New York State Job Service Division, or provide such notification in a manner consistent with existing collective bargaining contracts or agreements.
- B. Alternates, if stated in the Form of Bid, shall be chosen at the sole and exclusive discretion of the Owner when awarding the Contract. Alternates shall be listed in their order of priority, and acceptance shall be made in the same order, except that the Owner, at its sole and exclusive discretion, may by-pass any Maintenance or Warranty Service Alternates. The lowest bid will then be determined by adding, to the bidder's total base bid, all Alternates chosen by the Owner.
- C. The Owner reserves the sole and exclusive right to reject any bid or all bids, to waive any informalities or irregularities or omissions in any bid received or to afford any bidder an opportunity to remedy any informality or irregularity.
- D. The execution of the Agreement shall not be construed as a guarantee by the Owner that the plant, equipment, and the general scheme of proposed operations of a bidder is either adequate or suitable for the satisfactory performance of the Work or that other data supplied by a bidder is accurate.

Section 14.0 - Required Bonds and Insurance

- A. Simultaneously with the delivery of the signed Agreement, the successful bidder shall furnish to the Owner and maintain, at its own cost and expense a Performance Bond in an amount at least equal to one hundred percent (100%) of the Contract amount as security for faithful performance of the Contract and also a Payment Bond in an amount at least equal to one hundred percent (100%) of the Contract amount for the payment of all persons performing labor under the Contract or furnishing materials for the Contract. The Performance Bond and Payment Bond surety must be authorized to do business in New York State by the NYS Department of Financial Services, rated at least A- by A.M. Best and Company or meet such other requirements as are acceptable to the Owner in its sole and exclusive discretion.
- B. Attorneys-in-fact who sign said bonds on behalf of a surety must affix to each bond a certified and effectively dated copy of their power of appointment.
- C. Bidders should carefully review the Contract Documents for the requirements for insurance and bonds for this Contract including, but not limited to, Articles 6, 14 and 15 of the General Conditions and the

BIDDING REQUIREMENTS for CONSTRUCTION

INFORMATION FOR BIDDERS

sample certificate of insurance provided by the Owner in the bidding documents. The deductible for General Conditions Section 15.06 A is \$50,000 for SUNY projects and \$250,000 for all other projects.

Section 15.0 - Damages for Failure to Enter into Agreement

The successful bidder, upon failure or refusal to sign and deliver the Agreement and bonds required within fourteen (14) days after such bidder has received the Letter of Intent, shall forfeit to the Owner as damages for such failure or refusal, the bid security, or the sum of the difference between the total bid of the successful bidder and the total bid of the bidder submitting the next lowest bid, whichever sum shall be higher.

Section 16.0 - Substantial Completion and Liquidated Damages

- A. All the Work of the Contract Documents shall commence at the time to be specified in the Notice to Proceed and the Contractor shall achieve Substantial Completion no later than **August 1, 2025**.
- B. Liquidated Damages may be assessed for each and every calendar day that the Work of the Contract is not complete, after the above stated date for Substantial Completion of the Work, at the rate of **One Thousand Five Hundred and 00/100 Dollars (\$1,500.00)**.

Section 17.0 – Forms and Documents

Each bidder shall complete and submit to the Owner, pursuant to provisions stated in the Information for Bidders, the following forms and documents:

Bidding Requirements: each bidder shall submit the following at time of bid:

- Form of Bid
 - Omnibus Procurement Certification
 - 2005 Procurement Lobbying Law - Certification
 - Code of Business Ethics - Certification
 - Compliance with Laws - Certification
 - W-9 Form
 - Supplement to Form of Bid
 - Bid Security
- F. Contract Forms for Construction: the successful bidder shall submit the following for execution of the Contract. The Owner reserves the right to reject any bid if any or all of the required documents are not submitted within the timeframes identified below, or if the bidder fails to demonstrate to the Owner's satisfaction that the bidder is responsible or qualified to carry out the obligations of the Contract or to complete the Work as contemplated:
- Workforce and Work Plan submittal package as per Section 3.0 – Qualifications of Bidders Letter B.1 – within five (5) days of pre-award letter notification
 - Required Insurance Forms – within five (5) days of pre-award letter notification
 - New York State Vendor Responsibility Questionnaire For-Profit Construction (CCA-2) - within five (5) days of pre-award letter notification
 - New York State Vendor Responsibility Questionnaire For-Profit Construction (CCA-2) for each subcontractor named with the bid for the HVAC, plumbing and electric work within five (5) days of pre-award letter notification (if applicable)

BIDDING REQUIREMENTS for CONSTRUCTION

INFORMATION FOR BIDDERS

- Signed Project Labor Agreement - within five (5) days of pre-award letter notification (if applicable)
- Agreement - within fourteen (14) days after Letter of Intent
- Payment Bond – with Contractor’s signed Agreement
- Performance Bond – with Contractor’s signed Agreement

Section 18.0 – Project Labor Agreement (optional)

The Dormitory Authority of the State of New York (“DASNY”) and the Building and Construction Trades Council of Greater New York and Vicinity (the “Council”) have entered into a Memorandum of Understanding (“MOU”) that requires the use of a Project Labor Agreement (“PLA”) on applicable covered projects within the City of New York. While this Project is considered an “Excluded Project”, under the MOU and therefore the use of a PLA is optional on this Project, the successful prime contractor performing work on this Project shall have the option to voluntarily execute the PLA. This is to provide potential bidders of the Project with notice of this option, consistent with the provisions of the MOU. Execution of the applicable PLA following the Information for Bidders is not a requirement to perform work on this Project.

Section 19.0 – Electronic Data Transfer

Notwithstanding Section 2.02 (B) – Electronic Data Transfer, payment to the Contractor shall only be rendered electronically, unless payment by paper check is authorized in writing by the Owner. The Contractor further acknowledges and agrees that the Owner may withhold payments, if the Contractor has not complied with the Owner’s requirements relating to the electronic payment program in effect at such time, unless payment by paper check is authorized in writing by the Owner.

BIDDING REQUIREMENTS for CONSTRUCTION

FORM OF BID

TO THE DORMITORY AUTHORITY OF THE STATE OF NEW YORK
(Owner)

For _____
(Title of Project)

Pursuant to and in compliance with the Owner's Notice to Bidders dated _____ and the Contract Documents relating hereto, the undersigned hereby offers to Provide all plant, labor, materials, supplies, equipment, Allowances, if applicable and other facilities and things necessary or proper for or incidental to the Work of:

(Contract Type or Trade)

as required by, and in strict accordance with applicable Contract Documents, including written changes thereto, and addenda issued by the Owner and sent to the undersigned or delivered to the bidder or available to the bidder prior to the opening of bids, whether received by the undersigned or not, for the total sum of:

(Written Dollar Amount)

(\$ _____)
(Figure Dollar Amount)

The above Written Dollar Amount is the undersigned's bid and no other number on any page submitted with this page 1 of the FORM OF BID can be the undersigned's bid under any circumstance.

The bid may be withdrawn at any time prior to the scheduled time for the opening of bids or any authorized postponement thereof.

If the Letter of Intent is sent or delivered to the undersigned within sixty (60) days after the date of opening of the bids, or any time thereafter before the bid is withdrawn, the undersigned shall, within fourteen (14) days after the date of such Letter of Intent, execute and deliver the Agreement in the form included in the Contract Documents.

The undersigned hereby designates as the undersigned's office to which the Letter of Intent may be sent or delivered:

Name: _____

Firm's Legal Name: _____

Street Address: _____

PO Box #: _____

City, State, Zip Code: _____

Phone Number: _____

Email Address: _____

BIDDING REQUIREMENTS for CONSTRUCTION

FORM OF BID

Date of Bid Submission: _____

Firm's Legal Name: _____

Street Address: _____

PO Box #: _____

City, State, Zip Code: _____

By: _____
(Signature of Officer)

Title: _____

Officer Name: _____
(Print)

Phone Number: _____

Fax Number: _____

E-Mail Address: _____

Taxpayer ID or Social Security Number: _____

Submit Bid to:
DASNY
Attn: CONTRACTS UNIT – BID ENCLOSED
515 Broadway
Albany, New York 12207

SUPPLEMENT to FORM OF BID
City University of New York
City College of New York
Harris Hall IT Upgrade
CR3 General Construction
Project Number 3822309999

Reference is made to Section 9.0, **Preparation of Bids (paragraph G.)** of the Information for Bidders.

The bidder must complete and submit this form, at time of bid, **in a separate sealed envelope**, with the Form of Bid package.

The Project shall be bid as a single prime contract for the performance of the Work of the Contract Documents. Where applicable, the prospective bidder shall provide the name of each Subcontractor and the agreed upon amount to be paid to each Subcontractor for the Heating, Ventilating & Air Conditioning Work, Plumbing Work and Electric Work on the form provided below. **If the prospective bidder intends to self-perform any of the work of these trades, the bidder must name themselves in the space(s) provided below after "Name of Subcontractor" and further state the value of said work.** "Not Applicable" should only be selected where the Work of the Project does not include any work in the specified category.

Contractor's Name: _____

Heating, Ventilation & Air Conditioning Work ☐ **Not Applicable**

Name of Subcontractor: _____

Value of Subcontract: _____ (\$ _____)
(Written dollar amount)

Plumbing Work ☐ **Not Applicable**

Name of Subcontractor: _____

Value of Subcontract: _____ (\$ _____)
(Written dollar amount)

Electrical Work ☐ **Not Applicable**

Name of Subcontractor: _____

Value of Subcontract: _____ (\$ _____)
(Written dollar amount)

Upon announcement of the low bid, the sealed list of Subcontractors for the HVAC, Plumbing and Electrical Work submitted with the low bid shall be opened and each Subcontractor shall be announced. The remaining lists of subcontractors for the HVAC, Plumbing and Electrical Work submitted with each bid shall remain sealed and returned to each bidder upon award of the Contract.

DORMITORY AUTHORITY OF THE STATE OF NEW YORK
OMNIBUS PROCUREMENT
CERTIFICATION

I, the undersigned, an authorized signatory of _____, (the “**Firm**”) hereby represent that they are knowledgeable about the Firm’s business and operations and certify to the Dormitory Authority of the State of New York (“**DASNY**”) under penalty of perjury that the answers provided herein are true to the best of their knowledge and belief as follows with respect to certain actions taken and to be taken in connection with the Firm’s submission of a [bid/proposal] and the execution of any resulting contract (the “**Contract**”) in response to DASNY’s [notice to bidders/request for proposal] for Project # [] as follows:

A. Non-Collusive Bidding Certification

1. The prices in the [bid/proposal], have been arrived at independently without collusion, consultation, communication or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other [bidder/proposer] or with any competitor;
2. Unless otherwise required by law, the prices which have been quoted in the [bid/proposal] have not been knowingly disclosed by the [bidder/proposer] and will not knowingly be disclosed by the [bidder/proposer] prior to opening, directly or indirectly, to any other [bidder/proposer] or to any competitor; and
3. No attempt has been made or will be made by the [bidder/proposer] to induce any other person, partnership, or corporation to submit or not to submit a [bid/proposal] for the purpose of restricting competition.

B. Non-Segregated Facilities

The Firm does not, nor shall not, maintain or provide for the employees of such Firm any segregated facilities at any establishments, and that the Firm does not, nor shall not, permit the employees of such Firm to perform the services of such employees at any location under the control of such Firm where segregated facilities are maintained. The Firm agrees that a breach of this certification is a violation of the nondiscrimination clauses of the Contract.

C. Non-discrimination in Employment in Northern Ireland

The Firm stipulates that it, and any individual or legal entity in which the Firm holds a ten percent (10%) or greater ownership interest, and any such entity that holds such an interest in the Firm, either:

1. Has no business operations in Northern Ireland; or
2. Shall take all lawful steps in good faith to conduct any business operations it has or in which it has such an interest in Northern Ireland in accordance with the MacBride Fair Employment Principles as set forth in Chapter 807 of the Laws of 1992 and shall permit any independent monitoring of its compliance with said Principles.

D. Federal Equal Employment Opportunity Act

DORMITORY AUTHORITY OF THE STATE OF NEW YORK
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CERTIFICATION

The Firm is compliant with the Federal Equal Employment Opportunity Act of 1972 (P.L. 92-261), as amended.

E. Commitment to Opportunity Programs

The Firm acknowledges and agrees to be bound in accordance with NYS Executive Law Article 15-A, and in conformance with regulations promulgated by the Division of Minority and Women's Business Development of the NYS Department of Economic Development. A list of NYS certified M/WBEs may be obtained from the ESDC directory of certified businesses located at www.nylovesmwbe.ny.gov.

F. Commitment to Service-Disabled Veteran-Owned Business

The Firm acknowledges and agrees to be bound in accordance with NYS Executive Law Article 17-B, and in conformance with applicable regulations. A list of NYS certified SDVOB may be obtained from the NYS Office of General Services Division of Services-Disabled Veterans' Business Development located at <https://ogs.ny.gov/veterans>.

G. Transfer of Offset Credits

The Firm acknowledges notice that DASNY may assign or otherwise transfer offset credits created by the Contract to third parties located in New York State.

H. 2005 Procurement Lobbying Law

1. The Firm understands and has to date and agrees hereinafter to comply with DASNY's procedures relative to permissible contacts for this procurement as required by State Finance Law § 139-j (3) and § 139-k (6) (b);
2. No "governmental entity," as defined in State Finance Law § 139-j and § 139-k has made a finding in the last four years that the Firm was not responsible;
 - a. If yes, please note the governmental entity, the date of the finding and the basis of the finding regarding each finding of non-responsibility. Attach additional pages, if necessary.

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DORMITORY AUTHORITY OF THE STATE OF NEW YORK
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3. No “governmental entity” as defined in State Finance Law § 139-j and § 139-k has terminated or withheld a procurement contract with the Firm due to the intentional provision of false or incomplete information required by such laws and/or the failure to comply with the requirements of State Finance Law § 139-k(3) relating to permissible contacts.

- a. If yes, please note the governmental entity, the date of the termination or withholding of contract and the basis of termination or withholding of contract. Attach additional pages, if necessary.

I. Code of Business Ethics

The Firm acknowledges notice of and has read DASNY’s Code of Business Ethics attached as **Exhibit A** hereto and acknowledges that the Firm’s failure to comply shall justify termination of the Contract by DASNY and may result in the rejection of the Firm’s [bid/proposal] for future work with DASNY.

J. Iran Divestment

That to the best of its knowledge and belief, the Firm and each person and each person signing on behalf of any other party, that each person is not on the list created pursuant to paragraph (b) of subdivision 3 of section 165-a of the State Finance Law.

K. Russia Divestment – EO 16

Executive Order No. 16 provides that “all Affected State Entities are directed to refrain from entering into any new contract or renewing any existing contract with an entity conducting business operations in Russia.” The Executive Order remains in effect while sanctions imposed by the federal government are in effect. As defined in Executive Order No. 16, an “entity conducting business operations in Russia” means an institution or company, wherever located, conducting any commercial activity in Russia or transacting business with the Russian Government or with commercial entities headquartered in Russia or with their principal place of business in Russia in the form of contracting, sales, purchasing, investment, or any business partnership.

DORMITORY AUTHORITY OF THE STATE OF NEW YORK
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That to the best of its knowledge and belief, the Firm and each person and each person signing on behalf of any other party, represents as follows:

_____ 1. No, Vendor does not conduct business operations in Russia within the meaning of Executive Order No. 16.

_____ 2.a. Yes, Vendor conducts business operations in Russia within the meaning of Executive Order No. 16 but has taken steps to wind down business operations in Russia or is in the process of winding down business operations in Russia. (Please provide a detailed description of the wind down process and a schedule for completion.)

_____ 2.b. Yes, Vendor conducts business operations in Russia within the meaning of Executive Order No. 16 but only to the extent necessary to provide vital health and safety services within Russia or to comply with federal law, regulations, executive orders, or directives. (Please provide a detailed description of the services being provided or the relevant laws, regulations, etc.)

_____ 3. Yes, Vendor conducts business operations in Russia within the meaning of Executive

L. Certification

The Firm acknowledges that intentional submission of false or misleading information may constitute a felony under Penal Law Section 210.40 or a misdemeanor under Penal Law Section 210.35 or Section 210.45, and may also be punishable by a fine of up to \$10,000 or imprisonment of up to five years under 18 U.S.C. Section 1001 and hereby represents that all information contained here provided to DASNY is complete, true and accurate.

By: _____

Name: _____

Title: _____

Date: _____

DORMITORY AUTHORITY OF THE STATE OF NEW YORK
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Exhibit A: Dormitory Authority of the State of New York - Code of Business Ethics

A. Ethics Programs

1. DASNY is a public-benefit corporation of the State of New York and expects the highest degree of ethical business conduct by its employees and the many contractors, consultants and vendors with whom it interacts on behalf of its clients, bondholders and the people of the State of New York. DASNY, by mandate of its Board of Directors, administers a comprehensive corporate integrity program to ensure that, as public officers, DASNY employees at all levels perform their official duties consistent with the requirements of the *New York State Public Officers Law*; other applicable laws, rules, and regulations; and policies of DASNY.
2. DASNY encourages and supports a fair, open and honest business relationship with its contractors, consultants and vendors based on quality, service and cost. Moreover, DASNY believes that a “level playing field” in the marketplace can only be achieved through adherence to ethical business practices by all participants involved in the process.
3. To promote a working relationship with DASNY based on ethical business practices, contractors, consultants and vendors are expected to:
 - a. furnish all goods, materials and services to DASNY as contractually required and specified;
 - b. submit complete and accurate reports to DASNY and its representatives as required;
 - c. not seek, solicit, demand or accept any information, verbal or written, from DASNY or its representatives that provides an unfair advantage over a competitor;
 - d. not engage in any activity or course of conduct that restricts open and fair competition on Authority-related projects and transactions;
 - e. not engage in any course of conduct with DASNY employees or representatives that constitutes a conflict of interest or creates the appearance of a conflict of interest;
 - f. not offer any unlawful gifts or gratuities to DASNY employees or representatives, or engage in bribery or other criminal activity; and
 - g. report to DASNY any activity by an DASNY employee or contractor, consultant or vendor of DASNY that is inconsistent with DASNY’s *Code of Business Ethics*.
4. DASNY encourages its contractors, consultants and vendors to advance and support ethical business conduct and practices among their respective directors, officers and employees, preferably through the adoption of corporate ethics awareness training programs and written codes of conduct. In addition to considering technical competence and financial stability, DASNY will consider the *corporate integrity* of all contractors, consultants and vendors prior to the awarding of contracts or issuing of purchase orders.

DORMITORY AUTHORITY OF THE STATE OF NEW YORK
OMNIBUS PROCUREMENT
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B. Conduct of DASNY Employees

DASNY employees are expected to conduct business with contractors, consultants and vendors in a fair, consistent and professional manner. DASNY's Code of Business Ethics and Employee Conduct entitled *Serving Responsibly*, and other DASNY policies and procedures, guide the manner in which DASNY employees are required to interact with contractors, consultants and vendors. Additionally, the New York State Public Officers Law sets forth legal parameters within which DASNY employees must perform their official duties with respect to, among other things, conflicts of interest and the acceptance of gifts.

Limits on Gifts to DASNY Employees

1. Pursuant to Section 73(5) of the Public Officers Law, no person shall offer any gift having more than a nominal value to an DASNY employee under circumstances in which it:
 - a. could be reasonably inferred the gift was intended to influence the employee in the performance of his or her official duties;; or
 - b. could reasonably be expected to influence the employee in the performance of his or her official duties;; or
 - c. was intended as a reward for any official action on the part of the employee.
2. A gift is anything more than nominal in value, in any form, given to an DASNY employee. Gifts include, but are not limited to, money, service, loan, travel, lodging, meals, refreshments, entertainment, discount, forbearance or promise. Any firm or its agents, either doing business or seeking to do business with DASNY (contractors, consultants, vendors, etc.), is prohibited from directly or indirectly offering or giving any gifts, even gifts of nominal value, to DASNY employees as such gifts are deemed to be *per se* improper.
3. As is stated in the *Prohibited Interests* section of the Construction and Consultant Contract documents, violations of these gift provisions may be grounds for immediate contract termination and/or referral for civil action or criminal prosecution.

C. Employing Relatives of DASNY Employees

Although contractors, consultants and vendors may employ relatives of DASNY employees, DASNY must be made aware of such circumstances as soon as possible, preferably in writing, to ensure a conflict of interest situation does not arise. DASNY reserves the right to request that contractors, consultants and vendors modify the work assignment of an DASNY employee's relative where a conflict of interest, or the appearance thereof, is deemed to exist. Please be advised that DASNY employees are required to disclose information regarding the hiring of relatives by contractors, consultants and vendors and recuse themselves from matters that may present a conflict of interest. For purposes of this document, the term "relatives" refers to spouses, domestic partners, parents, children, sisters, brothers, sisters-in-law, brothers-in-law, parents-in-law, sons/daughters-in-law, stepparents, stepchildren, aunts, uncles, nieces, nephews, first cousins, grandparents by blood relationship or by marriage, or persons residing in the same household.

DORMITORY AUTHORITY OF THE STATE OF NEW YORK
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Hiring Former DASNY Employees

Contractors, consultants and vendors may hire former DASNY employees. However, as a general rule, former employees of DASNY may neither appear nor practice before DASNY, nor receive compensation for services rendered on a matter before DASNY, for a period of *two years* following their separation from DASNY service. In addition, former DASNY employees are subject to a “*lifetime bar*” from appearing before DASNY or receiving compensation for services regarding any transaction in which they personally participated or which was under their active consideration during their tenure with DASNY. Violations will be referred to the New York State Commission on Public Integrity for appropriate action.

Request for Taxpayer Identification Number and Certification

► Go to www.irs.gov/FormW9 for instructions and the latest information.

Give Form to the
requester. Do not
send to the IRS.

Print or type. See Specific Instructions on page 3.	1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.	
	2 Business name/disregarded entity name, if different from above	
	3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only one of the following seven boxes. <input type="checkbox"/> Individual/sole proprietor or single-member LLC <input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ► _____ Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is not disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner. <input type="checkbox"/> Other (see instructions) ► _____	4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3): Exempt payee code (if any) _____ Exemption from FATCA reporting code (if any) _____ <i>(Applies to accounts maintained outside the U.S.)</i>
	5 Address (number, street, and apt. or suite no.) See instructions.	Requester's name and address (optional)
	6 City, state, and ZIP code	
	7 List account number(s) here (optional)	

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number										
				-				-		
or										
Employer identification number										
				-						

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here	Signature of U.S. person ►	Date ►
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General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to www.irs.gov/FormW9.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)

- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, later.

By signing the filled-out form, you:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
2. Certify that you are not subject to backup withholding, or
3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and
4. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See *What is FATCA reporting*, later, for further information.

Note: If you are a U.S. person and a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien;
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States;
- An estate (other than a foreign estate); or
- A domestic trust (as defined in Regulations section 301.7701-7).

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax under section 1446 on any foreign partners' share of effectively connected taxable income from such business. Further, in certain cases where a Form W-9 has not been received, the rules under section 1446 require a partnership to presume that a partner is a foreign person, and pay the section 1446 withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid section 1446 withholding on your share of partnership income.

In the cases below, the following person must give Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States.

- In the case of a disregarded entity with a U.S. owner, the U.S. owner of the disregarded entity and not the entity;
- In the case of a grantor trust with a U.S. grantor or other U.S. owner, generally, the U.S. grantor or other U.S. owner of the grantor trust and not the trust; and
- In the case of a U.S. trust (other than a grantor trust), the U.S. trust (other than a grantor trust) and not the beneficiaries of the trust.

Foreign person. If you are a foreign person or the U.S. branch of a foreign bank that has elected to be treated as a U.S. person, do not use Form W-9. Instead, use the appropriate Form W-8 or Form 8233 (see Pub. 515, *Withholding of Tax on Nonresident Aliens and Foreign Entities*).

Nonresident alien who becomes a resident alien. Generally, only a nonresident alien individual may use the terms of a tax treaty to reduce or eliminate U.S. tax on certain types of income. However, most tax treaties contain a provision known as a "saving clause." Exceptions specified in the saving clause may permit an exemption from tax to continue for certain types of income even after the payee has otherwise become a U.S. resident alien for tax purposes.

If you are a U.S. resident alien who is relying on an exception contained in the saving clause of a tax treaty to claim an exemption from U.S. tax on certain types of income, you must attach a statement to Form W-9 that specifies the following five items.

1. The treaty country. Generally, this must be the same treaty under which you claimed exemption from tax as a nonresident alien.
2. The treaty article addressing the income.
3. The article number (or location) in the tax treaty that contains the saving clause and its exceptions.
4. The type and amount of income that qualifies for the exemption from tax.
5. Sufficient facts to justify the exemption from tax under the terms of the treaty article.

Example. Article 20 of the U.S.-China income tax treaty allows an exemption from tax for scholarship income received by a Chinese student temporarily present in the United States. Under U.S. law, this student will become a resident alien for tax purposes if his or her stay in the United States exceeds 5 calendar years. However, paragraph 2 of the first Protocol to the U.S.-China treaty (dated April 30, 1984) allows the provisions of Article 20 to continue to apply even after the Chinese student becomes a resident alien of the United States. A Chinese student who qualifies for this exception (under paragraph 2 of the first protocol) and is relying on this exception to claim an exemption from tax on his or her scholarship or fellowship income would attach to Form W-9 a statement that includes the information described above to support that exemption.

If you are a nonresident alien or a foreign entity, give the requester the appropriate completed Form W-8 or Form 8233.

Backup Withholding

What is backup withholding? Persons making certain payments to you must under certain conditions withhold and pay to the IRS 24% of such payments. This is called "backup withholding." Payments that may be subject to backup withholding include interest, tax-exempt interest, dividends, broker and barter exchange transactions, rents, royalties, nonemployee pay, payments made in settlement of payment card and third party network transactions, and certain payments from fishing boat operators. Real estate transactions are not subject to backup withholding.

You will not be subject to backup withholding on payments you receive if you give the requester your correct TIN, make the proper certifications, and report all your taxable interest and dividends on your tax return.

Payments you receive will be subject to backup withholding if:

1. You do not furnish your TIN to the requester,
2. You do not certify your TIN when required (see the instructions for Part II for details),
3. The IRS tells the requester that you furnished an incorrect TIN,
4. The IRS tells you that you are subject to backup withholding because you did not report all your interest and dividends on your tax return (for reportable interest and dividends only), or
5. You do not certify to the requester that you are not subject to backup withholding under 4 above (for reportable interest and dividend accounts opened after 1983 only).

Certain payees and payments are exempt from backup withholding. See *Exempt payee code*, later, and the separate Instructions for the Requester of Form W-9 for more information.

Also see *Special rules for partnerships*, earlier.

What is FATCA Reporting?

The Foreign Account Tax Compliance Act (FATCA) requires a participating foreign financial institution to report all United States account holders that are specified United States persons. Certain payees are exempt from FATCA reporting. See *Exemption from FATCA reporting code*, later, and the Instructions for the Requester of Form W-9 for more information.

Updating Your Information

You must provide updated information to any person to whom you claimed to be an exempt payee if you are no longer an exempt payee and anticipate receiving reportable payments in the future from this person. For example, you may need to provide updated information if you are a C corporation that elects to be an S corporation, or if you no longer are tax exempt. In addition, you must furnish a new Form W-9 if the name or TIN changes for the account; for example, if the grantor of a grantor trust dies.

Penalties

Failure to furnish TIN. If you fail to furnish your correct TIN to a requester, you are subject to a penalty of \$50 for each such failure unless your failure is due to reasonable cause and not to willful neglect.

Civil penalty for false information with respect to withholding. If you make a false statement with no reasonable basis that results in no backup withholding, you are subject to a \$500 penalty.

Criminal penalty for falsifying information. Willfully falsifying certifications or affirmations may subject you to criminal penalties including fines and/or imprisonment.

Misuse of TINs. If the requester discloses or uses TINs in violation of federal law, the requester may be subject to civil and criminal penalties.

Specific Instructions

Line 1

You must enter one of the following on this line; **do not** leave this line blank. The name should match the name on your tax return.

If this Form W-9 is for a joint account (other than an account maintained by a foreign financial institution (FFI)), list first, and then circle, the name of the person or entity whose number you entered in Part I of Form W-9. If you are providing Form W-9 to an FFI to document a joint account, each holder of the account that is a U.S. person must provide a Form W-9.

a. **Individual.** Generally, enter the name shown on your tax return. If you have changed your last name without informing the Social Security Administration (SSA) of the name change, enter your first name, the last name as shown on your social security card, and your new last name.

Note: ITIN applicant: Enter your individual name as it was entered on your Form W-7 application, line 1a. This should also be the same as the name you entered on the Form 1040/1040A/1040EZ you filed with your application.

b. **Sole proprietor or single-member LLC.** Enter your individual name as shown on your 1040/1040A/1040EZ on line 1. You may enter your business, trade, or "doing business as" (DBA) name on line 2.

c. **Partnership, LLC that is not a single-member LLC, C corporation, or S corporation.** Enter the entity's name as shown on the entity's tax return on line 1 and any business, trade, or DBA name on line 2.

d. **Other entities.** Enter your name as shown on required U.S. federal tax documents on line 1. This name should match the name shown on the charter or other legal document creating the entity. You may enter any business, trade, or DBA name on line 2.

e. **Disregarded entity.** For U.S. federal tax purposes, an entity that is disregarded as an entity separate from its owner is treated as a "disregarded entity." See Regulations section 301.7701-2(c)(2)(iii). Enter the owner's name on line 1. The name of the entity entered on line 1 should never be a disregarded entity. The name on line 1 should be the name shown on the income tax return on which the income should be reported. For example, if a foreign LLC that is treated as a disregarded entity for U.S. federal tax purposes has a single owner that is a U.S. person, the U.S. owner's name is required to be provided on line 1. If the direct owner of the entity is also a disregarded entity, enter the first owner that is not disregarded for federal tax purposes. Enter the disregarded entity's name on line 2, "Business name/disregarded entity name." If the owner of the disregarded entity is a foreign person, the owner must complete an appropriate Form W-8 instead of a Form W-9. This is the case even if the foreign person has a U.S. TIN.

Line 2

If you have a business name, trade name, DBA name, or disregarded entity name, you may enter it on line 2.

Line 3

Check the appropriate box on line 3 for the U.S. federal tax classification of the person whose name is entered on line 1. Check only one box on line 3.

IF the entity/person on line 1 is a(n) . . .	THEN check the box for . . .
• Corporation	Corporation
• Individual • Sole proprietorship, or • Single-member limited liability company (LLC) owned by an individual and disregarded for U.S. federal tax purposes.	Individual/sole proprietor or single-member LLC
• LLC treated as a partnership for U.S. federal tax purposes, • LLC that has filed Form 8832 or 2553 to be taxed as a corporation, or • LLC that is disregarded as an entity separate from its owner but the owner is another LLC that is not disregarded for U.S. federal tax purposes.	Limited liability company and enter the appropriate tax classification. (P= Partnership; C= C corporation; or S= S corporation)
• Partnership	Partnership
• Trust/estate	Trust/estate

Line 4, Exemptions

If you are exempt from backup withholding and/or FATCA reporting, enter in the appropriate space on line 4 any code(s) that may apply to you.

Exempt payee code.

- Generally, individuals (including sole proprietors) are not exempt from backup withholding.
- Except as provided below, corporations are exempt from backup withholding for certain payments, including interest and dividends.
- Corporations are not exempt from backup withholding for payments made in settlement of payment card or third party network transactions.
- Corporations are not exempt from backup withholding with respect to attorneys' fees or gross proceeds paid to attorneys, and corporations that provide medical or health care services are not exempt with respect to payments reportable on Form 1099-MISC.

The following codes identify payees that are exempt from backup withholding. Enter the appropriate code in the space in line 4.

- 1—An organization exempt from tax under section 501(a), any IRA, or a custodial account under section 403(b)(7) if the account satisfies the requirements of section 401(f)(2)
- 2—The United States or any of its agencies or instrumentalities
- 3—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities
- 4—A foreign government or any of its political subdivisions, agencies, or instrumentalities
- 5—A corporation
- 6—A dealer in securities or commodities required to register in the United States, the District of Columbia, or a U.S. commonwealth or possession
- 7—A futures commission merchant registered with the Commodity Futures Trading Commission
- 8—A real estate investment trust
- 9—An entity registered at all times during the tax year under the Investment Company Act of 1940
- 10—A common trust fund operated by a bank under section 584(a)
- 11—A financial institution
- 12—A middleman known in the investment community as a nominee or custodian
- 13—A trust exempt from tax under section 664 or described in section 4947

The following chart shows types of payments that may be exempt from backup withholding. The chart applies to the exempt payees listed above, 1 through 13.

IF the payment is for . . .	THEN the payment is exempt for . . .
Interest and dividend payments	All exempt payees except for 7
Broker transactions	Exempt payees 1 through 4 and 6 through 11 and all C corporations. S corporations must not enter an exempt payee code because they are exempt only for sales of noncovered securities acquired prior to 2012.
Barter exchange transactions and patronage dividends	Exempt payees 1 through 4
Payments over \$600 required to be reported and direct sales over \$5,000 ¹	Generally, exempt payees 1 through 5 ²
Payments made in settlement of payment card or third party network transactions	Exempt payees 1 through 4

¹ See Form 1099-MISC, Miscellaneous Income, and its instructions.

² However, the following payments made to a corporation and reportable on Form 1099-MISC are not exempt from backup withholding: medical and health care payments, attorneys' fees, gross proceeds paid to an attorney reportable under section 6045(f), and payments for services paid by a federal executive agency.

Exemption from FATCA reporting code. The following codes identify payees that are exempt from reporting under FATCA. These codes apply to persons submitting this form for accounts maintained outside of the United States by certain foreign financial institutions. Therefore, if you are only submitting this form for an account you hold in the United States, you may leave this field blank. Consult with the person requesting this form if you are uncertain if the financial institution is subject to these requirements. A requester may indicate that a code is not required by providing you with a Form W-9 with "Not Applicable" (or any similar indication) written or printed on the line for a FATCA exemption code.

A—An organization exempt from tax under section 501(a) or any individual retirement plan as defined in section 7701(a)(37)

B—The United States or any of its agencies or instrumentalities

C—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities

D—A corporation the stock of which is regularly traded on one or more established securities markets, as described in Regulations section 1.1472-1(c)(1)(i)

E—A corporation that is a member of the same expanded affiliated group as a corporation described in Regulations section 1.1472-1(c)(1)(i)

F—A dealer in securities, commodities, or derivative financial instruments (including notional principal contracts, futures, forwards, and options) that is registered as such under the laws of the United States or any state

G—A real estate investment trust

H—A regulated investment company as defined in section 851 or an entity registered at all times during the tax year under the Investment Company Act of 1940

I—A common trust fund as defined in section 584(a)

J—A bank as defined in section 581

K—A broker

L—A trust exempt from tax under section 664 or described in section 4947(a)(1)

M—A tax exempt trust under a section 403(b) plan or section 457(g) plan

Note: You may wish to consult with the financial institution requesting this form to determine whether the FATCA code and/or exempt payee code should be completed.

Line 5

Enter your address (number, street, and apartment or suite number). This is where the requester of this Form W-9 will mail your information returns. If this address differs from the one the requester already has on file, write NEW at the top. If a new address is provided, there is still a chance the old address will be used until the payor changes your address in their records.

Line 6

Enter your city, state, and ZIP code.

Part I. Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. If you are a resident alien and you do not have and are not eligible to get an SSN, your TIN is your IRS individual taxpayer identification number (ITIN). Enter it in the social security number box. If you do not have an ITIN, see *How to get a TIN* below.

If you are a sole proprietor and you have an EIN, you may enter either your SSN or EIN.

If you are a single-member LLC that is disregarded as an entity separate from its owner, enter the owner's SSN (or EIN, if the owner has one). Do not enter the disregarded entity's EIN. If the LLC is classified as a corporation or partnership, enter the entity's EIN.

Note: See *What Name and Number To Give the Requester*, later, for further clarification of name and TIN combinations.

How to get a TIN. If you do not have a TIN, apply for one immediately. To apply for an SSN, get Form SS-5, Application for a Social Security Card, from your local SSA office or get this form online at www.SSA.gov. You may also get this form by calling 1-800-772-1213. Use Form W-7, Application for IRS Individual Taxpayer Identification Number, to apply for an ITIN, or Form SS-4, Application for Employer Identification Number, to apply for an EIN. You can apply for an EIN online by accessing the IRS website at www.irs.gov/Businesses and clicking on Employer Identification Number (EIN) under Starting a Business. Go to www.irs.gov/Forms to view, download, or print Form W-7 and/or Form SS-4. Or, you can go to www.irs.gov/OrderForms to place an order and have Form W-7 and/or SS-4 mailed to you within 10 business days.

If you are asked to complete Form W-9 but do not have a TIN, apply for a TIN and write "Applied For" in the space for the TIN, sign and date the form, and give it to the requester. For interest and dividend payments, and certain payments made with respect to readily tradable instruments, generally you will have 60 days to get a TIN and give it to the requester before you are subject to backup withholding on payments. The 60-day rule does not apply to other types of payments. You will be subject to backup withholding on all such payments until you provide your TIN to the requester.

Note: Entering "Applied For" means that you have already applied for a TIN or that you intend to apply for one soon.

Caution: A disregarded U.S. entity that has a foreign owner must use the appropriate Form W-8.

Part II. Certification

To establish to the withholding agent that you are a U.S. person, or resident alien, sign Form W-9. You may be requested to sign by the withholding agent even if item 1, 4, or 5 below indicates otherwise.

For a joint account, only the person whose TIN is shown in Part I should sign (when required). In the case of a disregarded entity, the person identified on line 1 must sign. Exempt payees, see *Exempt payee code*, earlier.

Signature requirements. Complete the certification as indicated in items 1 through 5 below.

1. Interest, dividend, and barter exchange accounts opened before 1984 and broker accounts considered active during 1983. You must give your correct TIN, but you do not have to sign the certification.

2. Interest, dividend, broker, and barter exchange accounts opened after 1983 and broker accounts considered inactive during 1983. You must sign the certification or backup withholding will apply. If you are subject to backup withholding and you are merely providing your correct TIN to the requester, you must cross out item 2 in the certification before signing the form.

3. Real estate transactions. You must sign the certification. You may cross out item 2 of the certification.

4. Other payments. You must give your correct TIN, but you do not have to sign the certification unless you have been notified that you have previously given an incorrect TIN. "Other payments" include payments made in the course of the requester's trade or business for rents, royalties, goods (other than bills for merchandise), medical and health care services (including payments to corporations), payments to a nonemployee for services, payments made in settlement of payment card and third party network transactions, payments to certain fishing boat crew members and fishermen, and gross proceeds paid to attorneys (including payments to corporations).

5. Mortgage interest paid by you, acquisition or abandonment of secured property, cancellation of debt, qualified tuition program payments (under section 529), ABLE accounts (under section 529A), IRA, Coverdell ESA, Archer MSA or HSA contributions or distributions, and pension distributions. You must give your correct TIN, but you do not have to sign the certification.

What Name and Number To Give the Requester

For this type of account:	Give name and SSN of:
1. Individual	The individual
2. Two or more individuals (joint account) other than an account maintained by an FFI	The actual owner of the account or, if combined funds, the first individual on the account ¹
3. Two or more U.S. persons (joint account maintained by an FFI)	Each holder of the account
4. Custodial account of a minor (Uniform Gift to Minors Act)	The minor ²
5. a. The usual revocable savings trust (grantor is also trustee)	The grantor-trustee ¹
b. So-called trust account that is not a legal or valid trust under state law	The actual owner ¹
6. Sole proprietorship or disregarded entity owned by an individual	The owner ³
7. Grantor trust filing under Optional Form 1099 Filing Method 1 (see Regulations section 1.671-4(b)(2)(i)(A))	The grantor*
For this type of account:	Give name and EIN of:
8. Disregarded entity not owned by an individual	The owner
9. A valid trust, estate, or pension trust	Legal entity ⁴
10. Corporation or LLC electing corporate status on Form 8832 or Form 2553	The corporation
11. Association, club, religious, charitable, educational, or other tax-exempt organization	The organization
12. Partnership or multi-member LLC	The partnership
13. A broker or registered nominee	The broker or nominee

For this type of account:	Give name and EIN of:
14. Account with the Department of Agriculture in the name of a public entity (such as a state or local government, school district, or prison) that receives agricultural program payments	The public entity
15. Grantor trust filing under the Form 1041 Filing Method or the Optional Form 1099 Filing Method 2 (see Regulations section 1.671-4(b)(2)(i)(B))	The trust

¹ List first and circle the name of the person whose number you furnish. If only one person on a joint account has an SSN, that person's number must be furnished.

² Circle the minor's name and furnish the minor's SSN.

³ You must show your individual name and you may also enter your business or DBA name on the "Business name/disregarded entity" name line. You may use either your SSN or EIN (if you have one), but the IRS encourages you to use your SSN.

⁴ List first and circle the name of the trust, estate, or pension trust. (Do not furnish the TIN of the personal representative or trustee unless the legal entity itself is not designated in the account title.) Also see *Special rules for partnerships*, earlier.

***Note:** The grantor also must provide a Form W-9 to trustee of trust.

Note: If no name is circled when more than one name is listed, the number will be considered to be that of the first name listed.

Secure Your Tax Records From Identity Theft

Identity theft occurs when someone uses your personal information such as your name, SSN, or other identifying information, without your permission, to commit fraud or other crimes. An identity thief may use your SSN to get a job or may file a tax return using your SSN to receive a refund.

To reduce your risk:

- Protect your SSN,
- Ensure your employer is protecting your SSN, and
- Be careful when choosing a tax preparer.

If your tax records are affected by identity theft and you receive a notice from the IRS, respond right away to the name and phone number printed on the IRS notice or letter.

If your tax records are not currently affected by identity theft but you think you are at risk due to a lost or stolen purse or wallet, questionable credit card activity or credit report, contact the IRS Identity Theft Hotline at 1-800-908-4490 or submit Form 14039.

For more information, see Pub. 5027, Identity Theft Information for Taxpayers.

Victims of identity theft who are experiencing economic harm or a systemic problem, or are seeking help in resolving tax problems that have not been resolved through normal channels, may be eligible for Taxpayer Advocate Service (TAS) assistance. You can reach TAS by calling the TAS toll-free case intake line at 1-877-777-4778 or TTY/TDD 1-800-829-4059.

Protect yourself from suspicious emails or phishing schemes.

Phishing is the creation and use of email and websites designed to mimic legitimate business emails and websites. The most common act is sending an email to a user falsely claiming to be an established legitimate enterprise in an attempt to scam the user into surrendering private information that will be used for identity theft.

The IRS does not initiate contacts with taxpayers via emails. Also, the IRS does not request personal detailed information through email or ask taxpayers for the PIN numbers, passwords, or similar secret access information for their credit card, bank, or other financial accounts.

If you receive an unsolicited email claiming to be from the IRS, forward this message to phishing@irs.gov. You may also report misuse of the IRS name, logo, or other IRS property to the Treasury Inspector General for Tax Administration (TIGTA) at 1-800-366-4484. You can forward suspicious emails to the Federal Trade Commission at spam@uce.gov or report them at www.ftc.gov/complaint. You can contact the FTC at www.ftc.gov/idtheft or 877-IDTHEFT (877-438-4338). If you have been the victim of identity theft, see www.IdentityTheft.gov and Pub. 5027.

Visit www.irs.gov/IdentityTheft to learn more about identity theft and how to reduce your risk.

Privacy Act Notice

Section 6109 of the Internal Revenue Code requires you to provide your correct TIN to persons (including federal agencies) who are required to file information returns with the IRS to report interest, dividends, or certain other income paid to you; mortgage interest you paid; the acquisition or abandonment of secured property; the cancellation of debt; or contributions you made to an IRA, Archer MSA, or HSA. The person collecting this form uses the information on the form to file information returns with the IRS, reporting the above information. Routine uses of this information include giving it to the Department of Justice for civil and criminal litigation and to cities, states, the District of Columbia, and U.S. commonwealths and possessions for use in administering their laws. The information also may be disclosed to other countries under a treaty, to federal and state agencies to enforce civil and criminal laws, or to federal law enforcement and intelligence agencies to combat terrorism. You must provide your TIN whether or not you are required to file a tax return. Under section 3406, payers must generally withhold a percentage of taxable interest, dividend, and certain other payments to a payee who does not give a TIN to the payer. Certain penalties may also apply for providing false or fraudulent information.

BIDDING REQUIREMENTS for CONSTRUCTION

BID BOND

KNOW ALL PERSONS BY THESE PRESENTS, that we:

_____ as Principal,
(Legal Title of the Bidder)

and _____ as Surety,
(Legal Title of the Surety)

are hereby held and firmly bound unto the Dormitory Authority - State of New York in the penal sum of:

_____,
(Amount)

or in the full and just sum of the difference between the total bid of the Principal and the total bid of the bidder submitting the next lowest bid, whichever sum shall be higher, for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

Signed this ____ day of _____ 20____.

Whereas the Principal has submitted to the Dormitory Authority - State of New York a certain bid, made a part hereof, to enter into a Contract in writing for the:

(Title of Project)

NOW, THEREFORE the conditions of this obligation is such that::

A. This obligation shall be void:

1. If said bid shall be rejected or in the alternate.
2. If said bid shall be accepted and the Principal shall execute and deliver the Agreement in the form attached hereto (properly completed; in accordance with said bid) and shall furnish bonds for the faithful performance of said Contract by the Principal, and for the payment of persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the Contract created by the acceptance of said bid.

Otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

- B. The penal sum of this Bond is in addition to any other Bond furnished by the Contractor and in no way shall be impaired or affected by any other Bond.
- C. The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and said Surety's Bond in no way shall be impaired or affected by any extension of time within which the Owner may accept such bid; and said Surety does hereby waive notice of any such extension.

BIDDING REQUIREMENTS for CONSTRUCTION

BID BOND

IN WITNESS WHEREOF:

the parties hereto have executed this Bond the day and year first above written.

IN THE PRESENCE OF:

(Principal)

(Surety)

(Signature)

(Signature)

(Title)

(Title)

(Address)

(Address)

(City, State, Zip Code)

(City, State, Zip Code)

(Phone Number & FAX Number)

(Phone Number & FAX Number)

(Email Address)

(Email Address)

BIDDING REQUIREMENTS for CONSTRUCTION

BID BOND

ACKNOWLEDGEMENT OF CONTRACTOR EXECUTING BID BOND
IF A CORPORATION

STATE OF _____

COUNTY OF _____

On the ____ day of _____ in the year 20____, before me personally came _____,
to me known, who, being by me duly sworn, did depose and say that he/she resides at:

(street, city, state, zip code)

that he/she is the _____ of _____,
the corporation described in and which executed the foregoing instrument; and that he/she signed his/her name
thereto by authority of the Board of Directors of said corporation.

Notary Public

ACKNOWLEDGEMENT OF CONTRACTOR EXECUTING BID BOND
IF A PARTNERSHIP, LIMITED LIABILITY COMPANY OR INDIVIDUAL

STATE OF _____

COUNTY OF _____

On the ____ day of _____ in the year 20____, before me, the undersigned, a Notary Public in and for said
State, personally appeared _____, personally known or proved to me
on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within
instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by
his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s)
acted, executed the instrument.

Notary Public

ACKNOWLEDGEMENT OF SURETY

STATE OF _____

COUNTY OF _____

On the ____ day of _____ in the year 20____, before me personally came _____,
to me known, who, being by me duly sworn, did depose and say that he/she resides at:

(street, city, state, zip code)

that he/she is the _____ of _____,
the corporation described in and which executed the foregoing instrument; and that he/she signed his/her name
thereto by authority of the Board of Directors of said corporation.

Notary Public

D A S N Y

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NEW YORK CITY: 28 Liberty Street, FI 55, New York, NY 10005 | 212-273-5000

ROCHESTER: 3495 Winton Place, Building C, Suite 1, Rochester, NY 14623 | 585-461-8400

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Office of Opportunity Programs

UPSTATE: 515 Broadway * Albany, NY 12207 * Phone: (518) 257-3706 Fax: (518) 257-3100

DOWNSTATE: 28 Liberty Street, Fl 55 * New York, NY * 10005 * Phone: (212) 273-5038 Fax: (212) 273-5121

SCOPE VERIFICATION FORM

This form must be submitted with the Utilization Plan for each MWBE subcontractor listed on the Utilization Plan and each Service-Disabled Veteran Owned Business (SDVOB). Failure to submit will delay acceptance of the Utilization Plan and award of the Contract.

A. PROJECT INFORMATION	
Facility:	Project No:
Contract/Bid No:	Work Authorization (if applicable):

B. PRIME CONTRACTOR	C. M/WBE SUBCONTRACTOR	MBE <input type="checkbox"/>	WBE <input type="checkbox"/>
COMPANY:	COMPANY:		
CONTACT:	CONTACT:		
TELEPHONE:	TELEPHONE:		
E-MAIL:	E-MAIL:		

D. SDVOB SUBCONTRACTOR
COMPANY:
CONTACT:
TELEPHONE:
E-MAIL:

E. MWBE SUBCONTRACTOR SCOPE OF SERVICES

In the box below, provide a detailed scope of services to be performed by the proposed M/WBE Subcontractor listed above.

CSI Number (Must be 6 Digits)	DESCRIPTION OF WORK	CONTRACT AMOUNT



DORMITORY AUTHORITY - STATE OF NEW YORK
Office of Opportunity Programs

UPSTATE: 515 Broadway * Albany, NY 12207 * Phone: (518) 257-3706 Fax: (518) 257-3100

DOWNSTATE: 28 Liberty Street, Fl 55 * New York, NY * 10005 * Phone: (212) 273-5038 Fax: (212) 273-5121

F. SDVOB SUBCONTRACTOR SCOPE OF SERVICES

In the box below, provide a detailed scope of services to be performed by the proposed SDVOB Subcontractor listed above.

CSI Number (Must be 6 Digits)	DESCRIPTION OF WORK	CONTRACT AMOUNT

The official schedule of values for the above scope of services must be submitted along with the applicable subcontract agreement within 30 days of contract award. Failure to do so may delay future payment requisitions.

Contractor will notify and obtain written approval from DASNY for any changes in this Scope Verification Form.

Contractor and M/WBE Subcontractor certify that M/WBE Subcontractor will perform the above scope of work and will not subcontract its work, in whole or in part, to a non-M/WBE entity.

Contractor and SDVOB Subcontractor certify that SDVOB Subcontractor will perform the above scope of work and will not subcontract its work, in whole or in part, to a non-SDVOB entity.

CONTRACTOR

M/WBE SUBCONTRACTOR

Print Name of Principal or Officer

Print Title of Principal or Officer

Signature of Principal or Officer

Signature of Principal or Officer

Date

Date



DORMITORY AUTHORITY - STATE OF NEW YORK
Office of Opportunity Programs

UPSTATE: 515 Broadway * Albany, NY 12207 * Phone: (518) 257-3706 Fax: (518) 257-3100

DOWNSTATE: 28 Liberty Street, Fl 55 * New York, NY * 10005 * Phone: (212) 273-5038 Fax: (212) 273-5121

SDVOB SUBCONTRACTOR

Print Name of Principal or Officer

Signature of Principal or Officer

Date



FOR DEMO PURPOSES ONLY CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an **ADDITIONAL INSURED**, the policy(ies) must be endorsed. If **SUBROGATION IS WAIVED**, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Your Agent or Broker	CONTACT NAME:	
	PHONE (A/C, No. Ext):	FAX (A/C, No):
INSURED Your Name	E-MAIL ADDRESS:	
	INSURER(S) AFFORDING COVERAGE	
	INSURER A: Your Insurance Company	
	INSURER B: Your Insurance Company	
	INSURER C: Your Insurance Company	
	INSURER D: Your Insurance Company	
INSURER E: Your Insurance Company		
INSURER F: Your Insurance Company		

COVERAGES

CERTIFICATE NUMBER:

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> Include Independent Contractors GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC	Y		XYZ-123	MM/DD/YY	MM/DD/YY	EACH OCCURRENCE \$ 2,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 50,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 2,000,000 GENERAL AGGREGATE \$ 4,000,000 PRODUCTS - COMP/OP AGG \$ 4,000,000 Fire Damage Lgl Liab \$ 1,000,000
	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input checked="" type="checkbox"/> ALL OWNED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS			ABC-345	MM/DD/YY	MM/DD/YY	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> EXCESS LIAB DED <input type="checkbox"/> RETENTION \$	<input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS-MADE	Y	LLL-555	MM/DD/YY	MM/DD/YY	EACH OCCURRENCE \$ As Needed AGGREGATE \$ \$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y / N <input type="checkbox"/> N / A		WCB-678	MM/DD/YY	MM/DD/YY	WC STATU-TORY LIMITS <input type="checkbox"/> OTH-ER <input type="checkbox"/> E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
	E Other			MCK-777	MM/DD/YY	MM/DD/YY	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

DASNY Contract No: Project No: 3822309999 CR3 Project Description & Facility: CCNY Harris Hall IT Upgrade
The following are Additional Insureds as respect to this project: City of New York- 1 City Hall, New York, NY 10007; City University of New York- 217 E 42nd Street, New York, NY 10017; City University Construction Fund- 217 E 42nd Street, New York, NY 10017; Construction Manager (If applicable) - Contract Specific; State of New York- One Commerce Plaza, 99 Washington Ave, Albany, NY 12231-0001; Dormitory Authority of the State of New York - 515 Broadway, Albany, NY 12207
Proof of 30 Days Notice of Cancellation in favor of the Dormitory Authority of the State of New York is required for all insurance policies.

CERTIFICATE HOLDER

CANCELLATION

Dormitory Authority- State of New York 515 Broadway Albany, New York 12207	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE Your Agent/Broker Representative

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THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – SCHEDULED PERSON OR ORGANIZATION

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s):	Location(s) Of Covered Operations
DASNY and all others as per the written contract	"All locations" or specific project name and address
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

A. Section II – Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

1. Your acts or omissions; or
2. The acts or omissions of those acting on your behalf;

in the performance of your ongoing operations for the additional insured(s) at the location(s) designated above.

B. With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:

This insurance does not apply to "bodily injury" or "property damage" occurring after:

1. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or
2. That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – COMPLETED OPERATIONS

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s):	Location And Description Of Completed Operations
DASNY and all others as per the written contract	"All locations" or specific project name and address
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

Section II – Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury" or "property damage" caused, in whole or in part, by "your work" at the location designated and described in the schedule of this endorsement performed for that additional insured and included in the "products-completed operations hazard".



NEW YORK
STATE OF
OPPORTUNITY.

DASNY

FACILITY

PROJECT NAME

CONTRACTOR

DA#

ALBANY (HEADQUARTERS): 515 Broadway, Albany, NY 12207 | 518-257-3000

BUFFALO: 539 Franklin Street, Buffalo, NY 14202 | 716-566-4400

NEW YORK CITY: 28 Liberty Street, Fl 55, New York, NY 10005 | 212-273-5000

ROCHESTER: 3495 Winton Place, Building C, Suite 1, Rochester, NY 14623 | 585-461-8400

CONTRACT FORMS FOR CONSTRUCTION
AGREEMENT

This Agreement made as of the _____, by and between the DORMITORY AUTHORITY, a public benefit corporation and public authority established by the Public Authorities Law of the State of New York, hereinafter referred to as the Owner and; _____, a business corporation organized and existing under the laws of the State of New York, hereinafter referred to as the Contractor, for the Work at _____.

WITNESSETH: That the Owner and the Contractor for the consideration named agree as follows:

- A. The Contractor shall Provide the Work of every kind or nature whatsoever required and all other things necessary to complete in a proper and workmanlike manner the _____, Contract number _____, Project number _____, in strict accordance with the Contract Documents (defined in the General Conditions), of which a listing of technical Specifications and Drawings is attached hereto and in strict accordance with Addenda issued by the Owner pursuant to the Contract, and Provide all other obligations imposed on such Contractor by the Contract.
- B. The Contractor agrees to Provide the Work of the Contract Documents necessary or proper for, or incidental to the Work of the Contract, for the total sum of _____ Dollars (_____), which sum shall be deemed to be in full consideration for the performance by the Contractor of all the duties and obligations of such Contractor under the Contract.
- C. The Contractor shall commence the Work of the Contract Documents at the time to be specified in the Notice to Proceed, issued by the Owner, and shall achieve Substantial Completion no later than the _____. The Contractor shall pay to the Owner as liquidated damages the sum of _____ (_____) for each and every day that the Contractor fails to achieve Substantial Completion of the Work.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first above written.

* Contractor Signature Date

Dormitory Authority Signature Date

Title

Title

*If a corporation, signer must be President, Vice-President or other authorized officer.
If a Limited Liability Company (LLC), signer must be a member or manager.
If a Limited Liability Partnership (LLP), signer must be a partner.
If a Limited Partnership, signer must be an authorized partner.
If a general partnership, signer must be a partner.
If a sole proprietorship, signer must be the owner.

CONTRACT FORMS FOR CONSTRUCTION
AGREEMENT

ACKNOWLEDGEMENT OF DORMITORY AUTHORITY OFFICER EXECUTING AGREEMENT

STATE OF _____

COUNTY OF _____

On the _____ day of _____ in the year 2022, before me personally came Louis R. Cirelli, Jr., D.B.A., P.E., CMQ/OE to me known, who, being by me duly sworn, did depose and say that he resides at Schenectady, New York, that he is the Director, Procurement of Dormitory Authority, the corporation described in and which executed the above instrument; and that he signed his name thereto by order of the Board of Directors of said corporation.

Notary Public

ACKNOWLEDGEMENT OF CONTRACTOR EXECUTING AGREEMENT
IF A CORPORATION

STATE OF _____

COUNTY OF _____

On the ____ day of _____ in the year 20____, before me personally came _____, to me known, who, being by me duly sworn, did depose and say that he/she resides at:

(street, city, state, zip code)
that he/she is the _____ of _____, the corporation described in and which executed the foregoing instrument; and that he/she signed his/her name thereto by authority of the Board of Directors of said corporation.

Notary Public

ACKNOWLEDGEMENT OF CONTRACTOR EXECUTING AGREEMENT
IF A PARTNERSHIP, LIMITED LIABILITY COMPANY OR INDIVIDUAL

STATE OF _____

COUNTY OF _____

On the ____ day of _____ in the year 20____, before me, the undersigned, a Notary Public in and for said State, personally appeared _____, personally known or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Notary Public

CONTRACT FORMS FOR CONSTRUCTION
AGREEMENT

Iran Divestment Certification

1. By signing this certification and by signing this Contract, each person and each person signing on behalf of any other party certifies, and in the case of a joint bid or partnership each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief that each person is not on the list created pursuant to paragraph (b) of subdivision 3 of section 165-a of the State Finance Law.
2. Contract means the contract between the Dormitory Authority of the State of New York ("DASNY") and _____ ("Contractor") for the _____ Project, DASNY Project Number _____.
3. This certification is part of the Contract and is subscribed by and affirmed by the person entering into the Contract as true under the penalties of perjury.

Contractor Name

By: _____

Print Name: _____

Title: _____

CONTRACT FORMS FOR CONSTRUCTION
AGREEMENT

SPECIFICATIONS AND DRAWINGS LISTING

Following is a list of technical Specifications and Drawings, which are a part of the Contract Documents placed for bid. Addenda issued by the Owner may not be listed but remain a part of the Contract Documents. In addition to the documents listed below, and Addenda issued by the Owner, the Contract Documents include those documents in the definition of Contract Documents in Article 1 of the General Conditions which are included in the Project manual.

DRAFT

CONTRACT FORMS FOR CONSTRUCTION
AGREEMENT

Extended Warranty Service Maintenance

- D. In the event the Form of Bid includes an Alternate for an extended warranty service maintenance agreement, and the Owner's Letter of Intent accepts that Alternate, funds for said Alternate shall be encumbered upon the execution of said agreement. If the extended warranty service maintenance agreement is not signed concurrent with this Contract, the warranty service provider, by execution of this Agreement, agrees that the warranty service provider shall execute the extended warranty service agreement which is included with the Contract Documents for the amounts stated in the accepted Alternate.

List the warranty service provider associated with the bid and the annual cost of the contract.

	<u>Annual Cost</u>
_____ Legal Name of Firm	1 st Year _____
_____ Street Address	2 nd Year _____
_____ City, State, Zip Code	3 rd Year _____
_____ * Warranty Service Provider Signature	4 th Year _____
_____ Date	5 th Year _____
_____ Title	

*If a corporation, signer must be President, Vice-President or other authorized officer.
If a Limited Liability Company (LLC), signer must be a member or manager.
If a Limited Liability Partnership (LLP), signer must be a partner.
If a Limited Partnership, signer must be an authorized partner.
If a general partnership, signer must be a partner.
If a sole proprietorship, signer must be the owner.

CONTRACT FORMS FOR CONSTRUCTION
AGREEMENT

ACKNOWLEDGEMENT OF WARRANTY SERVICE PROVIDER
IF A CORPORATION

STATE OF _____

COUNTY OF _____

On the ____ day of _____ in the year 20____, before me personally came _____, to
me known, who, being by me duly sworn, did depose and say that he/she resides at:

(street, city, state, zip code)

that he/she is the _____ of _____, the
corporation described in and which executed the foregoing instrument; and that he/she signed his/her name thereto by
authority of the Board of Directors of said corporation.

Notary Public

ACKNOWLEDGEMENT OF WARRANTY SERVICE PROVIDER
IF A PARTNERSHIP, LIMITED LIABILITY COMPANY OR INDIVIDUAL

STATE OF _____

COUNTY OF _____

On the ____ day of _____ in the year 20____, before me, the undersigned, a Notary Public in and for said
State, personally appeared _____, personally known or proved to me
on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument
and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their
signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed
the instrument.

Notary Public

DRAFT

CONTRACT FORMS for CONSTRUCTION

PAYMENT BOND

KNOW ALL PERSONS BY THESE PRESENTS, that we:

_____ as Principal,
(Legal title of the Contractor)

(Street, City, State, Zip Code)

and _____ as Surety,
(Legal title of the Surety)

(Street, City, State, Zip Code)

are held and firmly bound unto the Dormitory Authority, 515 Broadway, Albany, New York 12207, as Obligee, hereinafter called the Owner, for the use and benefit of the claimants as hereinbelow defined, in the amount of:

_____ Dollars

()

WHEREAS, CONTRACTOR, has by written Agreement dated _____
entered into a Contract with the Owner for:

(Title of Project)

in accordance with the Contract Documents and any changes thereto, which are made a part hereof, and are hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Principal shall promptly make payment to all claimants as hereinafter defined, for all labor and material used or reasonably required for use in the performance of the Contract, then this obligation shall be void; otherwise such obligation shall remain in full force and effect, subject, however, to the following conditions:

- A. A claimant is defined as one having a direct contract with the Principal or with a Subcontractor of the Principal for labor, material, or both, used or reasonably required for use in the performance of the Contract, labor and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment directly applicable to the Contract.
- B. The above named Principal and Surety hereby jointly and severally agree with the Owner that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant, may sue on this Payment Bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon. The Owner shall not be liable for the payment of any costs or expenses of any such suit.
- C. No suit or action shall be commenced hereunder by any claimant:

CONTRACT FORMS for CONSTRUCTION

PAYMENT BOND

1. Unless claimant, other than one having a direct contract with the Principal, shall have given written notice to the Principal above named, within one hundred twenty (120) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Principal at any place where the Principal maintains an office or regularly conducts the Principal's business, or at Principal's residence or served on Principal in any manner in which legal process may be served in the State of New York.
 2. Except as provided in section 220-g of the New York State Labor Law, after the expiration of one (1) year following the date on which the public improvement has been Completed and Accepted by the Owner; however, if any limitation embodied in this Payment Bond is prohibited by any law controlling the construction hereof such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.
 3. Other than in a New York State court of competent jurisdiction in and for the county in which the Contract, or any part thereof, was to be performed, or in the United States District Court for the district in which the Contract, or any part thereof, was to be performed, and not elsewhere.
- D. The penal sum of this Payment Bond is in addition to any other bond furnished by the Contractor and in no way shall be impaired or affected by any other bond.
- E. The amount of this Payment Bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder.

Signed this _____ day of _____ 20____

IN THE PRESENCE OF:

(Principal)

(Signature)

(Title)

(Street Address)

(City, State, Zip Code)

(Phone Number & FAX Number)

(Email Address)

(Surety)

(Signature)

(Title)

(Street Address)

(City, State, Zip Code)

(Phone Number & FAX Number)

(Email Address)

CONTRACT FORMS for CONSTRUCTION

PAYMENT BOND

ACKNOWLEDGEMENT OF CONTRACTOR EXECUTING PAYMENT BOND
IF A CORPORATION

STATE OF _____

COUNTY OF _____

On the ____ day of _____ in the year 20____, before me personally came _____,
to me known, who, being by me duly sworn, did depose and say that he/she resides at:

(street, city, state, zip code)

that he/she is the _____ of _____, the
corporation described in and which executed the foregoing instrument; and that he/she signed his/her name thereto by
authority of the Board of Directors of said corporation.

Notary Public

ACKNOWLEDGEMENT OF CONTRACTOR EXECUTING PAYMENT BOND
IF A PARTNERSHIP, LIMITED LIABILITY COMPANY OR INDIVIDUAL

STATE OF _____

COUNTY OF _____

On the ____ day of _____ in the year 20____, before me, the undersigned, a Notary Public in and for said
State, personally appeared _____, personally known or proved to me
on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument
and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their
signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed
the instrument.

Notary Public

ACKNOWLEDGEMENT OF SURETY

STATE OF _____

COUNTY OF _____

On the ____ day of _____ in the year 20____, before me personally came _____,
to me known, who, being by me duly sworn, did depose and say that he/she resides at:

(street, city, state, zip code)

that he/she is the _____ of _____, the
corporation described in and which executed the foregoing instrument; and that he/she signed his/her name thereto by
authority of the Board of Directors of said corporation.

Notary Public

DRAFT

CONTRACT FORMS for CONSTRUCTION

PERFORMANCE BOND

KNOW ALL PERSONS BY THESE PRESENTS, that we:

_____ as
Principal,
(Legal title of the Contractor)

(Street, City, State, Zip Code)

and _____ as Surety,
(Legal title of the Surety)

(Street, City, State, Zip Code)

are held and firmly bound unto the Dormitory Authority, 515 Broadway, Albany, New York 12207, as Obligee, hereinafter called the Owner, in the amount of:

_____ Dollars
(Written Dollar Amount)

_____ ()
(Figure Dollar Amount)

for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, CONTRACTOR, has by written agreement dated _____
entered into a Contract with the Owner for:

(Title of Project)

in accordance with the Contract Documents and any changes thereto, which are made a part hereof, and are hereinafter referred to as the Contract.

- A. If the Contractor well and fully performs the Contract, the Surety and the Contractor shall have no obligation under this Performance Bond, except to participate in conferences as provided in paragraph B1.
- B. If there is no Owner Default, the Surety's obligation under this Performance Bond shall arise after:
1. The Owner has notified the Contractor and Surety that the Owner is considering declaring a Contractor Default; and
 2. The Owner has declared a Contractor Default.

PERFORMANCE BOND

- C. When the Owner has satisfied the conditions of paragraph B, the Surety shall, at the Owner's option, and at the Surety's expense take one the following actions within twenty (20) days after written notice is sent by the Owner to the Surety declaring a Contractor Default:
1. Arrange for the Contractor, with consent of the Owner, to perform and complete the Contract.
 2. Undertake to perform and complete the Contract itself, through its agents or through independent contractors.
 3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by the Owner and the contractor selected with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the Payment Bond and Performance Bond issued on the Contract, with a contract price between the Owner and contractor equal to the Balance of the Contract Price, and pay to the Owner the amount of damages as described in paragraph E in excess of the Balance of the Contract Price incurred by the Owner resulting from the Contractor Default.
 4. Tender to the Owner the amount of this Performance Bond.
- D. If the Surety does not proceed within the time prescribed in paragraph C , the Surety shall be deemed to be in default on this Performance Bond, and the Owner shall be entitled to enforce any remedy available to the Owner.
- E. After the Owner has declared a Contractor Default, and when the Surety acts under paragraph C1, C2, or C3 above, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Contract. When the Surety acts under paragraph C1, C2 or C3 above, the Owner will agree to pay the Balance of the Contract Price to the Surety in accordance with and subject to the terms of the Contract or to a contractor selected to perform and complete the Contract in accordance with and subject to the terms of the contract between the Owner and contractor. When the Surety acts under paragraph C1 or C2 above, the Surety's obligation to perform and complete the Contract is not limited by the amount of this Performance Bond and the Balance of the Contract Price. When the Surety acts under paragraph C1, C2 or C3 above or fails to act under paragraph C, the Surety, in addition to its other obligations, is obligated without duplication for:
1. Additional legal, Design Professional, Consultant and delay costs resulting from the Contractor Default, or resulting from the actions or failure to act of the Surety under paragraph C.
 2. Liquidated damages, or if no liquidated damages are specified in the Contract, actual damages for loss of beneficial use of the Work caused by delayed performance or non-performance of the Contractor.
- F. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Performance Bond to any person or entity other than the Owner or its successors or assigns.
- G. This Performance Bond and the Surety's obligations shall be in no way impaired or affected by any extension of time, modification, omission, addition, or change in or to the Contract or the Work to be performed thereunder, or by the payment thereunder before the time required therein, or by any waiver of any provision or condition precedent or subsequent thereof, or by settlement or compromise of any claim or dispute related there to, or by assignment, subcontract or other transfer of the Work or any part thereof, or of any monies due or to become due thereunder; and the Surety hereby waives notice of any

PERFORMANCE BOND

and all such extensions, modifications, omissions, additions, changes, payments, waivers, assignments, subcontracts and transfers.

- H. Any and all things done and omitted to be done by and in relation to assignees, subcontractors, and other transferees shall have the same effect as to the Surety as though done or omitted to be done by or in relation to the Principal.
- I. The obligations of the Surety under this Performance Bond shall be in no way impaired or affected by any winding up, insolvency, bankruptcy, or reorganization of the Principal or by any other rearrangement of the Principal for the benefit of creditors.
- J. The Owner's acceptance of this Performance Bond shall in no way, for any purpose, limit or be claimed to limit the liability of the Principal under the Contract, but such liability shall remain in all respects to the same extent as is provided for in the Contract.
- K. Notice to the Surety and the Contractor shall be mailed or delivered to the address shown on the signature page. Notice to the Owner shall be mailed or delivered to the address shown in the preamble.
- L. Definitions:
 - 1. **Balance of the Contract Price** - The total amount payable by the Owner to the Contractor under the Contract after all proper adjustments (increases and reductions) allowed by the Contract have been made, including, but not limited to, allowance to the Contractor of any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Contract.
 - 2. **Contract** - The agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents as defined in the General Conditions of the Contract and all changes, modifications, amendments, additions, and alterations thereto after the date of this Performance Bond.
 - 3. **Contractor Default** - Failure of the Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Contract.
 - 4. **Owner Default** - Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Contract or to perform and complete or comply with the other material terms thereof.
- M. The penal sum of this Performance Bond is in addition to any other bond furnished by the Contractor and in no way shall be impaired or affected by any other bond.

CONTRACT FORMS for CONSTRUCTION

PERFORMANCE BOND

N. Any suit under this Performance Bond must be instituted before the expiration of two (2) years from the date on which Final Payment is made under this Contract.

Signed as of this ____ day of _____ 20__

IN THE PRESENCE OF:

(Principal)

(Surety)

(Signature)

(Signature)

(Title)

(Title)

(Address)

(Address)

(City, State, Zip Code)

(City, State, Zip Code)

(Phone Number & FAX Number)

(Phone Number & FAX Number)

(Email Address)

(Email Address)

ACKNOWLEDGEMENT OF CONTRACTOR EXECUTING PERFORMANCE BOND
IF A CORPORATION

STATE OF _____

COUNTY OF _____

On the ____ day of _____ in the year 20____, before me personally came _____,
to me known, who, being by me duly sworn, did depose and say that he/she resides at:

(street, city, state, zip code)

that he/she is the _____ of _____, the
corporation described in and which executed the foregoing instrument; and that he/she signed his/her name thereto by
authority of the Board of Directors of said corporation.

Notary Public

ACKNOWLEDGEMENT OF CONTRACTOR EXECUTING PERFORMANCE BOND
IF A PARTNERSHIP, LIMITED LIABILITY COMPANY OR INDIVIDUAL

STATE OF _____

COUNTY OF _____

On the ____ day of _____ in the year 20____, before me, the undersigned, a Notary Public in and for said
State, personally appeared _____, personally known or proved to me
on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument
and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their
signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed
the instrument.

Notary Public

ACKNOWLEDGEMENT OF SURETY

STATE OF _____

COUNTY OF _____

On the ____ day of _____ in the year 20____, before me personally came _____,
to me known, who, being by me duly sworn, did depose and say that he/she resides at:

(street, city, state, zip code)

that he/she is the _____ of _____, the
corporation described in and which executed the foregoing instrument; and that he/she signed his/her name thereto by
authority of the Board of Directors of said corporation.

Notary Public

D A S N Y

DORMITORY AUTHORITY STATE OF NEW YORK

WE FINANCE, BUILD AND DELIVER.

Construction General Conditions

ALBANY (HEADQUARTERS): 515 Broadway, Albany, NY 12207 | 518-257-3000

BUFFALO: 6047 Transit Road, Suite 103, East Amherst, NY 14051 | 716-566-4400

NEW YORK CITY: 28 Liberty Street, FI 55, New York, NY 10005 | 212-273-5000

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ARTICLE 1 -- DEFINITIONS

Section 1.01 - Definitions

The following terms as used in the Contract Documents shall be defined as follows:

Addendum or Addenda – Additional provisions of the Contract Documents issued in writing prior to the receipt of bids.

Alternate – Scope(s) of Work stated in the Contract documents to be added or deducted from the Contractor's base bid amount for alternate labor, materials and/or methods of construction.

Allowance – A sum of money set aside in the Agreement and included in the Contractor's lump sum base bid for a scope of work which has been specified in the Allowance section of the General Requirements. Reimbursement for Allowance work shall be as per General Conditions Article 7 – Changes in the Work.

Application for Payment – A Contractor's written billing request, on a form:

- A. prepared by the Owner from the Schedule of Values approved by the Owner;
- B. completed by the Contractor;
- C. adjusted by the Owner; and
- D. signed by the Contractor,

requesting partial or full payment for partial or full performance of the Contract.

Beneficial Occupancy – The stage in the performance of the Work prior to Substantial Completion when a designated portion of the Work is sufficiently complete in accordance with the Contract Documents so the Owner or Client can occupy or utilize such portion of the Work for its intended use, evidenced by the Notice of Beneficial Occupancy executed by the Owner following approval from the Authority Having Jurisdiction. Beneficial Occupancy may or may not allow for completion of outstanding punchlist items, as required by the Contract Documents. Notice of Beneficial Occupancy requires that the designation portion of Beneficial Occupancy Work function in a safe, reliable and warrantable manner.

Change Order – Written notice, in a standard Owner's form, to the Contractor, signed by the Contractor and executed by the Owner, changing the Contract Documents in accordance with General Conditions Article 7 - Changes in the Work, or a Forced Change Order.

Claim - A demand by the Contractor seeking, as a matter of right, adjustment or interpretation of Contract terms, payment of money, an extension of 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.

Client - The entity for whom the Dormitory Authority is performing services, including subsidiaries, agents, related corporations, or fiduciaries of the entity.

Construction Manager - A natural person, partnership, limited liability company, corporation, or other legal entity regularly engaged in management of construction projects, and so designated by the Owner.

GENERAL CONDITIONS

Consultant - A natural person, partnership, limited liability company, corporation, or other legal entity providing architectural, engineering, construction management, testing, inspection, commissioning, or other professional services, and so designated by the Owner.

Contract - The agreement between the Owner and the Contractor consisting of the Contract Documents.

Contract Amendment – A written instrument, signed by an authorized officer of the Dormitory Authority and an authorized officer of Contractor, amending, modifying, changing, or supplementing the Contract.

Contract Completion and Acceptance - The stage in the performance of the Work when all Work required to be performed by the Contract, including but not limited to submission of all documentation required for final payment, except any Work that may be required in the future with respect to:

- A. any warranty or guarantee in the Contract Documents;
- B. General Conditions Article 6 – Subcontracts, Sections 6.01 E through I;
- C. General Conditions Article 14 - Protection of Persons and Property; or
- D. General Conditions Article 15 – Insurance and Bonds,

is complete in accordance with the Contract Documents, evidenced by the Notice of Contract Completion and Acceptance executed by the Owner. Contract Completion and Acceptance follows or may be concurrent with Physical Completion.

Contract Documents - The Notice to Bidders, Information for Bidders, Form of Bid, Agreement, Payment Bond, Performance Bond, General Conditions, General Requirements, Drawings, Specifications, Addenda, Change Orders, Contract Amendments, and all provisions of law deemed to be included in the Contract.

Contractor - A natural person, partnership, limited liability company, corporation, or other legal entity with whom the Owner enters into the Contract to perform the Work.

Design Professional - A natural person, partnership, limited liability company, corporation, or other legal entity providing architectural or engineering professional services, and so designated by the Owner.

Disputed Work Directive - Written directive, in a standard Owner's form, from and executed by the Owner to the Contractor directing the Contractor to proceed with the Work described in the Disputed Work Directive in accordance with General Conditions Article 10 – Claims and Disputes.

Dormitory Authority - Dormitory Authority of the State of New York, a public benefit corporation established by the laws of the State of New York with its principal office located at 515 Broadway, Albany, New York, 12207-2964.

Extra Work - Any work in addition to the Work initially required to be performed by the Contractor pursuant to the Contract Documents.

Facility – the operating unit of the Client where the Site is located.

False Claim – Any Claim which is, either in whole or part, false or fraudulent.

GENERAL CONDITIONS

False Representation – This action takes place when a person has knowledge of the value of the work and materials supplied, performed, or proposed (the “Information”) constituting the Claim, Change Order, or Application for Payment and either:

- A. acts in deliberate ignorance of the truth or falsity of the Information or
- B. acts in reckless disregard of the truth or falsity of the Information.

Forced Change Order –Written notice, in a standard Owner’s form, to the Contractor, without the Contractor’s signature and executed by the Owner, changing the Contract Documents in accordance with General Conditions Article 7 – Changes in the Work.

Furnish - To deliver to the Site ready for installation.

Hazardous Material – any substance (gas, liquid, or solid) or agent (biological, chemical, radiological, physical, or having two or more of the preceding characteristics) which has the potential to cause harm to humans, animals, or the environment, either by itself or through interaction with other factors, including but not limited to heavy metals, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, herbicides, dioxins, biological wastes, carcinogens, asbestos or any substance containing asbestos, polychlorinated biphenyls, lead, urea formaldehyde, explosives, radionuclides, radioactive materials, chemicals known or suspected to cause cancer or reproductive toxicity, pollutants, effluents, contaminants, emissions, infectious wastes, any petroleum or petroleum-derived waste or product or related materials, and any item defined as a hazardous, special, or toxic material, substance, or waste under any Hazardous Material Law, including, but not limited to, the NYS Environmental Conservation Law and Title 6 of the New York Code of Rules and Regulations.

Hazardous Material Laws – collectively, any present federal, state or local law, including all valid amendments, relating to public health, safety, or the environment, including without limitation, the Resource Conservation and Recovery Act (“RCRA”), 42 U.S.C. §6901 et seq.; the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”), 42 U.S.C. §9601 et seq., as amended by the Superfund Amendments and Reauthorization Act of 1986 (“SARA”); the Clean Air Act, 42 U.S.C. §7401 et seq.; the Hazardous Materials Transportation Act, 49 U.S.C. §5101 et seq.; the Clean Water Act, 33 U.S.C. §1215 et seq.; the Toxic Substances Control Act, 15 U.S.C. §2601 et seq.; the Safe Drinking Water Act, 42 U.S.C. §300f et seq.; the Federal Insecticide, Fungicide and Rodenticide Act, 7 U.S.C. §136 et seq.; the Emergency Planning and Community Right-to-Know Act, 42 U.S.C. §11001 et seq.; the Occupational Safety and Health Act of 1970, 29 U.S.C. §651 et seq.; the Atomic Energy Act, 42 U.S.C. §2201 et seq.; the NYS Environmental Conservation Law; the NYS Labor Law; the NYS Public Health Law; and the amendments, regulations, orders, decrees, permits, licenses or deed restrictions now or hereafter enacted or promulgated under any such statute.

Install - To unload at the delivery point at the Site and perform every operation necessary to establish secure mounting and correct operation at the proper location.

Letter of Intent - Written notice, signed by the Owner, to the Contractor, which accepts the Contractor’s Form of Bid and transmits the Agreement, Payment Bond, Performance Bond, and other documents to the Contractor for execution. The Letter of Intent is not the formal notice to begin the physical Work of the Contract.

Means and Methods of Construction - Labor, materials, temporary structures, tools, plant, and construction equipment, and the manner and time of their use, necessary to accomplish the result intended by the Contract Documents.

Notice of Beneficial Occupancy – Written notice, in a standard Owner’s form, to the Contractor, executed by the Owner and delivered to the Contractor prior to Substantial Completion, that certain Work of the Contract Documents, identified in such Notice of Beneficial Occupancy, satisfies the criteria for Beneficial Occupancy and will be occupied or utilized by the Owner or Client.

Notice of Contract Completion and Acceptance – Written notice, in a standard Owner’s form, to the Contractor, executed by the Owner, that the Work required to be performed by the Contract Documents, except any Work required by any warranty or guarantee in the Contract Documents, satisfies the criteria for Contract Completion and Acceptance.

Notice of Physical Completion - Written notice, in a standard Owner’s form, to the Contractor, executed by the Owner, that the Work of the Contract Documents satisfies the criteria for Physical Completion.

Notice of Substantial Completion - Written notice, in a standard Owner’s form, to the Contractor, executed by the Owner, that the Work of the Contract Documents satisfies the criteria for Substantial Completion and constitutes the start of the guarantee period.

Notice to Proceed –

- A. Written notice, signed by the Owner, to the Contractor, that acknowledges receipt by the Owner of the signed Agreement, Payment Bond, and Performance Bond from the Contractor and directs the Contractor to start performance of the Work; or
- B. Written notice, in a standard Owner’s form, to the Contractor, executed by the Owner, directing the Contractor to proceed with the change in the Work described therein in accordance with General Conditions Article 7 – Changes in the Work. A Notice to Proceed cannot change the Contract amount or the date to achieve Substantial Completion. A Notice to Proceed can change only the General Requirements, the Drawings, or the Specifications.

NYS – New York State

Other Contractor(s) – The one or more natural persons, partnerships, limited liability companies, corporations, or other legal entities who have entered into a contract with the Owner to perform work (including services) at or near the Site, identified in the Contract Documents or in writing by the Owner, including, but not limited to, contractors, Construction Managers, Consultants, and Design Professionals. Other Contractors does not include the Contractor.

Owner - Dormitory Authority of the State of New York.

Owner's Representative - A natural person, partnership, limited liability company, corporation, or other legal entity so designated by the Owner to act on behalf of the Owner. See General Conditions Section 2.03 for limitations and further provisions on the Owner’s Representative.

Physical Completion – The stage in the performance of the Work when all Work to be performed at the Site, except any Work that may be required in the future by any warranty or guarantee in the Contract Documents, is complete in accordance with the Contract Documents, evidenced by the Notice of Physical Completion executed by the Owner. Physical Completion precedes or may be concurrent with Completion and Acceptance. Physical Completion requires that all punchlist work be completed by the Contractor such that the Contractor no longer is required to perform Work at the site. All insurances must remain in effect

GENERAL CONDITIONS

until the Contractor achieves Physical Completion and the Contractor is required to submit certified payrolls through the date of Notice of Physical Completion.

Project - The work at or near the Site(s) carried out pursuant to the Contract and one or more other contracts.

Project Management Program – The software program used by the Owner to manage, monitor, and oversee performance of the Contract.

Provide - To Furnish and Install the Work complete in place and ready for its intended use.

Resume Work Order or Directive – Written notice, signed by the Owner, to the Contractor, to recommence or continue Work of the Contract Documents.

Schedule of Values – a form provided by the Owner, completed by the Contractor, and submitted to the Owner for review and written approval; the completed, approved form establishes a minimum level of allocation of the Contract amount among the items of Work to formulate the Contractor's billing requests.

Site - The area(s) within the Contract limit, as indicated by the Contract Documents.

Stop or Suspend Work Order or Directive- Written notice, signed by the Owner, to the Contractor, to cease or hold Work of the Contract Documents.

Subcontract - An agreement between the Contractor and Subcontractor for Work on the Site.

Subcontractor - A natural person, partnership, limited liability company, corporation, or other legal entity under contract with the Contractor, or under contract with any Subcontractor, to perform any portion of the Work, or to provide any labor, material, equipment, or service at the Site.

Substantial Completion – The stage in the performance of the Work when all Work is sufficiently complete in accordance with the Contract Documents so the Owner or Client can occupy or utilize the Work for its intended use, evidenced only by the Notice of Substantial Completion executed by the Owner. Issuance of a temporary certificate of occupancy or a temporary approval for occupancy does not establish Substantial Completion. Work at the site (Physical Completion), and Work required by the Contract (Completion and Acceptance) may still be required.

Unit Price – The price for one measured unit (i.e. cu. ft., sq. foot etc.) of completed Work activity. Each Unit Price includes all labor, material, equipment, overhead, and profit attributable to that scope of Work. Unit Prices shall be based upon estimated quantities specified in the Unit Prices section of the General Requirements and as listed on the Form of Bid and will be paid based upon actual quantities of Work performed as verified by the Owner.

Unmanned Aircraft System (UAS or DRONES)- An aircraft and its associated elements (including communication links and the components that control the unmanned aircraft) operated without the possibility of direct human intervention from within or on the aircraft.

Work - All obligations explicitly and implicitly imposed upon the Contractor by the Contract Documents.

ARTICLE 2 -- CONTRACT DOCUMENTS

Section 2.01 - Captions

The table of contents, titles, captions, headings, running headlines, and marginal notes contained herein and in the Contract Documents are solely to facilitate reference to various provisions of the Contract Documents and in no way affect the interpretation of the provisions to which they refer.

Section 2.02 – Electronic Data Transfer

- A. Electronic data includes, but is not limited to, all digital versions of any Contract Document, all digital files produced by mechanical, facsimile, electronic, magnetic, digital or other programs, programming notes or instructions, activity listings of electronic mail receipts or transmittals, output resulting from the use of any software program, including but not limited to, word processing documents, spreadsheets, database files, charts, graphs, drawings, specifications, outlines, electronic mail, personal digital assistant messages, instant messenger messages, PDF files, PRF files, batch files, ASCII files, DWG files and any other type of files now or hereafter allowed by Owner.
- B. The Owner reserves the right to implement an electronic payment program for payments due the Contractor. Prior to implementation, the Owner, in writing, shall notify the Contractor one hundred twenty (120) calendar days prior to the effective date of the electronic payment program. Commencing on or after the electronic payment effective date, all payments, due the Contractor, shall only be rendered electronically, unless payment by paper check is authorized in writing by the Owner. Commencing on or after the electronic payment effective date, the Contractor, further acknowledges and agrees that the Owner may withhold payments, if the Contractor has not complied with the Owner's policies and procedures relating to the electronic payment program in effect at such time, unless payment by paper check is authorized in writing by the Owner.
- C. Electronic data produced in connection with the Contract is proprietary information of the Owner and to be treated as confidential and not to be disclosed to or shared with others outside the limits of the Contract without the express written consent of the Owner. The Owner makes no warranty, express or implied, as to the accuracy of the information transferred.
- D. The Contractor shall pay, on behalf of the Owner, any loss which the Owner becomes legally liable to pay as a result of a claim by any person or entity against the Contractor or Owner, which results directly from an act, error, or omission of the Contractor in the provision of electronic data in respect to the Contract.

Section 2.03 - Owner

- A. The Contract constitutes the entire agreement and understanding between the Contractor and the Owner with respect to the Project and supersedes all prior agreements, arrangements and understandings, and all trade custom and trade usage, and the construction of any provision of the Contract shall not be affected by the wording of any other agreement, whether between the Contractor and the Owner or involving other parties. The Contract may not be amended, modified, supplemented, or changed in any way except in accordance with General Conditions Article 7 – Changes in the Work or a Contract Amendment. The legal relationship between the Owner and the Contractor shall be governed solely by the Contract and no rights shall arise on any other basis, including but not limited to, oral agreement, partial performance, estoppel, conduct of the parties, course of conduct or any other course of dealing

GENERAL CONDITIONS

involving the Project or any other project. The meaning and intent of the Contract Documents shall be interpreted solely by the Owner.

- B. The Owner shall give all orders and directions contemplated under the Contract relative to the execution of the Work. The Owner shall determine the amount, quality, and acceptability of the Work and shall decide all questions which may arise in relation to said Work. The Owner's estimates and decisions shall be final except as otherwise expressly provided herein.
- C. The Owner may, at its sole and exclusive discretion, waive certain provisions of the Contract Documents. Such waiver shall only be done by written instrument signed by a duly authorized officer of the Owner, and any such waiver shall apply solely in accordance with its terms and shall not act as a waiver of any provision of the Contract Documents, or estoppel against the enforcement thereof, in connection with any subsequent or separate event involving the Project or other projects.
- D. Any differences or conflicts concerning performance which may arise between the Contractor and Other Contractors performing work for the Owner shall be analyzed and resolved by the Owner as warranted by the circumstances. The Owner's exercise of discretion in this regard shall be sole and exclusive and its decision concerning such differences and conflicts shall be final and binding.
- E. The Owner may act through an Owner's Representative designated as such in writing by the Owner. Unless otherwise designated by the Owner, the Owner's Representative is the Owner's employee assigned to the Project as the project manager. Unless otherwise stated in writing by the Owner, the Owner's Representative is not an authorized officer of the Owner, does not have authority to approve a Labor Rate Worksheet on behalf of the Owner, does not have authority to waive the requirement for a narrative and fragnet schedule of General Conditions Section 7.01 C. 4, does not have authority to waive any provision of the Contract Documents and does not act for the Owner for General Conditions Article 15 – Insurance and Bonds. Unless otherwise stated in writing by the Owner and notwithstanding the other provisions of this paragraph, the Owner's Representative does have authority to issue a direction to attend a meeting in accordance with General Conditions Section 4.04, a Notice to Proceed in accordance with General Conditions Section 7.01 and a Disputed Work Directive in accordance with General Conditions Section 10.01. The Owner may change the Owner's Representative and the scope of her, his or its duties by written notice to the Contractor in accordance with General Conditions Section 2.04. The Owner's Representative's signature by itself on a Change Order is not execution of a Change Order by the Owner. See General Conditions Section 7.01 A. 5 for the requirements for execution of a Change Order by Owner.

Section 2.04 - Notice and Service Thereof

- A. Any notice to the Contractor from the Owner relative to any part of the Contract shall be in writing and service considered complete when said notice is sent or delivered in person to the Contractor or its authorized representative, at the street address, postal address or email address given by the Contractor in the Form of Bid. The Contractor may change any of these addresses by written notice to the Owner's Procurement Unit, 515 Broadway, Albany, New York 12207 - 2964; such change shall not be effective until Contractor receives from the Owner's Procurement Unit a written acknowledgement that the change has been received.
- B. Any notice from the Contractor to the Owner required by any part of the Contract shall be in writing and shall be sent or delivered to the Owner's Representative at the street address, postal address or email address for the Owner's Representative given in the Notice to Bidders. The Owner may change the Owner's Representative or any of these addresses by written notice to the Contractor. If any part of the Contract shall require the Contractor to provide notice to any other employee or unit of the

Owner, the notice to such employee or unit is in addition to, and does not replace, the notice to the Owner's Representative. Notice to the Owner may be delivered by certified mail, overnight delivery by a nationally recognized courier or, if an email address is provided, email. The Owner's Representative will endeavor to provide a written acknowledgment of receipt of the notice but any failure to provide such written acknowledgment shall not be a breach of the Contract, shall not in any way alter the Contractor's obligation to provide timely notice and shall not in any way alter any of the other obligations of the Contractor under the Contract.

- C. For all notices from the Contractor to the Owner required by any part of the Contract, the Contractor shall have the burden of proving the Owner's receipt of the notice.

Section 2.05 - Nomenclature

Materials, equipment, or other Work not defined or specified in the Contract but described in words that have a generally accepted technical or trade meaning shall be interpreted as having said meaning in connection with the Contract.

Section 2.06 - Invalid Provisions

If any term or provision of the Contract Documents or the application thereof to any natural person, partnership, limited liability company, corporation or other legal entity or circumstance shall, to any extent, be determined to be invalid or unenforceable, the remainder of the Contract Documents, or the application of such terms or provisions to natural persons, partnerships, limited liability companies, corporations or other legal entities or circumstances other than those to which it is held invalid or unenforceable, shall not be affected thereby and each term or provision of the Contract Documents shall be valid and be enforced to the fullest extent permitted by law. It is the intent of the Owner and the Contractor that all provisions of the Contract shall be construed to be valid under applicable law and shall be enforced to the maximum extent possible.

Section 2.07 – Interpretation of Contract Documents

- A. Should any provision in the Contract Documents be in conflict or inconsistent with the General Conditions or supplements thereto, the General Conditions or supplements thereto shall govern.
- B. Figured dimensions shall take precedence over scaled dimensions. Larger scale Drawings shall take precedence over smaller scale Drawings. Latest Addenda shall take precedence over previous Addenda and earlier dated Drawings and Specifications.
- C. Should a conflict occur in or between or among any parts of the Contract Documents that are entitled to equal preference, the better quality or greater quantity of material or more onerous provision in the Owner's judgment shall govern, regardless of cost, unless the Owner directs otherwise in writing. In each conflict, the Owner, in its sole and exclusive discretion, shall determine whether the quality, quantity or onerous provision method will be used to resolve the conflict.
- D. Drawings and Specifications are complementary. Anything shown on the Drawings and not mentioned in the Specifications, or mentioned in the Specifications and not shown on the Drawings, shall have the same effect as if shown or mentioned in both.
- E. The term "materials" includes "supplies".

- F. Words of the masculine gender shall be deemed and construed to include correlative words of the feminine and neuter genders. Unless the context shall otherwise indicate, words importing the singular number shall include the plural number and vice versa.

Section 2.08 - Copies of Contract Documents

The Owner may furnish to the Contractor up to three (3) paper copies and one electronic (PDF) copy of the Contract Documents without charge. Additional sets may be furnished at the costs of reproduction and mailing.

ARTICLE 3 -- SITE CONDITIONS

Section 3.01 - Subsurface or Site Conditions Found Different

- A. The Contractor acknowledges that the Contract amount set forth in its bid includes such provisions which the Contractor deems sufficient for all subsurface or site conditions the Contractor could reasonably anticipate encountering as indicated in the Contract Documents, or borings, reports, rock cores, foundation investigation reports, topographical maps, or other information available to the Contractor or from the Contractor's inspection and examination of the Site prior to submission of bids.
- B. The Owner assumes no responsibility for the correctness of any boring or other subsurface information and makes no representation whatsoever regarding subsurface conditions and test borings, reports, rock cores, foundation investigation and topographical maps which may be made available to the Contractor.
- C. Should the Contractor encounter subsurface or site conditions at the Site materially differing from those shown on or described in or indicated in the Contract Documents, the Contractor shall immediately give written notice to the Owner of such conditions and shall not disturb said conditions until authorized to do so by the Owner in writing.
- D. Subsurface or site conditions found materially differing from those that could have been reasonably anticipated may be cause for change to the Contract amount and time of completion. This determination will be made at the sole and exclusive discretion of the Owner.

Section 3.02 - Verifying Dimensions and Conditions

- A. The Contractor shall take all measurements at the Site and shall verify all dimensions and conditions at the Site before proceeding with the Work. If said dimensions or conditions are found to conflict with the Contract Documents, the Contractor immediately shall refer said conflict to the Owner in writing. The Contractor shall comply with any revised Contract Documents.
- B. During the performance of the Work, the Contractor shall verify all field measurements prior to fabrication of building components or equipment, and proceed with the fabrication to meet field conditions.
- C. The Contractor shall review all Contract Documents to determine exact location of all Work and verify spatial relationships of all the Work. Any question concerning said location or spatial relationships shall be submitted in a manner approved by the Owner.
- D. Special locations for equipment, pipelines, ductwork, and other such items of the Work, where not dimensioned on plans, shall be coordinated with affected Other Contractors.

E. The Contractor shall be responsible for the proper fitting of the Work in place.

Section 3.03 - Surveys

Unless otherwise expressly provided in the Contract Documents, the Owner shall furnish the Contractor all surveys of the property necessary for the Work, but the Contractor shall lay out the Work.

ARTICLE 4 -- CONTRACTOR

Section 4.01 - Representations of Contractor

The Contractor represents and warrants:

- A. That it is financially solvent and is experienced in and competent to perform the Work, and has the staff, workers, equipment, subcontractors, and suppliers to complete the Work within the time specified for the Contract amount.
- B. That it is familiar with all federal, state, and local laws, codes, ordinances, orders, rules, and regulations which may affect the Work, the Contractor, or the Project.
- C. That all temporary and permanent Work required by the Contract Documents can be satisfactorily constructed, and that said construction will not injure any person or damage any property.
- D. That it has carefully examined the Contract Documents and the Site, and from the Contractor's own investigations is satisfied as to the nature and materials likely to be encountered, the character of equipment and other facilities needed for the performance of the Work, the general and local conditions, and all other materials or items which may affect the Work.
- E. That it is satisfied that the Work can be performed and completed as required in the Contract Documents, and warrants that it has not been influenced by any oral statement or promise of the Owner or the Design Professional.
- F. That to the best of Contractor's knowledge, there are no pending or threatened suits, proceedings, judgments, rulings, or orders by or before any court or any governmental agency or arbitrator that could reasonably be expected to affect materially and adversely:
 - 1. the financial condition or operations of the Contractor;
 - 2. the ability of the Contractor to perform its obligations hereunder; or
 - 3. the legality, validity, or enforceability of this Contract.
- G. That Contractor is a duly organized and validly existing entity of the type described in the recital clauses of the Agreement and is in good standing under the laws of the jurisdiction of its formation; it has the legal right, power, and authority and is qualified to conduct its business and to execute and deliver this Contract and perform its obligations under this Contract; and all regulatory authorizations have been obtained and will be maintained, as necessary, for it to perform legally its obligations under this Contract.
- H. That executing and performing this Contract are within Contractor's powers; that executing and performing this Contract has been duly authorized by all necessary action on the Contractor's part; and

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that such actions do not and will not violate any provision of law or any rule, regulation, order, writ, judgment, decree, or other determination presently in effect applicable to Contractor or its governing documents.

- I. That this Contract constitutes the Contractor's legal, valid, and binding obligation, enforceable against it in accordance with this Contract's terms, subject to applicable bankruptcy, insolvency, reorganization, and other laws affecting creditors' rights generally, and general equitable principles, to the discretion of the court before which proceedings to obtain the same may be pending.
- J. That Contractor is in good standing with any union with craft labor on the Site for part or all the Work of this Contract or the work of the Project.
- K. That Contractor is experienced in the methods of design, engineering, installation, management, and construction contemplated for the Work of this Contract and for contracts of this nature, scope magnitude and quality and that the Contractor understands the complexity involved in this type of Contract and the necessity to coordinate its Work with appropriate governmental agencies, the Owner, and the Other Contractors.
- L. That Contractor is fully informed as to all existing conditions and limitations, including local workforce/labor working arrangements and the continuous, regular, and uninterrupted operations of the Facility.
- M. That Contractor has had the opportunity to consult with or has consulted with legal counsel of its choice before entering into this Contract.
- N. That any breach of any of the representations and warranties of this General Conditions Section 4.01, any failure of the Contractor to familiarize itself with the Contract Documents, the Facility, the Site or the Project or any lack of knowledge on the part of the Contractor of any existing or foreseeable condition or conditions at the Site reasonably inferred from the Contract Documents which create difficulties or hindrances in the execution of the Work shall constitute a conclusive and binding determination by the Contractor that resolving any adverse impact of such breach, failure or lack of knowledge does not constitute Extra Work and a waiver by the Contractor of all Claims for additional compensation or damages or time to achieve Substantial Completion as a result of the breach, failure or lack of knowledge.

Section 4.02 - Errors or Discrepancies

The Contractor shall examine the Contract Documents thoroughly before commencing the Work and report any errors or discrepancies to the Owner, in writing, within fifteen (15) calendar days of discovery. The Owner shall not be responsible for costs, damages or delays due to the Contractor's failure to comply with the requirements of this General Conditions Section 4.02.

Section 4.03 - Coordinated Composite Drawings

- A. The Contractor shall prepare coordinated composite drawings clearly showing how the Work of the Contractor is to be performed in relation to the work of Other Contractors, prepare scaled drawings and sections in the same digital software program, version, and operating system as the original Contract Drawings or in an operating system approved by the Owner.
- B. If, and only if, required by the Information for Bidders for the Contract, the Contractor shall run a conflicts and coordination check utilizing the Project Drawings within a three-dimensional software

program of the Contractor's choice to limit the number of physical conflicts that may occur during construction. Failure to run such a conflicts and coordination check or to resolve conflicts and coordination issues identified as a result of such a check prior to the initiation of the Work on Site shall constitute a:

1. conclusive and binding determination by the Contractor that resolution of the conflicts does not involve Extra Work; and
2. waiver by the Contractor of all Claims for additional compensation, damages, or time to achieve Substantial Completion as a result of the existence of physical conflicts.

Section 4.04 - Meetings

The Contractor shall attend all meetings required by the Contract Documents and all meetings when directed to attend by the Owner. The Contractor shall be represented at all meetings by the on-Site superintendent described in General Conditions Section 4.05 A who shall attend the meetings in person unless the Owner in writing prior to the meeting directs otherwise. If the Owner directs, the Contractor shall be represented either by the project management personnel of General Conditions 4.05 B or by an authorized officer of Contractor; in each case, the project management personnel or the authorized officer shall attend the meetings in person. The Owner, in its sole and exclusive discretion, shall determine the time, date, location, and purpose of the meeting. The purpose of a meeting includes, but is not limited to, Project progress, submittal status, Change Orders, site logistics, coordination, inspections, testing, safety reviews, or anything which the Owner determines is useful for administration or performance of the Contract or the Project.

Section 4.05 - Supervision by Contractor

- A. The Contractor shall provide full-time competent supervision for the duration of the Contract. During the course of on-Site Work, the Contractor shall provide a full-time on-Site superintendent who shall have full authority to act for the Contractor at all times. The superintendent shall read, write, and speak English fluently, as well as communicate with the Contractor's workers and the workers of all Subcontractors.
- B. The Contractor shall also provide competent project management personnel in addition and superior to the full-time on-Site superintendent who shall also have full authority to act for the Contractor at all times except such project management personnel cannot modify or rescind any action of the full-time on-Site superintendent directed to the Owner without the Owner's written consent.
- C. If at any time the supervisory staff is not satisfactory to the Owner, the Contractor shall, if directed in writing by the Owner, immediately replace such supervisory staff with other staff satisfactory to the Owner at no additional cost to the Owner.
- D. The Contractor shall remove from the Work any employee of the Contractor or of any Subcontractor when so directed in writing by the Owner.

Section 4.06 – Project Scheduling

- A. The Contractor shall provide a project scheduler, experienced in critical path method (CPM) scheduling. The scheduler's experience and credentials shall be submitted in writing to the Owner for review and acceptance prior to proceeding with scheduling of the Work. The Owner may withdraw its acceptance of the project scheduler at any time thereafter for failure to perform in accordance with the Contract. The Contractor shall provide a replacement scheduler and submit the replacement's

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experience and credentials in writing to the Owner for review and acceptance as soon as possible. The replacement scheduler shall be at no additional cost to the Owner.

- B. Using the software required by the Owner, the Contractor shall prepare, maintain, and revise the Project CPM schedule to plan and monitor the progress of all Project operations, in accordance with the Contract Documents. See the General Requirements for further details.
- C. Construction activities shall be interrelated on a single Project CPM schedule that represents the entire Project, including the entire Contract duration from Notice to Proceed to Substantial Completion and through Contract Completion and Acceptance. The Contractor shall utilize the critical path method of network calculation to generate the Project CPM schedule and shall utilize the time-scaled precedence diagram method to show the Project CPM Schedule. The Project CPM Schedule shall utilize calendar days for the time scale. The Contractor shall ensure all logic constraints are identified between the Work of the Contract, the work of Other Contractors and Owner's work prior to approval of the Project CPM schedule. See the General Requirements for further details.
- D. The Owner may reject any proposed Project CPM schedule, any proposed updated Project CPM schedule or any proposed recovery Project CPM schedule if the Owner, in its sole and exclusive discretion, finds the proposed Project CPM schedule, proposed updated Project CPM schedule or proposed recovery Project CPM schedule defective for any reason, including but not limited to:
 - 1. Defective logic;
 - 2. Excessive use of constraints;
 - 3. Activity durations that are inconsistent with actual or available workforce;
 - 4. The appearance of an effort to manipulate the schedule so that responsibility for an adverse impact is associated with a natural person or entity other than the natural person or entity responsible for the adverse impact; or
 - 5. Lacking executive summary and/or narrative.
- E. If a proposed Project CPM schedule, proposed updated Project CPM schedule or proposed recovery Project CPM schedule is rejected by the Owner, the Owner will notify the Contractor in writing of the rejection and the reason or reasons for the rejection. Contractor shall submit a new proposed Project CPM schedule, proposed updated Project CPM schedule or proposed recovery Project CPM schedule with the defect or defects corrected at no cost to the Owner within two weeks of the Owner's written rejection.
- F. Review comments made by the Owner on the proposed Project CPM schedule, any proposed updated Project CPM schedule or any proposed recovery Project CPM schedule shall not relieve the Contractor from compliance with requirements of the Contract Documents. The Contractor shall be responsible for scheduling, sequencing, and performing the Work to comply with the requirements of the Contract Documents.
- G. The Contractor expressly understands and agrees that no additional compensation shall be paid for any alterations to Contractor's planned construction sequence to accommodate the Project CPM schedule requirements, any updated Project CPM schedule or any recovery Project CPM schedule pursuant to

the Contract. Failure to include any element of work required for the performance of the Work shall not excuse the Contractor from completing all the Work required within the applicable completion date of each phase in the Contract Documents regardless of the Owner's approval of the Project CPM schedule, any updated Project CPM schedule or any recovery Project CPM schedule.

- H. The Owner may withhold payments, in whole or in part, if the Contractor fails to provide an acceptable project scheduler, replacement project scheduler, Project CPM schedule, updated Project CPM schedule, recovery Project CPM schedule or other schedule information or reports in accordance with requirements of the Contract.

Section 4.07 - Worker Identification and Site Access Control

- A. All employees of the Contractor and every Subcontractor shall comply with all site access control, safety and security procedures prescribed by the Owner which may include, but are not limited to, the wearing of Owner issued identification badges, ingress and egress through controlled entry and exit points, and use of card readers or other electronic identity verification devices. Contractor cannot authorize any one to enter the Site, except Contractor's and Subcontractor's employees and persons delivering materials or equipment to Contractor or a Subcontractor, without the prior written consent of the Owner.
- B. All employees of the Contractor and every Subcontractor, prior to entering the Site for the first time, shall obtain an identification badge if issued by the Owner and produce to the Owner a valid form of government-issued photo identification and furnish other background information, including but not limited to the following:

Full Name
Last four (4) digits of Social Security Number
Home Address (#/Street/Apt./City/Zip)
Contractor/Subcontractor Name
Job Classification
Union Local Affiliation, if any

The Owner recognizes that certain information requested above constitutes personal information and will take all reasonable steps to ensure the security and confidentiality of this information as required by law.

- C. All employees of the Contractor and every Subcontractor shall visibly display on their person, while entering and on the Site, an identification badge if issued by the Owner. In the event said identification badge has not been issued by the Owner, all employees of the Contractor and every Subcontractor shall produce a valid form of government-issued photo identification promptly upon request of the Owner. Failure to display such identification or to produce such identification in the manner as prescribed by the Owner may result in the employee's non-admittance to or immediate removal from the Site. The Owner will send written confirmation to the Contractor confirming the action taken, if requested by the Contractor.

Section 4.08 - Related Work

- A. The Contractor should examine the Contract Documents for Work of its Contract and any related work of other contracts, to ascertain the relationship of its Work to any related work of other contracts.

- B. The Owner may contract with a Design Professional, Construction Manager, or other Consultants to provide services to the Owner. The services enumerated in consultant contracts are for the benefit of the Owner who may choose to utilize any or all of said services. The Contractor has no privity of contract with the Design Professional, Construction Manager, or any other Consultant which contracts with the Owner and should not assume that all of the services enumerated in said contracts will be provided.
- C. The Contractor shall adhere to all of the requirements specified or communicated by the Design Professional in performing delegated design work required by the Contract Documents.

Section 4.09 – Coordination with Separate Contracts

- A. The Owner may award other contracts for work which may proceed simultaneously with the execution of the Work. The Contractor shall coordinate the Contractor's operations with those of Other Contractors as directed by the Owner. Cooperation shall be required in the arrangements for access, the storage of material, and in the detailed execution of the Work.
- B. The Contractor shall take those steps reasonably necessary to keep itself informed of the progress and workmanship of Other Contractors and any subcontractors of Other Contractors and shall notify the Owner in writing immediately of lack of progress or defective workmanship on the part of Other Contractors or any subcontractors of Other Contractors, where said delay or defective workmanship may interfere with the Contractor's operations.
- C. Failure of a Contractor to keep so informed and failure to give written notice of lack of progress or defective workmanship by Other Contractors or any subcontractors of Other Contractors shall be construed as acceptance by the Contractor of said progress and workmanship as being satisfactory for proper coordination with the Work.
- D. Where the Contractor shall perform Work in close proximity to work of Other Contractors or any subcontractors of Other Contractors, or where there is evidence that Work of the Contractor may interfere with work of Other Contractors or any subcontractors of Other Contractors, the Contractor shall assist in arranging space conditions to make satisfactory adjustment for the performance of the Work. If the Contractor performs Work in a manner that causes interference with the work of Other Contractors or any subcontractors of Other Contractors, the Contractor shall make changes necessary to correct the condition at no additional cost to the Owner.
- E. The Contractor shall render any assistance which the Owner may require with respect to any claim or action in any way relating to the Work including, without limitation, review of claims, preparation of technical reports and participation in negotiations, without any additional compensation therefor.

Section 4.10 - Cooperation with Other Contractors

- A. During the performance of the Work, Other Contractors may be engaged in performing work. The Contractor shall coordinate the Contractor's Work with the work of said Other Contractors in such a manner as the Owner may direct.
- B. If the Owner determines that the Contractor is failing to coordinate the Work with the work of Other Contractors as the Owner has directed:
 - 1. The Owner shall have the right to withhold any payments due under the Contract until the Contractor complies with the Owner's direction; and

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2. The Contractor shall assume the defense and pay on behalf of the Owner any and all claims or judgments or damages and any costs to which the Owner may be subjected or which the Owner may suffer or incur by reason of the Contractor's failure to promptly comply with the Owner's directions, including, but not limited to attorney's fees, expert fees, and costs. Notwithstanding the foregoing, the Owner retains the right to select its own counsel for such defense, the cost of which is to be paid by the Contractor.
- C. If the Contractor notifies the Owner, in writing, that an Other Contractor on the Site is failing to coordinate its work with the Work, the Owner shall investigate the charge. If the Owner finds it to be true, the Owner shall promptly issue such directions to the Other Contractor with respect thereto as the situation may require. The Owner shall not be liable for any damages suffered by the Contractor by reason of the Other Contractor's failure to promptly comply with the directions so issued by the Owner, or by reason of an Other Contractor's default in performance.
- D. Should the Contractor sustain any damage through any act or omission of any Other Contractor having a contract with the Owner or through any act or omission of any subcontractor of said Other Contractor, the Contractor shall have no Claim against the Owner for said damage.
- E. Should any Other Contractor having or which shall have a contract with the Owner sustain damage through any act or omission of the Contractor or through any act or omission of a Subcontractor, the Contractor shall reimburse said Other Contractor for all said damages and shall indemnify and hold the Owner harmless from all such claims by said Other Contractor, including, but not limited to attorney's fees, expert fees, and costs. Notwithstanding the foregoing, the Owner retains the right to select its own counsel for such defense, the cost of which is to be paid by the Contractor. The Owner's right to indemnification hereunder shall in no way be diminished, waived, or discharged, by its recourse to assessment of liquidated damages as provided in the Contract Documents, or by the exercise of any other remedy provided by the Contract or law.
- F. The Owner cannot guarantee the responsibility, efficiency, unimpeded operations, or performance of any contractor. The Contractor acknowledges these conditions and shall bear the risk of all delays including, but not limited to, delays caused by the presence or operations of Other Contractors and subcontractors of Other Contractors and delays attendant upon any Project CPM schedule approved by the Owner and the Owner shall not incur any liability by reason of any delay.

ARTICLE 5 -- MATERIALS AND LABOR

Section 5.01 - Contractor's Obligations

- A. The Contractor shall, comply with all the terms of the Contract Documents and complete all the Work in a good worker like manner, within the time specified in the Contract and to the satisfaction of the Owner.
- B. The Contractor shall provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, permits, insurance, temporary structures and other facilities and services necessary for the proper execution and completion of the Work, whether temporary or permanent, and whether incorporated or to be incorporated in the Work or not incorporated in the Work.

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- C. 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 skilled in tasks assigned to them.
- D. Any labor, materials or means whose employment, or utilization during the course of the Contract may tend to or in any way cause or result in strike, work stoppages, delays, suspension of Work or similar troubles by workers employed by the Contractor, its Subcontractors or material suppliers, or by any of the trades working in or about the Site, or by Other Contractors, their subcontractors or material suppliers pursuant to other contracts shall not be allowed. Any violation by the Contractor of this requirement may in the sole judgment of the Owner be considered a default by the Contractor under the Contract and a basis for the Owner to take action against the Contractor as set forth in General Conditions Article 11 – Termination or Suspension or such other action as the Owner may deem proper.
- E. The Contractor and each Subcontractor shall comply with all applicable local, state, and federal laws, rules and regulations and all applicable construction standards issued by the Joint Commission and other accrediting agencies and organizations.
- F. The Contractor and each Subcontractor shall comply with all applicable Hazardous Material Laws. The Contractor shall provide the Owner the Safety Data Sheets for any Hazardous Materials or hazardous substances brought on the Site by the Contractor or a Subcontractor at least fifteen (15) calendar days prior to the delivery of such materials to the Site. Contractor shall identify to Owner at least fifteen (15) calendar days in advance the quantities of all "Chemicals of Interest" listed under the Chemical Facility Anti-Terrorism Standards of the Homeland Security Appropriations Act of 2007 that will be brought onto the Site.
- G. Contractor shall provide the necessary information and training to its employees on each Hazardous Material and hazardous substance to which they may be exposed on the Site and shall cause each of its Subcontractors to provide the necessary information and training to the Subcontractor's employees on each Hazardous Material and hazardous substance to which they may be exposed on the Site. Upon request of the Owner, Contractor shall provide the Owner with proof, satisfactory to the Owner, that Contractor's employees and all Subcontractors' employees have received the necessary information and training.
- H. Contractor shall not transport, store or use, and shall prohibit Subcontractors from transporting, storing or using, any construction materials or equipment (whether or not totally enclosed) containing Hazardous Materials including, but not limited to, asbestos, polychlorinated biphenyls, benzene, lead or urea formaldehyde in connection with this Contract; provided, however, Contractor and Subcontractors may transport, store and use the following substances: lead, natural gas, gasoline, diesel fuel, fuel oil(s), gravel(s), lube oil(s), grease(s), sealant(s), combustible gases, form oil(s), solvent(s), adhesives, paints, coatings, and all other materials that are used or consumed in or during construction or testing of the Work and its constituent systems and components in quantities reasonably necessary to perform the Work, if transported, stored and used in accordance with applicable laws including, but not limited to, those laws related to the implementation and utilization of spill containment, transport systems and storage vessels and facilities.
- I. Any Hazardous Materials and hazardous substances brought to or stored on or at the Site shall require specific, prior written authorization from Owner and, as a condition to such authorization, Contractor shall provide Owner with the Material Safety Data Sheet covering any Hazardous Material or hazardous substance furnished under or otherwise associated with the Work (including the construction equipment). Contractor shall maintain on the Site, at all times, complete records, and inventories, including Safety Data Sheets, of Hazardous Materials and hazardous substances described in this

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General Conditions Section 5.01 that are being used by it or its Subcontractors, or any persons for whose actions on the Site Contractor is responsible.

Section 5.02 - Means and Methods of Construction

- A. Unless otherwise provided in the Contract Documents, the Contractor shall choose the Means and Methods of Construction subject to the Owner's right to reject, at any time, the Means and Methods of Construction proposed by the Contractor, which in the opinion of the Owner:
 - 1. Will constitute or create a hazard to the Work or to persons or property;
 - 2. Will not produce finished Work in accordance with the terms of the Contract;
 - 3. Will be detrimental to the overall progress of the Project; or
 - 4. Will have an adverse impact on the operations of the Client.
- B. The Owner's failure to exercise its right to reject the Contractor's Means and Methods of Construction shall not relieve the Contractor of its obligation to complete the Work; the Owner's exercise of its right to reject the Contractor's Means and Methods of Construction shall not create a Contractor's or Subcontractor's cause of action for damages against the Owner.

Section 5.03 - Contractor's Title to Materials

- A. No materials for the Work shall be purchased by the Contractor or by any Subcontractor subject to any chattel mortgage or under a conditional sale or other agreement by which an interest is retained by any other party. The Contractor warrants that the Contractor has full, good, and clear title to all materials used by the Contractor in the Work, or resold to the Owner pursuant to the Contract Documents free from all liens, claims or encumbrances.
- B. For all materials and equipment to be stored at a location other than the Site prior to execution of an agreement with the Owner for materials stored off-site pursuant to General Conditions Section 8.01 G, the Contractor shall provide the Owner with written notice of the location, security, environmental protections and the materials or equipment to be stored at that location at least fifteen (15) calendar days before such storage begins. Such notice does not obligate the Owner to pay for such stored material or equipment. Payment for stored material or equipment can be made only when the requirements for such payment in General Conditions Article 8 - Payment and elsewhere in the Contract have been met.
- C. All materials, equipment and articles which become the property of the Owner shall be new unless specifically stated otherwise.

Section 5.04 - Comparable Products ("Or Equal" Clause)

- A. Whenever a material, article or piece of equipment is identified on the Drawings or in the Specifications by reference to manufacturers' or vendors' names, trade names, catalogue number, or make, said identification is intended to establish a standard. Any material, article or equipment of other manufacturers and vendors which performs satisfactorily the duties imposed by the design intent may be considered equally acceptable provided that, in the opinion of the Design Professional, the material, article, or equipment so proposed is of equal quality, substance and function and the Contractor shall not Provide, Furnish or Install any said proposed material, article, or equipment without the prior

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written approval of the Design Professional. The burden of proof and all costs related thereto concerning the "or equal" nature of the substitute item, whether approved or disapproved, shall be borne by the Contractor.

- B. Where the Design Professional, pursuant to the provisions of this General Conditions Section 5.04, approves in writing a product proposed by the Contractor and said proposed product requires a revision of the Work covered by this Contract, or the work covered by other contracts, all changes in the work of all contracts, revision or redesign, and all new Drawings and details required therefore shall be provided by the Contractor at its cost and shall be subject to the approval of the Design Professional.
- C. No substitution which may result in a delay to the Project will be permitted without the prior written approval of the Owner.

Section 5.05 - Quality, Quantity and Labeling

- A. The Contractor shall Furnish materials and equipment of the quality and quantity specified in the Contract. Any excess materials purchased per the Contract are the property of the Owner.
- B. When materials are specified to conform to any standard, the materials delivered to the Site shall bear manufacturer's labels stating that the materials meet said standards. Contractor's quality control plan required by paragraph D of this General Conditions Section 5.05 shall include measures undertaken by the Contractor to prevent the use of materials with counterfeit labels or other counterfeit indications of meeting a standard.
- C. The above requirements shall not restrict or affect the Owner's right to test materials as provided in the Contract.
- D. The Contractor shall develop and implement quality control plans to assure itself and the Owner that all Work performed by the Contractor and its Subcontractors complies fully with all Contract requirements. The Contractor shall submit the plans to the Owner upon request as required by the Contract. See the Submittals Section of the General Requirements for further details. The Contractor's quality control plans shall be independent of any testing or inspection performed by or on behalf of the Owner.

Section 5.06 - Tax Exemption

- A. The Owner is exempt from payment of federal, state, and local taxes; sales and compensating use taxes of the State of New York and of cities and counties on all materials and supplies incorporated into the completed Work. These taxes are not to be included in bids. This exception does not apply to tools, machinery, equipment or other property leased by or to the Contractor or a Subcontractor, or to supplies and materials which, even though they are consumed, are not incorporated in to the completed Work, and the Contractor and Subcontractors shall be responsible for and pay any and all applicable taxes, including sales and compensating use taxes, on said leased tools, machinery, equipment or other property and upon all said unincorporated supplies and materials.
- B. The Contractor and Subcontractors shall obtain any and all necessary certificates or other documentation from the appropriate governmental agency or agencies, and use said certificates or other documentation as required by law, rule, or regulation.

ARTICLE 6 -- SUBCONTRACTS

Section 6.01 - Subcontracting

- A. The Contractor may utilize the services of Subcontractors, subject to the limits prescribed in the Information for Bidders Section 7.0 – Approval of Subcontractors/Subcontract Limits. Exceeding stated limits, without prior written approval by the Owner, may be cause for Contract termination.
- B. The Contractor shall submit to the Owner the name of each proposed Subcontractor as required by the Contract. The Owner reserves the right to disapprove any proposed Subcontractor and such disapproval shall not result in any additional cost to the Owner. If requested by the Owner, the Contractor shall provide copies of any and all Subcontracts and purchase order agreements related to the Work, which must be in written form. The Contractor shall require each Subcontractor to provide the Owner, upon the Owner's request, with a copy of each of the Subcontractor's subcontracts and purchase order agreements related to the Work.
- C. The Contractor's use of Subcontractors shall not diminish the Contractor's obligation to complete the Work. The Contractor shall control and coordinate the Work of Subcontractors and be fully responsible for the acts and omissions of Subcontractors, and of persons either directly or indirectly employed by Subcontractors. The Contractor shall be responsible for all guarantees and warranties provided by Subcontractors.
- D. The Contractor shall be responsible for requiring each Subcontractor, to extent of the Work to be performed by such Subcontractor, to be bound to the Contractor by all the terms, conditions, and requirements of the Contract Documents, and to assume towards the Contractor all the obligations and responsibilities which the Contractor, by the Contract Documents, assumes toward the Owner. The Contractor shall cause each Subcontractor to receive and review the provisions of the Contract Documents applicable to the Subcontractor, including but not limited to a copy of the Payment Bond for this Contract. Upon request of the Owner, the Contractor shall provide written proof satisfactory to the Owner that each Subcontractor has received and reviewed the provisions of the Contract Documents applicable to such Subcontractor, including but not limited to, a copy of the Payment Bond for this Contract.
- E. The Contractor shall ensure that each Subcontractor's duties to procure insurance for, and to defend, indemnify and hold harmless the Owner and Client, are, to the fullest extent permitted by law, at least the same as the Contractor's duties to procure insurance for, and to defend, indemnify and hold harmless the Owner and Client.
- F. To the fullest extent permitted by law and independent of any duty to indemnify and hold harmless, the Contractor shall require each Subcontractor, to the fullest extent permitted by law, to defend the Owner and Client against claims by third persons for wrongful death, bodily injuries and property damage, direct or consequential, loss or damage of any kind whatsoever arising out of or alleged to arise out of or as a result of or in connection with the performance of the Work, whether actually caused by or resulting from the performance of the Work, or out of or in connection with the Subcontractor's operations or presence at, or in the vicinity of, the Site.
- G. To the fullest extent permitted by law, the Contractor shall require each Subcontractor, to the fullest extent permitted by law, to indemnify and hold harmless the Owner and Client against claims by third persons for wrongful death, bodily injuries and property damage, direct or consequential, loss or damage of any kind whatsoever arising out of or alleged to arise out of or as a result of or in connection with the performance of the Work, whether actually caused by or resulting from the performance of the

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Work, or out of or in connection with the Subcontractor's operations or presence at, or in the vicinity of, the Site.

- H. The Contractor shall require each Subcontractor, in addition to the Subcontractor's other obligations, to pay the costs of the Owner and Client, including but not limited to, attorneys' and consultants' fees, expenses and court costs, to commence and prosecute a court action against the Subcontractor to enforce one or more of the Subcontractor's obligations under General Conditions Section 6.01 E, F or G or against an insurance company to obtain coverage under an insurance policy which the Subcontractor represented would provide coverage to the Owner or Client.
- I. Nothing contained in the Contract or any subcontract shall create any contractual relationship between any Subcontractor and the Owner except the requirements in General Conditions Sections 15.03 and 15.04 for each Subcontractor to procure insurance policies on which the Owner or the Owner and Client are insureds, the obligations of each Subcontractor pursuant to General Conditions Section 6.01 E, F and G to defend, indemnify and hold harmless, to the fullest extent permitted by law, the Owner and Client against claims by third persons for wrongful death, bodily injuries and property damage, direct or consequential, loss or damage of any kind whatsoever and the obligation of each Subcontractor pursuant to General Conditions Section 6.01 H

In selecting a Subcontractor, the Contractor shall consider whether the proposed Subcontractor appears on any list of entities debarred or suspended from doing business with a government entity, including the current list of companies or individuals that have been declared ineligible to receive Federal contracts published by the System for Award Management. The Contractor shall not Subcontract with any entity on the List of Employers Ineligible To Bid On Or Be Awarded Any Public Contract, published by the NYS Department of Labor Bureau of Public Work. The Contractor shall not Subcontract with any entity on the debarment list published by the NYS Workers' Compensation Board pursuant to Section 141-b of the NYS Workers' Compensation Law. The Contractor shall not Subcontract with any entity on the list of Non-Responsible Entities maintained by the NYS Office of General Services pursuant to Executive Order No. 192.

In selecting a Subcontractor, the Contractor shall also consider whether the proposed Subcontractor has legal authority to do business in New York State and possesses the integrity, experience, qualifications, and organizational and financial capacity to perform Work on the Project.

Prior to award of a Contract, the Contractor shall require any Subcontractor, with a subcontract value of two million dollars (\$2,000,000) or greater, to submit to the Owner a certified NYS Vendor Responsibility Questionnaire For Profit Construction (CCA-2) for review. At any time during the term of the Contract, the Owner may request, and the Contractor or Subcontractor shall provide, a NYS Vendor Responsibility Questionnaire For Profit Construction (CCA-2) for any other Subcontractor performing Work on the Project for review. Additionally, the Owner or Contractor may require a Subcontractor to update, recertify and resubmit a previously submitted NYS Vendor Responsibility Questionnaire For Profit Construction (CCA-2) to the Owner upon request. Refer to General Conditions Article 19 – Executive Order No. 125.

- J. Prior to or after award of the Contract, if requested by the Owner, the Contractor shall require a Subcontractor to submit a NYS Vendor Responsibility Questionnaire For Profit Construction (CCA-2) and a Dormitory Authority DASNY Vendor Questionnaire. If requested by the Owner, the Contractor shall require a Subcontractor to update a NYS Vendor Responsibility Questionnaire For Profit

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Construction (CCA-2) and a Dormitory Authority DASNY Vendor Questionnaire previously submitted to the Owner.

- K. The Contractor shall submit a NYS Vendor Responsibility Questionnaire For Profit Construction (CCA-2) and a Dormitory Authority DASNY Vendor Questionnaire to the Owner for each Subcontractor proposed for the Work with a subcontract value of two million dollars (\$2,000,000) or greater. Refer to General Conditions Article 19 – Executive Order No. 125.
- L. After execution of the Contract, the Owner will provide to the Contractor copies of the Owner's Code of Business Ethics Certification form. The Contractor is required to have each Subcontractor, at all tiers, complete the form prior to the Subcontractor beginning work. The completed forms are to be filed by the Contractor with the Owner. A failure to comply with this requirement may result in the Subcontractor(s) being removed from the Project Site.
- M. Compliance with General Municipal Law:
 - 1. New York General Municipal Law § 101 (5) requires each bidder on a public work contract, where the preparation of separate specifications is not required by New York General Municipal Law §101 (1), to submit with its bid a separate sealed list that names each subcontractor that the bidder will use to perform work on the contract, and the agreed-upon amount to be paid to each, for: (a) plumbing and gas fitting, (b) steam heating, hot water heating, ventilating and air conditioning apparatus and (c) electric wiring and standard illuminating fixtures. After the low bid is announced, the sealed list of subcontractors submitted with such low bid is opened and the names of such subcontractors is announced, and thereafter any change of subcontractor or agreed-upon amount to be paid to each shall require the approval of Owner, upon a showing presented to the public owner of legitimate construction need for such change, which shall be open to public inspection. Legitimate construction need shall be determined by the Owner in Owner's sole discretion. Any attempt by Contractor to use or manipulate this process to obtain lower bid amounts by subcontractors than those listed on the sealed bid may result in a finding of non-responsibility of the Contractor.
 - 2. On a project where the preparation of separate specifications is not required by New York General Municipal Law §101 (1), to the extent that Contractor seeks change of subcontractor or the agreed-upon amount to be paid to each for (a) plumbing and gas fitting, (b) steam heating, hot water heating, ventilating and air conditioning apparatus, or (c) electric wiring and standard illuminating fixtures, the Contractor acknowledges and agrees that it shall seek the approval of Owner as set forth in the General Municipal Law.

ARTICLE 7 -- CHANGES IN THE WORK

Section 7.01 - Changes

- A. Without invalidating the Contract, the Owner, in writing, may order changes in the Work by altering, adding to, or deducting from the Work of the Contract.
 - 1. No change in the Work is effective unless the Owner executes and delivers a Change Order to the Contractor. No payment for a change in the Work is due the Contractor unless and until a Change Order is executed and delivered by the Owner to the Contractor and the Contractor has performed the change in the Work. No alteration to the standard language of the Owner's Change Order

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form shall be accepted. If the Contractor requests an adjustment to the Substantial Completion date for a change in the Work and the Owner agrees, an increase or decrease to the duration, in calendar days, shall be included in the Change Order.

2. Notwithstanding subparagraph 1, the Owner, at its discretion, may execute and deliver to the Contractor a Notice to Proceed directing the Contractor to proceed immediately and diligently with the change in the Work described in the Notice to Proceed. The Owner, upon execution and delivery of the Notice to Proceed to the Contractor, is obligated to adjust the Contract for the change in the Work described in the Notice to Proceed; the extent of the adjustment(s) will be determined using the method of General Conditions Section 7.01 B specified in the Notice to Proceed, this General Conditions Article and negotiations with the Contractor; the adjustment(s) will be stated in the Change Order to be executed and delivered by the Owner to the Contractor. The Contractor, upon receipt of the Notice to Proceed, is obligated to proceed immediately and diligently with the change in the Work described in the Notice to Proceed while the adjustment(s) are determined. The Notice to Proceed shall be processed through the Project Management Program prior to execution and delivery by the Owner to the Contractor. No alteration to the standard language of the Owner's Notice to Proceed form shall be accepted. No payment for the change in the Work is due the Contractor until the Change Order is executed and delivered by the Owner to the Contractor and the Contractor has performed the change in the Work. The Owner determines the duration between execution and delivery of the Notice to Proceed and execution and delivery of the Change Order.
 3. Contractor's failure to proceed immediately and diligently with any Notice to Proceed or Change Order executed and delivered by the Owner to the Contractor, unless the Owner in writing directs otherwise, shall be a material breach of the Contract.
 4. If, after the Owner has executed and delivered a Notice to Proceed to the Contractor for a change in the Work, the Owner and the Contractor cannot agree on the adjustment(s) to the Contract for the change in the Work described in such Notice to Proceed, the Owner shall execute and deliver a Forced Change Order to the Contractor in an amount and with such other provisions that the Owner considers to be fair and reasonable for the change in the Work described in such Notice to Proceed and Forced Change Order. If the Contractor does not accept the Forced Change Order, the Contractor shall strictly comply with the requirements of General Conditions Section 7.01 D.
 5. No Change Order is executed by the Owner unless and until the Change Order is, reviewed and accepted by the Owner, and properly executed by an authorized representative of the Owner with appropriate approval authority in accordance with the Owner's internal procedures.
- B. The Contract amount may be increased or decreased only by a Change Order and the amount of the adjustment is determined by one or more of the following methods, as determined by the Owner:
1. By applying the applicable unit price or prices contained in the Contract Documents, or negotiated pursuant to the provisions of this General Conditions Article. Unit prices are limited to the quantities specified in the Contract Documents or prior Change Order. Unit prices for quantities greater than specified in the Contract Documents or prior Change Order may, in the Owner's sole and exclusive discretion, be subject to negotiations between the Owner and Contractor.
 2. By estimating the fair and reasonable cost of the change in the Work or deleted Work.
 3. By determining the actual cost of the change in the Work and considering the following:

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- a. Labor, including all wages and required wage supplements, paid to employees below the rank of superintendent directly employed at the Site for the change in the Work. Minimum wages are the prevailing rate of wages defined by the NYS Department of Labor. Actual wages in excess, paid by the Contractor, may be considered by the Owner.
 - b. Premiums or taxes paid by the Contractor for worker's compensation insurance, unemployment insurance, FICA tax and other payroll taxes as required by law, net of actual and anticipated refunds and rebates.
 - c. Materials associated with the change in the Work.
 - d. Equipment, excluding hand tools, which in the judgment of the Owner, would have been or will be employed in the Work. The Owner may employ the use of rental rates it deems most appropriate from the information in the "Equipment Watch Retail Rental and Equipment Watch Cost Recovery" databases. In no case will the equipment rental cost exceed the purchase price of the equipment. Self-owned equipment is defined to include equipment rented from Contractor-controlled or affiliated companies. It is the duty of the Contractor to utilize either rented or self-owned equipment that is of a nature and size appropriate for the Work to be performed. The Owner reserves the right to determine reasonable and appropriate equipment sizing, and at the Owner's discretion, it may adjust the costs allowed to reflect a smaller or less elaborate piece of equipment more suitable for performance of the change in the Work. The Owner, in its sole and exclusive discretion, will determine if equipment is rented from a company controlled by or affiliated with the Contractor.
 - e. To determine the daily and hourly rate of self-owned equipment, the monthly rate shall be divided by twenty-two (22) to establish a daily rate; or by one hundred and seventy-six (176) to establish the hourly rate. The operating cost listed in the "Equipment Watch Retail Rental and Equipment Watch Cost Recovery" databases would be added to this rate to establish the billable rate.
- C. For each change in the Work, the Contractor shall submit to the Owner, within the time period provided by the Owner, the following information:
1. A detailed proposal of labor, material, and equipment costs for the change in the Work. The Contractor and Subcontractors shall use the Owner's Contractor and Subcontractor Change Order Proposal Forms, which are available directly from the Owner or from the Dormitory Authority's website.
 2. The Contractor's and Subcontractor's proposal forms shall include the following signed statement, which shall be notarized if so requested by the Owner:

"I hereby certify that the value for the labor, material and equipment that comprise the proposal, represents the value of said work, material and equipment for the work performed or to be performed, pursuant to the Contract between the undersigned and the Dormitory Authority and that no overhead or profit is included in the proposal for a change to the Work performed by any Subcontractor or for any major equipment or material supplier that is a subsidiary or an affiliate of this firm."
 3. Signed Labor Rate Worksheet to determine hourly rates for each classification of worker associated with the change in the Work. The Contractor shall use the Owner's Labor Rate Worksheets, which are available directly from the Owner or from the Dormitory Authority's website.

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<http://www.dasny.org>. Only hourly rates for each classification of worker approved by the Owner can be used to determine the adjustment of the Contract amount for a Change Order. Only an authorized officer of Owner or authorized employee of Owner's Project Controls Unit can approve Labor Rate Worksheets.

4. Narrative and fragnet schedule, which describes the impact on the Project CPM schedule in calendar days associated with the change in the Work if the Contractor requests a change in the date to achieve Substantial Completion. Owner, in its sole and exclusive discretion, may waive, in writing, this requirement for requests to change the date to achieve Substantial Completion made prior to the Owner's approval of the initial Project CPM schedule. Owner's waiver of this requirement can be made only by an authorized officer of Owner or authorized employee of Owner's Project Controls Unit. If the Contractor does not submit a narrative and fragnet schedule, the Contractor acknowledges that the Change Order does not require a change in the date to achieve Substantial Completion.
 5. The Contractor agrees to provide, at the Owner's request, any additional documentation to further verify labor, material, equipment, and any other cost sought for a change in the Work.
 6. The Contractor agrees to provide, at the Owner's request, written justification for a change in the Work.
- D. Each Contractor's written change proposal shall be reviewed by the Owner consistent with the requirements of the Contract.
1. Owner and Contractor shall negotiate in good faith to agree on the adjustment(s) to the Contract for each change in the Work. The Owner is not required to respond to any change proposal submitted by the Contractor until the Contractor submits a change proposal that complies with the Contract Documents. Negotiations under this General Conditions Article shall not impact the Project schedule. The Contractor's proposal for a change in the Work is approved and accepted by the Owner only by the Owner's execution and delivery of a Change Order to the Contractor. See General Conditions Section 7.01 A. 5 for the requirements of execution and delivery.
 2. If the Owner has executed and delivered a Notice to Proceed to the Contractor for a change in the Work and the Owner and the Contractor cannot agree on the adjustment(s) to the Contract for the change in the Work described in such Notice to Proceed, the Owner shall execute and deliver a Forced Change Order to the Contractor in an amount and with such other provisions that the Owner considers to be fair and reasonable for the change in the Work described in such Notice to Proceed and Forced Change Order. If the Contractor does not accept the Forced Change Order, the Contractor shall file a notice of Claim in strict accordance with General Conditions Section 10.03 and comply strictly with all requirements of General Conditions Sections 10.03, 10.05 and 10.06. The Contractor's failure to comply with any or all of General Conditions Sections 10.03, 10.05 and 10.06 shall be deemed to be:
 - a. a conclusive and binding determination on the part of the Contractor to accept the Forced Change Order as final, binding and conclusive on the Contractor; and
 - b. a waiver by the Contractor of all Claims for additional compensation or damages as a result of the Forced Change Order.
- E. Any information representing the value of the Work performed, materials supplied and equipment utilized contained in the Contractor's and Subcontractor's proposals that constitutes False

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Representation may subject the Contractor or Subcontractor to criminal charges, including NYS Penal Law Sections 175.35 (Offering a False Instrument for Filing) and 210.40 (False Statement) and/or Title 18 U.S.C. Sections 1001 (Fraudulent and False Statements) and/or termination of the Contract for cause and civil prosecution under Article XIII of the NYS State Finance Law – the New York False Claims Act.

- F. The compensation specified in the Change Order executed by the Owner and delivered to the Contractor includes full compensation for the changes in the Work covered thereby, and the Contractor waives all rights to any other compensation, damages, or expenses for the changes in the Work described therein.
- G. The Contractor shall furnish satisfactory bills, certified payrolls, vouchers, and other cost documentation covering all items of cost and when requested by the Owner shall give the Owner access to all accounts and records relating thereto, including records of Subcontractors and material suppliers.
- H. At Substantial Completion, the Owner may address increased Project-specific bonding, liability insurance and builder's risk insurance costs which may have resulted from changes in the Work. The Contractor shall provide satisfactory proof of and paid invoices, including cancelled checks or bank statements showing payment, for such increased costs. The Owner will not pay overhead and profit on any increased costs for bonding, liability insurance or builder's risk insurance.
- I. General Conditions Section 10.01 applies when the Owner determines that a decision, response, direction, action, omission, or condition does not require performance of Extra Work.

Section 7.02 - Overhead and Profit

- A. See Example A for changes in the Work performed directly by the Contractor, whether a base cost is arrived at by estimated cost or actual cost method; add to base cost a sum equal to twenty percent. See Exceptions - Paragraphs "D" and "E".

Example A:

Contractor base cost	\$1,000
20% overhead and profit	<u>200</u>
Total	\$1,200

- B. See Example B for changes in the Work performed by a Subcontractor under contract with the Contractor, where estimated or actual cost is Ten Thousand Dollars (\$10,000.00) or less; add to the base cost a sum equal to twenty percent of cost, for the benefit of the Subcontractor. For the benefit of the Contractor; add an additional sum equal to ten percent of the Subcontractor's base cost.

Example B:

Subcontractor base cost	\$1,000
20% Subcontractor overhead and profit	<u>200</u>
Subcontractor Total	\$1,200
10% Contractor overhead and profit on base cost	<u>100</u>
Total	\$1,300

- C. See Example C for changes in the Work performed by a Subcontractor, under contract with the Contractor, which exceeds a base cost of Ten Thousand Dollars (\$10,000) in estimated or actual cost;

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add to the base cost a sum equal to twenty percent of cost for the benefit of the Subcontractor. For the benefit of the Contractor; add an additional sum equal to ten percent of the first Ten Thousand Dollars (\$10,000) of the Subcontractor's base cost, plus five percent of the next Ninety Thousand Dollars (\$90,000) of the Subcontractor's base cost, plus three percent of any sum in excess of One Hundred Thousand Dollars (\$100,000) of the Subcontractor's base cost.

Example C:

Subcontractor base cost	\$200,000
20% Subcontractor overhead and profit	<u>40,000</u>
Subcontractor Total	\$240,000
10% Contractor overhead and profit on first \$10,000 base cost	1,000
5% on next \$90,000 base cost	4,500
3% on base cost over \$100,000	<u>3,000</u>
Total	\$248,500

- D. See Example D for overhead and profit on major equipment such as: switchgear, transformers, air handling units, boilers, etc. For extra equipment purchases by the Contractor or Subcontractors which exceeds a base cost of Ten Thousand dollars (\$10,000) in estimated or actual cost; add to the base cost for the benefit of the Contractor a sum equal to ten percent of the first Ten Thousand dollars (\$10,000) of the vendor's base cost plus five percent of the next Ninety Thousand dollars (\$90,000) of the vendor's base cost, plus three percent of any sum in excess of One Hundred Thousand dollars (\$100,000) of the vendor's base cost. If the equipment is supplied by the Subcontractor, the Contractor is entitled to a maximum of ten (10) percent of the first Ten Thousand dollars (\$10,000) of the base cost.

Example D:

Vendor base cost	\$200,000
10% Contractor or Subcontractor overhead and profit on first \$10,000 base cost	1,000
5% on next \$90,000 base cost	4,500
3% on base cost over \$100,000	<u>3,000</u>
Contractor or Subcontractor Total	\$208,500
10% Contractor overhead and profit on first \$10,000 base cost when equipment is supplied by the Subcontractor, no other mark-up allowed	<u>1,000</u>
Total	\$209,500

- E. See Example E for overhead and profit on a material only Change Order. For increased material purchases by the Contractor or Subcontractors; add to the base cost for the benefit of the Contractor a sum equal to ten percent of the first Ten Thousand dollars (\$10,000) of the supplier's cost plus five percent of the next Ninety Thousand dollars (\$90,000) of the supplier's cost, plus three percent of any sum in excess of One Hundred Thousand dollars (\$100,000) of the supplier's cost. If the material is supplied by the Subcontractor, the Contractor is entitled to a maximum of ten (10) percent of the first Ten Thousand dollars (\$10,000) of the base cost.

Example E:

Material cost (net difference between original contract and revised)	\$200,000
10% Contractor or Subcontractor overhead and profit on first \$10,000 base cost	1,000
5% on next \$90,000 base cost	4,500
3% on base cost over \$100,000	<u>3,000</u>
Contractor or Subcontractor Total	\$208,500

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10% Contractor overhead and profit on first \$10,000 base cost when material is supplied by the Subcontractor, no other mark-up allowed	<u>1,000</u>
Total	\$209,500

- F. Other than the overhead and profit described in General Conditions Section 7.02A, no further overhead and profit will be allowed for changes to the Work performed by a Subcontractor under Subcontract with the Contractor or for major equipment or material supplier determined to be an affiliate of or controlled by the Contractor. An affiliate is considered any firm or entity in which the Contractor or any individual listed on the Contractor's NYS Vendor Responsibility Questionnaire either owns 5% or more of the shares of, or is one of the five largest shareholders, a director, officer, member, partner or proprietor of said Subcontractor, major equipment or material supplier; a controlled firm is any firm or entity which, in the opinion of the Owner, is controlled by the Contractor or any individual listed on the Contractor's NYS Vendor Responsibility Questionnaire.
1. The Owner, in its sole and exclusive discretion, will determine if a firm or entity is an affiliate of or controlled by the Contractor.
- G. No overhead and profit shall be paid for changes in the Work performed by a Subcontractor not under Subcontract with the Contractor. No overhead and profit shall be paid on the premium portion of overtime pay. Where the changes in the Work involve both an increase and a reduction in similar or related Work, the overhead and profit allowance shall be applied only to the cost of the increase that exceeds the cost of the reduction.
- H. The Owner, in its sole and exclusive discretion, shall require any Contractor or Subcontractor that is issued a Contract pursuant to pricing from a New York State Office (NYS) of General Services (OGS) Centralized Contract held by said Contractor or Subcontractor to provide an itemized change proposal as per the rates for non-trade service labor, equipment, and materials established within aforementioned NYS OGS Centralized Contract. Rates are considered inclusive of overhead and profit and no additional markup will be approved. All other provisions of Article 7 – Changes to the Work shall apply.

Section 7.03 - Deduct Change Order

The amount of credit to be allowed by the Contractor to the Owner for a deletion or change which results in a decrease in the Contract amount shall be as determined by the Owner. The credit shall include the overhead and profit allocable to the deleted or changed Work unless the Owner, in its sole and exclusive discretion, determines otherwise.

ARTICLE 8 -- PAYMENT

Section 8.01 - Provision for Payment

- A. The Contractor shall complete and submit to the Owner for review and written approval, the detailed Schedule of Values prior to the Contractor's first billing request. It is understood, and the Contractor acknowledges, that the Schedule of Values is an administrative tool to illustrate a format and minimum level of detail required for billing requests, and shall not be considered as delineating the Contractor's scope of Work. The Owner may require the Contractor to revise its Schedule of Values at no cost to the Owner and to provide a greater level of detail. Further, the Owner reserves the right to accept only those cost distributions which, in the Owner's opinion, are reasonable, equitably balanced and correspond to the estimated quantities in or for the Contract Documents. Owner's approval of the

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Schedule of Values can be provided only by an authorized officer of Owner or authorized employee of Owner's Project Controls Unit.

The Contractor, at its own expense, shall take all actions necessary to fully comply with the requirements of the Statewide Utilization Management Plan ("SUMP") of the NYS Contract System. Contractor shall require all Subcontractors to comply with the requirements of SUMP and the NYS Contract System. These requirements include, but are not limited to, the Contractor's timely payment to all Subcontractors and timely input in to the NYS Contract System of information, including but not limited to, information regarding Subcontractor payments and compliance with Contract requirements, including but not limited to Contract requirements for participation of Minority and Women Owned Business Enterprises in the performance of the Contract.

- B. The Owner shall not approve any billing request until:
 - 1. the Contractor is in full compliance with SUMP and the NYS Contract System; and
 - 2. the Owner provides approval of the Schedule of Values.
- C. To request a partial or full payment for partial or full performance of the Contract, Contractor shall obtain from the Owner a Contractor's billing request. The Contractor shall complete the billing request by entering in each line item thereof the percentage of completion of that item as of the end of the preceding business month or billing cycle and deliver the completed billing request to the Owner. The Owner shall review the billing request and make any changes which the Owner, in its sole and exclusive discretion, determines to be necessary so that the percentage of completion for each line item in the billing request accurately reflects the Contractor's performance of the Contract as of the end of the preceding business month. The Owner then delivers the Owner's adjusted version of the billing request to the Contractor for execution by the Contractor of the certifications of the Contractor required for partial or full payment for partial or full performance of the Contract. The Contractor delivers the executed billing request to the Owner. Any partial payment request under the Contract shall be at least thirty (30) calendar days after the preceding partial payment request under the Contract, unless the Owner in writing signed by an authorized officer permits more frequent requests.
- D. The Owner may make a partial payment to the Contractor for partial performance of the Contract on the basis of an Application for Payment for the Work performed during the preceding business month. The Owner shall retain five percent (5%) of the amount of each said Application for Payment. The Owner may make full payment to the Contractor for full performance of the Contract on the basis of an Application for Payment. Each Application for Payment shall be accompanied by all documentation required by law, including but not limited to, certified payrolls and all documentation required by the Owner, including but not limited to documentation to establish compliance with NYS Labor Law and NYS Lien Law. The Owner may require any documentation the Owner determines is necessary or useful to establish that the Contractor's performance of the Work complies with the requirements of the Contract and applicable law.
- E. Any partial payment made shall not be construed as a waiver of the right of the Owner to require the fulfillment of all the terms of the Contract. No payment, either partial or full, by the Owner to the Contractor shall waive or excuse any failure by the Contractor to comply fully with the Contract Documents. No payment will be made for Work not performed.
- F. In preparing the Contractor's billing request, material delivered to the Site and properly stored and secured at the Site and material approved to be stored off-site under such conditions as the Owner shall

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prescribe in accordance with paragraph G of this General Conditions Section 8.01, may be taken into consideration. All costs related to the storage of materials are the sole responsibility of the Contractor.

- G. The Owner will provide an agreement for materials stored off-site and specific forms that the Contractor shall complete, execute, and submit with any billing request for such material. Required information includes, but is not limited to: a general description of the material; a detailed list of the materials; a pre-approved storage area; segregation and identification of the material; insurance covering full value against all risks of loss or damage, with non-cancellation provision; immediate replacement agreement in event of loss or damage; agreement to pay the expense of all inspections of the material; ownership provisions; delivery guarantee; project completion statement; bill of sale, releases of liens, and inventory. The Owner, in its sole and exclusive discretion, may require the Contractor to certify in the agreement for materials stored off-site that the materials comply with one or more requirements of the Contract or to provide documentary proof acceptable to the Owner that the materials comply with one or more requirements of the Contract.
- H. All monthly billing requests submitted by the Contractor shall only be in the form and manner approved by the Owner. The Contractor shall furnish such affidavits, vouchers, receipts, and other documentation as to delivery and payment for materials, payment of Subcontractors, and payment of prevailing rate of wage and supplements required by NYS Labor Law as the Owner requires to substantiate each and every billing request. Contractor shall furnish any other documentation required by Owner to establish compliance with one or more requirements of the Contract or any statute or regulation, including but not limited to the certification required by General Conditions Section 16.02 and proof of compliance with NYS Labor Law Section 220-h (See General Conditions Section 16.03 H).
- I. All payments received by the Contractor under or in connection with the Contract are trust funds under Article 3-A of the NYS Lien Law and shall be applied by the Contractor in accordance with such law.

Section 8.02 - Substantial Completion and Reduction of Retainage

- A. After the Owner has determined Substantial Completion of the Work, as evidenced by the executed Notice of Substantial Completion, the Owner shall pay to the Contractor the balance due the Contractor pursuant to the Contract less:
 - 1. Two (2) times the value of any remaining items of Work to be completed or corrected as determined in accordance with paragraph B. of this General Conditions Section 8.02.
 - 2. An amount necessary to satisfy any and all claims, liens, or judgments by the Owner or third parties against the Contractor.
- B. After the Owner has determined Substantial Completion of the Work, as evidenced by the executed Notice of Substantial Completion, the Contractor shall submit to the Owner, for Owner's written approval, a detailed estimate of the value of the known remaining items of Work as set forth by the Owner and a schedule for achieving Physical Completion and Contract Completion and Acceptance of the Work. The Owner shall review that estimate and schedule and:
 - 1. Direct the Contractor to revise and resubmit the estimate, the schedule or both; or
 - 2. Approve the estimate and schedule.

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The Owner, at its discretion, may value the items of Work to be completed or corrected assuming such items will be completed or corrected by an entity other than the Contractor and may include the cost of obtaining regulatory or other third-party approval of one or more items of Work.

- C. As the remaining items of Work are completed and accepted by the Owner, the Owner shall pay the appropriate amount pursuant to a duly completed and submitted Application for Payment.
- D. The list of remaining Work items may be expanded to include additional items of corrective or completion Work until Contract Completion and Acceptance by the Owner. Appropriate payments may be withheld to cover the value of these items pursuant to this General Conditions Section 8.02.
- E. The Contractor may request from the Owner a reduction of retainage when a phase of the Work is accepted by the Owner but Owner is not obligated to grant such request.
- F. The Application for Payment for the first payment of reduction of retainage shall be accompanied by a release, by the Contractor to the Owner, in the form set forth at Exhibit "A" to the General Conditions for Construction. As set forth in such release, any Claims not specifically excepted and reserved by the Contractor per the release form will be released and forever discharged. Owner's acceptance of a release containing Claims specified by and reserved to the Contractor does not waive any rights of the Owner arising under the Contract or any other source with respect to such Claims. By executing this Contract, Contractor acknowledges and agrees that it has reviewed the release in the form set forth at Exhibit "[X]" to the Contract Documents. Submission of the duly completed release set forth at Exhibit "[X]" to the Contract Documents along with the Application for Payment for the first payment of reduction of retainage is a condition precedent to the release of any retainage by the Owner. The requirement of a release may be waived only in writing and only by the Owner's Office of Counsel. No payment, final or otherwise, shall operate to release the Contractor or the Contractor's sureties from any obligations under this Contract or the Performance or Payment bonds.

Section 8.03 - Release and Consent of Surety

Notwithstanding any other provision of the Contract Documents to the contrary, reduction of retainage and/or the final Application for Payment shall not become due until the Contractor submits to the Owner a General Release from the Contractor and, if the Owner requests, a Consent of Surety to said payment in form and content acceptable to the Owner. No payment, final or otherwise, shall operate to release the Contractor or the Contractor's sureties from any obligations under this Contract or the Performance or Payment bonds.

Section 8.04 - Liens

- A. Upon the Owner's receipt of a notice of public improvement lien, all, or a portion, of the amounts due in the current and subsequent payments due the Contractor shall be withheld until a sum which shall be one and one-half (1 1/2) times the amount stated to be due in the notice of public improvement lien shall have been withheld from payments due the Contractor. This sum shall be withheld until the lien is discharged. The Contractor shall promptly discharge any notice of public improvement lien by filing a bond pursuant to NYS Lien Law Section 21, subdivision 5. If any Subcontractor should file a notice of lien against the property upon which the Project is located, such lien is void and Contractor, at its expense shall obtain and file an order of the Supreme Court of the State of New York cancelling such lien. If Contractor shall fail to obtain such order or if Contractor shall file a notice of lien against the property upon which the Project is located, the Owner may obtain an order of the Supreme Court of the

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State of New York cancelling such lien and deduct the attorney's fees and other costs incurred in obtaining and filing such order from any amount due the Contractor.

- B. Upon receipt of any other lien, levy, notice to withhold, restraining notice, court or administrative order or any other instrument allowed by law and directing the Owner to withhold payments due Contractor, the Owner will withhold the sum which Owner determines is necessary to withhold to comply with the applicable law. This sum shall be withheld until the instrument is, in the Owner's sole and exclusive discretion, appropriately satisfied or discharged.

Section 8.05 - Withholding of Payments

- A. The Owner may withhold from the Contractor any part of any payment as may, in the judgment of the Owner, be necessary:
 - 1. To ensure payment of just claims of any natural person or entity supplying labor, materials, or equipment for the Work.
 - 2. To protect the Owner from loss due to defective Work not remedied.
 - 3. To protect the Owner, Client, or any Consultant from loss due to failure to defend, loss due to injury to persons or damage to the Work or property of Other Contractors, Subcontractors or others caused by the act or neglect of the Contractor or Subcontractors.
 - 4. To ensure payment of fines and penalties, that may be imposed on the Contractor pursuant to the provisions of the Contract.
 - 5. To ensure payment of fines, penalties, or damages that may be imposed on the Contractor pursuant to General Conditions Article 20 - Opportunity Programs.
 - 6. To protect and make whole the Owner from a Contractor's non-compliance to the requirements set forth in General Conditions Article 14 – Protection of Persons and Property and Article 15 – Insurance and Bonds.
 - 7. To protect the Owner and Client from damage caused or claimed to have been caused directly or indirectly by the failure of the Contractor to perform the Work of the Contract in strict accordance with the Contract Documents.
- B. The Owner shall have the right to apply any such amounts so withheld in such a manner as the Owner may deem proper to satisfy said claims, fines, and penalties, or to secure said protection. Said application of the money shall be deemed payments for the account of the Contractor.

Section 8.06 - Late Payment

Timeliness of payment and any interest to be paid to the Contractor for late payment is governed by Section 2880 of the NYS Public Authorities Law. Timely payment by the Contractor to the Subcontractor is governed by Section 139-f of the NYS State Finance Law which requires payment by the Contractor to the Subcontractor within seven (7) calendar days of receipt of payment from the Owner.

Section 8.07 – False Representations/Information

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- A. False Representations, information, or data submitted on or with Applications for Payment may result in one or more of the following actions:
 - 1. Termination of the Contract for cause;
 - 2. Disapproval of future bids or contracts or subcontracts;
 - 3. Withholding of final payment on the Contract; and
 - 4. Civil and/or criminal prosecution (See General Conditions Sections 7.01 E and 10.03 F).
- B. The provisions of this General Conditions Section 8.07 are solely for the benefit of the Owner, and any action or non-action hereunder by the Owner shall not give rise to any liability on the part of the Owner.

ARTICLE 9 -- TIME OF COMPLETION

Section 9.01 - Substantial Completion

- A. The Contractor shall commence performance of the Work at the time stated in the Notice to Proceed and the Contractor shall achieve Substantial Completion no later than the date for Substantial Completion specified in the Contract. Notwithstanding anything to the contrary, a schedule submitted by the Contractor showing Substantial Completion earlier than that specified in the Contract shall not entitle the Contractor to any additional cost in the event the earlier date is or is not realized unless agreed to by the Owner.
- B. It is hereby understood and mutually agreed, by and between the Contractor and the Owner, that Substantial Completion of the Work on or before the date for Substantial Completion specified in the Contract, is an essential condition of the Contract.
- C. The Contractor agrees that the Work shall be prosecuted regularly, diligently, and cooperatively with Other Contractors at such rate of progress as shall ensure Substantial Completion thereof within the time specified. It is expressly understood and agreed, by and between the Contractor and the Owner, that the time to achieve Substantial Completion allowed herein is reasonable.
- D. It is further agreed that time is of the essence for each and every portion of the Work. In any instance in which additional time is allowed for Substantial Completion of the Work, the new date of Substantial Completion established by said extension shall be of the essence. The Contractor shall not be charged with liquidated damages or any excess cost of the Owner or Client if the Owner determines in its sole and exclusive discretion that the Contractor is without fault and that the delay in Substantial Completion of the Work is due:
 - 1. To any preference, priority or allocation order duly issued by the Government of the United States or the State of New York.
 - 2. To an unforeseeable cause beyond the control and without the fault of, or negligence of the Contractor, and approved by the Owner, including, but not limited to, acts of God or of public enemy, acts of the Owner, fires, epidemics, pandemics, quarantine, restrictions, strikes, freight embargoes and unusually severe weather.
 - 3. To any delays of Subcontractors or suppliers occasioned by any of the causes specified in Subsections 1 and 2 of this paragraph provided the Contractor shall, within fifteen (15) calendar

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days from the beginning of any such delay, notify the Owner in writing of the causes of the delay. Notice shall be delivered to the Owner as specified in General Conditions Section 10.03 C.

- E. The date of Substantial Completion may be modified only by a Change Order.
- F. If the Contractor shall neglect, fail, or refuse to achieve Substantial Completion by the date specified, or any proper extension thereof granted by the Owner, the Contractor agrees to pay to the Owner for loss of beneficial use of the Work of the Contract an amount specified in the Contract, not as a penalty, but as liquidated damages, for each and every calendar day thereafter that the Contractor does not achieve Substantial Completion.
- G. If the Contractor shall abandon performance of the Work before achieving Substantial Completion, the Contractor agrees to pay to the Owner for loss of beneficial use of the Work of the Contract an amount specified in the Contract, not as a penalty, but as liquidated damages, for each and every calendar day after both the date of abandonment and the date specified for Substantial Completion that the Work has not achieved Substantial Completion. The obligation of the Contractor to pay liquidated damages as provided in this paragraph shall survive the termination of the Contract pursuant to General Conditions Section 11.01.
- H. If the Owner terminates the Contract before the Contractor achieves Substantial Completion, the Contractor agrees to pay to the Owner for loss of beneficial use of the Work of the Contract an amount specified in the Contract, not as a penalty, but as liquidated damages, for each and every calendar day after both the date of termination of the Contract and the date specified for Substantial Completion that the Work has not achieved Substantial Completion. The obligation of the Contractor to pay liquidated damages as provided in this paragraph shall survive the termination of the Contract pursuant to General Conditions Section 11.01.
- I. Said amount of liquidated damages is agreed upon by and between the Contractor and the Owner because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages which the Owner would sustain for loss of beneficial use of the Work of the Contract in the event of delay in Substantial Completion, abandonment of the Work by the Contractor or termination of the Contract pursuant to General Conditions Section 11.01, and said amount is agreed to be the amount of damages sustained by the Owner and said amount may be retained from time to time by the Owner.
- J. The foregoing liquidated damages are intended to compensate the Owner only for the loss of beneficial use of the Work of the Contract. In addition, the Contractor shall be liable to the Owner and the Client, to the fullest extent permitted by law, for whatever actual damages (other than actual loss of beneficial use) the Owner or Client may incur as a result of any actions or inactions of the Contractor or its Subcontractors including, without limitation, interest expense and carrying costs, liabilities to Other Contractors working on the Project or other third parties, job extension costs, and other losses incurred by the Owner or Client. The provisions of this paragraph are for the exclusive use of the Owner and Client, and shall not accrue to Other Contractors or other third parties.
- K. The Owner will issue the Notice of Substantial Completion after the Owner, in its sole and exclusive discretion, has determined that Substantial Completion of the Work has occurred.

Section 9.02 – Physical Completion and Contract Completion and Acceptance

- A. After the Owner has issued the Notice of Substantial Completion, the Contractor shall comply with General Conditions Section 8.02 B. Compliance with General Conditions Section 8.02 B is a condition precedent to the payment described in General Conditions Section 8.02 A. Once the Owner approves

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the detailed estimate of the value of the known remaining items of Work and the schedule for achieving Physical Completion and Contract Completion and Acceptance, the Contractor shall achieve Physical Completion and Contract Completion and Acceptance no later than the dates for each in the approved schedule. The Owner and Contractor agree that achieving Physical Completion and Contract Completion and Acceptance no later than the dates for each in the approved schedule is an essential condition of the Contract and that time is of the essence.

- B. The Contractor agrees that after achieving Substantial Completion, Contractor shall continue to prosecute the remaining items of Work regularly, diligently, and cooperatively with Other Contractors. Contractor further agrees that once the schedule for achieving Physical Completion and Contract Completion and Acceptance is approved, the Contractor shall prosecute the remaining items of Work regularly, diligently, and cooperatively with Other Contractors at such a rate of progress as shall ensure the achieving of Physical Completion and Contract Completion and Acceptance by the dates for each in the approved schedule.
- C. The list of remaining Work items may be expanded to include additional items of corrective or completion Work until Contract Completion and Acceptance by the Owner. Appropriate payments may be withheld to cover the value of these items pursuant to General Conditions Section 8.02.
- D. The Owner will issue the Notice of Physical Completion after the Owner, in its sole and exclusive discretion, has determined that Physical Completion of the Work has occurred.
- E. The Owner will issue the Notice of Contract Completion and Acceptance after the Owner, in its sole and exclusive discretion, has determined that Contract Completion and Acceptance of the Work has occurred. Contract Completion and Acceptance follows or may be concurrent with Physical Completion.

ARTICLE 10 -- CLAIMS AND DISPUTES

Section 10.01 - Claim for Extra Work

A. If the Contractor claims that:

- 1. a decision of, or direction or response to the Contractor by, the Owner, Consultant, or Owner Representative;
- 2. a condition; or
- 3. any action or omission of the Owner;

is contrary to the terms and provisions of the Contract and will require the Contractor to perform Extra Work, Contractor shall file a written notice of Claim in strict accordance with General Conditions Section 10.03. No Claim for Extra Work shall be allowed unless the Contractor files a written notice of Claim that complies strictly with the requirements of General Conditions Sections 10.01 and 10.03. The notice of Claim shall identify the decision, direction, response, action, omission, or condition from which the Claim arises. The Contractor shall also strictly comply with all other requirements of General Conditions Sections 10.01 and 10.03.

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- B. If the Owner determines the decision, response, direction, action, omission, or condition does not require the performance of Extra Work, the Owner shall issue a Disputed Work Directive. The Contractor, upon receipt of the Disputed Work Directive shall immediately and diligently proceed with the Work described in the Disputed Work Directive in accordance with all instructions of the Owner. Contractor's failure to proceed immediately and diligently with any Disputed Work Directive issued by the Owner, unless the Owner in writing directs otherwise, shall be a material breach of the Contract. Contractor's performance of the Work described in and pursuant to the Disputed Work Directive shall not be a waiver of the Contractor's Claim for Extra Work provided the Contractor strictly complies with all requirements of General Conditions Sections 10.01 and 10.03. The Owner may issue a Disputed Work Directive for a decision, response, direction, action, omission, or condition before the Contractor files a notice of Claim arising from such decision, response, direction, action, omission, or condition; if the Owner does so, the Contractor shall still file a notice of Claim in strict compliance with General Conditions Section 10.03 and shall strictly comply with all requirements of General Conditions Sections 10.01 and 10.03.
- C. The Contractor's failure to comply strictly with any or all parts of General Conditions Sections 10.01 and 10.03 shall be deemed to be:
 - 1. a conclusive and binding determination on the part of the Contractor that the decision, response, direction, action, omission, or condition does not involve Extra Work; and
 - 2. a waiver by the Contractor of all Claims for additional compensation or damages as a result of the decision, response, direction, action, omission, or condition.

Section 10.02 - Claim for Additional Cost

- A. If the Contractor wishes to make a Claim for an increase in the cost to perform the Work, including but not limited to a Claim alleging breach of the Contract by Owner, the Contractor shall file a written notice of Claim strictly in accordance with General Conditions Section 10.03. The notice of Claim shall identify the condition or event from which the Claim arises. No Claim for an increase in the cost to perform the Work of the Contract shall be allowed unless the Contractor files a notice of Claim that complies strictly with the requirements of General Conditions Section 10.02 and 10.03. Contractor shall also strictly comply with all other requirements of General Conditions Sections 10.02 and 10.03. The Owner shall determine the validity of the Contractor's contention. Pending the decision of the Owner, the Contractor shall proceed with the diligent and prompt performance of the Work. Denial of additional costs shall not entitle the Contractor to additional time to achieve Substantial Completion. Nothing in this paragraph waives any of Owner's rights under the Contract.
- B. The Contractor's failure to comply strictly with any or all parts of General Conditions Sections 10.02 and 10.03 shall be deemed to be:
 - 1. a conclusive and binding determination on the part of the Contractor that the event or condition does not increase the cost to perform the Work of the Contract; and
 - 2. a waiver by the Contractor of all Claims for additional compensation or damages as a result of the event or condition.

Section 10.03 - Notice of Claim and Substantiation

- A. A written notice of Claim shall be delivered concurrently to the Owner's Representative and Project Controls Unit by the Contractor within fifteen (15) calendar days after occurrence of the event, decision,

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direction, response, action, or omission giving rise to such Claim or within fifteen (15) calendar days after the Contractor first recognizes the condition giving rise to the Claim, whichever is earlier. The burden of proving the Owner's receipt of the notice of Claim shall be the Contractor's responsibility. Contractor's failure to comply with the requirements of this Section 10.03 shall constitute a waiver of its Claim.

- B. Within ninety (90) calendar days of the initial notice of Claim, the Contractor shall substantiate the Claim in writing and document the nature of the Claim and provide supporting cost data and documentation, Contractor's original cost estimate, Project CPM schedule demonstrating alleged impact of and correlation to the Claim subject matter and a Contractor affidavit stating the following:

"I hereby certify that the value assigned the work, labor, material and equipment that comprise the Claim, represents the actual value of said work, labor, material and equipment pursuant to the Contract between the undersigned and the Dormitory Authority."

1. The Contractor shall provide, every thirty (30) calendar days thereafter for as long as such damages are incurred, written, verified statements of the details and the amounts of such damages, together with documentary evidence of such damages.
2. Contractor shall identify the final written, verified statement for each Claim submitted pursuant to this paragraph.
3. Each written, verified statement shall be delivered as set forth in paragraph C of this General Conditions Section 10.03.

- C. The Contractor shall provide the Owner's Representative one (1) electronic copy of the documented Claim and mail two (2) paper copies of the documented Claim to:

Dormitory Authority
Project Controls Unit
515 Broadway
Albany, NY 12207-2964

- D. The Owner, at any time after the Contractor files a notice of Claim, may request additional documentation to determine the validity of the Contractor's contention and the Contractor shall submit such additional documentation within the time period specified by the Owner in the Owner's request for additional documentation. The Owner, at any time after the Contractor files a notice of Claim, may request an updated and reconciled electronic copy of the documented Claim and the Contractor shall submit such a copy within ten calendar days.
- E. The value of any Claim, if allowed, shall be determined by the methods described in General Conditions Article 7 – Changes in the Work. No Claim shall be allowed unless and until a Change Order allowing the Claim is executed and delivered by the Owner to the Contractor; payment of an allowed Claim may be made only through an Application for Payment.
- F. Any information representing the actual value of the labor performed, equipment utilized and material Furnished contained in the Claim that constitutes False Representation may subject the Contractor or

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Subcontractor to criminal charges, including NYS Penal Law Sections 175.35 (Offering a False Instrument for Filing) and 210.40 (False Statement) and/or Title 18 U.S.C. Sections 1001 (Fraudulent and False Statements) and/or termination of the Contract for cause and civil prosecution under Article XIII of the NYS State Finance Law – the New York False Claims Act.

Section 10.04 - No Damages for Delay

- A. No Claims for increased costs, charges, expenses, or damages of any kind shall be made by the Contractor against the Owner for any delays or hindrances from any cause whatsoever; provided that the Owner, in the Owner's sole and exclusive discretion, may compensate the Contractor for any said delays or hindrances by extending the date for achieving Substantial Completion specified in the Contract. No payment for increased cost, charge, expense, or damage of any kind shall act as a waiver of the Owner's right, in its sole and exclusive discretion, to compensate the Contractor for any delays or hindrances from any cause whatsoever solely by extending the date for achieving Substantial Completion specified in the Contract.
- B. If the Contractor claims that a delay or hindrance entitles the Contractor to additional time to achieve Substantial Completion, the Contractor shall submit a written request to the Owner for such additional time within fifteen (15) calendar days of the event or condition giving rise to the request. The written request shall identify the event or condition causing the alleged delay or hindrance giving rise to the request and show that the Contractor is not responsible for the delay or hindrance or for any concurrent delay. The Contractor shall submit with the request an updated Project CPM schedule that shows the impact of the event or condition on the Project CPM schedule. The request and updated Project CPM schedule shall be submitted to the Owner in accordance with General Conditions Section 10.03 C. The Owner may request additional documentation to decide the Contractor's request and the Contractor shall submit such additional documentation within the time period specified by Owner in the Owner's request for additional documentation. Failure of the Owner to respond in writing to a written request for additional time within thirty (30) calendar days shall be deemed a denial of the request unless the Owner extends the period to respond to the written request for additional time by written notice to the Contractor. While the Owner is considering the Contractor's request, the Contractor shall proceed with the diligent and prompt performance of the Work. Denial of additional time shall not entitle the Contractor to additional costs.
- C. The Contractor's failure to comply strictly with any or all parts of General Conditions Sections 10.03 and 10.04 shall be deemed to be:
 - 1. a conclusive and binding determination on the part of the Contractor that the event or condition causing the alleged delay or hindrance does not require additional time to achieve Substantial Completion; and
 - 2. a waiver by the Contractor of all Claims for additional time to achieve Substantial Completion as a result of the event or condition causing alleged delay or hindrance.

Section 10.05 - Continuance of the Work

Unless the Owner, in writing, permits otherwise, the Contractor shall proceed diligently and promptly with the performance of the Work while the Owner considers a notice of Claim filed pursuant to:

- A. General Conditions Sections 7.01D and 10.03;
- B. General Conditions Sections 10.01 and 10.03; or

C. General Conditions Sections 10.02 and 10.03;

or while the Owner considers a request for additional time to achieve Substantial Completion filed pursuant to General Conditions Sections 10.03 and 10.04 or while the Owner considers any other Claim.

Section 10.06 - Resolution of Claim

- A. Any resolution or determination by the Owner of a Claim or a request for additional time to achieve Substantial Completion shall be final, binding and conclusive on the Contractor unless within fifteen (15) calendar days after receiving notice of the Owner's resolution, the Contractor files a written notice with the Owner that the Contractor reserves the Contractor's rights under the Contract in connection with the matters covered by said resolution or determination. The written notice shall be filed in strict accordance with General Conditions Sections 10.03 C and 10.06. The Contractor's failure to comply strictly with these requirements shall be deemed to be a waiver by the Contractor of all Claims for additional compensation or damages included in the Claim and the request for additional time to achieve Substantial Completion.
- B. After any resolution or determination by the Owner of a Claim or a request for additional time to achieve Substantial Completion, the Contractor shall proceed diligently and promptly with the performance of the Work whether the Contractor files a written notice with the Owner that the Contractor reserves the Contractor's rights under the Contract in connection with the matters covered by said resolution or determination or the Contractor does not file such a written notice. Nothing in this paragraph waives any of the Owner's rights under the Contract.
- C. Contractor shall file no action or proceeding in a court challenging any resolution or determination by the Owner of a Claim or a request for additional time to achieve Substantial Completion unless the Contractor shall have strictly complied with all the requirements relating to the giving of notice and of information with respect to such Claim or request for additional time to achieve Substantial Completion in this General Conditions Article 10. Nothing in this paragraph waives any of Owner's rights under the Contract.
- D. Contractor shall file no action or proceeding in court challenging any resolution or determination by the Owner of a Claim or a request for additional time to achieve Substantial Completion until Contractor has achieved Physical Completion of the Work. Contractor agrees that any court action or proceeding challenging any resolution or determination by the Owner of a Claim or a request for additional time to achieve Substantial Completion filed before Contractor has achieved Physical Completion of the Work is premature. Nothing in this paragraph waives any of Owner's rights under the Contract. The Owner, in its sole and exclusive discretion, may modify this paragraph by a Contract Amendment.
- E. At its sole and exclusive discretion, the Owner may resolve any Claim or a request for additional time to achieve Substantial Completion without waiving its rights under the Contract.

ARTICLE 11 – TERMINATION OR SUSPENSION

Section 11.01 – Termination for Cause

- A. In the event that any provision of the Contract is violated by the Contractor or by any Subcontractor, the Owner may serve written notice upon the Contractor and upon the Contractor's surety, if any, of the Owner's intention to declare a Contractor Default (defined in the Performance Bond) and terminate the Contract. Such notice shall contain the reasons for the intention to declare a Contractor Default and

terminate the Contract. The Contractor will be allowed an opportunity to show why the Owner should not declare a Contractor Default and why the Contractor's Contract should not be terminated for cause. If the violation shall not cease or arrangements satisfactory to the Owner are not made, the Owner, in writing, may declare a Contractor Default and the Contract shall terminate upon the date specified by the Owner in the declaration of Contractor Default. The Owner shall send the Contractor and the Contractor's surety, if any, written notice of and a copy of the declaration of Contractor Default and termination of the Contract. In the event of a declaration of Contractor Default and termination of the Contract, the Owner has the remedies set forth in the Performance Bond, the Contract, and all remedies at law or in equity.

- B. In the event of any such termination, the Owner may take over the Work and prosecute the Contract to completion and take possession of and may utilize such materials, appliances, and equipment on the Site and necessary or useful in completing the Work. The Contractor and Contractor's surety shall be liable to the Owner for all costs incurred by the Owner.
- C. In the event the termination for cause is determined to be improper, the termination shall be deemed a termination pursuant to General Conditions Section 11.02 – Termination for Convenience of Owner.

Section 11.02 - Termination for Convenience of Owner

- A. The Owner, at any time, may terminate the Contract in whole or in part. Any such termination shall be effected by delivering to the Contractor a written notice of termination specifying the extent to which performance of Work under the Contract is terminated and the date upon which the termination becomes effective. Upon receipt of the notice of termination, the Contractor shall act promptly to minimize the expenses resulting from the termination.
- B. The Owner shall pay the Contractor for Work of the Contract performed by the Contractor and accepted by the Owner for the period extending from the end of the period covered by the last approved Application for Payment up to the effective date of the termination, an amount determined in accordance with General Conditions Article 7 – Changes in the Work. In no event shall the Contractor be entitled to compensation in excess of the total consideration of the Contract. In no event shall Contractor be entitled to overhead or profit on the Work not performed.
- C. In the event of such termination the Owner may take over the Work and prosecute the Contract to completion and may take possession of and may utilize such materials, appliances, and equipment on the Site and necessary or useful in completing the Work.

Section 11.03 - Owner's Right to do Work

The Owner at any time may notify the Contractor that the Owner will have the Work of the Contract or any part thereof, performed by others, without terminating the Contract and without prejudice to any other right the Owner may have. The Owner may recover any and all costs related to such Work and deduct the value of such Work from the Contract amount. In the event the total costs related to such Work performed by others, or other costs associated with compliance with the Contract Documents, exceeds the available funds remaining in the Contract, the Owner shall have the right to recover said funds from the Contractor.

Section 11.04 - Suspension of Work

- A. Should the Owner determine that conditions exist such that it becomes necessary to suspend performance of all or any part of the Work, the Owner, at its sole discretion, shall issue to the Contractor a Suspend Work Order. Upon receipt of the order, the Contractor shall immediately comply with its

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terms and take reasonable steps to protect the Work covered by the order during the period of work suspension. The order shall contain the reason or reasons for suspension which may include, but is not limited to, latent field conditions, substantial program revisions, acquisition of rights of way or real property, financial crisis, labor disputes, civil unrest, expired insurance, court order, public health emergency or acts of God.

- B. Upon receipt of a Suspend Work Order, the Contractor shall, as soon as practicable, cease performance of the Work as ordered and take immediate affirmative measures to protect such Work from loss or damage.
- C. The Contractor specifically agrees that such suspension of the Work shall not increase the cost of the Work. However, to the extent that the suspension of the Work is through no fault of the Contractor, the Owner may consider requests for compensation provided that the Contractor complies with General Conditions Article 10 – Claims and Disputes.
- D. The date of Substantial Completion of the Work may be extended by Change Order to compensate the Contractor for the time lost by the suspension.
- E. The Owner may terminate the Suspend Work Order by a written direction to the Contractor or through the issuance of a Resume Work Order, or may invoke any other provision of General Conditions Article 11 – Termination or Suspension.

Section 11.05 – Stoppage of Work

- A. Should the Contractor fail to comply with the terms of the Contract, including but not limited to the insurance requirements of the Contract, the Owner may at any time, in its sole discretion, issue a Stop Work Order requiring the Contractor to stop all or any part of the Work. Upon receipt of the order, the Contractor shall immediately comply with its terms and take reasonable steps to protect the Work covered by the order during the period of work stoppage. The Owner, at its option, shall either:
 - 1. Cancel the Stop Work Order after the Contractor has successfully remedied the cause of the Stop Work Order; or
 - 2. Invoke any other provision of General Conditions Article 11 – Termination or Suspension.
- B. The Contractor shall not be entitled to an increase in time or costs as a result of the Stop Work Order. Owner may, in its sole discretion, consider requests for an increase in time or costs provided that the Contractor complies with General Conditions Article 10 – Claims and Disputes.

ARTICLE 12 -- BENEFICIAL OCCUPANCY

Section 12.01 - Occupancy Prior to Substantial Completion

- A. If, before Substantial Completion, the Owner desires Beneficial Occupancy of any part of the Work, the Owner shall have the right to do so, and the Contractor shall in no way interfere with or object to Beneficial Occupancy. Payment for operational costs of Project systems for the part of the Work subject to Beneficial Occupancy from the time of Beneficial Occupancy to Substantial Completion shall be borne by the Owner, unless otherwise specified by the Contract.
- B. Said Beneficial Occupancy (1) shall not constitute acceptance of space, systems, materials, or elements of the Work and (2) shall not affect the obligations of the Contractor for Work which is not in

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accordance with the requirements of the Contract or other obligations of the Contractor under the Contract.

The Contractor shall continue the performance of the Work in a manner that shall not unreasonably interfere with said use, occupancy, and operation by the Owner.

ARTICLE 13 -- INSPECTION

Section 13.01 - Access to the Work

The Owner shall at all times have access to the Work and the Contractor shall provide proper facilities for access. If the Contractor schedules or performs any Work on a day or at a time which results in a Dormitory Authority employee assigned to the Project receiving overtime compensation or an additional charge to the Dormitory Authority from an Other Contractor for such Work, the Dormitory Authority, in its sole and exclusive discretion, may deduct such overtime compensation and such additional charge from moneys due the Contractor. If the Contractor intends to schedule any Work, including but not limited to any testing or inspection, outside the regular operating hours for the Project, the Contractor must provide the Owner and any Other Contractor involved in such Work at least fifteen (15) calendar days written notice of the scheduled date for such Work. The Owner, in its sole and exclusive discretion, may reduce the required number of days of notice for one or more occasions by written notice to the Contractor and to any involved Other Contractors.

Section 13.02 - Notice for Testing and Inspection

If the Contract Documents, the Owner's instructions, laws, rules, ordinances, or regulations require that any Work be inspected or tested, the Contractor shall give the Owner a minimum of five (5) calendar days, unless otherwise specified, written notice of readiness of the Work for inspection or testing and the date fixed for said inspection or testing.

Section 13.03 - Reexamination of Work

Reexamination of any part of the Work may be ordered by the Owner, and if so ordered the Work shall be uncovered by the Contractor. If said Work is found to be in accordance with the Contract, the Owner shall pay the cost of reexamination. If said Work is not found to be in accordance with the Contract, the Contractor shall pay the cost of reexamination and replacement.

Section 13.04 - Inspection of Work

All Work, all materials whether incorporated in the Work or not incorporated in the Work, all processes of manufacture, and all methods of construction shall be, at all times and places, subject to the inspection of the Owner, and the Owner shall be the final judge of the quality and suitability of the Work, materials, processes of manufacture, and methods of construction for the purposes for which said Work, materials, processes of manufacture, and methods of construction are used. Any Work not approved by the Owner shall be reconstructed, made good, replaced, or corrected immediately by the Contractor including all work of Other Contractors destroyed or damaged by said removal or replacement. Rejected material shall be removed immediately from the Site. Acceptance of material and workmanship by the Owner shall not relieve the Contractor from the Contractor's obligation to replace all Work that is not in full compliance with the Contract.

Section 13.05 - Defective or Damaged Work

If, in the opinion of the Owner, it is undesirable to replace any defective or damaged materials or to reconstruct or correct any portion of the Work damaged or not performed in accordance with the Contract Documents, the Contract amount shall be reduced by an amount, which in the judgment of the Owner, shall be deemed equitable.

Section 13.06 – Testing of Work

All materials and equipment used in the Work shall be subject to testing in accordance with accepted standards to establish conformance with the Contract Documents and suitability for intended use or as directed by the Owner. Any Work covered or concealed without the approval or consent of the Owner, shall be uncovered for examination. No testing by the Owner or by a testing laboratory on behalf of the Owner relieves the Contractor of the responsibility to maintain quality control of materials, equipment, and installation to conform to the requirements of the Contract Documents. The Owner may order additional testing for any test results below specified minimums, above specified maximums or otherwise unacceptable. Additional cost for testing, professional services and any other expenses related to the additional testing shall be at the Contractor's expense. The Owner may deduct such costs from moneys due the Contractor.

Section 13.07 - Final Completion

No previous inspection shall relieve the Contractor of the obligation to perform the Work in accordance with the Contract. No payment, either partial or full, by the Owner to the Contractor shall excuse any failure by the Contractor to comply fully with the Contract Documents. The Contractor shall remedy all defects and deficiencies at the Contractor's expense, paying the cost of any damage to other Work, the work of Other Contractors and the property of the Owner or Client. No Work is completed and accepted until the Owner issues the Notice of Contract Completion and Acceptance. Contract Completion and Acceptance is limited to the Work described in the Notice of Contract Completion and Acceptance.

Section 13.08 - Guarantee

The Contractor shall, in all respects, guarantee the Work to the Owner and be responsible for all material, equipment, and workmanship of the Work. The Contractor shall forthwith repair, replace or remedy in a manner approved by the Owner, at the Contractor's expense, any material, equipment, workmanship, or other part of the Work found by the Owner to be defective or otherwise faulty and not in compliance with the Contract Documents, which defect or fault appears during the minimum period of one (1) year, or such longer period as may be prescribed by the Contract, from the date of Substantial Completion determined by the Owner. For items of Work performed after the date of Substantial Completion, the minimum period of one (1) year in the preceding sentence shall begin with the date of Physical Completion. The Contractor shall also pay for any damage to the Work, any damage to the work of Other Contractors and any damage to the property of the Owner or Client resulting from said defect or fault.

ARTICLE 14 -- PROTECTION OF PERSONS AND PROPERTY

Section 14.01 – Site Safety and Protection

- A. The Contractor and each Subcontractor shall comply with all applicable rules, regulations, codes, and bulletins of the New York State Department of Labor and to the standards imposed under the Federal Occupational Safety and Health Act of 1970, as amended. The Contractor and each Subcontractor shall comply with all Client safety requirements. The Contractor and each Subcontractor shall comply with

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all City of New York safety requirements for Projects within the City of New York constructed in accordance with the Building Code of the City of New York.

- B. The Contractor and each Subcontractor, and only the Contractor and each Subcontractor, shall be responsible for the initiation, maintenance and supervision of safety precautions and programs in connection with the Work and the Contractor shall require each Subcontractor to initiate, maintain and supervise its own safety precautions and programs for any portion of the Work for which the Subcontractor is responsible and to generate safety reports for days when safety inspections occur. The Contractor shall prepare and submit to the Owner a written safety plan for the Site showing how all safety requirements of applicable law and the Contract will be implemented for the duration of the Contract. The Contractor shall designate a responsible person at the Site whose duties shall include maintaining site safety pursuant to OSHA and any other applicable requirements including NYS EO 202, conducting weekly tool box meetings with its workers, implementing the Site safety plan and providing the Owner with a copy of such meeting minutes.
- C. The Owner shall provide the Contractor with copies of the Owner's safety orientation booklet. The Contractor shall provide a copy to each of its workers and to each worker of its Subcontractors prior to each worker starting Work. The Contractor shall maintain documentation that each worker received a copy of the Owner's safety orientation booklet prior to the worker starting Work.
- D. The Contractor and each Subcontractor shall, at all times: (1) guard the Owner's property from damage or loss in connection with the Work; (2) guard and protect the Contractor's Work and adjacent property; (3) replace or make good any said loss or damage unless said loss or damage is caused directly by the Owner; and (4) guard the lives and health of all persons on and in the vicinity of the Site.
- E. The Contractor and each Subcontractor shall protect all adjoining property and shall repair or replace any said property damaged or destroyed during the progress of the Work.
- F. The Contractor is responsible for ensuring that each Subcontractor executes the Subcontractor's obligations in this General Conditions Section 14.01.

Section 14.02 - Protection of Work

- A. The Contractor shall be responsible for the safety, efficiency and adequacy of the Contractor's Work, plant, appliances, and methods, and for any damage which may result from the failure or the improper construction, maintenance, or operation of such Work, plant, appliances, and methods.
- B. The Contractor shall have full responsibility to protect and maintain all materials on and off site in proper condition and forthwith repair, replace and make good any damage thereto until Physical Completion. The Contractor shall maintain an inventory of all materials for the Project that are delivered to the Site or approved for off-site storage facilities pursuant to General Conditions Section 8.01 G. All tools, spare parts, extra materials, attic stock and similar items delivered by the Contractor after Physical Completion shall be in proper condition and Contractor shall forthwith repair, replace, and make good any damage thereto until the later of Contract Completion and Acceptance or the expiration of one year from delivery.
- C. The Contractor shall immediately report any loss, theft, burglary, vandalism, or damage of materials or installed work to the Owner by phone and email as soon as it is discovered. If vandalism, theft, or burglary is suspected as the cause of the loss, the Contractor shall notify Site security personnel and the municipal police, protect the place of the loss until released from protection by the Owner, and insure that no potential evidence relating to the loss is removed from the place of the loss.

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- D. Any insurance claim alleging damage to the Work shall be submitted to the Owner pursuant to General Conditions Section 10.03.
- E. A claim for damage to the Work shall include the following in addition to the requirements of General Conditions Section 10.03:
 - 1. A copy of a police report (if applicable).
 - 2. A complete inventory of damages or lost items including:
 - a. Description of each item.
 - b. Purchase date and proof of delivery of each item.
 - c. Supplier from whom purchased.
 - d. Serial number (if applicable).
 - e. Price of each item.
 - 3. The name, address and telephone number of the person who controlled the lost or damaged items immediately before the loss or damage.
 - 4. The name, address and telephone number of the person who discovered the loss or damage.
 - 5. A written description of how the loss or damage occurred.
- F. The Owner may deny any claim from the Contractor under this General Conditions Section 14.02 if all items required by this General Conditions Section 14.02 are not provided or are not satisfactory to the Owner.

Section 14.03 - Protection of Lives and Health

- A. The Contractor and each Subcontractor shall be responsible for the safe performance of the Work and their Means and Methods of Construction and for any injury or loss that shall occur from a failure to meet such responsibility.
- B. The Contractor shall, within twenty-four (24) hours, notify the Owner and each Subcontractor shall, within twenty-four (24) hours, notify the Contractor of any incident, accident, illness, or injury that occurred on the Project Site. The Contractor shall follow-up and provide the Owner with a copy of Form C-2, Employers Report of Injury/Illness within twenty-four (24) hours of any incident, accident, illness, or injury, a copy of the recorded OSHA Log and any and all reports and statements pertaining to such incident, accident, illness, or injury.
- C. The Contractor and each Subcontractor shall maintain a record of all cases of death, illness or injury requiring medical attention, hospitalization, or causing loss of time from work, arising out of and in the course of performance of Work of the Contract.
- D. The Contractor and each Subcontractor shall preserve and safeguard the area of any incident, accident, illness, or injury where the person required emergency medical treatment. The Contractor shall secure

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the area and not allow any material object or property to be altered, changed, moved, or removed from the area and post a person at the area to protect it. Safeguarding and protecting the area shall only be abandoned by the Contractor upon release by the Owner. The Contractor shall provide the Owner, within twenty-four (24) hours, a list of witnesses which includes the full name, home address, occupation and telephone number of each person and all maintenance records, tool box meeting records and daily reports reflecting the work performed on the day of the incident. The Contractor shall provide, within twenty-four (24) hours of learning of the actual or potential existence of any other witnesses, the Owner with updated information which includes the full name, home address, occupation, and telephone number of each additional witness.

- E. If, in the performance of the Work, a harmful hazard is created for which appliances or methods of elimination have been approved by regulatory authorities, the Contractor shall install, maintain, and operate said appliances or methods.
- F. The Contractor and each Subcontractor shall provide, in accordance with the terms of the relevant insurance policies and, as soon as practicable, within five (5) calendar days, written notice to each of its liability insurers (primary, excess and umbrella) of any such incident, accident, illness, injury, or death on the Project Site on behalf of itself, the Owner, the Client, and the Construction Manager. This provision does not remove the obligation of each insured to provide notice to its liability insurers. The Contractor and each Subcontractor shall provide to the Owner, the Client and the Construction Manager, a copy of such notice at the time such notice is given to each insurer as well as confirmation of receipt of such notice by each insurer.
- G. The Contractor is responsible for ensuring that each Subcontractor executes the Subcontractor's obligations in this General Conditions Section 14.03.
- H. Drug Testing Policy:
 - 1. The Contractor shall undertake or continue, and ensure each Subcontractor shall undertake or continue, a drug testing policy designed to maintain a safe working environment.
 - 2. The Contractor shall submit to the Owner, within seventy-two (72) hours after the date of the execution of this Contract, its drug testing policy in connection with the Project. Owner reserves the right in its sole discretion to direct that the Contractor's drug testing policy, at a minimum, contains a requirement to drug test any employee involved in an incident on the Project involving any reported bodily injury or any property damage over \$1000 in value. Owner may also require random drug testing when appropriate in accordance with law along, with certifications to Owner regarding the status of the testing.
 - 3. The Contractor shall not allow any worker or employee on a work site who is under, appears to be under, or is suspected of being under the influence of drugs or alcohol. Such employee shall not be allowed on site until drug testing has occurred and Owner has approved.
- I. Professional Conduct:
 - 1. The Contractor acknowledges and agrees that professionally appropriate conduct is a material obligation of this Contract. All employees, officers and representative of Contractor shall conduct themselves professionally in all communications in connection with the Project, including but not limited to communications with Subcontractors and other contractors.

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2. Use of abusive, threatening, vulgar or other offensive language, whether written or oral, is a breach of the obligation set forth in paragraph (1) of this section 14.03 (I).
3. Contractor will receive a warning in writing from Owner upon breach of the obligation set forth paragraph (1) of this section 14.03 (I). Contractor agrees that any subsequent breach of paragraph (1) of this section 14.03 (I) committed after receipt of the written warning is grounds for the Owner to terminate this Contract for cause, or for the Owner to avail itself of any other remedy at law.
4. The Contractor shall include the provisions set forth in paragraphs (1) and (2) of this section 14.03 (I) in every subcontract in such a manner that the requirements of these provisions will be binding upon each Subcontractor as to Work in connection with the Contract.

J. Sexual Harassment:

1. As a condition to the award of this Contract, Contractor affirms that it has implemented (i) a written policy addressing sexual harassment prevention in the workplace and that (ii) it provides or will provide annual sexual harassment training to all of its employees, both of which meet the requirements of New York law including Section 201-g of the New York State Labor Law. The policy shall equal or exceed the standards set forth by the New York Department of Labor pursuant to the model sexual harassment prevention policy in connection with New York Labor Law Section 201-g (1). The Contractor shall ensure that all its employees receive a copy of the sexual harassment prevention policy pursuant to New York law and shall provide a copy to owner upon request.
 2. The Contractor shall submit to the Owner, within seventy-two (72) hours after the date of the execution of this Contract, its sexual harassment prevention policy. The Owner may direct Contractor to revise its sexual harassment prevention policy to the extent that the Owner determines that the policy fails to meet the standards set forth in paragraph (1) of this section. Owner's failure to direct Contractor to revise its policy does not constitute a determination or representation that the policy satisfies New York law nor that the policy meets the standards set forth in paragraph (1) of this section.
 3. The Contractor shall include the provisions set forth in paragraph (1) of this section 14.03 (J) in every subcontract in such a manner that the requirements of these provisions will be binding upon each Subcontractor as to Work in connection with the Contract.
- K. Failure of the Contractor to comply with provisions of this General Conditions Section 14.03 shall be deemed a material breach of Contract and the Owner may impose a payment penalty on the Contractor for any act of non-compliance. The payment penalty shall not exceed one twentieth (1/20) of the contract price or a maximum of One Thousand Dollars (\$1,000) for each time the Contractor fails to perform or to provide the information, reports, forms, etc. required in this General Conditions Section 14.03. This payment penalty is not exclusive; the Owner may avail itself of any other contractual remedy available.

Section 14.04 - Risks Assumed by the Contractor

The Contractor agrees that each duty set forth in this General Conditions Section 14.04 is separate, distinct, and independent from the other duties in this General Conditions Section 14.04.

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- A. To the fullest extent permitted by law, the Contractor solely assumes the following distinct and several risks whether said risks arise from acts or omissions, whether supervisory or otherwise, of the Owner, of the Client, of any Subcontractor, of third persons or from any other cause, including unforeseen obstacles and difficulties which may be encountered in the performance of the Work, whether said risks are within or beyond the control of the Contractor and whether said risks involve any legal duty, primary or otherwise, imposed upon the Owner or Client, regardless of the presence or absence of culpable conduct on the part of the Contractor, excepting only risks which arise from faulty designs as shown by the Drawings and Specifications or from the percentage of negligence attributed to the Owner, the Client or the Construction Manager or the Owner's, Client's or Construction Manager's members, officers, representatives or employees that caused the loss, damage or injuries hereinafter set forth:
1. To the fullest extent permitted by law, the risk of loss or damage, including direct or indirect damage or loss, of whatever nature to the Work or to any plant, equipment, tools, materials or property furnished, used, installed or received by the Owner, the Construction Manager, the Contractor or any Subcontractor, materialman or worker performing services or furnishing materials for the Work regardless of the presence or absence of any culpable conduct on the part of the Contractor, excepting only risks which arise from the percentage of negligence attributed to the Owner, Client or Construction Manager or the Owner's, Client's or Construction Manager's members, officers, representatives or employees that caused the loss or damage. The Contractor shall bear said risk of loss or damage until Physical Completion or until completion or removal of said plant, equipment, tools, materials or property from the Site and the vicinity thereof, whichever event occurs last. In the event of said loss or damage, the Contractor immediately shall repair, replace, or make good any said loss or damage.
 2. To the fullest extent permitted by law, the risk of claims, just or unjust, by third persons against the Contractor, the Owner, the Client, or the Construction Manager on account of wrongful death, bodily injuries and property damage, direct or consequential, loss or damage of any kind whatsoever arising out of or alleged to arise out of or as a result of or in connection with the performance of the Work by the Contractor or any Subcontractor, whether actually caused by or resulting from the performance of the Work, or out of or in connection with the operations of the Contractor or any Subcontractor or presence at or in the vicinity of the Site of the Contractor or any Subcontractor, regardless of the presence or absence of any culpable conduct on the part of the Contractor. The Contractor shall bear the risk for all deaths, injuries, damages or losses sustained or alleged to have been sustained prior to Physical Completion of the Work excepting only the percentage of negligence attributed to the Owner, Client or Construction Manager or the Owner's, Client's or Construction Manager's members, officers, representatives or employees that caused the deaths, losses, damages or injuries, regardless of the presence or absence of any culpable conduct on the part of the Contractor. The Contractor shall bear the risk for all deaths, injuries, damages, or losses sustained or alleged to have been sustained after Physical Completion resulting from the Contractor's negligence or alleged negligence.
 3. To the fullest extent permitted by law, the Contractor assumes entire responsibility and liability for any and all damage or injury of any kind or nature whatsoever, including death resulting therefrom, to all persons, whether employees of the Contractor or otherwise, and to all property, arising out of or alleged to arise out of or as a result of or in connection with the performance of the Work by the Contractor or any Subcontractor, whether actually caused by or resulting from the performance of the Work, or out of or in connection with the Contractor's or any Subcontractor's operations or presence at or in the vicinity of the Site, regardless of the presence or absence of any culpable conduct on the part of the Contractor. If any person shall make said claim for any damage or injury, including death resulting therefrom, or any alleged breach of any statutory duty or obligation on

the part of the Owner, the Client, Construction Manager, or any of the servants and employees of the Owner, Client or Construction Manager, the Contractor shall indemnify and hold harmless the Owner, the Client, the Construction Manager, and any of such servants and employees, for any and all loss, damage or injury that the Owner, the Client Construction Manager, or any such servants and employees, may sustain as the result of any claim, provided however, the Contractor shall not be obligated to indemnify and hold harmless the Owner, the Client Construction Manager, and any such servants and employees for their own negligence, if any. In the event that any negligence is attributed to the Owner, Client, Construction Manager or any such servants or employees, then that particular entity or person shall be indemnified and held harmless for all of its liability minus the percentage of negligence attributed to that particular entity or person.

4. Notwithstanding any contrary provision of the Contract, and to the fullest extent permitted by law, the Contractor shall, within ten (10) calendar days of notice from the Owner, Client or Construction Manager, assume the obligation to defend and represent the Owner, the Client, the Construction Manager, and any of the servants and employees of the Owner, Client or Construction Manager, with counsel selected by the Owner, in all claims by third parties arising out of or alleged to arise out of or as a result of or in any way associated with the duties, obligations or requirements of the Contractor or any Subcontractor pursuant to the Contract, or the presence of the Contractor or any Subcontractor on the Site. This obligation to defend applies immediately and is separate and independent of and distinct from the enforceability of any obligation of Contractor or any Subcontractor to indemnify or hold harmless the Owner, the Client, the Construction Manager and the servants or employees of the Owner, Client, and Construction Manager. The Contractor's obligation to defend includes, but is not limited to, payment of any legal fees associated with defending the Owner, the Client, the Construction Manager and any such servants and employees, all costs of investigation, expert evaluation, and any other costs. If the Contractor fails to so defend and represent the Owner, the Client, the Construction Manager, or any such servants and employees with counsel selected by the Owner, the Owner may proceed to defend and represent itself, the Client, the Construction Manager and any such servant and employee with counsel selected by Owner. Contractor shall make payment of the selected counsel's fees and expenses and all other defense costs incurred by Owner immediately upon receipt of Owner's demand.
- B. The Contractor's obligations under this General Conditions Article shall not be deemed waived, limited or discharged by the enumeration or procurement of any insurance for liability for damages. The Contractor shall notify its insurance carrier within twenty-four (24) hours after receiving a written notice of loss or damage or claim from the Owner, the Client, or the Construction Manager. The Contractor shall make a claim to its insurer specifically under the provisions of the contractual liability coverage and any other coverage afforded the Owner, the Client or Construction Manager including those of being a named insured or an additional insured where applicable.
- C. Neither Contract Completion and Acceptance of the Work nor making any payment shall release the Contractor from the Contractor's obligations under this General Conditions Article. The enumeration elsewhere in the Contract of particular risks assumed by the Contractor or of particular claims for which the Contractor is responsible shall not be deemed to limit the effect of the provisions of this General Conditions Article or to imply that the Contractor assumes or is responsible for only risks or claims of the type enumerated; and neither the enumeration in this General Conditions Article nor the enumeration elsewhere in the Contract of particular risks assumed by the Contractor or particular claims for which the Contractor is responsible shall be deemed to limit the risks which the Contractor would assume or the claims for which the Contractor would be responsible in the absence of said enumerations.

- D. Notwithstanding any provision of the Contract to the contrary, and to the fullest extent permitted by law, if the Contractor does not fulfill one or more of Contractor's obligations under General Conditions Articles 14 and 15 to defend, indemnify, hold harmless, and procure insurance for the Owner, Client and Construction Manager, and the Owner, Client or Construction Manager commences a court action to enforce one or more of the Contractor's obligations to defend, indemnify, hold harmless and procure insurance for the Owner, Client and Construction Manager, the Contractor, in addition to its other obligations, shall pay the costs of the Owner, Client and Construction Manager to bring and prosecute the court action, including but not limited to attorney and consultant fees, expenses and court fees. If the Owner, Client, or Construction Manager commences a court action against an insurance company to obtain coverage under an insurance policy which the Contractor represented would provide coverage to the Owner, Client or Construction Manager, the Contractor, in addition to its other obligations, shall pay the costs of the Owner, Client, and Construction Manager to bring and prosecute the court action, including but not limited to attorney and consultant fees, expenses, and court fees.

ARTICLE 15--INSURANCE AND BONDS

Section 15.01 - General Provisions

- A. The Contractor and Subcontractors shall not violate, or permit to be violated, any term or condition of their insurance policies, and shall at all times satisfy the safety requirements of the Owner and of the insurance companies issuing such policies.
- B. The Contractor and Subcontractors shall maintain in force all insurance required to be procured by them under this Contract until issuance of the Notice of Physical Completion by the Owner except where this Contract requires an insurance policy to be maintained for a period beyond issuance of the Notice of Physical Completion in which case the Contractor and Subcontractors shall maintain such insurance policy in force for the specified period beyond issuance of the Notice of Physical Completion.
- C. All insurance required to be procured and maintained by the Contractor and Subcontractors under this Contract shall be procured from insurance companies licensed to do business in the State of New York by the NYS Department of Financial Services and rated at least A- by A.M. Best and Company, or meet such other requirements as are acceptable to the Owner in its sole and exclusive discretion.
- D. All insurance policies required to be procured and maintained by the Contractor and Subcontractors under this Contract shall include a provision or endorsement that the policy shall not be canceled, materially changed, or not renewed without at least thirty (30) calendar days written notice to the Owner except for non-payment in which case notice to the Owner shall be provided as required by law.
- E. All insurance policies required to be procured and maintained by the Contractor and Subcontractors under this Contract shall include a provision or endorsement that at least thirty (30) calendar days prior to the expiration of the policy, evidence from the carrier of renewal or replacement of the policy by the carrier, with terms and limits no less favorable than the expiring policy, or written notice from the carrier that the policy will not be renewed or replaced by the carrier, shall be delivered to the Owner.
- F. All insurance policies required to be procured and maintained by the Contractor and Subcontractors under this Contract shall be written on an occurrence basis except where this Contract explicitly allows otherwise.
- G. All insurance policies required to be procured and maintained by the Contractor and Subcontractors under this Contract shall include a provision or endorsement that the Owner and the Client shall not be responsible for any claim expenses and loss payments within the deductible or the self-insured retention

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and that the Contractor or Subcontractor shall be solely responsible for all claim expenses and loss payments within the deductible or self-insured retention. At any time this Contract requires the Contractor or any Subcontractor to maintain an insurance policy, the Owner may require the Contractor or any Subcontractor to provide proof, acceptable to the Owner in its sole discretion, that the Contractor or Subcontractor has assets or security sufficient to satisfy all deductible or self-insured obligations under such insurance policy for which the Contractor or Subcontractor may be liable under the claims pending or reasonably possible against the Contractor or Subcontractor at the time the Owner requires the proof. A failure of the Contractor or Subcontractor to provide such proof is a failure of the Contractor or Subcontractor to maintain the insurance required by the Contract or to provide the Owner with evidence of valid and in-force insurance coverage required by the Contract for purposes of General Conditions Section 15.05.

- H. All insurance policies required to be procured and maintained by the Contractor and Subcontractors under this Contract shall include a provision or endorsement that there shall be no right of subrogation against the Owner, Client, or Construction Manager. If any of the Contractor's policies or any of the policies of any Subcontractor prohibit such a waiver of subrogation, the Contractor or Subcontractor shall secure the necessary permission to grant this waiver of subrogation. Any and all such permission shall be confirmed by a manuscript endorsement to the relevant insurance policy or policies and a certified copy of the endorsement shall be provided to the Owner and Construction Manager.
- I. Each liability and protective liability insurance policy required to be procured and maintained by the Contractor and Subcontractors under this Contract shall include a provision or endorsement that the coverage afforded the Owner, Client and Construction Manager under such policy shall be primary and non-contributory and that such policy shall be primary to any other insurance policy maintained by the Owner, by the Client or by the Construction Manager. Any other insurance policy maintained by the Owner, by the Client or by the Construction Manager shall be in excess of and shall not contribute with the Contractor's or Subcontractor's insurance policy, regardless of the "other insurance" clause contained in the Owner's, Client's or Construction Manager's own policy of insurance or the Contractor's or Subcontractor's insurance policies.
- J. Any other Contract Document, including but not limited to the Information for Bidders, but excluding Change Orders, may require any of the Contractor and Subcontractors to provide at its or their expense any other form or limit of insurance necessary to secure the interests of the Owner or Client.
- K. Notwithstanding any other provision of the Contract, the Owner, in a Change Order or Contract Amendment, may require the Contractor and any or all Subcontractors to provide, at the expense of the Owner, any other form or limit of insurance in addition to the insurance requirements of the original Contract necessary to secure the interests of the Owner, Client, or Construction Manager.
- L. Neither the procurement nor the maintenance of any type of insurance by the Owner, the Client, the Contractor or the Construction Manager shall in any way be construed or deemed to limit, discharge, waive or release the Contractor or any Subcontractor from any of the obligations or risks accepted by the Contractor and Subcontractors or to be a limitation on the nature or extent of said obligations and risks or to be a limitation of any obligation to defend, indemnify, hold harmless and procure insurance for the Owner, Client and Construction Manager.
- M. All provisions of General Conditions Article 14 - Protection of Persons and Property and General Conditions Article 15 – Insurance and Bonds are to the fullest extent permitted by law. One purpose of this Contract is to allocate, to the fullest extent permitted by law, all risk of loss to the Contractor, each Subcontractor, and the insurers of each. Each insurance company from which Owner or Client

has directly purchased an insurance policy is a third-party beneficiary of the Contractor's and each Subcontractor's obligations to procure insurance.

- N. Contractor is responsible for ensuring that each Subcontractor obtains and maintains in the required amount each type of insurance policy required by this Contract and that such insurance policy provides the Owner, Client and Construction Manager with the coverage required by this Contract.
- O. Contractor agrees and acknowledges that, because the Contractor (and not the Owner or Client) is responsible for performance of the duties and obligations set forth in this Contract for completion of the Project, the Contractor, through the use of insurance, intends to allocate all losses to such insurance to protect itself and the Owner and Client.

Section 15.02 - Submission of Insurance

- A. Owner will not execute the Contract unless the Contractor shall submit to the Owner or the Owner's designee proof of insurance in such forms as requested and deemed acceptable by the Owner, indicating the Project, and showing evidence of all insurance required under the Contract. Upon the Owner's request, the Contractor shall provide a copy of each insurance policy required by the Contract certified by the insurance carrier as a true and complete copy. The Owner may request such a certified copy of a policy at any time and may make such requests as often as the Owner, in its sole and exclusive discretion, deems necessary. Each request may be for a certified copy of one or more policies. In addition, the Contractor shall provide copies of certificates of insurance to the Construction Manager, if applicable. Certificates of insurance, notwithstanding anything to the contrary contained on the Certificate of Insurance, when submitted to the Owner, constitute a warranty by the Contractor and its insurance agent or broker, that the insurance coverage described is in effect for the policy term shown.
- B. The Contractor shall submit to the Owner or Owner's designee insurance certificates (Accord 25, or equivalent as determined by the Owner), copies of declaration pages, schedules of forms and endorsements, copies of all named insured endorsements, all endorsements of the policy granting coverage to the Owner, Client, and Construction Manager, and such other documents requested by the Owner as proof of insurance for the Contractor. All insurance submittals must be approved by the Owner or the Owner's designee prior to the Contractor's commencement of Work.
- C. Upon the Owner's request, the Contractor shall submit to the Owner or Owner's designee proof of insurance for one or more Subcontractors, in such forms as requested and deemed acceptable by the Owner, indicating the Project, and showing evidence of all insurance required under the Contract. Upon the Owner's request, the Contractor shall provide a copy of each insurance policy of the Subcontractor or Subcontractors required by the Contract and certified by the insurance carrier as a true and complete copy. The Owner may request such a certified copy of a policy at any time and may make such requests as often as the Owner, in its sole and exclusive discretion, deems necessary. Each request may be for a certified copy of one or more policies for one or more Subcontractors. In addition, the Contractor shall provide copies of certificates of insurance to the Construction Manager, if applicable. Certificates of insurance of the Subcontractors, notwithstanding anything to the contrary contained on the Certificate of Insurance, when submitted to the Owner by the Contractor, constitute a warranty by the Contractor, the Subcontractor and the Subcontractor's insurance agent or broker, that the insurance coverage described is in effect for the policy term shown.
- D. Upon request of the Owner made any time after bids are opened, the Contractor shall submit insurance certificates (Accord 25 and 855, or equivalent as determined by the Owner), copies of declaration pages, schedules of forms and endorsements, copies of all named insured endorsements, all endorsements of the policy granting coverage to the Owner, Client, and Construction Manager, and such other

documents requested by the Owner as proof of insurance for a Subcontractor. Owner may request proof of insurance for one or more Subcontractors at the same or at different times and may request proof of insurance for a particular Subcontractor as often as Owner, in its sole and exclusive discretion, determines is necessary.

Section 15.03 - Insurance Provided by Contractor

- A. Prior to award of the Contract, the Contractor shall procure, at its sole cost and expense, and shall maintain in force at all times required by this Contract all of the insurance required under this Contract. Each Subcontractor shall procure, at its sole cost and expense, prior to the Contractor submitting to the Owner the name of such Subcontractor and prior to such Subcontractor commencing performance of any of the Work, and each Subcontractor shall maintain in force at all times required by this Contract all of the insurance required under this Contract. The insurance that the Contractor and each Subcontractor shall procure and maintain under this Contract includes, but is not limited to, the following:
1. Workers' Compensation (including occupational disease) and Employer's Liability insurance. Full New York State Workers' Compensation and Employer's Liability coverage shall be provided and evidenced by one of the following certificates (**Acord certificates are not acceptable**):
 - a. C-105.2 (September '15, or most current version) - Certificate of NYS Workers' Compensation Insurance Coverage. The insurance carrier shall provide a completed form as evidence of in-force coverage.
 - b. U-26.3 – (or any replacement) NYS Insurance Fund Certificate of Workers' Compensation Coverage. The NYS Insurance Fund shall provide a completed form as evidence of in-force coverage.
 - c. GSI-105.2(2/02 or most current version) - Certificate of Participation in Workers' Compensation Group Board-approved self-insurance. The NYS Workers' Compensation Board's Self Insurance Office or the Contractor's Group Self Insurance Administrator shall provide a completed form.
 - d. SI-12 (5/09 or most current version) Affidavit Certifying That Compensation Has Been Secured. The NYS Workers' Compensation Board's Self Insurance Office or the Contractor's Self Insurance Administrator shall provide a completed form.
 2. Disability Benefits insurance. Full New York State Disability Benefits coverage for the benefit of such employees as are required to be covered by the New York State Disability Benefits Law shall be provided and evidenced by one of the following certificates:
 - a. DB-120.1 (September 15, or most current version) - Certificate Of Insurance Coverage Under the NYS Disability Benefits Law.
 - b. DB-155 (9/16) – Compliance with Disability Benefits Law. The NYS Workers' Compensation Board's Self Insurance Office shall provide a completed form.
 - c. CE 200 Certificate of Attestation of Exemption. (Note: this form will only be accepted as evidence of an exemption from providing Disability Benefits insurance as required by law. The Dormitory Authority of the State of New York will not accept this as an exemption from providing Worker's Compensation Insurance.) The Certificate may be obtained from the NYS

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Workers Compensation Board's website at <http://www.web.state.ny.us>. The CE 200 cannot be used for multiple projects; therefore, a new form shall have to be completed prior to award of any subsequent contract.

3. Commercial General Liability (CGL) insurance. The CGL insurance policy shall cover the liability of the Contractor or Subcontractor for bodily injury, property damage, and personal/advertising injury arising from performance of the Work or operations or presence at or in the vicinity of the Site of the Contract. The limits under such policy shall not be less than the following: the limit for each occurrence shall be at least \$2,000,000; the general aggregate limit shall be at least \$4,000,000; the personal and advertising injury limit shall be at least \$1,000,000; ; the Fire Damage Legal Liability shall be at least \$1,000,000; and the Products Completed Operations limit shall be at least \$4,000,000. The limits may be provided through a combination of primary and umbrella and/or excess liability policies. Coverage shall provide and encompass at least the following:
 - a. If the Contractor or Subcontractor proposes the use of a policy other than the ISO form CG 00 01 12 07, the Contractor or Subcontractor shall provide the proposed policy to the Owner which, in its sole and exclusive discretion, will determine whether the proposed policy provides equivalent coverage. The Contractor or Subcontractor shall pay Owner any attorney fees and other costs incurred by Owner in determining whether the proposed policy provides equivalent coverage. Owner will select the attorney providing advice on the proposed policy.
 - b. ISO Endorsement Forms CG 20 10 04 13 and CG 20 37 04 13, or their equivalents, specifically naming as additional insureds the Dormitory Authority, Client, any other entities as required by the Contract Documents, and if applicable, the Construction Manager and for form CG 20 37 04 13 or its equivalent, specifically listing the Project location. In the event said endorsements or equivalents are not able to be provided, the Owner may accept, at the Owner's sole discretion, CG 20 38 04 13 or its equivalent or other manuscript endorsements providing equivalent coverage.
 - c. If the Contractor or Subcontractor proposes the use of an endorsement or endorsements other than the ISO Endorsement Forms CG 20 10 04 13 and CG 20 37 04 13, the Contractor or Subcontractor shall provide the proposed endorsement(s) to the Owner or the Owner's designee which, in its sole and exclusive discretion, will determine whether the proposed endorsements provide equivalent coverage. Contractor and Subcontractor shall pay Owner any attorney fees and other costs incurred by Owner in determining whether the proposed endorsements provide equivalent coverage. Owner will select the attorney providing advice on the proposed endorsements.
 - d. Additional insured status for Owner, Client, Construction Manager and any other entities as required by the Contract Documents shall apply during the Products/Completed Operations phase as well as during the course of performance of the Work.
 - e. The policy provisions required by General Conditions Section 15.01.
 - f. Excavation, Collapse and Underground Hazards.
 - g. Independent contractors/subcontractors.
 - h. Blanket Written Contractual Liability covering all indemnity agreements, including all indemnity obligations contained in the Contract, and covering tort liability of another assumed in a contract.

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- i. Products and completed operations coverage for a term no less than three years commencing upon issuance by the Owner of the Notice of Physical Completion.
 - j. Premises liability.
 - k. Defense and/or indemnification obligations, including obligations assumed under this Contract.
 - l. Cross liability for additional insureds.
 - m. Contractor and Subcontractor means and methods.
 - n. Liability resulting from Section 240 or Section 241 of the NYS Labor Law.
 - o. ISO Endorsement CG 25 03 11 85 or its equivalent applying the policy's general aggregate limit separately to the Project.
 - p. The maximum deductible or self-insured retention shall be \$50,000.
 - q. No endorsement or provision in the policy shall exclude coverage for Owner, Client, or Construction Manager for any liability when the injured party is an employee of Contractor or any Subcontractor.
 - r. No endorsement or provision in the policy shall require privity of contract between the Owner and Subcontractor or between the Client and the Contractor or Subcontractor or between the Construction Manager and the Contractor or Subcontractor in order for the Owner, the Client, or the Construction Manager to have coverage as an insured on such insurance policy.
 - s. If the Contractor or Subcontractor must provide a Railroad Protective Liability insurance policy, the CGL exclusion for work within fifty (50) feet of railroad property must be deleted.
 - t. No endorsement or provision in the policy shall have a height limitation or exclusion.
 - u. No endorsement or provision in the policy shall have a classification exclusion with respect to work performed for the Owner, Client, and Construction Manager.
 - v. Owner, Client, and Construction Manager shall be covered for any and all liability arising out of acts or omissions of Contractor and any Subcontractor.
4. Commercial Automobile Liability insurance. The Commercial Automobile Liability insurance policy shall cover liability arising out of the use of any motor vehicle in connection with the Contract, including owned, leased, hired and non-owned vehicles bearing or, under the circumstances under which they are being used, required by the laws of NYS to bear, license plates. The policy shall have a combined single limit for bodily injury and property damage of at least \$1,000,000. The limit may be provided through a combination of primary and umbrella and/or excess liability policies. If the Contract involves the removal of hazardous waste or otherwise transporting Hazardous Materials, pollution liability coverage for covered autos shall be provided by endorsement CA 99 48 03 06 or CA 00 12 03 06 and the Motor Carrier Act Endorsement (MCS90) shall be attached to the policy.

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5. Umbrella and/or Excess Liability insurance. When the limits of the CGL, Commercial Auto Liability or Employers' Liability policies procured are insufficient to meet the limits specified in the preceding paragraphs, Commercial Umbrella or Excess Liability policies shall be procured and maintained provided, however, that the total amount of insurance coverage is at least equal to the requirements specified in the preceding paragraphs. The Commercial Umbrella or Excess Liability policies shall follow the same form as the CGL, Commercial Automobile Liability and Employers Liability insurance policies required in the preceding paragraphs. The Umbrella and/or Excess Liability policies shall be primary to any other insurance maintained by the Owner or Client or Construction Manager or any other additional insured. Any other insurance maintained by the Owner, the Client, the Construction Manager, or any other additional insured shall be in excess of and shall not contribute with the Contractor's or Subcontractor's Umbrella or Excess Liability insurance policies, regardless of the "other insurance" clause contained in the Owner's or Client's or Construction Manager's or other additional insured's own policy of insurance or the Contractor's or Subcontractor's insurance policies.
 6. The Contractor shall secure, pay for, and maintain property insurance necessary for protection against the loss of owned, borrowed or rented capital equipment and tools, including any tools owned by employees, and any tools or equipment, staging towers, and forms owned, borrowed, or rented by the Contractor. The requirement to secure and maintain such insurance is solely for the benefit of the Contractor. Failure of the Contractor to secure such insurance or to maintain adequate levels of coverage shall not render the Owner, Client and, if applicable, the Construction Manager and other entities specified as additional insureds on the sample certificate of insurance provided by the Owner in the bidding documents or their agents and employees responsible for any losses; and the Owner, Client and, if applicable, the Construction Manager and other entities specified as additional insureds on the sample certificate of insurance provided by the Owner in the bidding documents and their agents and employees shall have no such liability.
- B. Notwithstanding any other provision of the Contract to the contrary and to the fullest extent permitted by law, Contractor shall be liable for all costs and fees, including counsel fees, incurred by or on behalf of the Owner, the Client or the Construction Manager in any action brought by or against the Owner, Client or Construction Manager concerning insurance coverage owed to Owner, Client or Construction Manager by any insurer for which Contractor or any Subcontractor represented that the Owner, Client and Construction Manager would be an insured or would benefit in any way if a claim was brought against Owner, Client and Construction Manager .

Section 15.04 - Other Insurance Provided by Contractor

The Contractor and each Subcontractor shall also procure and maintain as required by General Conditions Sections 15.01 B and 15.03 A the following insurance:

- A. United States Longshore and Harbor Workers' Compensation Act and Jones Act: When, to perform the Work, the Contractor or any Subcontractor is engaged in activities on or near a shoreline or on or near the navigable waterways of the United States or when any part of the Work is connected to water related activities, the Workers' Compensation policy referenced above of the Contractor and any such Subcontractor shall be endorsed to provide Jones Act and United States Longshore and Harbor Workers' Act coverage.
- B. Contractor's Pollution Liability insurance: When the Work includes abatement, removal, repair, replacement, enclosure, encapsulation or disposal of any pollutants, which include but are not limited to, petroleum, petroleum products, mold, asbestos, lead or any other Hazardous Material, the Contractor or any Subcontractor performing Work involving any of the pollutants, shall procure and maintain in

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full force and effect pollution legal liability insurance with limits of at least \$2,000,000 providing coverage for bodily injury and property damage, including loss of use of damaged property or of property that has not been physically injured and coverage that encompasses at least the following:

1. Endorsement specifically naming as additional insureds: Dormitory Authority, the Client, and if applicable, the Construction Manager and other entities specified on the sample certificate of insurance provided by the Owner in the bidding documents.
 2. The policy provisions required by General Conditions Section 15.01.
 3. A maximum deductible or self-insured retention of \$50,000.
 4. Coverage for actual, alleged or threatened emission, discharge, dispersal, seepage, release or escape of pollutants, including any loss, cost or expense incurred as a result of any cleanup of pollutants or in the investigation, settlement or defense of any claim, suit or proceedings against the Owner, Client or Construction Manager arising from the Work.
 5. Coverage shall be provided until three years after the Owner issues the Certificate of Physical Completion.
- C. Railroad Protective Liability insurance: If any Work of the Contract is to be performed on or within fifty (50) feet of a railroad property or railroad right of way or will require entrance upon railroad property or right of way or will require assignment of a railroad employee, the Contractor shall provide and maintain a Railroad Protective Liability policy with the policy limits required by the owner(s) of the railroad. For purposes of this paragraph, a subway is a railroad. The policy form shall be ISO-RIMA or an equivalent form approved by the owner(s) of the railroad. The railroad owner(s) shall be the named insured on the policy and the definition of “physical damage to property” shall mean direct and accidental loss of or damage to all property of any named insured and all property in any named insured’s care, custody, or control. If the Contractor shall provide a Railroad Protective Liability insurance policy, the Contractor and any Subcontractor performing on or within fifty (50) feet of railroad property or railroad right of way or entering railroad property or right of way or requiring assignment of a railroad employee shall have their CGL insurance policy endorsed to delete the exclusion of coverage for Work within fifty (50) feet of railroad property.
- D. Professional Liability insurance: Each of the Contractor and any Subcontractor performing any Work which involves delegation of design shall procure and maintain Error and Omissions Liability Insurance for the delegated design Work with a minimum insurance limit of not less than two (2) million dollars issued to and covering damage for liability imposed on the Contractor or Subcontractor by this Contract or law arising out of any negligent act, error, or omission in the rendering of or failure to render professional services required by this Contract. This insurance may be issued on a claims-made policy form and shall be maintained for no less than three (3) years after issuance by the Owner of the Notice of Physical Completion. The policy, at the sole expense of the Contractor or Subcontractor, shall have extended Discovery Clause coverage of at least three (3) years after issuance by the Owner of the Notice of Physical Completion if the policy is cancelled or not renewed. The maximum deductible or self-insured retention is \$100,000.
- E. Unmanned Aircraft System (UAS) Insurance: Any Contractor or Subcontractor proposing the use of any Unmanned Aircraft System for any purpose on a Project, including but not limited to investigation, surveying, photography, inspections or observation, shall comply with all of Owner’s policies and procedures regarding such use and shall provide coverage, in the form of an Unmanned Aircraft System (UAS) endorsement to the Commercial General Liability Coverage required above or Aircraft Liability

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Coverage with a minimum limit of \$1,000,000. Such coverage shall name the Owner and any required third parties as additional insureds.

- F. Marine Protection & Indemnity insurance and Hull & Machinery insurance: Each of the Contractor and any Subcontractor performing any Work on navigable water or connected to water-related activities or with marine operations, shall procure and maintain Marine Protection & Indemnity insurance and Hull & Machinery insurance. Hull & Machinery coverage shall be provided for the total value of the watercraft and equipment used in the Work on navigable water or connected to water-related activities or with marine operations. The Contractor shall obtain a Marine Protection & Indemnity Liability insurance policy for all navigable water, water-related or marine activities or operations under the Contract with a minimum limit of \$2,000,000. The Owner, the Client and, if applicable, the Construction Manager and other entities specified on the sample certificate of insurance provided by the Owner in the bidding documents shall be additional insureds on the Marine Protection & Indemnity Liability insurance policy. The Marine Protection & Indemnity Liability insurance policy shall provide coverage that encompasses at least the following:
5. The policy provisions required by General Conditions Section 15.01.
 2. A maximum deductible or self-insured retention of \$50,000.
 3. Coverage shall be provided until the Owner issues the Certificate of Physical Completion.
 4. Endorsement specifically naming as additional insureds: Dormitory Authority, the Client, and if applicable, the Construction Manager and other entities specified on the sample certificate of insurance provided by the Owner in the bidding documents.

Section 15.05 - Stop Work Order - Insurance

- A. All insurance certificates are valid for one (1) year from the date the certificate is signed/stamped, or until policy expiration, whichever is earlier. The Contractor shall be responsible to submit updated insurance certificates to the Owner or the Owner's designee thirty (30) calendar days prior to any insurance certificate expiration date.
- B. Failure of the Contractor or any Subcontractor to maintain the insurance required by the Contract or to provide the Owner or the Owner's designee with evidence of valid and in-force insurance coverage required by the Contract shall result in a Stop Work Order pursuant to General Conditions Article 11 – Termination or Suspension and/or withholding of payment to the Contractor.
- C. At any time that the coverage provisions and limits on the policies required herein do not meet the provisions and limits set forth above, the Contractor or Subcontractor shall immediately cease Work on the Project. The Contractor or Subcontractor shall not resume Work on the Project until authorized to do so by the Owner or the Owner's designee.
- D. Any delay or time lost as a result of the Contractor or Subcontractor not having proper insurance required by this General Conditions Article or not providing the Owner or the Owner's designee with evidence of valid and in force insurance required by the Contract shall not give rise to a delay Claim or any other Claim against the Owner. Further, the Contractor may be liable to other contractors for costs incurred by reason of the Contractor's or Subcontractor's failure to provide insurance.

Section 15.06 – Builder's Risk

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- A. The Owner will provide Builder's Risk insurance for all projects, except for those projects listed in paragraph B of this General Conditions Section 15.06.
1. The Owner shall, except as otherwise specified, at all times beginning with the Notice to Proceed and until Substantial Completion, procure and maintain, at the Owner's sole cost and expense, "All Risk" Builder's Risk insurance. The Contractor and Subcontractors will be covered for the Work of the Contract, except losses up to and including the deductible shall be borne by the Contractor. The Owner shall, at the Owner's sole discretion, have the power to adjust and to settle with the insurer any loss or claim under the Builder's Risk insurance. Reimbursement for loss, if any, shall be made payable to the Owner. The deductible is stated in the Information for Bidders.
 2. Coverage shall include sub limits for property in transit and for property in storage on and off the Site. Specific higher limits for transit or for storage may be available as circumstances may require upon written request by the Contractor or any Subcontractor to the Owner at least 30 calendar days before such higher limit would take effect if the request is granted. Owner in its sole and exclusive discretion may grant or deny the request for a higher limit for transit or storage. If the Owner denies the request, the Contractor or Subcontractor shall have no Claim against the Owner for any cost or damage. If the Owner grants the request, the Owner may condition the grant upon the Contractor or Subcontractor paying the additional cost for the higher limit for transit or storage.
 3. No coverage shall be provided to the Contractor or any Subcontractor under any property insurance policy of the Owner or Client which only covers completed, occupied structures.
- B. The Contractor shall procure and maintain, at its sole cost and expense, Builder's Risk insurance for all OMH, OPWDD, OASAS, NYCHA, and HTFC-GOSR projects, or when otherwise specified, as provided below.
1. The Contractor shall maintain until the date of Physical Completion, an All Risk Builder's Risk Completed Value Form insurance policy, with coverage for at least the value of the Work of the Contract except for excavation work, planting and seeding, and Work buried in the ground other than wiring and walking tunnels, but including debris removal costs and architect, engineering and other costs to evaluate damage and provide any design or other services necessary to correct or minimize damage in the event of damage to the Work covered by the policy or such higher amount of coverage as required by the Owner in this Contract. Debris removal costs shall include demolition as may be necessary by the operation of any law, ordinance, or regulation. The policy shall cover property of the Owner or Client when in the Contractor's care, custody, or control. The policy shall name as insureds the Owner, Client and Contractor and shall include such soft costs coverage for the Owner and Client as specified in this Contract. The extended coverage endorsement may include a loss deductible of \$10,000 or less. The Contractor shall bear all losses up to and including the deductible provision.
 2. Coverage shall also include sub limits for equipment, material, and other property in transit or in storage on or off the Site. Specific higher limits of coverage for property in transit or storage, at Contractor's expense, may be required by the Owner due to circumstances of the Project.

Each Builder's Risk insurance policy shall include the following endorsement:

"It is made a condition of this insurance that until the Owner issues the Notice of Physical Completion to the Contractor, occupancy of the premises shall not require consent of the insurer, nor shall such occupancy be the basis for a rate adjustment."

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3. Builder's Risk insurance policy shall name the Dormitory Authority and the Contractor Loss Payees in order of precedence, as their interests may appear and shall run until the date of Physical Completion. Policies expiring on a fixed date before Physical Completion shall be renewed not less than thirty (30) calendar days before such expiration date. Such policy shall not be changed by endorsement without the knowledge and consent of the Owner and in particular, shall provide that no notice of cancellation by the insurer shall be effective until sixty (60) calendar days after such notice is received by the Owner. If the policy is issued by a mutual insurance company, the policy shall provide that the Owner and the Client shall not be liable for any premium or assessment under the policy; the Contractor shall be responsible for all premiums and assessments.
4. The Owner may withhold the Contractor's payment for Work which is required to be insured until original binder or policies for the Builder's Risk insurance are provided to the Owner pursuant to General Conditions Section 15.06.

Section 15.07 - Bonds Provided by Contractor

- A. The Contractor shall provide the Performance Bond in an amount at least equal to 100% of the Contract sum as security for the faithful performance of the Contract. The Contractor shall also provide the Payment Bond in an amount at least equal to 100% of the Contract sum for the payment of all persons performing labor or providing materials in connection with the Work of the Contract. The Contractor shall execute the Performance Bond form and the Payment Bond form included in the Contract Documents.
- B. If at any time the Owner, in its sole and exclusive discretion, shall become dissatisfied with any surety or sureties upon the Performance Bond or the Payment Bond, or if for any other reason said bonds shall cease to be adequate security to the Owner, the Contractor shall, within five (5) calendar days after written notice from the Owner to do so, substitute an acceptable bond or bonds in such form and sum and signed by such other surety or sureties as may be satisfactory to the Owner. The Contractor shall pay the premiums on said bond or bonds. No further payments shall be deemed due nor shall be made until the new surety or sureties shall have furnished an acceptable bond or bonds to the Owner.
- C. The surety company, on all bonds, shall be authorized to do business in the State of New York by the NYS Department of Financial Services and rated at least A- by A.M. Best and Company, or meet such other requirements as are acceptable to the Owner in its sole and exclusive discretion.

ARTICLE 16 -- GENERAL PROVISIONS of the CONTRACT

Section 16.01 - General Law Provisions

- A. This Contract and its enforcement, and any controversy arising out of or relating to the making or performance of this Contract, shall be governed by and construed in accordance with the law of the State of New York, without regard to the New York principles of conflicts-of law and except where the United States supremacy clause requires otherwise.
- B. Each and every provision of law and clause required by law to be inserted in the Contract shall be deemed to be inserted therein and the Contract shall read and shall be enforced as though so included therein.
- C. The Contractor shall comply fully with all applicable laws, rules, and regulations, and as applicable, Building Code of New York State or Building Code of the City of New York.

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- D. The Contractor agrees that the Contract shall be deemed executory to the extent of moneys available from either: (1) the proceeds of bonds issued by the Dormitory Authority for the Contract, (2) moneys made available by the Client to the Owner for the Contract, (3) other moneys made available to the Owner from whatever source specifically for the Contract and no liability shall be incurred by the Owner beyond moneys available therefore.
- E. The relationship created by the Contract between the Owner and the Contractor is one of an independent contractor and it is no way to be construed as creating an agency relationship between the Owner and the Contractor nor is it to be construed as, in any way or under any circumstances, creating or appointing the Contractor as an agent of the Owner for any purpose whatsoever.
- F. Except as provided herein, this Contract and each and every provision hereof and thereof is for the exclusive benefit of the Parties hereto and not for the benefit of any third party. Nothing in the Contract shall create or shall give to third parties any claim or right of action against the Owner, the State of New York, the Client, or any institution at which the Work is being carried out beyond such as may legally exist irrespective of the Contract; however, it is understood that the Client is an intended third party beneficiary of the Contract for the purposes of recovering any damages caused by the Contractor.
- G. The Contractor shall not assign the Contract in whole or in part without prior written consent of the Owner. Any attempt to assign the Contract in whole or in part without prior written consent of the Owner is null and void. As a condition to consent to the assignment, the Owner shall require each proposed assignee to establish, to the satisfaction of the Owner in its sole and exclusive discretion, that the assignee is responsible and, if applicable, has the experience to perform the Work. If the Owner consents to an assignment and if the Contractor assigns all or part of any moneys due or to become due under the Contract, the instrument of assignment shall contain a clause substantially to the effect that the Contractor and assignee agree that the assignee's right in and to any moneys due or to become due to the Contractor shall be subject to all prior claims for services rendered or materials supplied in connection with the performance of the Work. The Owner reserves the right to assign this Contract in whole or in part without the consent of the Contractor. Unless otherwise agreed by the Parties hereto in a separate writing, no permitted assignment described in this Section shall relieve the assigning Party from any of its obligations under this Contract. However, the assignee may be required by the assigning Party to agree to indemnify and hold harmless the assigning Party from some or all of its obligations under this Contract.
- H. This Contract shall be binding upon and shall inure to the benefit of the Parties hereto and their respective successors and permitted assignees.
- I. The Owner is exempt from the terms of fair-trade agreements for sales to the Contract.
- J. Inasmuch as the Contractor can be compensated adequately by money damages for any breach of the Contract which might be committed by the Owner, the Contractor agrees that no default, act or omission of the Owner shall constitute a material breach of the Contract entitling the Contractor to cancel or rescind the Contract or to suspend or abandon performance of the Contract; and the Contractor hereby waives any and all rights and remedies to which the Contractor might otherwise be or become entitled to because of any wrongful act or omission of the Owner saving only the Contractor's right to money damages.
- K. No action or proceeding shall lie or shall be maintained by the Contractor, nor anyone claiming under or through the Contractor, against the Owner upon any Claim arising out of or based upon the Contract, relating to the giving of notices or information.

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- L. No action or proceeding shall lie in favor of or shall be maintained by the Contractor against the Owner unless such action shall be commenced within one year after the earliest following event:
 - 1. The date the Owner executes the Notice of Physical Completion.
 - 2. Receipt, by the Owner, of the Contractor's final Application for Payment, if no Notice of Physical Completion is issued.
 - 3. The date of termination if the Owner terminates the Contract.
- M. The Owner and Contractor agree to submit to the exclusive jurisdiction of the Commercial Division, New York Supreme Court, which shall hear any dispute, Claim or controversy arising in connection with or relating to this Contract, including, but not limited to the validity, breach, enforcement, or termination thereof.
- N. No action or proceeding shall be brought against the Owner in any location other than Albany County unless the Owner specifically consents, in writing, to a change of venue.
- O. If the Contractor obtains a judgment against the Owner in any action or proceeding, the Contractor agrees to accept no more than three percent (3%) interest, per annum, on the amount of the judgment.
- P. Neither Contractor nor its Subcontractors shall place or maintain, or permit to be placed or maintained, any sign, bill, or poster on or about the Premises without the prior consent of Owner's Representative.
- Q. Each Party has reviewed and discussed this Contract with counsel and agrees that this Contract shall not be construed by applying any rule of construction providing for interpretation against the drafting Party.

Section 16.02 - Diesel Emissions Reduction

- A. The Contractor shall certify that heavy duty vehicles, as defined in the NYS Environmental Conservation Law (ECL) Section 19-0323 and Title 6 of the New York Codes Rules and Regulations, Part 248 (6 NYCRR 248), will comply with the rules, regulations and provisions pursuant to ECL Section 19-0323, and 6 NYCRR 248, which requires the use of Best Available Retrofit Technology and Ultra Low Sulfur Diesel to the extent required by law unless specifically waived by the NYS Department of Environmental Conservation (DEC). Qualification for a waiver will be the responsibility of the Contractor.
- B. Annually, as required by DEC, but no later than March 1st, the Contractor shall complete and submit directly to the Owner, via electronic mail, the Regulated Entity Vehicle Inventory Form and Regulated Entity and the Contractors Annual Report Form, found on the DEC website <http://www.dec.state.ny.gov> for vehicles used on the Project for the preceding calendar year.
- C. The Contractor shall certify to the Owner, and submit with each Application for Payment, the Contractor and Subcontractor Certifications form, which states that the Contractor agrees to comply with the provisions of General Conditions Section 16.02.

Section 16.03 – State and Federal Labor Law Provisions

- A. All applicable provisions of NYS Labor Law shall be carried out in the performance of the Work.

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- B. The Contractor specifically agrees, as required by NYS Labor Law, Sections 220 and 220-d as amended, that:
1. No worker, in the employ of the Contractor, any Subcontractor or any other person doing or contracting to do the whole or any part of the Work contemplated by the Contract shall be permitted or required to work more than eight (8) hours in any one (1) calendar day and more than five (5) days in any one week, except in the extraordinary emergencies set forth in NYS Labor Law.
 2. The wages paid for a legal day's work shall be not less than the prevailing rate of wages as defined by NYS Labor Law. Each laborer, worker or mechanic employed by the Contractor, any Subcontractor or any other person doing or contracting to do the whole or any part of the Work contemplated by the Contract shall be paid not less than the prevailing rate of wages as defined by NYS Labor Law and shall be provided not less than the supplements as required by NYS Labor Law.
 3. The minimum hourly rate of wage to be paid and supplements provided shall be not less than that required by the NYS Labor Law and as shall be designated by the Commissioner of Labor of the State of New York.
 4. The Contractor and all Subcontractors shall post in a prominent and accessible place on the Site, a legible statement of all minimum wage rates and supplements to be paid or provided for the various classes of workers engaged in the performance of the Work and all deductions, if any, required by law to be made from unpaid wages actually earned by any worker so engaged.
 5. The Contractor and all Subcontractors shall provide each worker a written notice of the prevailing wage rate for each of the worker's particular job classifications on each pay stub and, as required by the NYS Labor Law, written notice that includes the telephone number and address for the Department of Labor and a notice informing all workers of their right to contact the Department of Labor if a worker is not receiving the proper prevailing rate of wages and/or supplements for a worker's particular job classification.
 6. The Contractor shall be responsible for obtaining prevailing wage rate updates directly from the NYS Department of Labor, either by accessing its website <http://www.labor.state.ny.us> or a written request to the Bureau of Public Works.
- C. The minimum wage rates, if any, specified for apprentices shall apply only to persons working with the tools of the trade which such persons are learning under the direct supervision of journeyman mechanics as an individual registered in an apprenticeship program which is duly registered with the Commissioner of Labor of the State of New York in conformity with the NYS Labor Law. Except as otherwise required by law, the number of apprentices in each trade or occupation employed by the Contractor or any Subcontractor shall not exceed the number permitted by the applicable standards of the NYS Department of Labor, or, in the absence of such standards, the number permitted under the usual practice prevailing between the unions and the employers' association of the respective trades or occupations.
- D. All workers of the Contractor and all Subcontractors shall be paid in accordance with the provisions of the NYS Labor Law. The Contractor and all Subcontractors shall submit to the Owner original copies of the Contractor and Subcontractor Certifications form and Certified Payroll forms in accordance with payment procedures and otherwise upon request. The Contractor and all Subcontractors shall prepare and keep original payrolls or transcripts thereof in compliance with NYS Labor Law Section 220, subdivision 3-a, and shall file transcripts of such payrolls with the Owner as required by NYS Labor

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Law Section 220, subdivision 3-a. Filing the transcripts of such payrolls with the Owner as required by NYS Labor Law Section 220, subdivision 3-a is a condition precedent to payment of any sums due and owing Contractor or any Subcontractor for Work performed upon the Project.

- E. The Contractor agrees that, in case of underpayment of wages to any worker engaged in the Work by the Contractor or any Subcontractor, the Owner shall withhold from the Contractor out of payments due an amount sufficient to pay such worker the difference between the wages required to be paid under the Contract and the wages actually paid such worker for the total number of hours worked, and that the Owner may disburse such amount so withheld by the Owner for and on account of the Contractor to the worker to whom such amount is due. The Contractor further agrees that the amount to be withheld pursuant to this paragraph may be in addition to the amounts and percentages to be retained by the Owner pursuant to other provisions of the Contract.
- F. Pursuant to subdivision 3 of Section 220 and Section 220-d of the NYS Labor Law the Contract shall be forfeited and no sum paid for any Work done thereunder upon a Contractor's or Subcontractor's second conviction for willfully paying or providing less than:
 - 1. The stipulated wage scale or supplement as established by the fiscal officer.
 - 2. The stipulated minimum hourly wage scale and supplements as designated by the Commissioner of Labor of the State of New York.
- G. If the project is Federally funded in part or whole and therefore subject to the requirements of the Davis Bacon Act, the U.S. Department of Labor's government-wide implementation of the Act, or to Federal program legislation, the Contractor shall pay the higher of either NYS Department of Labor prevailing wage rates or wages established for the locality of the project by the U.S. Department of Labor.
- H. The Contractor specifically agrees that all workers engaged on the Site, whether employees of the Contractor, Subcontractor, or other person performing or contracting to do any part of the Work, shall be certified, prior to performing any Work, as having successfully completed at a minimum the OSHA 10-hour construction safety and health course as required by NYS Labor Law Section 220-h, unless additional certifications, courses or training are required by the project specific jurisdiction or as required to complete the Work of the Contract.

Section 16.04 – Nondiscrimination

- A. To the extent required by Article 15 of the NYS Executive Law (also known as the Human Rights Law) and all other NYS and United States statutory and constitutional non-discrimination provisions, the Contractor shall not discriminate against any employee or applicant for employment because of race, creed, color, sex (including gender identity or expression), national origin, sexual orientation, military status, age, disability, predisposing genetic characteristics, marital status or domestic violence status.
- B. If the Contractor is directed to do so by the Owner, the Contractor shall request each employment agency, labor union or authorized representative of workers with which the Contractor has a collective bargaining agreement or other agreement or understanding, to furnish a written statement that such employment agency, labor union or representative will not discriminate on the basis of race, creed, color, sex (including gender identity or expression), national origin, sexual orientation, military status, age, disability, predisposing genetic characteristics or marital status, and that such union or representative will affirmatively cooperate in the implementation of the Contractor's obligations under Articles 15 and 15A of the NYS Executive Law.

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- C. The Contractor shall state, in all solicitations or advertisements for employees, that in the performance of the Contract, all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex (including gender identity or expression), sexual orientation, military status, age, disability, predisposing genetic characteristics or marital status.
- D. The Contractor shall include the provisions of paragraphs A, B, and C of this General Conditions Section 16.04 in every Subcontract and purchase order in such a manner that such provisions will be binding upon each Subcontractor and vendor as to the operations for the Contract to be performed within the State of New York.
- E. Pursuant to NYS Labor Law, Section 220-e, the Contractor specifically agrees:
 - 1. That in the hiring of employees for the performance of Work under the Contract or any subcontract hereunder, or for the manufacture, sale or distribution of materials, equipment or supplies hereunder, but limited to operations performed within the territorial limits of the State of New York, no Contractor, Subcontractor, nor any person acting on behalf of such Contractor or Subcontractor, shall by reason of race, creed, color, national origin, sex (including gender identity or expression), sexual orientation, military status, age, disability, predisposing genetic characteristics or marital status discriminate against any citizen of the State of New York who is qualified and available to perform the Work to which the employment relates.
 - 2. That no Contractor, Subcontractor, nor any person on behalf of such Contractor or Subcontractor shall, in any manner, discriminate against or intimidate any employee hired for the performance of Work under the Contract on account of race, creed, color, national origin, sex (including gender identity or expression), sexual orientation, military status, age, disability, predisposing genetic characteristics or marital status.
 - 3. That there may be deducted from the amount payable to the Contractor, by the Owner under the Contract, a penalty of fifty dollars (\$50.00) for each person for each calendar day during which such person was discriminated against or intimidated in violation of the terms of the Contract.
 - 4. That the Contract may be canceled or terminated by the Owner and all moneys due or to become due hereunder may be forfeited for a second or any subsequent violation of the terms or conditions of this Section 16.04 E of the Contract.

Section 16.05 - Domestic Steel

The Dormitory Authority is required to comply with all provisions of Title 4 of Article 9 of the NYS Public Authorities Law, including NYS Public Authorities Law Section 2603-a, and in accordance therewith, if the amount of the Contract exceeds \$100,000, the Owner requires that all structural steel, reinforcing steel or other major steel items to be incorporated in to the Work of the Contract be produced or made in whole or substantial part in the United States, its territories, or possessions. The Owner, in its discretion, may grant waivers of this requirement in accordance with NYS Public Authorities Law Section 2603-a. Contractor must request a waiver in writing and obtain a written waiver of this requirement from Owner before using in performance of the Contract any steel not produced or made in whole or substantial part in the United States, its territories, or possessions.

Section 16.06 - Failure to Comply with Article 16

The Owner will not be responsible for any Claim arising from compliance with this General Conditions Article 16.

ARTICLE 17—RECORDS/AUDITS/INVESTIGATIONS/ETHICS

Section 17.01 – Preparation of Records/Owner's Right to Inspect Records and to Audit

The Contractor shall, concurrently with performance of the Contract, prepare substantiating records regarding performance of the Contract, including records of Subcontractors and material suppliers. General Conditions Section 17.03 describes the records and other data to be maintained by Contractor, Subcontractors, and material suppliers. The Contractor shall maintain and keep, for a period of at least six (6) years after the date of payment of the final Application for Payment, all records and other data relating to the Work, including records of Subcontractors and material suppliers. Upon seven (7) calendar days' written notice, the Contractor shall make its records (including records of Subcontractors and material suppliers) available during normal business hours to the Owner or its authorized representative(s). Owner and its authorized representative(s) shall be entitled to inspect, examine, review and copy the Contractor's records, including but not limited to all documents, electronic records and recordings, (including records of Subcontractors and material suppliers) at the Owner's reasonable expense, within adequate workspace at the Contractor's facilities. The Owner shall also have the right to have Owner or its authorized representative audit all records and other data of the Contractor, Subcontractors and material suppliers relating to the Work.

Section 17.02- False Statements/Information/Disclosure

Failure to comply with General Conditions Section 17.01, providing False Representations, false statements or inaccurate information submitted in accordance with Contract Documents, including but not limited to, an Application for Payment, a Claim or a Change Order, a filing or system entry related to MWBE participation requirements or False Representations, false statements, or inaccurate information submitted to the Owner, or a determination that the Contractor participated in the kick-back of wages may result in one or more of the following actions:

- A. Termination of the Contract for cause, pursuant to General Conditions Section 11.01.
- B. Rejection of future bids or disapproval of a contract or subcontract.
- C. Withholding of payments.
- D. Criminal prosecution.
- E. Civil prosecution under Article XIII of the NYS State Finance Law – the New York False Claims Act.
- F. Rejection of a Claim or Change Order.
- G. Deduction of the Owner's cost of an audit from the Contract amount.

Section 17.03 - Owner's Right to Conduct Investigations

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- A. The Contractor agrees to cooperate fully and faithfully with any investigation, audit or inquiry conducted by the Owner.
- B. The Contractor shall grant the Owner the right to examine all books, records, files, accounts, computer records, documents, and correspondence, including electronically-stored information, in the possession or control of the Contractor, its subsidiaries and affiliated companies and any other company directly or indirectly controlled by the Contractor, relating to the Contract. These shall include, but not be limited to: Subcontracts; bid files; payroll and personnel records; cancelled checks; correspondence; memoranda; daily reports of Work completed that day; schedules; reports; audits; vendor qualification records; original estimate files; Change Order/Contract Amendment estimate files; detailed worksheets; Subcontractor, consultant and supplier proposals for both successful and unsuccessful bids; back-charge logs; any records detailing cash, trade, or volume discounts earned; insurance proceeds, rebates or dividends received; payroll and personnel records; tax returns; and the supporting documentation for the aforesaid books and records.
- C. At the Owner's request, said materials shall be provided in a computer readable format, where available. At the request of the Owner, the Contractor shall execute such documents, if any, as are necessary to give the Owner access to Contract-related books, documents, or records, which are, in whole or part, under control of the Contractor but not currently in the Contractor's physical possession. The Contractor shall not enter in to any agreement with a Subcontractor, consultant, or supplier, in connection with the Contract, that does not contain a right to audit clause in favor of the Owner. The Contractor shall assist the Owner in obtaining access to past and present Subcontractor, consultant, and supplier amendment/change order files (including detailed documentation covering negotiated settlements), accounts, computer records, documents, correspondence, and any other books and records in the possession of Subcontractors, consultants and suppliers pertaining to the Contract, and, if appropriate, enforce the right-to-audit provisions of such agreements.
- D. The Contractor shall assist the Owner in obtaining access to, interviews with, and information from all former and current persons employed and/or retained by the Contractor, for purposes of the Contract.
- E. The Contractor shall require each Subcontractor to include in all agreements that the Subcontractor may hereinafter enter into with any and all Subcontractors, consultants, and suppliers, in connection with the Contract, a right-to-audit clause in favor of the Owner conferring rights and powers of the type outlined in this General Conditions Section 17.03. The Contractor shall not enter in to any Subcontract with a Subcontractor in connection with the Contract that does not contain such a provision. The Contractor shall not make any payments to a Subcontractor, consultant, or supplier from whom the Contractor has failed to obtain and supply to the Owner complete, accurate, and truthful information in compliance with a request from the Owner to the Contractor.
- F. Any violation of the provisions of this General Conditions Article 17 shall justify termination of this Contract and may result in the Owner's rejection of the Contractor's bids or proposals for future contracts and the deduction of the Owner's cost of an audit from the Contract amount.

Section 17.04 - Disclosure of Criminal Investigation

- A. The Contractor shall immediately notify the Owner in the event that any owner, partner, director, officer or employee of the Contractor, or its affiliated companies as identified in the NYS Vendor Responsibility Questionnaire For Profit Construction (CCA-2), are subpoenaed or questioned in connection with any business-related criminal investigation, whether or not the owner, partner, director, officer or employee is, or is believed to be, the subject or target of such investigation, or is notified or otherwise learns that any owner, partner, director, officer or employee of the Contractor or its affiliated

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companies is under investigation for an alleged business-related violation of criminal law, or in the event that any premises or records of the Contractor are searched pursuant to a search warrant seeking evidence of a crime or crimes, unless otherwise precluded by law enforcement authorities.

- B. The Contractor shall immediately notify the Owner in the event that any owner, partner, director, officer or employee of the Contractor or its affiliated companies as identified in the NYS Vendor Responsibility Questionnaire For Profit Construction (CCA-2), the firm itself, or one of its affiliated companies is indicted or charged in an accusatory instrument for any business-related violation of local, state or federal criminal law, unless otherwise precluded by law enforcement authorities.
- C. In the event that any owner, partner, director, officer, or employee of the Contractor is indicted or charged in an accusatory instrument for any business-related violation of local, state, or federal criminal law relating to this Contract or any other Dormitory Authority contract, the Owner may require the Contractor to remove said owner, partner, director, officer, or employee from any direct involvement in the affairs of the Contractor as it relates to this Contract and all other Dormitory Authority contracts until the criminal matter is resolved. In the event that any owner, partner, director, officer, or employee of the Contractor is convicted of a business-related violation of local, state, or federal criminal law, the Owner may require the Contractor to permanently remove said individual from any direct involvement in the affairs of this Contract and all other Dormitory Authority contracts.
- D. In the event that the Contractor or any owner, partner, director, officer, or employee of the Contractor is convicted or enters into an agreement as a remedy to the alleged commission of a criminal act of a business-related violation of local, state, or federal criminal law or regulatory violation, the Owner may schedule a hearing with the Contractor to determine the Contractor's responsibility to continue work under this Contract and other Dormitory Authority contracts. Following this hearing, the Owner may, at its sole discretion, take one or more of the following actions:
 - 1. Terminate this Contract.
 - 2. Require the Contractor, at its own expense, to hire an independent private-sector inspector general to monitor its activities, institute procedures and conduct internal inquiries, in a manner prescribed by the Owner.
 - 3. Increase retainage to an amount not to exceed ten percent (10%).
 - 4. Take any other remedial action deemed appropriate.

Section 17.05 - Anti-Riot Provisions

- A. The Contractor agrees that no part of the Contract funds shall be used to make payments, give assistance, or supply services, in any form, to any individual convicted in any federal, state, or local court of competent jurisdiction for inciting, promoting, or carrying on a riot, or engaging in any group activity resulting in material damage to property or injury to persons found to be in violation of federal, state or local laws designed to protect persons or property.
- B. The Contractor and each Subcontractor shall notify their employees of all rules and regulations adopted pursuant to Article 129-A of the NYS Education Law. The Contractor shall post notices containing the text of the aforementioned rules and regulations at the Site.

Section 17.06 - Ethical Conduct

- A. Officers and employees of the Owner are bound by Sections 73, 73-a and 74 of the NYS Public Officers Law. In addition, no officer, employee, architect, attorney, engineer, inspector, or consultant of or for the Owner authorized on behalf of the Owner to exercise any legislative, executive, administrative, supervisory, or other similar functions in connection with the Contract or the Work, shall become personally interested, directly or indirectly, in the Contract, material supply contract, subcontract, insurance contract, or any other contract pertaining to the Work.
- B. Section 73(5) of the NYS Public Officers Law expressly prohibits the Contractor, or its agents, from directly or indirectly offering or giving any gift having more than nominal value to an employee of the Owner under circumstances in which it could be reasonably inferred the gift was intended to influence the employee in the performance of their official duties or was intended as a reward for the employee's official action.
 - 1. In addition to the prohibition of Section 73(5) of the NYS Public Officers Law, the Dormitory Authority has a "zero tolerance" policy with respect to the solicitation, acceptance, or receipt of gifts from disqualified sources. Therefore, the Contractor and its agents shall refrain from offering or giving anything of value to an employee of the Owner. Employees of the Owner may not solicit any gift, gratuity, stipend, or thing of value from the Contractor or its agents. Violations of these gift provisions may be grounds for immediate Contract termination and/or referral for civil action or criminal prosecution.
- C. To promote a working relationship with the Owner based on ethical business practices, the Contractor is expected to:
 - 1. Furnish all goods, materials and services to the Owner as contractually required and specified.
 - 2. Submit complete and accurate reports to the Owner and its representatives as required.
 - 3. Not seek, solicit, demand or accept any information, verbal or written, from the Owner or its representatives that provides an unfair advantage over a competitor.
 - 4. Not engage in any activity or course of conduct that restricts open and fair competition on Owner-related projects and transactions.
 - 5. Not engage in any course of conduct with Owner employees or its representatives that constitutes a conflict of interest, in fact or in appearance.
 - 6. Not offer or give any unlawful gifts or gratuities, or engage in bribery or other criminal activity.
- D. The Owner encourages the Contractor to advance and support ethical business conduct and practices among its directors, officers, and employees, preferably through the adoption of corporate ethics awareness training programs and written codes of conduct.
- E. Although the Contractor may employ relatives of Owner employees, the Owner shall be made aware of such circumstances as soon as possible, preferably in writing, to ensure a conflict of interest situation does not arise. The Owner reserves the right to request that the Contractor modify the work assignment of a relative of an Owner employee where a conflict of interest, or the appearance thereof, is deemed to exist.

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- F. The Contractor may hire former employees of the Owner. However, as a general rule, former employees of the Owner may neither appear nor practice before the Owner, nor receive compensation for services rendered on a matter before the Owner, for a period of two years following their separation from service with the Owner. In addition, former employees of the Owner are subject to a “lifetime bar” from appearing before the Owner or receiving compensation for services regarding any transaction in which they personally participated or which was under their active consideration during their tenure with the Owner.
- G. The Contractor agrees to notify the Owner’s Office of Internal Affairs at 518-257-3193 of any activity by an employee of the Owner that is inconsistent with the contents of this General Conditions Section 17.06.
- H. Any violation of this General Conditions Section 17.06 shall justify termination of this Contract and may result in Owner’s rejection of the Contractor’s bids or proposals for future agreements.

Section 17.07 – Continuing Integrity

- A. The Contractor shall, at all times during the Contract term, remain responsive and responsible. The Contractor shall also monitor all Subcontractors for responsiveness and responsibility at all times during the Contract term. The Contractor agrees, if requested by the President of Owner or his or her designee, to present evidence of its continuing legal authority to do business in New York State, integrity, experience, ability, prior performance, and organizational and financial capacity. The Contractor shall immediately notify Owner of any material or adverse information pertaining to the Contractor or any Subcontractor, regardless of tier.
- B. The President of Owner or his or her designee, in his or her sole discretion, reserves the right to suspend any or all activities under this Contract, at any time, when he or she discovers information that calls in to question the responsibility of Contractor. In the event of such suspension, Contractor will be given written notice outlining the particulars of such suspension. Upon issuance of such notice, Contractor shall comply with the terms of the suspension order. Contract activity may resume at such time as the President of Owner or his or her designee issues a written notice authorizing a resumption of performance under the Contract.
- C. Notwithstanding any other provision of this Contract, upon written notice to Contractor, and a reasonable opportunity to be heard with the appropriate Owner officials or staff, the Contract may be terminated by the President of Owner or his or her designee at Contractor’s expense where Contractor is determined by the President of Owner or his or her designee to be non-responsible. In such event, the President of Owner or his or her designee may complete the contractual requirements in any manner he or she may deem advisable and pursue available legal or equitable remedies for the breach.

Section 17.08 – Iran Divestment

- A. By entering into this Contract, Contractor certifies, under the penalties of perjury, that Contractor is not on the list created pursuant to paragraph (b) of subdivision 3 of Section 165-a of the NYS State Finance Law. Contractor further certifies that Contractor will not utilize on this Contract any subcontractor that is identified on the list created pursuant to paragraph (b) of subdivision 3 of Section 165-a of the NYS State Finance Law.
- B. During this Contract, should Owner receive information that a person (as defined in NYS State Finance Law §165-a) is in violation of the above-referenced certifications, Owner will review such information and offer the person an opportunity to respond. If the person fails to demonstrate that it has ceased its

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engagement in the investment activity which is in violation of the Act within 90 days after the determination of such violation, then Owner shall take such action as may be appropriate and provided for by law, rule, or contract, including, but not limited to, seeking compliance, recovering damages, or declaring the Contractor in default.

ARTICLE 18 -- 2005 PROCUREMENT LOBBYING LAW

Section 18.01 - Procurement Lobbying Law

Bidders shall affirm their understanding of and agree to comply with NYS State Finance Law § 139-j (3) and § 139-j (6) (b), certify their compliance with NYS State Finance Law § 139-k (5), disclose prior non-responsibility determinations under NYS State Finance Law § 139-j, and shall certify that the information they provide with respect to NYS State Finance Law § 139-j and § 139-k is complete, true, and accurate. Contractor hereby reaffirms its understanding of an agreement to comply with NYS State Finance Law § 139-j (3) and § 139-j (6) (b), re-certifies its compliance with NYS State Finance Law § 139-k (5) and recertifies that the information it provided with respect to NYS State Finance Law § 139-j and § 139-k is complete, true, and accurate.

Section 18.02 - Contractor's Certifications

For any contract \$15,000 or more each Contractor shall submit, with its bid, on the form provided herewith, the *2005 Procurement Lobbying Law – Certification*, pursuant to NYS State Finance Law § 139-j and § 139-k. The information contained in the *2005 Procurement Lobbying Law – Certification*, pursuant to NYS State Finance Law § 139-j and § 139-k will serve as an informational resource to aid the Owner in making an award determination.

Section 18.03 - Termination Provisions

The Owner reserves the right to terminate this Contract in the event it is found that the certification filed by the Contractor in accordance with NYS State Finance Law § 139-j and § 139-k, as such may be amended or modified, was intentionally false or intentionally incomplete. Upon such finding, the Owner may exercise its right pursuant to General Conditions Section 11.01 – Termination for Cause.

ARTICLE 19 -- EXECUTIVE ORDER No. 125

Section 19.01 - Determination of Contractor Responsibility

In order to assist the Owner in determining the responsibility and reliability of the lowest bidder for the Contract and to effectuate the directives of Executive Order No. 125, dated May 22, 1989, (9 NYCRR §4.125) the Council of Contracting Agencies has adopted procedures to collect and exchange relevant information among contracting agencies.

Section 19.02 – NYS Vendor Responsibility Questionnaire

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- A. For any Contract valued at \$10,000 or more, the NYS Vendor Responsibility Questionnaire For Profit Construction (CCA-2) for the Contractor or for any Subcontractor shall be submitted as requested by the Owner. Owner may request an updated NYS Vendor Responsibility Questionnaire For Profit Construction (CCA-2) for the Contractor or for any Subcontractor as often as the Owner, in its sole and exclusive discretion, deems necessary to carry out the Owner's duties and responsibilities under this Contract.
- B. The information contained in the NYS Vendor Responsibility Questionnaire For Profit Construction (CCA-2) will serve as an informational resource to aid the Owner in making an award determination and in making other determinations for this Contract.

ARTICLE 20 -- OPPORTUNITY PROGRAMS

Section 20.01 - General Provisions

- A. The Dormitory Authority is required to implement the provisions of NYS Executive Law Article 15-A and Parts 140 through 145 of Title 5 of the NYCRR for all State contracts (as defined in such statute and regulations) with a value:
 - 1. in excess of \$25,000 for labor, services, equipment, materials, or any combination of the foregoing; or
 - 2. in excess of \$100,000 for real property renovations and construction.
- B. The Contractor agrees, in addition to any other nondiscrimination provision of the Contract and at no additional cost to the Owner, to fully comply and cooperate with the Owner in the implementation of NYS Executive Law ARTICLE 15-A, PARTICIPATION BY MINORITY GROUP MEMBERS AND WOMEN WITH RESPECT TO STATE CONTRACTS, and the regulations promulgated thereunder. These requirements include: equal employment opportunities for minority group members and women (EEO), and contracting opportunities for NYS certified minority and women-owned business enterprises (MWBs). The Contractor's demonstration of good faith efforts pursuant to 5 NYCRR § 142.8 shall be a part of these requirements. These provisions shall be deemed supplementary to, and not in lieu of the nondiscrimination provisions required by NYS Executive Law Article 15 (the Human Rights Law) and other applicable federal, state and local laws.
- C. Failure to comply with all requirements in this General Conditions Article 20 may result in a finding of non-responsiveness, non-responsibility, breach of contract or any combination of the foregoing leading to the assessment of liquidated damages pursuant to General Conditions Section 20.06 and other remedies available to the Owner pursuant to the Contract and applicable law.

Section 20.02 – Equal Employment Opportunity (EEO)

- A. The provisions of NYS Executive Law Article 15-A, and the rules and regulations promulgated thereunder pertaining to equal employment opportunities for minority group members and women shall apply to the Contract.
- B. The Contractor shall:
 - 1. Undertake or continue, and ensure each Subcontractor shall undertake or continue, existing EEO programs to ensure that minority group members and women are afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age,

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disability, or marital status. For these purposes, EEO shall apply in the areas of recruitment, employment, job assignment, promotion, upgrading, demotion, transfer, layoff, or termination and rates of pay or other forms of compensation.

2. Submit an EEO policy statement to the Owner within seventy-two (72) hours after the date of the Letter of Intent to award the Contract.
3. Adopt a model EEO policy statement and require each Subcontractor to adopt a model EEO policy statement if the Contractor or Subcontractor does not have an existing EEO policy statement, and if the Owner requires the Contractor or Subcontractor to adopt a model EEO policy statement.
4. Have a Contractor's EEO policy statement that shall include the following language:
 - a. The Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, age, disability, or marital status, will undertake or continue existing EEO programs to ensure that minority group members and women are afforded equal employment opportunities without discrimination, and shall make and document its conscientious and active efforts to employ and utilize minority group members and women in its work force.
 - b. The Contractor shall state in all solicitations or advertisements for employees that, in the performance of the Contract, all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability, or marital status.
 - c. The Contractor shall request each employment agency, labor union, or authorized representative of workers with which it has a collective bargaining or other agreement or understanding, to furnish a written statement that such employment agency, labor union, or representative will not discriminate on the basis of race, creed, color, national origin, sex age, disability or marital status and that such union or representative will affirmatively cooperate in the implementation of the Contractor's obligations herein.
5. The Contractor shall include the provisions of paragraphs a. through c. of this General Conditions Section 20.02 B. 4. and Subdivision E of this General Conditions Section 20.02, which provides for relevant provisions of the Human Rights Law, in every Subcontract in such a manner that the requirements of these provisions will be binding upon each Subcontractor as to Work in connection with the Contract.

C. To ensure continuous compliance with General Conditions Section 20.02:

1. The Contractor shall submit a Workforce Utilization Report, and shall require each Subcontractor to submit a Workforce Utilization Report, in such form as shall be required by the Owner on a monthly basis during the term of the Contract.
2. Separate forms shall be completed by the Contractor and each Subcontractor.
3. Pursuant to Executive Order 162 (9 NYCRR 8.162) dated January 9, 2017, the Contractor and its Subcontractors are required to submit monthly *E.O. 162 Workforce Utilization Reports* for contracts with a total contract value of Twenty-Five Thousand 00/100 Dollars (\$25,000.00) or more. All *E.O. 162 Workforce Utilization Reports* are to be submitted within 10 days of the end of each month by following the online reporting process set forth in section 20.02 (4). The *E.O. 162*

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Workforce Utilization Reports will require the Contractor and its and Subcontractors, among other things, report the gross wages paid to each of their employees for the work performed by such employees in connection with the Contract.

4. For monthly reporting in connection with Executive Order 162, reports are to be submitted electronically as follows:
 - a. Log-in (<https://ny.newnycontracts.com>) or visit the NYSCS Account Look Up (<https://ny.newnycontracts.com/frontend/usersearchpublic.asp>) and follow the on-screen directions to look up your firm's account and then access the secure System. Contact Customer Support via any of the System links if you have any questions while attempting to access your account.
 - b. Go to View>> My Workforce Audits.
 - c. View Workforce Audits by status, dates, contract, and contract type (Prime/Subcontractor).
 - d. The System will notify contractors to log in to review and record the workforce details for the applicable audit.
 - e. Complete all required reporting on a timely basis.
- D. The Contractor shall comply with the provisions of the NYS Human Rights Law, and all other State and Federal statutory and constitutional non-discrimination provisions. The Contractor and each Subcontractor shall not discriminate against any employee or applicant for employment because of race, creed (religion), color, sex, national origin, sexual orientation, military status, age, disability, predisposing genetic characteristic, marital status, or domestic violence victim status, and shall also follow the requirements of the NYS Human Rights Law with regard to non-discrimination on the basis of prior criminal conviction and prior arrest.

Section 20.03 – Opportunities for Minority and Women-Owned Business Enterprises (MWBE)

- A. The Owner has established goals for the participation in this Contract of NYS certified minority-owned business enterprises (“MBE”) and NYS certified women-owned business enterprises (“WBE” and collectively with MBEs, “MWBE”). The goals (collectively, MWBE Contract Goals) are set forth in the Information for Bidders Section 8.0 – Opportunity Programs Requirements.
- B. The Contractor represents and warrants that, as a condition for award of the Contract, the Contractor has submitted a Statewide Utilization Management Plan (“SUMP”) via the NYS Contract System (NYSCS) which lists all proposed Subcontractors including an identification of the NYS certified MWBE subcontractors and suppliers the Contractor intends to use to perform the Work of the Contract and to achieve the MWBE Contract Goals established in the Contract Documents. In addition, or alternatively, Contractor may have submitted a request for a waiver. Prior to award of the Contract, the Owner approved Contractor’s plan to achieve the MWBE Contract Goals established in the Contract Documents (MWBE Utilization Plan) to the extent the Owner did not approve Contractor’s request for a waiver of part or all of the MWBE Contract Goals. Owner approval of the MWBE Utilization Plan approves a Subcontractor only for the purpose of the MWBE Utilization Plan.
- C. Contractor agrees to adhere to the MWBE Utilization Plan in the performance of the Contract. Contractor shall not change the Utilization Plan without the prior written approval of the Owner. Contractor further agrees that failure to adhere to the MWBE Utilization Plan shall constitute a material breach of the Contract and upon such breach, the Owner shall be entitled to any remedy provided in the Contract or by law, including but not limited to a finding that the Contractor is non-responsible.

- D. The Contractor understands that only sums paid to MWBEs for the performance of a commercially useful function, as that term is defined in 5 NYCRR § 140.1 may be applied towards the achievement of the applicable MWBE Contract Goal. The portion of a subcontract with an MWBE serving as a supplier that shall be deemed to represent the commercially useful function performed by the MWBE shall be 60% of the total value of the subcontract. The portion of a subcontract with an MWBE serving as a broker that shall be deemed to represent the commercially useful function performed by the MWBE shall be the monetary value for fees, or the markup percentage, charged by the MWBE. The Owner will audit the Contractor's efforts to achieve the MWBE Contract Goals through the NYSCS.

Section 20.04 - Good Faith Efforts

- A. The Contractor shall document good faith efforts pursuant to 5 NYCRR § 142.5 to provide meaningful participation by MWBEs as Subcontractors (which includes material suppliers, other vendors, and others; see definition of Subcontractor in General Conditions Article 1 - Definitions) in the performance of the Contract, to comply with the requirements of the Contract and to enable the Owner to determine compliance with the provisions of this General Conditions Article 20. Guidelines for documentation of good faith efforts are at <https://www.dasny.org/forms> under MWSBE.
- B. If the Contractor fails to adequately document good faith efforts, it may result in a finding of non-compliance.

Section 20.05 - Waivers

- A. If the Contractor, after making good faith efforts satisfactory to the Owner, is unable to achieve the MWBE Contract Goals, the Contractor may submit a request for a waiver through the NYSCS, or a non-electronic method provided by the Owner. The request for a waiver must be supported by evidence of the good faith efforts by the Contractor to achieve the maximum feasible MWBE participation towards the applicable MWBE Contract Goals. If the documentation included with the waiver request is complete, the Owner shall evaluate the request and issue a written notice of acceptance or denial within twenty (20) business days of receipt.
- B. If the Owner, upon review of the SUMP, the MWBE Utilization Plan, the NYSCS and any other relevant information, determines that the Contractor is failing or refusing to comply with the MWBE Contract Goals and no waiver has been issued in regard to such non-compliance, the Owner may issue a notice of deficiency to the Contractor. The Contractor shall respond to the notice to deficiency within seven (7) business days of receipt. Such response may include a request for partial or total waiver of MWBE Contract Goals.

Section 20.06 – Damages - MWBE Participation

- A. If the Owner determines that the Contractor is not in compliance with the requirements of this General Conditions Article 20 and the Contractor refuses to comply with the requirements of this General Conditions Article 20, or if the Contractor is found to have willfully and intentionally failed to comply with the MWBE Contract Goals, then: (1) the Contractor shall be obligated to pay the Owner liquidated damages; or (2) the Contractor shall be obligated to pay the Owner other appropriate damages; or (3) the Owner shall receive one or more other appropriate remedies, unless the Owner elects to pursue its remedies under NYS Executive Law Section 316. If the Owner declines to pursue its remedies under NYS Executive Law Section 316, the Owner may elect to pursue one or more of liquidated damages, other appropriate damages, and one or more other appropriate remedies.

GENERAL CONDITIONS

- B. If the Owner decides to assess liquidated damages, the Contractor shall be obligated to pay to the Owner liquidated damages in an amount equal to the difference between all sums identified for payment to MWBEs if the Contractor had achieved the MWBE Contract Goals and all sums actually paid to MWBEs for performance of Work under the Contract. If such liquidated damages have not been withheld by the Owner, the Contractor shall pay such liquidated damages to the Owner within sixty (60) days after they are assessed. provided, however, that if the Contractor has filed a complaint with the Director of the Division of Minority and Women's Business Development pursuant to 5 NYCRR §142.2, liquidated damages shall be payable only in the event of a determination adverse to the Contractor following the complaint process. The liquidated damages are intended to compensate the Owner only for the Owner's damage if the Owner determines that the Contractor is not in compliance with the requirements of General Conditions Sections 20.03, 20.04 and 20.05 and the Contractor refuses to comply with the requirements of General Conditions Sections 20.03, 20.04 and 20.05, or if the Contractor is found to have willfully and intentionally failed to comply with the MWBE Contract Goals. In addition, the Contractor shall be liable to the Owner to the fullest extent permitted by law for:
- a. whatever other appropriate damages the Owner may incur; or
 - b. any other appropriate remedy to which the Owner may be entitled as a result of the Contractor's refusal to comply with the requirements of this General Conditions Article 20 outside the requirements of General Conditions Sections 20.03, 20.04, 20.05 and the MWBE Contract Goals.

Other appropriate damages include, but are not limited to, the expenses for personnel, supplies and overhead incurred by the Owner to administer and enforce the requirements of this General Conditions Article 20 other than the requirements of General Conditions Sections 20.03, 20.04, 20.05 and the MWBE Contract Goals.

Section 20.07 – Reporting to Owner

The Contractor shall complete the reports and submit as indicated to establish and update EEO requirements during the life of the Contract. Reports not submitted at such time shall be cause for the Owner to delay payment to the Contractor. The listed reports are a requirement of the Contract and copies are included in the Contract Documents and template forms are also available on the Dormitory Authority's web site. The Contractor shall submit to the Owner all executed agreements and purchase orders for ALL MWBE/SDVOB subcontractors/suppliers who were approved on the Utilization Plan no later than 30 days after award of the Contract.

ARTICLE 21- SERVICE-DISABLED VETERAN OWNED BUSINESSES

Section 21.01 – General Provisions

Article 17-B of the NYS Executive Law provides for more meaningful participation in public procurement by certified Service-Disabled Veteran – Owned Businesses (SDVOB), thereby further integrating such businesses in to New York State's economy. The Dormitory Authority recognizes the need to promote the employment of service-disabled veterans and to ensure that certified SDVOBs have opportunities for maximum feasible participation in the performance of Dormitory Authority contracts.

Section 21.02 – Contract with Goals

- A. If the Information for Bidders established an overall goal for SDVOB participation in this Contract and Contractor submitted an SDVOB Utilization Plan that was accepted by the Dormitory Authority, Contractor shall follow the accepted SDVOB Utilization Plan. Contractor, by award of the Contract,

GENERAL CONDITIONS

certified that Contractor shall follow the submitted and accepted SDVOB Utilization Plan for the performance of SDVOBs on the Contract.

- B. Contractor shall not change the accepted SDVOB Utilization Plan without the prior written consent of the Dormitory Authority. Any modifications or changes to the accepted SDVOB Utilization Plan after award of the Contract to the Contractor shall be reported to the Dormitory Authority on a revised SDVOB Utilization Plan. As part of a revised SDVOB Utilization Plan, the Contractor may request a partial or total waiver of the goal for SDVOB participation but such request must be made prior to submission of the Application for Payment for the final payment on the Contract. Contractor shall make and shall document good faith efforts to provide meaningful participation by SDVOBs as subcontractors or suppliers in the performance of the Contract. The revised SDVOB Utilization Plan is not effective unless and until it is accepted by the Dormitory Authority. If the revised SDVOB Utilization Plan is not accepted by the Dormitory Authority, the Dormitory Authority shall issue a notice of deficiency and the Contractor shall proceed as set forth in paragraph D of this General Conditions Section 21.02
- C. Contractor shall report to the Dormitory Authority Monthly SDVOB Contractor Compliance during the Contract documenting the preceding month's progress towards implementing the accepted SDVOB Utilization Plan and achieving the SDVOB goals for the Contract. This information shall be submitted to the Dormitory Authority in the manner and at the times directed by the Dormitory Authority.
- D. If the Dormitory Authority, upon review of the SDVOB Utilization Plan and the Monthly SDVOB Contractor Compliance reports determines that the Contractor is failing or refusing to comply with the Contract SDVOB goals and no waiver has been issued with respect to such non-compliance, the Dormitory Authority may issue a notice of deficiency to the Contractor. The Contractor shall respond to the notice of deficiency within seven (7) business days of receipt. Such response may include a request for partial or total waiver of the Contract SDVOB goals.
- E. Contractor shall make and shall document its good faith efforts to utilize SDVOBs in the performance of the Contract. Evidence of required good faith efforts includes but is not limited to:
 - 1. Copies of solicitations to SDVOBs and any responses thereto;
 - 2. Explanation of the specific reason(s) each SDVOB responding to a Contractor's solicitation was not selected;
 - 3. Dates of any pre-bid, pre-award or other meetings attended by Contractor, if any, scheduled by the Dormitory Authority with certified SDVOBs which the Dormitory Authority determined were capable of fulfilling the SDVOB goals in the Contract;
 - 4. Information describing the specific steps undertaken to reasonably structure the scope of subcontracts and material orders for the purpose of subcontracting with, or obtaining materials from, SDVOBs;
 - 5. Other information relevant to the waiver request.
- F. Contractor's failure to use SDVOBs in accordance with the accepted SDVOB Utilization Plan or any accepted revised SDVOB Utilization Plan shall be a material breach of the Contract and upon such breach, the Dormitory Authority shall be entitled to any remedy provided in the Contract, by law or regulation or at law or in equity, including but not limited to a finding the Contractor is non-responsible. If the Dormitory Authority finds the Contractor willfully and intentionally fails to comply with the

Contract SDVOB goals, the Contractor shall pay damages to the Dormitory Authority as set forth in 9 NYCRR § 252.2(s).

Section 21.03 – Contract with No Goals

If the Information for Bidders does not establish an overall goal for SDVOB participation in this Contract, Contractors are still strongly encouraged and expected to consider SDVOBs in the fulfillment of the requirements of the Contract in recognition of the service and sacrifices made by service-disabled veterans and in recognition of their economic activity in doing business in New York State. The Contractor is encouraged to make good faith efforts to promote and assist in the participation of SDVOBs in performance of the Contract as Subcontractors.

Exhibit “A”

RELEASE FORM
REDUCTION OF RETAINAGE
DORMITORY AUTHORITY STATE OF NEW YORK

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Corporate with Claim Reservation

RELEASE FORM
REDUCTION OF RETAINAGE
DORMITORY AUTHORITY STATE OF NEW YORK

TO ALL TO WHOM THESE PRESENTS SHALL COME, OR MAY CONCERN, GREETING: Know ye,

that _____ hereinafter referred to as the

Contractor for and in consideration of the sum of _____

_____ dollars (\$ _____), lawful money of the

United States of America to it in hand heretofore or now paid by the Dormitory Authority, the receipt whereof

is hereby acknowledged, has remised, released, and forever discharged and by these presents does, for itself,

its successors and its assigns, remise, release, and forever discharge the said Dormitory Authority, its

members, officers, agents, employees, successors, and assigns of and from all claims of liability to the

Contractor for anything furnished or performed in connection with, or arising out of a contract dated the_

_____ day of _____ , between the Dormitory Authority and the Contractor in

relation to the construction of _____

or out of the work covered by said contract or arising out of said contract including, but not limited to, all

claims for extra work or by reason of extra work, labor or materials, or additional work or by reason of

additional work, labor, or materials furnished or performed in connection with, relating to, or arising out of

the subject matter of said contract, and any prior act, neglect, or default on the part of the Dormitory

Authority or any of its members, officers, agents, employees, successors, or assigns in connection therewith,

and all manner of action and actions, cause and causes of action, suits, debts, dues, sums of money, accounts,

reckonings, bonds, bills, specialties, covenants, contracts, controversies, agreements, promises, variances,

trespasses, damages, judgments, extents, executions, claims and demands whatsoever in law or in equity,

which against the said Dormitory Authority, its members, officers, agents, employees, successors ,

RELEASE FORM
REDUCTION OF RETAINAGE
DORMITORY AUTHORITY OF THE STATE OF NEW YORK
PAGE -2-

and assigns the Contractor ever had, now has, or which its successors or assigns hereafter can, shall or may have for, upon or by reason of any matter, cause or thing whatsoever from the beginning of the world to the day of the date of these presents, except the undersigned hereby specifically excludes from this release and hereby retains and reserves any and all right in connection with and concerning retention being held by the

Dormitory Authority in the amount of

dollars (\$), and a claim for damages in the amount of

dollars (\$),

presented to the Dormitory Authority. Failure to enter an amount for the claim for damages in the space provided above shall be deemed to mean zero or no damages.

The Contractor further acknowledges that neither the aforesaid payment nor acceptance by the Dormitory Authority of the work covered by the aforementioned contract shall in any way or manner operate as or constitute a release or waiver to its obligations, undertakings, or liabilities, under said contract or in any way affect or limit the same. This release may not be changed orally.

RELEASE FORM
REDUCTION OF RETAINAGE
DORMITORY AUTHORITY OF THE STATE OF NEW YORK
PAGE -3-

IN WITNESS WHEREOF, the said Contractor has caused these presents to be signed by its duly authorized officer on the _____ day of _____, 20_____.

NAME OF CONTRACTOR

BY:_____

STATE OF _____

COUNTY OF _____ SS:

On this _____ day of _____, in the year 20_____
before me personally came _____ to me know, who, being by me
duly sworn, did depose and say that he resides at _____;
that he is the _____ of the _____
_____, the corporation described in and which executed
the above instruments; and that he signed his name thereto by order of the board of directors of said
corporation.

NOTARY PUBLIC

CORPORATE ACKNOWLEDGMENT

Page 3.1

State of New York)
) ss.:
County of _____)

On the _____ day of _____ in the year _____ before me personally came _____ to me known, who, being by me duly sworn, did depose and say that (he/she/they) reside(s) in _____; that (he/she/they) (is /are) the president /other officer/director/attorney in fact duly appointed) of the _____

(name of corporation)

the corporation described in and which executed the above instrument; and that (he/she/they) signed (his/her/their) name(s) thereto by authority of the board of directors of said corporation.

Notary Public Signature

My Commission Expires _____

Cross out words that do not apply in parentheses.

UNIFORM ACKNOWLEDGMENT

(For Use by All Persons and Entities Other Than Corporations)

State of New York)
) ss.:
County of _____)

On the _____ day of _____ in the year _____ before me, the undersigned, a Notary Public in and for said State, personally appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) (is/are) subscribed to the within instrument and acknowledged to me that (he/she/they) executed the same in (his/her/their) capacity(ies), and that by (his/her/their) signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

CONSENT OF SURETY
REDUCTION OF RETAINAGE
DORMITORY AUTHORITY OF THE STATE OF NEW YORK
PAGE -4-

Contract Between the Dormitory Authority and _____

(hereinafter referred to as Contractor)

For _____ (Project)

Dated _____

In accordance with the provisions of the Contract, indicated above, between the Owner and the Contractor,
the (here insert the name and address of Surety Company)

(hereinafter referred to as Surety Company),

As Surety on the Performance and Labor & Material Payment Bonds of the Contractor and the Surety Company, issued as part of the said Contract, hereby approves of reduction of retainage on the Contract, and agrees that any such payment to the Contractor shall not relieve the Surety Company of any of its obligations to the Dormitory Authority, as set forth in the said bonds.

IN WITNESS WHEREOF,

the Surety Company has hereunto set its hand this _____ day of _____ 20____

Surety Company

Signature of Authorized Representative

Title

SURETY ACKNOWLEDGMENT

PAGE -5-

State of _____)
County of _____) ss.:

On this _____ day of _____, in the year _____, before me personally
came _____ to me known, who, being by me
duly sworn, did depose and say that (s)he resides in _____;
that (s)he is the Attorney of the _____, the corporation
described in and which executed the attached instrument; that (s)he knows the seal of the said corporation;
that the seal affixed to said instrument is such corporate seal; and that is was so affixed by order of the
Board of Directors of the said corporation, and that he signed his name thereto by like order.

Notary Public

My commission expires _____



Kathy Hochul, Governor

Roberta Reardon, Commissioner

DASNY

Daria Khanafiev
515 Broadway
Albany NY 12207

Schedule Year 2024 through 2025
Date Requested 11/05/2024
PRC# 2024013976

Location CCNY
Project ID# 3822309999 CR3
Project Type Harris Hall IT Upgrade

PREVAILING WAGE SCHEDULE FOR ARTICLE 8 PUBLIC WORK PROJECT

Attached is the current schedule(s) of the prevailing wage rates and prevailing hourly supplements for the project referenced above. A unique Prevailing Rate Case Number (PRC#) has been assigned to the schedule(s) for your project.

The schedule is effective from July 2024 through June 2025. All updates, corrections, posted on the 1st business day of each month, and future copies of the annual determination are available on the Department's website www.labor.ny.gov. Updated PDF copies of your schedule can be accessed by entering your assigned PRC# at the proper location on the website.

It is the responsibility of the contracting agency or its agent to annex and make part, the attached schedule, to the specifications for this project, when it is advertised for bids and /or to forward said schedules to the successful bidder(s), immediately upon receipt, in order to insure the proper payment of wages.

Please refer to the "General Provisions of Laws Covering Workers on Public Work Contracts" provided with this schedule, for the specific details relating to other responsibilities of the Department of Jurisdiction.

Upon completion or cancellation of this project, enter the required information and mail **OR** fax this form to the office shown at the bottom of this notice, **OR** fill out the electronic version via the NYSDOL website.

NOTICE OF COMPLETION / CANCELLATION OF PROJECT

Date Completed: _____ Date Cancelled: _____

Name & Title of Representative: _____

Phone: (518) 457-5589 Fax: (518) 485-1870
W. Averell Harriman State Office Campus, Bldg. 12, Room 130, Albany, NY 12240

General Provisions of Laws Covering Workers on Article 8 Public Work Contracts

Introduction

The Labor Law requires public work contractors and subcontractors to pay laborers, workers, or mechanics employed in the performance of a public work contract not less than the prevailing rate of wage and supplements (fringe benefits) in the locality where the work is performed.

Responsibilities of the Department of Jurisdiction

A Department of Jurisdiction (Contracting Agency) includes a state department, agency, board or commission; a county, city, town or village; a school district, board of education or board of cooperative educational services; a sewer, water, fire, improvement and other district corporation; a public benefit corporation; and a public authority awarding a public work contract.

The Department of Jurisdiction (Contracting Agency) awarding a public work contract **MUST** obtain a Prevailing Rate Schedule listing the hourly rates of wages and supplements due the workers to be employed on a public work project. This schedule may be obtained by completing and forwarding a "Request for wage and Supplement Information" form (PW 39) to the Bureau of Public Work. The Prevailing Rate Schedule **MUST** be included in the specifications for the contract to be awarded and is deemed part of the public work contract.

Upon the awarding of the contract, the law requires that the Department of Jurisdiction (Contracting Agency) furnish the following information to the Bureau: the name and address of the contractor, the date the contract was let and the approximate dollar value of the contract. To facilitate compliance with this provision of the Labor Law, a copy of the Department's "Notice of Contract Award" form (PW 16) is provided with the original Prevailing Rate Schedule.

The Department of Jurisdiction (Contracting Agency) is required to notify the Bureau of the completion or cancellation of any public work project. The Department's PW 200 form is provided for that purpose.

Both the PW 16 and PW 200 forms are available for completion [online](#).

Hours

No laborer, worker, or mechanic in the employ of a contractor or subcontractor engaged in the performance of any public work project shall be permitted to work more than eight hours in any day or more than five days in any week, except in cases of extraordinary emergency. The contractor and the Department of Jurisdiction (Contracting Agency) may apply to the Bureau of Public Work for a dispensation permitting workers to work additional hours or days per week on a particular public work project.

Wages and Supplements

The wages and supplements to be paid and/or provided to laborers, workers, and mechanics employed on a public work project shall be not less than those listed in the current Prevailing Rate Schedule for the locality where the work is performed. If a prime contractor on a public work project has not been provided with a Prevailing Rate Schedule, the contractor must notify the Department of Jurisdiction (Contracting Agency) who in turn must request an original Prevailing Rate Schedule from the Bureau of Public Work. Requests may be submitted by: mail to NYSDOL, Bureau of Public Work, State Office Bldg. Campus, Bldg. 12, Rm. 130, Albany, NY 12226; Fax to Bureau of Public Work (518) 485-1870; or electronically at the NYSDOL website www.labor.ny.gov.

Upon receiving the original schedule, the Department of Jurisdiction (Contracting Agency) is **REQUIRED** to provide complete copies to all prime contractors who in turn **MUST**, by law, provide copies of all applicable county schedules to each subcontractor and obtain from each subcontractor, an affidavit certifying such schedules were received. If the original schedule expired, the contractor may obtain a copy of the new annual determination from the NYSDOL website www.labor.ny.gov.

The Commissioner of Labor makes an annual determination of the prevailing rates. This determination is in effect from July 1st through June 30th of the following year. The annual determination is available on the NYSDOL website www.labor.ny.gov.

Payrolls and Payroll Records

Every contractor and subcontractor **MUST** keep original payrolls or transcripts subscribed and affirmed as true under penalty of perjury. As per Article 6 of the Labor law, contractors and subcontractors are required to establish, maintain, and preserve for not less than six (6) years, contemporaneous, true, and accurate payroll records. At a minimum, payrolls must show the following information for each person employed on a public work project: Name, Address, Last 4 Digits of Social Security Number, Classification(s) in which the worker was employed, Hourly wage rate(s) paid, Supplements paid or provided, and Daily and weekly number of hours worked in each classification.

The filing of payrolls to the Department of Jurisdiction is a condition of payment. Every contractor and subcontractor shall submit to the Department of Jurisdiction (Contracting Agency), within thirty (30) days after issuance of its first payroll and every thirty (30) days thereafter, a transcript of the original payrolls, subscribed and affirmed as true under penalty of perjury. The Department of Jurisdiction (Contracting Agency) shall collect, review for facial validity, and maintain such payrolls.

In addition, the Commissioner of Labor may require contractors to furnish, with ten (10) days of a request, payroll records sworn to as their validity and accuracy for public work and private work. Payroll records include, but are not limited to time cards, work description sheets, proof that supplements were provided, cancelled payroll checks and payrolls. Failure to provide the requested information within the allotted ten (10) days will result in the withholding of up to 25% of the contract, not to exceed \$100,000.00. If the contractor or subcontractor does not maintain a place of business in New York State and the amount of the contract exceeds \$25,000.00, payroll records and certifications must be kept on the project worksite.

The prime contractor is responsible for any underpayments of prevailing wages or supplements by any subcontractor.

All contractors or their subcontractors shall provide to their subcontractors a copy of the Prevailing Rate Schedule specified in the public work contract as well as any subsequently issued schedules. A failure to provide these schedules by a contractor or subcontractor is a violation of Article 8, Section 220-a of the Labor Law.

All subcontractors engaged by a public work project contractor or its subcontractor, upon receipt of the original schedule and any subsequently issued schedules, shall provide to such contractor a verified statement attesting that the subcontractor has received the Prevailing Rate Schedule and will pay or provide the applicable rates of wages and supplements specified therein. (See NYS Labor Laws, Article 8 . Section 220-a).

Determination of Prevailing Wage and Supplement Rate Updates Applicable to All Counties

The wages and supplements contained in the annual determination become effective July 1st whether or not the new determination has been received by a given contractor. Care should be taken to review the rates for obvious errors. Any corrections should be brought to the Department's attention immediately. It is the responsibility of the public work contractor to use the proper rates. If there is a question on the proper classification to be used, please call the district office located nearest the project. Any errors in the annual determination will be corrected and posted to the NYSDOL website on the first business day of each month. Contractors are responsible for paying these updated rates as well, retroactive to July 1st.

When you review the schedule for a particular occupation, your attention should be directed to the dates above the column of rates. These are the dates for which a given set of rates is effective. To the extent possible, the Department posts rates in its possession that cover periods of time beyond the July 1st to June 30th time frame covered by a particular annual determination. Rates that extend beyond that instant time period are informational ONLY and may be updated in future annual determinations that actually cover the then appropriate July 1st to June 30th time period.

Withholding of Payments

When a complaint is filed with the Commissioner of Labor alleging the failure of a contractor or subcontractor to pay or provide the prevailing wages or supplements, or when the Commissioner of Labor believes that unpaid wages or supplements may be due, payments on the public work contract shall be withheld from the prime contractor in a sufficient amount to satisfy the alleged unpaid wages and supplements, including interest and civil penalty, pending a final determination.

When the Bureau of Public Work finds that a contractor or subcontractor on a public work project failed to pay or provide the requisite prevailing wages or supplements, the Bureau is authorized by Sections 220-b and 235.2 of the Labor Law to so notify the financial officer of the Department of Jurisdiction (Contracting Agency) that awarded the public work contract. Such officer MUST then withhold or cause to be withheld from any payment due the prime contractor on account of such contract the amount indicated by the Bureau as sufficient to satisfy the unpaid wages and supplements, including interest and any civil penalty that may be assessed by the Commissioner of Labor. The withholding continues until there is a final determination of the underpayment by the Commissioner of Labor or by the court in the event a legal proceeding is instituted for review of the determination of the Commissioner of Labor.

The Department of Jurisdiction (Contracting Agency) shall comply with this order of the Commissioner of Labor or of the court with respect to the release of the funds so withheld.

Summary of Notice Posting Requirements

The current Prevailing Rate Schedule must be posted in a prominent and accessible place on the site of the public work project. The prevailing wage schedule must be encased in, or constructed of, materials capable of withstanding adverse weather conditions and be titled "PREVAILING RATE OF WAGES" in letters no smaller than two (2) inches by two (2) inches.

The "[Public Work Project](#)" notice must be posted at the beginning of the performance of every public work contract, on each job site.

Every employer providing workers. compensation insurance and disability benefits must post notices of such coverage in the format prescribed by the Workers. Compensation Board in a conspicuous place on the jobsite.

Every employer subject to the NYS Human Rights Law must conspicuously post at its offices, places of employment, or employment training centers, notices furnished by the State Division of Human Rights.

Employers liable for contributions under the Unemployment Insurance Law must conspicuously post on the jobsite notices furnished by the NYS Department of Labor.

Apprentices

Employees cannot be paid apprentice rates unless they are individually registered in a program registered with the NYS Commissioner of Labor. The allowable ratio of apprentices to journeyworkers in any craft classification can be no greater than the statewide building trade ratios promulgated by the Department of Labor and included with the Prevailing Rate Schedule. An employee listed on a payroll as an apprentice who is not registered as above or is performing work outside the classification of work for which the apprentice is indentured, must be paid the prevailing journeyworker's wage rate for the classification of work the employee is actually performing.

NYSDOL Labor Law, Article 8, Section 220-3, require that only apprentices individually registered with the NYS Department of Labor may be paid apprenticeship rates on a public work project. No other Federal or State Agency of office registers apprentices in New York State.

Persons wishing to verify the apprentice registration of any person must do so in writing by mail, to the NYSDOL Office of Employability Development / Apprenticeship Training, State Office Bldg. Campus, Bldg. 12, Albany, NY 12226 or by Fax to NYSDOL Apprenticeship Training (518) 457-7154. All requests for verification must include the name and social security number of the person for whom the information is requested.

The only conclusive proof of individual apprentice registration is written verification from the NYSDOL Apprenticeship Training Albany Central office. Neither Federal nor State Apprenticeship Training offices outside of Albany can provide conclusive registration information.

It should be noted that the existence of a registered apprenticeship program is not conclusive proof that any person is registered in that program. Furthermore, the existence or possession of wallet cards, identification cards, or copies of state forms is not conclusive proof of the registration of any person as an apprentice.

Interest and Penalties

In the event that an underpayment of wages and/or supplements is found:

- Interest shall be assessed at the rate then in effect as prescribed by the Superintendent of Banks pursuant to section 14-a of the Banking Law, per annum from the date of underpayment to the date restitution is made.
- A Civil Penalty may also be assessed, not to exceed 25% of the total of wages, supplements, and interest due.

Debarment

Any contractor or subcontractor and/or its successor shall be ineligible to submit a bid on or be awarded any public work contract or subcontract with any state, municipal corporation or public body for a period of five (5) years when:

- Two (2) willful determinations have been rendered against that contractor or subcontractor and/or its successor within any consecutive six (6) year period.
- There is any willful determination that involves the falsification of payroll records or the kickback of wages or supplements.

Criminal Sanctions

Willful violations of the Prevailing Wage Law (Article 8 of the Labor Law) may be a felony punishable by fine or imprisonment of up to 15 years, or both.

Discrimination

No employee or applicant for employment may be discriminated against on account of age, race, creed, color, national origin, sex, disability or marital status.

No contractor, subcontractor nor any person acting on its behalf, shall by reason of race, creed, color, disability, sex or national origin discriminate against any citizen of the State of New York who is qualified and available to perform the work to which the employment relates (NYS Labor Law, Article 8, Section 220-e(a)).

No contractor, subcontractor, nor any person acting on its behalf, shall in any manner, discriminate against or intimidate any employee on account of race, creed, color, disability, sex, or national origin (NYS Labor Law, Article 8, Section 220-e(b)).

The Human Rights Law also prohibits discrimination in employment because of age, marital status, or religion.

There may be deducted from the amount payable to the contractor under the contract a penalty of \$50.00 for each calendar day during which such person was discriminated against or intimidated in violation of the provision of the contract (NYS Labor Law, Article 8, Section 220-e(c)).

The contract may be cancelled or terminated by the State or municipality. All monies due or to become due thereunder may be forfeited for a second or any subsequent violation of the terms or conditions of the anti-discrimination sections of the contract (NYS Labor Law, Article 8, Section 220-e(d)).

Every employer subject to the New York State Human Rights Law must conspicuously post at its offices, places of employment, or employment training centers notices furnished by the State Division of Human Rights.

Workers' Compensation

In accordance with Section 142 of the State Finance Law, the contractor shall maintain coverage during the life of the contract for the benefit of such employees as required by the provisions of the New York State Workers' Compensation Law.

A contractor who is awarded a public work contract must provide proof of workers' compensation coverage prior to being allowed to begin work.

The insurance policy must be issued by a company authorized to provide workers' compensation coverage in New York State. Proof of coverage must be on form C-105.2 (Certificate of Workers' Compensation Insurance) and must name this agency as a certificate holder.

If New York State coverage is added to an existing out-of-state policy, it can only be added to a policy from a company authorized to write workers' compensation coverage in this state. The coverage must be listed under item 3A of the information page.

The contractor must maintain proof that subcontractors doing work covered under this contract secured and maintained a workers' compensation policy for all employees working in New York State.

Every employer providing worker's compensation insurance and disability benefits must post notices of such coverage in the format prescribed by the Workers' Compensation Board in a conspicuous place on the jobsite.

Unemployment Insurance

Employers liable for contributions under the Unemployment Insurance Law must conspicuously post on the jobsite notices furnished by the New York State Department of Labor.



Kathy Hochul, Governor

Roberta Reardon, Commissioner

DASNY

Daria Khanafiev
515 Broadway
Albany NY 12207

Schedule Year 2024 through 2025
Date Requested 11/05/2024
PRC# 2024013976

Location CCNY
Project ID# 3822309999 CR3
Project Type Harris Hall IT Upgrade

Notice of Contract Award

New York State Labor Law, Article 8, Section 220.3a requires that certain information regarding the awarding of public work contracts, be furnished to the Commissioner of Labor. One "Notice of Contract Award" (PW 16, which may be photocopied), **MUST** be completed for **EACH** prime contractor on the above referenced project.

Upon notifying the successful bidder(s) of this contract, enter the required information and mail **OR** fax this form to the office shown at the bottom of this notice, **OR** fill out the electronic version via the NYSDOL website.

Contractor Information

All information must be supplied

Federal Employer Identification Number: _____		
Name: _____		
Address: _____ _____		
City: _____	State: _____	Zip: _____
Amount of Contract: \$ _____	Contract Type:	
Approximate Starting Date: ____/____/____	<input type="checkbox"/> (01) General Construction	
Approximate Completion Date: ____/____/____	<input type="checkbox"/> (02) Heating/Ventilation	
	<input type="checkbox"/> (03) Electrical	
	<input type="checkbox"/> (04) Plumbing	
	<input type="checkbox"/> (05) Other : _____	

Phone: (518) 457-5589 Fax: (518) 485-1870
W. Averell Harriman State Office Campus, Bldg. 12, Room 130, Albany, NY 12226

Social Security Numbers on Certified Payrolls:

The Department of Labor is cognizant of the concerns of the potential for misuse or inadvertent disclosure of social security numbers. Identity theft is a growing problem and we are sympathetic to contractors' concern regarding inclusion of this information on payrolls if another identifier will suffice.

For these reasons, the substitution of the use of the last four digits of the social security number on certified payrolls submitted to contracting agencies on public work projects is now acceptable to the Department of Labor. This change does not affect the Department's ability to request and receive the entire social security number from employers during its public work/ prevailing wage investigations.

Construction Industry Fair Play Act: Required Posting for Labor Law Article 25-B § 861-d

Construction industry employers must post the "Construction Industry Fair Play Act" notice in a prominent and accessible place on the job site. Failure to post the notice can result in penalties of up to \$1,500 for a first offense and up to \$5,000 for a second offense. The posting is included as part of this wage schedule. Additional copies may be obtained from the NYS DOL website, <https://dol.ny.gov/public-work-and-prevailing-wage>

If you have any questions concerning the Fair Play Act, please call the State Labor Department toll-free at 1-866-435-1499 or email us at: dol.misclassified@labor.ny.gov.

Worker Notification: (Labor Law §220, paragraph a of subdivision 3-a)

Effective June 23, 2020

This provision is an addition to the existing wage rate law, Labor Law §220, paragraph a of subdivision 3-a. It requires contractors and subcontractors to provide written notice to all laborers, workers or mechanics of the *prevailing wage and supplement rate* for their particular job classification *on each pay stub**. It also requires contractors and subcontractors to *post a notice* at the beginning of the performance of every public work contract *on each job site* that includes the telephone number and address for the Department of Labor and a statement informing laborers, workers or mechanics of their right to contact the Department of Labor if he/she is not receiving the proper prevailing rate of wages and/or supplements for his/her job classification. The required notification will be provided with each wage schedule, may be downloaded from our website www.labor.ny.gov or be made available upon request by contacting the Bureau of Public Work at 518-457-5589. *In the event the required information will not fit on the pay stub, an accompanying sheet or attachment of the information will suffice.

**To all State Departments, Agency Heads and Public Benefit Corporations
IMPORTANT NOTICE REGARDING PUBLIC WORK ENFORCEMENT FUND**

Budget Policy & Reporting Manual

B-610

Public Work Enforcement Fund

effective date December 7, 2005

1. Purpose and Scope:

This Item describes the Public Work Enforcement Fund (the Fund, PWEF) and its relevance to State agencies and public benefit corporations engaged in construction or reconstruction contracts, maintenance and repair, and announces the recently-enacted increase to the percentage of the dollar value of such contracts that must be deposited into the Fund. This item also describes the roles of the following entities with respect to the Fund:

- New York State Department of Labor (DOL),
- The Office of the State of Comptroller (OSC), and
- State agencies and public benefit corporations.

2. Background and Statutory References:

DOL uses the Fund to enforce the State's Labor Law as it relates to contracts for construction or reconstruction, maintenance and repair, as defined in subdivision two of Section 220 of the Labor Law. State agencies and public benefit corporations participating in such contracts are required to make payments to the Fund.

Chapter 511 of the Laws of 1995 (as amended by Chapter 513 of the Laws of 1997, Chapter 655 of the Laws of 1999, Chapter 376 of the Laws of 2003 and Chapter 407 of the Laws of 2005) established the Fund.

3. Procedures and Agency Responsibilities:

The Fund is supported by transfers and deposits based on the value of contracts for construction and reconstruction, maintenance and repair, as defined in subdivision two of Section 220 of the Labor Law, into which all State agencies and public benefit corporations enter.

Chapter 407 of the Laws of 2005 increased the amount required to be provided to this fund to .10 of one-percent of the total cost of each such contract, to be calculated at the time agencies or public benefit corporations enter into a new contract or if a contract is amended. The provisions of this bill became effective August 2, 2005.

To all State Departments, Agency Heads and Public Benefit Corporations
IMPORTANT NOTICE REGARDING PUBLIC WORK ENFORCEMENT FUND

OSC will report to DOL on all construction-related ("D") contracts approved during the month, including contract amendments, and then DOL will bill agencies the appropriate assessment monthly. An agency may then make a determination if any of the billed contracts are exempt and so note on the bill submitted back to DOL. For any instance where an agency is unsure if a contract is or is not exempt, they can call the Bureau of Public Work at the number noted below for a determination. Payment by check or journal voucher is due to DOL within thirty days from the date of the billing. DOL will verify the amounts and forward them to OSC for processing.

For those contracts which are not approved or administered by the Comptroller, monthly reports and payments for deposit into the Public Work Enforcement Fund must be provided to the Administrative Finance Bureau at the DOL within 30 days of the end of each month or on a payment schedule mutually agreed upon with DOL.

Reports should contain the following information:

- Name and billing address of State agency or public benefit corporation;
- State agency or public benefit corporation contact and phone number;
- Name and address of contractor receiving the award;
- Contract number and effective dates;
- Contract amount and PWEF assessment charge (if contract amount has been amended, reflect increase or decrease to original contract and the adjustment in the PWEF charge); and
- Brief description of the work to be performed under each contract.

Checks and Journal Vouchers, payable to the "New York State Department of Labor" should be sent to:

Department of Labor
Administrative Finance Bureau-PWEF Unit
Building 12, Room 464
State Office Campus
Albany, NY 12226

Any questions regarding billing should be directed to NYSDOL's Administrative Finance Bureau-PWEF Unit at (518) 457-3624 and any questions regarding Public Work Contracts should be directed to the Bureau of Public Work at (518) 457-5589.

Required Notice under Article 25-B of the Labor Law

**Attention All Employees, Contractors and Subcontractors:
You are Covered by the Construction Industry Fair Play Act**

The law says that you are an employee unless:

- You are free from direction and control in performing your job, **and**
- You perform work that is not part of the usual work done by the business that hired you, **and**
- You have an independently established business.

Your employer cannot consider you to be an independent contractor unless all three of these facts apply to your work.

It is against the law for an employer to misclassify employees as independent contractors or pay employees off the books.

Employee Rights: If you are an employee, you are entitled to state and federal worker protections. These include:

- Unemployment Insurance benefits, if you are unemployed through no fault of your own, able to work, and otherwise qualified,
- Workers' compensation benefits for on-the-job injuries,
- Payment for wages earned, minimum wage, and overtime (under certain conditions),
- Prevailing wages on public work projects,
- The provisions of the National Labor Relations Act, and
- A safe work environment.

It is a violation of this law for employers to retaliate against anyone who asserts their rights under the law. Retaliation subjects an employer to civil penalties, a private lawsuit or both.

Independent Contractors: If you are an independent contractor, **you must pay all taxes and Unemployment Insurance contributions required by New York State and Federal Law.**

Penalties for paying workers off the books or improperly treating employees as independent contractors:

- **Civil Penalty**
 - First offense: Up to \$2,500 per employee
 - Subsequent offense(s): Up to \$5,000 per employee
- **Criminal Penalty**
 - First offense: Misdemeanor - up to 30 days in jail, up to a \$25,000 fine and debarment from performing public work for up to one year.
 - Subsequent offense(s): Misdemeanor - up to 60 days in jail or up to a \$50,000 fine and debarment from performing public work for up to 5 years.

If you have questions about your employment status or believe that your employer may have violated your rights and you want to file a complaint, call the Department of Labor at (866) 435-1499 or send an email to dol.misclassified@labor.ny.gov. All complaints of fraud and violations are taken seriously. You can remain anonymous.

Employer Name:

IA 999 (09/16)



Attention Employees

THIS IS A: **PUBLIC WORK PROJECT**

If you are employed on this project as a **worker, laborer, or mechanic** you are entitled to receive the **prevailing wage and supplements rate** for the classification at which you are working.

Your pay stub and wage notice received upon hire must clearly state your wage rate and supplement rate.

Chapter 629 of
the Labor Laws
of 2007:

These wages are set by law and must be posted at the work site. They can also be found at:
<https://dol.ny.gov/bureau-public-work>



If you feel that you have not received proper wages or benefits, please call our nearest office.*

Albany	(518) 457-2744	Patchogue	(631) 687-4882
Binghamton	(607) 721-8005	Rochester	(585) 258-4505
Buffalo	(716) 847-7159	Syracuse	(315) 428-4056
Garden City	(516) 228-3915	Utica	(315) 793-2314
New York City	(212) 932-2419	White Plains	(914) 997-9507
Newburgh	(845) 568-5287		

* For New York City government agency construction projects, please contact the Office of the NYC Comptroller at (212) 669-4443, or www.comptroller.nyc.gov – click on Bureau of Labor Law.

Contractor Name: _____

Project Location: _____

Requirements for OSHA 10 Compliance

Article 8 §220-h requires that when the advertised specifications, for every contract for public work, is \$250,000.00 or more the contract must contain a provision requiring that every worker employed in the performance of a public work contract shall be certified as having completed an OSHA 10 safety training course. The clear intent of this provision is to require that all employees of public work contractors, required to be paid prevailing rates, receive such training "prior to the performing any work on the project."

The Bureau will enforce the statute as follows:

All contractors and sub contractors must attach a copy of proof of completion of the OSHA 10 course to the first certified payroll submitted to the contracting agency and on each succeeding payroll where any new or additional employee is first listed.

Proof of completion may include but is not limited to:

- Copies of bona fide course completion card (*Note: Completion cards do not have an expiration date.*)
- Training roster, attendance record or other documentation from the certified trainer pending the issuance of the card.
- Other valid proof

**A certification by the employer attesting that all employees have completed such a course is not sufficient proof that the course has been completed.

Any questions regarding this statute may be directed to the New York State Department of Labor, Bureau of Public Work at 518-457-5589.

WICKS

Public work projects are subject to the Wicks Law requiring separate specifications and bidding for the plumbing, heating and electrical work, when the total project's threshold is \$3 million in Bronx, Kings, New York, Queens and, Richmond counties; \$1.5 million in Nassau, Suffolk and Westchester counties; and \$500,000 in all other counties.

For projects below the monetary threshold, bidders must submit a sealed list naming each subcontractor for the plumbing, HVAC and electrical and the amount to be paid to each. The list may not be changed unless the public owner finds a legitimate construction need, including a change in specifications or costs or the use of a Project Labor Agreement (PLA), and must be open to public inspection.

Allows the state and local agencies and authorities to waive the Wicks Law and use a PLA if it will provide the best work at the lowest possible price. If a PLA is used, all contractors shall participate in apprentice training programs in the trades of work it employs that have been approved by the Department of Labor (DOL) for not less than three years. They shall also have at least one graduate in the last three years and use affirmative efforts to retain minority apprentices. PLA's would be exempt from Wicks, but deemed to be public work subject to prevailing wage enforcement.

The Commissioner of Labor shall have the power to enforce separate specification requirements on projects, and may issue stop-bid orders against public owners for non-compliance.

Other new monetary thresholds, and similar sealed bidding for non-Wicks projects, would apply to certain public authorities including municipal housing authorities, NYC Construction Fund, Yonkers Educational Construction Fund, NYC Municipal Water Finance Authority, Buffalo Municipal Water Finance Authority, Westchester County Health Care Association, Nassau County Health Care Corp., Clifton-Fine Health Care Corp., Erie County Medical Center Corp., NYC Solid Waste Management Facilities, and the Dormitory Authority.

Contractors must pay subcontractors within a 7 days period.

(07.19)

Introduction to the Prevailing Rate Schedule

Information About Prevailing Rate Schedule

This information is provided to assist you in the interpretation of particular requirements for each classification of worker contained in the attached Schedule of Prevailing Rates.

Classification

It is the duty of the Commissioner of Labor to make the proper classification of workers taking into account whether the work is heavy and highway, building, sewer and water, tunnel work, or residential, and to make a determination of wages and supplements to be paid or provided. It is the responsibility of the public work contractor to use the proper rate. If there is a question on the proper classification to be used, please call the district office located nearest the project. District office locations and phone numbers are listed below.

Prevailing Wage Schedules are issued separately for "General Construction Projects" and "Residential Construction Projects" on a county-by-county basis.

General Construction Rates apply to projects such as: Buildings, Heavy & Highway, and Tunnel and Water & Sewer rates.

Residential Construction Rates generally apply to construction, reconstruction, repair, alteration, or demolition of one family, two family, row housing, or rental type units intended for residential use.

Some rates listed in the Residential Construction Rate Schedule have a very limited applicability listed along with the rate. Rates for occupations or locations not shown on the residential schedule must be obtained from the General Construction Rate Schedule. Please contact the local Bureau of Public Work office before using Residential Rate Schedules, to ensure that the project meets the required criteria.

Payrolls and Payroll Records

Contractors and subcontractors are required to establish, maintain, and preserve for not less than six (6) years, contemporaneous, true, and accurate payroll records.

Every contractor and subcontractor shall submit to the Department of Jurisdiction (Contracting Agency), within thirty (30) days after issuance of its first payroll and every thirty (30) days thereafter, a transcript of the original payrolls, subscribed and affirmed as true under penalty of perjury.

Paid Holidays

Paid Holidays are days for which an eligible employee receives a regular day's pay, but is not required to perform work. If an employee works on a day listed as a paid holiday, this remuneration is in addition to payment of the required prevailing rate for the work actually performed.

Overtime

At a minimum, all work performed on a public work project in excess of eight hours in any one day or more than five days in any workweek is overtime. However, the specific overtime requirements for each trade or occupation on a public work project may differ. Specific overtime requirements for each trade or occupation are contained in the prevailing rate schedules.

Overtime holiday pay is the premium pay that is required for work performed on specified holidays. It is only required where the employee actually performs work on such holidays.

The applicable holidays are listed under HOLIDAYS: OVERTIME. The required rate of pay for these covered holidays can be found in the OVERTIME PAY section listings for each classification.

Supplemental Benefits

Particular attention should be given to the supplemental benefit requirements. Although in most cases the payment or provision of supplements is straight time for all hours worked, some classifications require the payment or provision of supplements, or a portion of the supplements, to be paid or provided at a premium rate for premium hours worked. Supplements may also be required to be paid or provided on paid holidays, regardless of whether the day is worked. The Overtime Codes and Notes listed on the particular wage classification will indicate these conditions as required.

Effective Dates

When you review the schedule for a particular occupation, your attention should be directed to the dates above the column of rates. These are the dates for which a given set of rates is effective. The rate listed is valid until the next effective rate change or until the new annual determination which takes effect on July 1 of each year. All contractors and subcontractors are required to pay the current prevailing rates of wages and supplements. If you have any questions please contact the Bureau of Public Work or visit the New York State Department of Labor website (www.labor.ny.gov) for current wage rate information.

Apprentice Training Ratios

The following are the allowable ratios of registered Apprentices to Journey-workers.

For example, the ratio 1:1,1:3 indicates the allowable initial ratio is one Apprentice to one Journeyworker. The Journeyworker must be in place on the project before an Apprentice is allowed. Then three additional Journeyworkers are needed before a second Apprentice is allowed. The last ratio repeats indefinitely. Therefore, three more Journeyworkers must be present before a third Apprentice can be hired, and so on.

Please call Apprentice Training Central Office at (518) 457-6820 if you have any questions.

Title (Trade)	Ratio
Boilermaker (Construction)	1:1,1:4
Boilermaker (Shop)	1:1,1:3
Carpenter (Bldg.,H&H, Pile Driver/Dockbuilder)	1:1,1:4
Carpenter (Residential)	1:1,1:3
Electrical (Outside) Lineman	1:1,1:2
Electrician (Inside)	1:1,1:3
Elevator/Escalator Construction & Modernizer	1:1,1:2
Glazier	1:1,1:3
Insulation & Asbestos Worker	1:1,1:3
Iron Worker	1:1,1:4
Laborer	1:1,1:3
Mason	1:1,1:4
Millwright	1:1,1:4
Op Engineer	1:1,1:5
Painter	1:1,1:3
Plumber & Steamfitter	1:1,1:3
Roofer	1:1,1:2
Sheet Metal Worker	1:1,1:3
Sprinkler Fitter	1:1,1:2

If you have any questions concerning the attached schedule or would like additional information, please contact the nearest BUREAU of PUBLIC WORK District Office or write to:

New York State Department of Labor
Bureau of Public Work
State Office Campus, Bldg. 12
Albany, NY 12226

District Office Locations:	Telephone #	FAX #
Bureau of Public Work - Albany	518-457-2744	518-485-0240
Bureau of Public Work - Binghamton	607-721-8005	607-721-8004
Bureau of Public Work - Buffalo	716-847-7159	716-847-7650
Bureau of Public Work - Garden City	516-228-3915	516-794-3518
Bureau of Public Work - Newburgh	845-568-5287	845-568-5332
Bureau of Public Work - New York City	212-932-2419	212-775-3579
Bureau of Public Work - Patchogue	631-687-4882	631-687-4902
Bureau of Public Work - Rochester	585-258-4505	585-258-4708
Bureau of Public Work - Syracuse	315-428-4056	315-428-4671
Bureau of Public Work - Utica	315-793-2314	315-793-2514
Bureau of Public Work - White Plains	914-997-9507	914-997-9523
Bureau of Public Work - Central Office	518-457-5589	518-485-1870

Bronx County General Construction

Asbestos Worker	11/01/2024
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JOB DESCRIPTION Asbestos Worker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2024

Asbestos Worker \$ 47.25
Removal & Abatement Only*

NOTE: *On Mechanical Systems that are NOT to be SCRAPPED.

SUPPLEMENTAL BENEFITS

Per Hour:

Asbestos Worker \$ 13.65
Removal & Abatement Only

OVERTIME PAY

See (B, B2, *E, J) on OVERTIME PAGE

*Hours worked on Saturdays are paid at time and one half only if forty hours have been worked during the week.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8) on HOLIDAY PAGE

REGISTERED APPRENTICES

Apprentice Removal & Abatement Only:

1000 hour terms at the following percentage of Journeyman's rates.

1st	2nd	3rd	4th
78%	80%	83%	89%

SUPPLEMENTAL BENEFIT

Per Hour:

Apprentice
Removal & Abatement \$ 13.65

4-12a - Removal Only

Boilermaker	11/01/2024
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JOB DESCRIPTION Boilermaker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

WAGES

Per Hour: 07/01/2024 01/01/2025

Boilermaker \$ 67.38 \$ 68.88

Repairs & Renovations 67.38 68.88

Repairs & Renovation: Includes Repairing, Renovating replacement of parts to an existing unit(s).

SUPPLEMENTAL BENEFITS

Per Hour:

Boilermaker	33.5% of hourly	33.5% of Hourly
Repair & Renovations	Wage Paid	Wage Paid
	+ \$ 26.85	+ \$26.85

NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay.

Repairs & Renovation Includes replacement of parts and repairs & renovation of existing unit.

OVERTIME PAY

See (*B, O, **U) on OVERTIME PAGE

Note:* Includes 9th & 10th hours, double for 11th or more.

** Labor Day ONLY, if worked.

Repairs & Renovation see (B,E,Q) on OT Page

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 12, 15, 25, 26, 29) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:

(1/2) Year Terms at the following percentage of Boilermaker's Wage

1st	2nd	3rd	4th	5th	6th	7th
65%	70%	75%	80%	85%	90%	95%

Supplemental Benefits Per Hour:

	33.5% of Hourly Wage Paid Plus Amount Below	33.5% of Hourly Wage Paid Plus Amount Below
1st Term	\$ 20.36	\$ 20.36
2nd Term	21.28	21.28
3rd Term	22.22	22.22
4th Term	23.12	23.12
5th Term	24.07	24.07
6th Term	25.00	25.00
7th Term	25.93	25.93

NOTE: "Hourly Wage Paid" shall include any and all premium(s)

4-5

Broadband

11/01/2024

JOB DESCRIPTION Broadband

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour:	07/01/2024	06/29/2025
Field Tech	\$ 52.40	\$ 53.97
Install/Repair		

For outside work (excluding installation on building construction/alteration/renovation projects), stopping at first point of attachment (demarcation), installing/maintaining/repairing broadband internet service.

SUPPLEMENTAL BENEFITS

Per Hour: \$ 23.24

OVERTIME PAY

See (B, K, *R) on OVERTIME PAGE

Note: *Two and one half times the hourly rate after the 8th hour

HOLIDAY

Paid: See (5, 6, 7, 11, 12) on HOLIDAY PAGE

4-CWA-Dist1

Carpenter

11/01/2024

JOB DESCRIPTION Carpenter

DISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

Per hour:	07/01/2024
Piledriver	\$ 60.59 + 10.00*
Dockbuilder	\$ 60.59 + 10.00*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker \$ 45.79

OVERTIME PAY

See (B, E2, O) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE.

Paid: for 1st & 2nd yr.

Apprentices See (5,6,11,13,25)

Overtime: See (5,6,11,13,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wages per hour

(1)year terms:

1st	2nd	3rd	4th
\$26.98	\$32.58	\$40.96	\$49.35
+ 5.50*	+ 5.50*	+ 5.50*	+ 5.50*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:

All Terms: \$ 32.34

8-1556 Db

Carpenter

11/01/2024

JOB DESCRIPTION Carpenter

DISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

Per hour: 07/01/2024

Carpet/Resilient

Floor Coverer \$ 55.05
+ 8.25*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

INCLUDES HANDLING & INSTALLATION OF ARTIFICIAL TURF AND SIMILAR TURF INDOORS/OUTDOORS.

SUPPLEMENTAL BENEFITS

Per hour:

\$ 39.45

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (18, 19) on HOLIDAY PAGE.

Paid for 1st & 2nd yr.

Apprentices See (5,6,11,13,16,18,19,25)

Overtime: See (5,6,11,13,16,18,19,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wage per hour - (1) year terms:

1st	2nd	3rd	4th
\$ 25.20	\$ 28.20	\$ 32.45	\$ 40.33
+ 1.85*	+ 2.35*	+ 2.85*	+ 3.85*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:

1st	2nd	3rd	4th
\$ 15.22	\$ 16.22	\$ 19.32	\$ 20.32

8-2287

Carpenter

11/01/2024

JOB DESCRIPTION CarpenterDISTRICT 8

ENTIRE COUNTIES
Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

Per Hour:07/01/2024

Marine Construction:

Marine Diver\$ 75.46
+ 10.00*

Marine Tender\$ 55.00
+ 10.00*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime

SUPPLEMENTAL BENEFITS

Per Hour:

Journeyworker\$ 45.65

OVERTIME PAY
See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY
Paid:See (18, 19) on HOLIDAY PAGE
Overtime:See (5, 6, 11, 13, 16, 18, 19, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:
One (1) year terms.

1st year	\$ 26.98 + 5.50*
2nd year	32.58 + 5.50*
3rd year	40.96 + 5.50*
4th year	49.35 + 5.50*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental Benefits

Per Hour:

All terms\$ 32.20

8-1456MC

Carpenter

11/01/2024

JOB DESCRIPTION CarpenterDISTRICT 8

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

Per hour:07/01/2024

Building
Millwright\$ 59.35
+ 13.12*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS

Per hour:

Millwright \$ 45.41

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (18, 19) on HOLIDAY PAGE

Paid: See (18,19) on HOLIDAY PAGE.

Overtime See (5,6,8,11,13,18,19,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wages per hour:

One (1) year terms:

1st.	2nd.	3rd.	4th.
\$ 32.16	\$ 37.61	\$ 43.06	\$ 53.96
+ 7.08*	+ 8.25*	+ 9.42*	+ 11.76*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:

One (1) year terms:

1st.	2nd.	3rd.	4th.
\$ 30.56	\$ 33.09	\$ 36.27	\$ 40.69

8-740.1

Carpenter

11/01/2024

JOB DESCRIPTION Carpenter

DISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per Hour:

07/01/2024

Timberman \$ 55.59
+ 10.26*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS

Per Hour:

07/01/2024

\$ 44.96

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Overtime: See (5, 6, 11, 13, 25) on HOLIDAY PAGE

Paid: See (1) on HOLIDAY PAGE.

Paid: for 1st & 2nd yr.

Apprentices See (5,6,11,13,25)

Overtime: See (5,6,11,13,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wages per hour:

One (1) year terms:

1st	2nd	3rd	4th
\$24.96	\$30.07	\$37.72	\$45.38
+ 5.55*	+ 5.55*	+ 5.55*	+ 5.55*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:

All terms \$ 31.95

Carpenter

11/01/2024

JOB DESCRIPTION Carpenter

DISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland, Westchester

PARTIAL COUNTIES

Orange: South of but including the following, Waterloo Mills, Slate Hill, New Hampton, Goshen, Blooming Grove, Mountainville, east to the Hudson River.

Putnam: South of but including the following, Cold Spring, TompkinsCorner, Mahopac, Croton Falls, east to Connecticut border.

Suffolk: West of Port Jefferson and Patchogue Road to Route 112 to the Atlantic Ocean.

WAGES

Per hour: 07/01/2024

Core Drilling:

Driller \$ 46.25
+ 3.25*

Driller Helper \$ 36.28
+ 3.25*

Note: Hazardous Waste Pay Differential:

For Level C, an additional 15% above wage rate per hour

For Level B, an additional 15% above wage rate per hour

For Level A, an additional 15% above wage rate per hour

Note: When required to work on water: an additional \$ 3.00 per hour.

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS

Per hour:

Driller and Helper \$ 30.24

OVERTIME PAY

See (B, G, P) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

8-1536-CoreDriller

Carpenter

11/01/2024

JOB DESCRIPTION Carpenter

DISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, New York, Putnam, Queens, Richmond

PARTIAL COUNTIES

Nassau: The portion of the county that lies west of Seaford Creek and south of the Southern State Parkway.

WAGES

Per hour: 07/01/2024

Show Exhibit \$ 55.75
+ 9.80**

Bldg. Carpenter* \$57.05
+ 8.39**

* Not applicable in Putnam County

**This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS

Per hour worked:

Show Exhibit \$ 45.20
Bldg. Carpenter 39.75

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (18, 19) on HOLIDAY PAGE

Paid: for 1st & 2nd yr.

Apprentices See (5,6,11,13,16,18,19,25)

Overtime: See (5,6,11,13,16,18,19,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wages per hour: Show Exhibit

(1) year terms:

1st.	2nd.	3rd.	4th.
\$22.30	\$27.88	\$36.24	\$44.60
+ 4.90*	+ 4.90*	+ 4.90*	+ 4.90*

*This portion is not subject to overtime premiums

Supplemental benefits per hour:

All terms \$ 30.25

Wages per hour: Bldg. Carpenter

(1) year terms:

1st	2nd	3rd	4th
\$ 22.20	\$ 25.20	\$ 29.45	\$ 37.33
+ 2.14*	+ 2.59*	+ 3.09*	+ 4.09*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:

1st	2nd	3rd	4th
\$ 15.37	\$ 16.42	\$ 19.52	\$ 20.52

8-EXHIB

Carpenter - Heavy&Highway

11/01/2024

JOB DESCRIPTION Carpenter - Heavy&Highway

DISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

PARTIAL COUNTIES

Nassau: That portion of the county that lies West of Seaford Creek and South of the Southern State Parkway.

WAGES

Per hour:

07/01/2024

Heavy & Highway

Carpenter

\$ 60.59
+ 10.00*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS

Per hour worked:

Heavy & Highway

Carpenter

\$ 45.70

OVERTIME PAY

See (B, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 13, 25) on HOLIDAY PAGE

Paid : for 1st & 2nd yr

Apprentices See (5, 6, 11, 13, 25)

REGISTERED APPRENTICES

Wage per hour:

One (1) year terms:

	1st	2nd	3rd	4th
Heavy & Highway	\$ 26.98	\$ 32.58	\$ 40.96	\$ 49.35

+ 5.50* + 5.50* + 5.50* + 5.50*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental Benefits:

Per Hour:

All terms
\$ 32.25

8-NYC H/H

Electrician

11/01/2024

JOB DESCRIPTION Electrician

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour: 07/01/2024

Tree Trimmer \$ 35.24
Ground Person 20.69

Applies to line clearance, tree work, and right-of-way preparation on all new or existing overhead, electrical, telephone, and CATV lines.

SUPPLEMENTAL BENEFITS

Per hour:

Tree Trimmer \$ 13.20
Ground Person 7.75

OVERTIME PAY

See (B, *H, Q) on OVERTIME PAGE

*Worked performed on Sundays & Holidays outside of 7.00am - 4.00pm shall be paid at double time, in addition to the holiday pay if applicable.

HOLIDAY

Paid: See (5, 6, 10, 11, 15, 16, 26) on HOLIDAY PAGE

Overtime: See (5, 6, 10, 11, 15, 16, 26) on HOLIDAY PAGE

(An additional floating holiday after four years service)

9-3T

Electrician

11/01/2024

JOB DESCRIPTION Electrician

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour: 07/01/2024

Electrician \$ 32.00
Telephone 32.00

Maintenance and Jobbing-Electrical and teledata work of limited duration and scope, consisting of repairs and/or replacement of electrical and teledata equipment.

- Includes all work necessary to retrofit, service, maintain and repair all kinds of lighting fixtures and local lighting controls and washing and cleaning of foregoing fixtures.

SUPPLEMENTAL BENEFITS

Journeyworker:

07/01/2024
\$ 27.20
29.23*

* Applies to overtime hours

OVERTIME PAY

See (B, H) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

9-3m

Electrician**11/01/2024**

JOB DESCRIPTION Electrician

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond, Westchester

WAGES

Per hour: 07/01/2024

Service Technician \$ 37.40

Service and Maintenance on Alarm and Security Systems.

Maintenance, repair and /or replacement of defective (or damaged) equipment on, but not limited to, Burglar - Fire - Security - CCTV - Card Access - Life Safety Systems and associated devices. (Whether by service contract of T&M by customer request.)

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker: \$ 21.85

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 11, 15, 16, 17, 25, 26) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 17, 25, 26) on HOLIDAY PAGE

9-3H

Electrician**11/01/2024**

JOB DESCRIPTION Electrician

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per Hour: 07/01/2024

Electrician
Audio/Sound and
Temporary Light/
Power \$ 62.00

Solar-Photovoltaic Systems

Group 1 62.00

All tasks not listed in Group 2

Group 2 32.00

D.C portion and associated mechanical equipment related to solar systems,
(excluding battery storage and its associated equipment) including work related to
Weather Stations and Data Acquisitions/Monitoring Systems on solar photovoltaic systems.

Mounting of PV modules.

Mounting of DC optimizers to back of modules if the installation calls for this equipment.

Mounting of microinverters to back of modules and install trunk cabling on racking if called for.

Module to module connection of PV modules to adjacent modules. If racking manufacturer provides integrated inter-row cable management,
install string jumper to complete the string in full in same sub-array.

If racking manufacturer does not provide integrated inter-row cable management, run conduit between rows, bond it and run string jumper to
complete string in full in same sub-array.

Installation of weather stations and other weather station relevant sensors as specified.

Installation of data acquisition system (DAS) for PV system monitoring.

SHIFT WORK

Evening (Swing Shift):

Electrician

Audio/Sound and Temporary Light/ Power	\$ 72.75
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Night (Graveyard Shift): Electrician Audio/Sound and Temporary Light	\$ 81.49
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SUPPLEMENTAL BENEFITS

Per Hour:

Electrician	\$ 66.09 70.01*
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Swing Shift:	75.07 79.66*
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Graveyard Shift:	82.66 87.81*
------------------	-----------------

Temporary Light/Power:	30.33 33.64*
------------------------	-----------------

Group 1:	66.09 70.01*
----------	-----------------

Group 2:	27.21 29.23*
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* Applies when premium (OT) wages are paid.

Temporary Light and Power benefit rate applies for three or less workers.

Reduce benefit rate by 6.2% for any employee who has accumulated wages of \$168,600 for the same employer.

OVERTIME PAY

See (A, H) on OVERTIME PAGE

See (B) for Temporary Light and Power

HOLIDAY

Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages Per Hour:

One (1) year terms	
First term:	07/01/2024
0-6 mos.	\$ 18.00
7-12 mos.	18.50
Second term:	
0-6 mos.	19.50
7-12 mos.	20.50
Third term	
0-6 mos.	21.50
7-12 mos.	22.50
Fourth term:	
0-6 mos.	23.50
7-12 mos.	25.50
Fifth term/MIJ:	
0-12 mos.	27.50
13-18 mos.	32.00

Supplemental Benefits per hour:

One (1) year terms:

First Term:	Regular	Overtime
0-6 mos.	\$ 17.18	\$ 18.38
7-12 mos.	17.44	18.67

Second Term:		
0-6 mos.	17.97	19.26
7-12 mos.	18.49	19.85
Third Term:		
0-6 mos.	19.02	20.44
7-12 mos.	19.54	21.03
Fourth Term:		
0-6 mos.	20.06	21.62
7-12 mos.	21.11	22.80
Fifth Term/MIJ:		
1-12 mos.	24.79	26.52
13-18 mos.	27.21	29.23

9-3

Electrician - Highway and Street Lighting, Traffic Signals and Controls

11/01/2024

JOB DESCRIPTION Electrician - Highway and Street Lighting, Traffic Signals and Controls **DISTRICT** 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:

07/01/2024

Electro Pole Electrician \$ 62.00

Electro Pole Foundation
Installer 47.66

Electro Pole Maintainer 41.61

SUPPLEMENTAL BENEFITS

Per Hour:

07/01/2024

Electro Pole Electrician \$ 68.20
72.12*

Electro Pole Foundation
Installer 51.68
54.69*

Electro Pole Maintainer 47.03
49.66*

*Applies when premium wages are paid

Note: Reduce benefit rate by 6.2% for any employee who has accumulated wages in \$168,600 for the same employer.

OVERTIME PAY

See (A, B, E4, F, K) on OVERTIME PAGE

B - Applies to Electro Pole Foundation Installer

E4 - Applies to Electro Pole Maintainer

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

9-3J

Elevator Constructor

11/01/2024

JOB DESCRIPTION Elevator Constructor **DISTRICT** 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

PARTIAL COUNTIES

Rockland: Entire County except for the Township of Stony Point

Westchester: Entire County except for the Townships of Bedford, Lewisboro, Cortland, Mt. Kisco, North Salem, Pound Ridge, Somers and Yorktown.

WAGES

Per hour:

	07/01/2024	03/17/2025
Elevator Constructor	\$ 80.35	\$ 83.37
Modernization & Service/Repair	63.16	65.54

SUPPLEMENTAL BENEFITS

Per Hour:

Elevator Constructor	\$ 46.367	\$ 47.654
Modernization & Service/Repairs	45.217	46.470

OVERTIME PAY

Constructor See (D, M, T) on OVERTIME PAGE.

Modern/Service See (B, F, S) on OVERTIME PAGE.

HOLIDAY

Paid: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE
 Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

WAGES PER HOUR:

6 MONTH TERMS:

1st Term*	2nd & 3rd Term*	4th & 5th Term	6th & 7th Term	8th & 9th Term
50%	50%	55%	65%	75%

* Note: 1st, 2nd, 3rd Terms are based on Average of the Constructor, the Modernization and the Service/Repair wage.
 Terms 4 thru 9 Based on Journeyman's wage of classification Working in.

SUPPLEMENTAL BENEFITS:

	07/01/2024	03/17/2025
Elevator Constructor		
1st Term	\$ 0.00	\$ 0.00
2nd & 3rd Term	36.15	36.90
4th & 5th Term	37.19	37.99
6th & 7th Term	38.80	39.70
8th & 9th Term	40.41	41.40
Modernization & Service/Repair		
1st Term	\$ 0.00	\$ 0.00
2nd & 3rd Term	36.15	36.90
4th & 5th Term	37.19	37.99
6th & 7th Term	38.80	39.70
8th & 9th Term	40.41	41.40

4-1

Glazier

11/01/2024

JOB DESCRIPTION Glazier

DISTRICT 8

ENTIRE COUNTIES

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

WAGES

Per hour:

	07/01/2024	05/01/2025
Glazier, Glass Tinting and Window Film	\$ 63.28	Additional \$ 1.11***
Scaffolding, including swing scaffold	67.28	

*Mechanical Equipment	64.28
**Repair & Maintenance	30.76

*Mechanical equipment, scissor jacks, man lifts, booms & buckets 30' or more, but not pipe scaffolding.

**Repair & Maintenance- All repair & maintenance work on a particular building whenever performed, where the total cumulative Repair & Maintenance contract value is under \$193,000.

***To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per hour: 7/01/2024

Glazier, Glass Tinting \$ 42.13
Window Film, Scaffolding
and Mechanical Equipment

Repair & Maintenance 24.62

OVERTIME PAY

See (B, E, Q, V) on OVERTIME PAGE

For 'Repair & Maintenance' see (B, B2, I, S) on overtime page.

HOLIDAY

Paid: See (5, 6, 16, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

For 'Repair & Maintenance'

Paid: See(5, 6, 16, 25)

Overtime: See(5, 6, 16, 25)

REGISTERED APPRENTICES

Wage per hour:

(1) year terms at the following wage rates:

7/01/2024

1st term	\$ 22.34
2nd term	30.64
3rd term	40.87
4th term	50.14

Supplemental Benefits:

(Per hour)

1st term	\$ 19.27
2nd term	27.34
3rd term	32.85
4th term	36.01

8-1087 (DC9 NYC)

Insulator - Heat & Frost

11/01/2024

JOB DESCRIPTION Insulator - Heat & Frost

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per Hour: 07/01/2024

Insulators
Heat & Frost \$ 71.01

SUPPLEMENTAL BENEFITS

Per Hour:

Insulators \$ 36.76
Heat & Frost

OVERTIME PAY

See (B, E, *Q, V) on OVERTIME PAGE

* Triple time for Labor Day (If worked)

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages:

1 year terms.

Wages Per Hour:

1st	2nd	3rd	4th
\$ 31.96	\$ 39.06	\$ 46.16	\$ 53.26

Supplemental Benefits:

\$ 16.56	\$ 20.23	\$ 23.91	\$ 27.06
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4-12

Ironworker

11/01/2024

JOB DESCRIPTION Ironworker

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per Hour:	07/01/2024	01/01/2025 Additional
Stone Derrickmen Rigger	\$ 75.40	\$ 1.64*
Stone Handset Derrickman	72.55	1.11*

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per hour:

Stone Derrickmen Rigger	\$ 45.52
Stone Handset Derrickman	44.76

OVERTIME PAY

See (B, D1, *E, Q, **V) on OVERTIME PAGE

*Time and one-half shall be paid for all work on Saturday up to eight (8) hours and double time shall be paid for all work thereafter.

** Benefits same premium as wages on Holidays only

HOLIDAY

Paid: See (18) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 25) on HOLIDAY PAGE

Work stops at schedule lunch break with full day's pay.

REGISTERED APPRENTICES

Wage per hour:

Stone Derrickmen Rigger:

	1st	2nd	3rd	4th
07/01/2024	\$ 37.20	\$ 53.28	\$ 59.32	\$ 65.36

Supplemental Benefits:

Per hour:				
07/01/2024	23.27	34.39	34.39	34.39

Stone Handset:

1/2 year terms at the following hourly wage rate:

	1st	2nd	3rd	4th
07/01/2024	\$ 35.78	\$ 51.04	\$ 56.79	\$ 62.55

Supplemental Benefits:

Per hour:				
07/01/2024	22.95	34.08	34.08	34.08

9-197D/R

Ironworker

11/01/2024

JOB DESCRIPTION Ironworker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per Hour:	07/01/2024	01/01/2025
Ornamental	\$ 47.65	Additional
Chain Link Fence	47.65	\$ 1.25/hr*
Guide Rail	47.65	

(*)To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per hour:	
Journeyworker:	\$ 66.29

OVERTIME PAY

See (B, B1, Q, V) on OVERTIME PAGE

HOLIDAY

Paid:	See (1) on HOLIDAY PAGE
Overtime:	See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

1 year terms	07/01/2024
1st Term	\$ 25.98
2nd Term	28.45
3rd Term	30.80
4th Term	34.39
Supplemental Benefits per hour:	
1st Term	\$ 16.29
2nd Term	18.29
3rd Term	19.29
4th Term	20.29

4-580-Or

Ironworker

11/01/2024

JOB DESCRIPTION Ironworker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

PER HOUR:	07/01/2024	01/01/2025
Ironworker:		Additional
Structural	\$ 57.20	\$ 1.75/Hr.*
Bridges		
Machinery		

(*)To be allocated at a later date.

SUPPLEMENTAL BENEFITS

PER HOUR PAID:

Journeyman	\$ 89.85
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OVERTIME PAY

See (B, B1, Q, *V) on OVERTIME PAGE

*NOTE: Benefits are calculated for every hour paid.

HOLIDAY

Paid:	See (1) on HOLIDAY PAGE
Overtime:	See (5, 6, 18, 19) on HOLIDAY PAGE

REGISTERED APPRENTICES

WAGES PER HOUR:

6 month terms at the following rate:

1st	\$ 30.23
2nd	30.83
3rd - 6th	31.44

Supplemental Benefits
PER HOUR PAID: 62.47

4-40/361-Str

Ironworker

11/01/2024

JOB DESCRIPTION Ironworker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

PARTIAL COUNTIES

Rockland: Southern section - south of Convent Road and east of Blue Hills Road.

WAGES

Per hour: 07/01/2024

Reinforcing &
Metal Lathing \$ 56.95

"Base" Wage 55.20
plus \$ 1.75

"Base" Wage is used to calculate overtime hours only.

SUPPLEMENTAL BENEFITS

Per hour:
Reinforcing & \$ 44.63
Metal Lathing

OVERTIME PAY

See (B, E, Q, *X) on OVERTIME PAGE

*Only \$23.50 per Hour for non worked hours

Supplemental Benefit Premiums for Overtime Hours worked:

Time & One Half \$ 51.13
Double Time 57.63

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 13, *18, **19, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

(1) year terms at the following wage rates:

Prior to 01/01/2020:

1st term	2nd term	3rd term	4th Term
Wage Per Hour:			
\$ 22.55	\$ 28.38	\$ 34.68	\$ 37.18
"Base" Wage			
\$21.00	\$26.80	\$33.10	\$35.60
plus \$1.55	plus \$1.58	plus \$1.58	plus \$1.58

"Base" Wage is used to calculate overtime hours ONLY.

SUPPLEMENTAL BENIFITS

Per Hour:

1st term	2nd term	3rd term	4th Term
\$18.17	\$21.34	\$22.00	\$22.50

After 01/01/2020:

1st term	2nd term	3rd term	4th Term
Wage Per Hour:			
\$ 22.55	\$ 23.60	\$ 24.60	\$ 25.65
"Base" Wage			

\$21.00 plus \$1.55	\$22.00 plus \$1.60	\$23.00 plus \$1.60	\$24.00 plus \$1.65
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"Base" Wage is used to calculate overtime hours ONLY.

SUPPLEMENTAL BENIFITS

Per Hour:

1st term \$18.40	2nd term \$17.40	3rd term \$16.45	4th Term \$15.45
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4-46Reinf

Laborer	11/01/2024
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JOB DESCRIPTION Laborer

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:

Striper (Highway/streets):	07/01/2024	07/01/2025
Striping-Machine Operator	\$ 41.00	Additional \$ 3.05**
Striping Thermoplastic	45.00	
Flagger - Traffic Safety*	39.00	

Note: * Includes but is not limited to: Positioning of cones and directing of traffic using handheld devices. Excludes the Driver/Operator of equipment used in protection of traffic safety.

** To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per hour paid:

Journeyworker	\$ 19.27
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OVERTIME PAY

See (B, H) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 8, 13) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 13) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:

1st Term (1-2000 hours)	\$ 31.36
2nd Term (2001-4000 hours)	33.00

Supplemental Benefits per hour:

All Terms	19.27
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9-1010-LS

Laborer	11/01/2024
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JOB DESCRIPTION Laborer

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:	07/01/2024
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Laborer/Excavation

**Asbestos and Lead Abatement &

Removal, Hazardous Waste Removal

(including soil)	\$ 45.00
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Basic	45.00
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Flagman	45.00
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Pipelayer	45.00
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*Tree Work, *Landscape 45.00

*Includes trimming, cutting, planting and/or removal of trees.

** Applies to Heavy & Highway projects

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker: \$ 54.03

Note: No payment of Supplemental Benefits is required on paid holidays, when employees do not work.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

When an observed holiday falls on a Saturday, work done shall be paid at double time.

HOLIDAY

Paid: See (2, 20) on HOLIDAY PAGE

Overtime: See (2, 5, 6, 11, 20) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:

1000 hour terms at the following hourly wage rate.

07/01/2024

1st	0 - 1000	\$ 22.50
2nd	1001-2000	27.00
3rd	2001-3000	33.75
4th	3001-4000	40.50

Supplemental Benefits per hour:

All Apprentices 54.03

9-731Ex

Laborer

11/01/2024

JOB DESCRIPTION Laborer

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:

GROUP 14: Blasters.

GROUP 16: Tunnel workers - including Miners, Drill Runners, Iron Men, Maintenance Men, Conveyor Men, Safety Miners, Riggers, Block Layers, Cement Finishers, Rod Men, Caulkers, Powder Carriers, Miners' Helpers, Chuck Tenders, Track Men, Nippers, Brake Men, Derail Men, Form Men, Bottom Bell, Top Bell or Signal men, Form Workers, Movers, Concrete Workers, Shaft Men, Tunnel Laborers and Caulkers' Helpers.

GROUP 17: All others including: Powder Watchmen, Top Laborers and Changehouse Attendants.

Wages: (per hour) 07/01/2024

Laborer (Tunnel)-FREE AIR:

Group 14	\$ 77.13
Group 16	73.75
Group 17*	68.18

Small Bore Micro
Tunnel Machines 80% of rates above

For Repairs on Existing
Water Tunnels 90% of rates above

For Repairs of Sewer &
Drainage Tunnels 85% of rates above

For Repair & Maintenance

of all Subway & 80% of rates above
Vehicular Tunnels

*An additional \$3.00 per day when using an air spade, jack hammer or pavement breaker.

Note: Employer shall pay \$10.00 per day for each half mile starting at a point 500 feet from the bottom of the shaft.

SUPPLEMENTAL BENEFITS

Per hour:

GROUP 14	\$ 55.32
GROUP 16	53.06
GROUP 17	49.11

Small Bore Micro
Tunnel Machines 80% of rates above

For Repairs on Existing
Water Tunnels 90% of rates above

For Repairs of Sewer &
Drainage Tunnels 85% of rates above

For Repair & Maintenance
of all Subway& 80% of rates above
Vehicular Tunnels

OVERTIME PAY

OVERTIME:

For Laborer (Free Air) See (D, M, R*) on OVERTIME PAGE.
For Repair Categories See (B, F, R*) on OVERTIME PAGE.
& Micro Tunneling
* Straight time first 8 hours, double time after 8 hours.

HOLIDAY

Paid: See (5, 6, 9, 11, 12, 15, 16, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 9, 11, 12, 15, 16, 25) on HOLIDAY PAGE
Good Friday may be exchanged for one of the holidays listed.

9-147Tnl/Free

Laborer - Building

11/01/2024

JOB DESCRIPTION Laborer - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:	07/01/2024	01/01/2025 Additional
Basic Laborer and Mason Tender	\$ 44.70*	\$ 1.25**

*Before calculating premium wage deduct \$3.25

** To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per hour:

Basic Laborer and
Mason Tender \$ 29.99

OVERTIME PAY

See (B, B2, E, E2, Q, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:

1000 hour terms at the following wage rate:

Term:	1st	2nd	3rd	4th
Basic Laborer and Mason Tender 07/01/2024	\$ 22.05*	\$ 23.80*	\$ 25.30*	\$ 27.80*

*Before calculating premium wage deduct \$0.50

Supplemental Benefits per hour:

All Terms 07/01/2024	\$ 10.77
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9-MTDC(79)

Laborer - Building	11/01/2024
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JOB DESCRIPTION Laborer - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:

07/01/2024	07/01/2025 Additional
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Skilled Interior Demolition Laborer:	\$ 39.70*	\$ 0.75***
General Interior Demolition Laborer:	28.89**	

* Before calculating overtime wages deduct \$1.70

**General Demolition Laborer performs manual work and work incidental to demolition, such as loading and carting of debris from work site to an area where it can be loaded into trucks for removal. Also performs clean-up of the site when demolition is complete.

***To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per Hour:

Skilled Interior Demolition Laborer:	24.84
General Interior Demolition Laborer:	19.16

OVERTIME PAY

See (B, B2, I, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage Per Hour:

1000 hour terms at the following wage rate:

1st	2nd	3rd	4th
\$ 21.80*	\$ 23.55*	\$ 25.05*	\$ 27.55*

* Before calculating overtime wages deduct \$0.50

Supplemental Benefits Per Hour:

All Terms:	10.47
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9-MTDC (79-ID)

Laborer - Building	11/01/2024
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JOB DESCRIPTION Laborer - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:	07/01/2024
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Laborer:
Laborer-Concrete
(including flag person) \$ 42.53
+ 8.00*

* This portion is not subjected to overtime premiums.

SUPPLEMENTAL BENEFITS
Per Hour \$ 20.20
+ 9.00**

** This portion subjected to overtime premiums only on codes (E,Q)

OVERTIME PAY
OVERTIME: See (A,E,Q) on OVERTIME PAGE attached.
See (B,E,Q,) for work below street level to top of foundation.

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 11, 13, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES			
Wages per hour:			
Terms based on hours listed:			
1st	2nd	3rd	
0-1334	1334-2668	2669-4000	
\$ 15.35	\$ 20.15	\$ 20.95	
+ 2.49*	+ 7.32*	+ 7.80*	

* This portion is not subjected to overtime premiums.

Supplemental Benefits:			
Per hour:			
\$ 12.70	\$ 16.70	\$ 16.70	
+ 2.65*	+ 3.45*	+ 4.25*	

Journeyworker rate applies after 4000 hours
*This portion subjected to same premium as wages.

9-6A/18A/20-C

Laborer - Building

11/01/2024

JOB DESCRIPTION Laborer - Building **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES		
Per hour:	07/01/2024	01/01/2025
Building:		Additional
Plasterer Tender and Spray Fireproofing Tender	\$ 44.70*	\$ 1.25**

* Before calculating overtime wages deduct \$3.25

**To be allocated at a later date.

SUPPLEMENTAL BENEFITS
Per hour:
Journeyworker \$ 29.99

OVERTIME PAY
See (B, B2, E, E2, Q, R) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wage per hour:

1000 hours terms at the following wage.

	1st	2nd	3rd	4th
01/01/2024	\$22.05*	\$23.80*	\$25.30*	\$27.80*

* Before calculating overtime wages deduct \$ 0.50

Supplemental Benefits per hour:

All Terms:
07/01/2024

\$ 10.77

9-30 (79)

Laborer - Building

11/01/2024

JOB DESCRIPTION Laborer - Building

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2024 01/06/2025

Asbestos, Lead \$ 39.00 Additional
and Hazardous \$ 1.50/Hr.*
Material Abatement
Laborer

(*)To be allocated at a later date.

(Re-Roofing Removal See Roofer)

NOTE: Asbestos removed from Mechanical Systems not to be scrapped
See Asbestos Worker

SUPPLEMENTAL BENEFITS

Per Hour:

Laborer \$ 20.10

OVERTIME PAY

See (B, B2, I) on OVERTIME PAGE

*Calculate at \$39.00 per hour then add \$1.55

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 28) on HOLIDAY PAGE

REGISTERED APPRENTICES

1000 hour terms at the following:

Per Hour:

1st Term \$ 20.00*
2nd Term 21.00**
3rd Term 24.00***
4th Term 26.00****

SUPPLEMENTAL BENEFIT

Per Hour:

All Terms \$ 14.35

OVERTIME PAY:

*Calculate at \$20.00 per hour then add \$1.00

**Calculate at \$21.00 per hour then add \$1.00

***Calculate at \$24.00 per hour then add \$1.00

****Calculate at \$26.00 per hour then add \$1.00

4-NYDC(78)

Laborer - Building

11/01/2024

JOB DESCRIPTION Laborer - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:	07/01/2024	01/01/2025 Additional
Skilled Demolition Laborer:	\$ 42.48*	\$ 0.50***
General Demolition Laborer:	31.06**	

*Before calculating overtime wages deduct \$3.00

**Before calculating overtime wages deduct \$2.35

***To be allocated at a later date.

**General Demolition Laborer performs manual work and work incidental to demolition, such as loading and carting of debris from work site to an area where it can be loaded into trucks for removal. Also performs clean-up of the site when demolition is complete.

NOTE: Total Demolition Only: Demolition shall be the complete demolition (wrecking) or dismantling of entire buildings or structures. Also may include the removal of all or any portion of a roof in which structural change is to occur. Structural change is defined as the removal of structural slabs, steel members, concrete members and penetration through the structural slab.

SUPPLEMENTAL BENEFITS

Per hour:
Journeyworker:

Skilled Demolition Laborer:	\$ 28.92
General Demolition Laborer:	21.98

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:
(1) year terms at the following wage.

07/01/2024	1st	2nd	3rd	4th
	\$ 22.05*	\$ 23.80*	\$ 25.30*	\$ 27.80*

*Before calculating overtime wages deduct \$0.50

Supplemental Benefits per hour:

All Terms:	
07/01/2024	\$ 10.77

9-79/95

Laborer - Concrete & Asphalt Paving

11/01/2024

JOB DESCRIPTION Laborer - Concrete & Asphalt Paving

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Group 1: Slurry Seal Coater, Maintenance Safety Surface, Small Power Tool Operator, Play Equipment Installer, Temporary Fence Installer & Repairs, Laborer.

Group 2: Production Paving Work: Shoveler, small equipment operator.

Per hour:	07/01/2024
Concrete Formsetter	\$ 49.35 + \$ 8.00*
Asphalt Screeperson/Micro Paver	49.95 + \$ 8.00*
Asphalt Raker	49.35 + \$ 8.00*
Group 1	45.48 + \$ 8.00*
Group 2	45.48 + \$ 8.00*

* This portion is not subjected to overtime premiums.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker: \$ 45.55

Note: No payment of supplemental benefits is required on paid holidays, when employees do not work.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

Note: Saturday premium rate applies from 7:00 am on Saturday to 6:59 am Sunday

Note: Sunday premium rate applies from Sunday 7:00 am to Monday 6:59 am.

HOLIDAY

Paid: See (5, *11, 20) on HOLIDAY PAGE

HOLIDAY:

Overtime: See (21,22)** on HOLIDAY PAGE.

Note: See (5,20) Holiday pay -at the single time pay rate-shall be prorated based on 25% of a day's wages and benefits for each day worked during that calendar week.

**New Year's Day and Christmas Day: If an employee is performing work on these (2) days the employee will receive the single rate plus 25%.

* Columbus Day shall be an unpaid holiday. In the event work is performed on Columbus Day, wages shall be paid on a double time basis.

Note-When Independence day falls on Saturday, it will be observed on that Saturday, however, when it occurs on a Sunday, it will be observed on the Monday.

REGISTERED APPRENTICES

Wage per hour:

2000 hours term:

1st term	2nd term
1-1999	2000-4000
\$ 31.36 + \$ 8.00*	\$ 33.00 + \$ 8.00*

* This portion is not subjected to overtime premiums.

Supplemental Benefits per hour:

2000 hours term:

1st term	2nd term
1-1999	2000-4000
\$ 18.67	\$ 18.67

9-1010H/H

Laborer - Trac Drill

11/01/2024

JOB DESCRIPTION Laborer - Trac Drill

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Group 1: Chipper/Jackhammer, Powder Carrier, Hydraulic Chuck tender, Chuck Tender and Nipper, Magazine Keeper

Group 2: Hydraulic Trac Drill

Group 3: Air Trac, Wagon and Quarry bar

Group 4: Blaster

Per Hour: 07/01/2024

Group 1	\$ 45.00
Group 2	52.35
Group 3	51.52
Group 4	58.21

SUPPLEMENTAL BENEFITS

Per Hour:

All Classifications: 54.03

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

When an observed holiday falls on a Saturday, work done shall be paid at double time.

HOLIDAY

Paid: See (2, 20) on HOLIDAY PAGE

Overtime: See (2, 5, 6, 11, 20) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:

1000 hour terms at the following hourly wage rate.

07/01/2024

1st	0 - 1000	\$ 22.50
2nd	1001-2000	27.00
3rd	2001-3000	33.75
4th	3001-4000	40.50

Supplemental Benefits per hour:

All Apprentices 54.03

9-731/29

Laborer - Tunnel

11/01/2024

JOB DESCRIPTION Laborer - Tunnel

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

GROUP 5: Blasters and Mucking Machine Operators

GROUP 6: Tunnel Workers*(including Miners, Drill Runners, Iron Men, Maintenance Men, Inside Muck Lock Tender, Pumpmen, Electricians, Cement Finishers, Rod Men, Caulkers, Carpenters, Hydraulic Men, Shield Drivers, Monorail Operators, Motor Men, Conveyor Men, Safety Miners, Powder Carriers, Pan Men, Riggers, Miner's Helpers, Chuck Tenders, Track Men, Nippers, Brake Men, Form Workers, Concrete Workers, Tunnel Laborers, Caulker's Helpers), Hose Men, Grout Men, Gravel Men, Derail Men and Cable Men.

GROUP 7: Top Nipper

GROUP 8,9: Outside Man Lock Tender, Outside Muck Lock Tender, Shaft Men, Gauge Tender and Signal Men.

GROUP 10: Powder Watchmen, Top Laborers and Changehouse Attendants.

WAGES: (per hour)

07/01/2024

Laborer (Compressed Air):

GROUP 5	\$ 80.82
GROUP 6	77.95
GROUP 7	76.65
GROUP 8,9	75.10
GROUP 10	66.18

Note: Employer shall pay \$10.00 per day for each one half (1/2) mile or fraction starting from a point 500 feet from the shaft.

SUPPLEMENTAL BENEFITS

SUPPLEMENTAL BENEFITS:

per hour:

GROUP 5	\$ 57.61
GROUP 6	55.81
GROUP 7	54.68
GROUP 8,9	53.84

GROUP 1050.85

OVERTIME PAY
See (D, M, *R) on OVERTIME PAGE
NOTE: Time and one-half to be paid for all overtime repair-maintenance work on existing equipment and facilities.

* Straight time first 8 hours, double time after 8 hours.

HOLIDAY
Paid: See (5, 6, 9, 11, 12, 15, 16, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 9, 11, 12, 15, 16, 25) on HOLIDAY PAGE
Good Friday may be exchanged for one of the holidays listed.

9-147Tnl/Comp Air

Mason

11/01/2024

JOB DESCRIPTION Mason**DISTRICT** 4

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES
Per Hour:07/01/2024

Brick/Block Layer\$ 67.14

Base Wage for OT Calculation\$ 55.93

SUPPLEMENTAL BENEFITS
Per Hour:

Brick/Block Layer\$ 34.90

OVERTIME PAY
See (A, E, E2, Q) on OVERTIME PAGE
Note: OT Calculated on Base Wage plus \$ 11.21/hr.

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
(800 hour) Terms at the following Percentage of Journey workers "Base Wage" plus \$ 5.94/hr.:

1st	2nd	3rd	4th	5th
50%	60%	70%	80%	90%

Supplemental Benefits per hour:

All Apprentices\$ 24.70

4-1Brk

Mason - Building

11/01/2024

JOB DESCRIPTION Mason - Building**DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES
Building
Wages per hour:07/01/202401/01/2025
Additional

Mosaic & Terrazzo Mechanic	\$ 60.98	\$ 1.06*
Mosaic & Terrazzo Finisher	58.96	

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS
Per hour:

Mosaic & Terrazzo Mechanic\$ 31.36*
+ \$9.78

Mosaic & Terrazzo Finisher \$ 31.36*
+ \$9.77

*This portion of benefits subject to same premium rate as shown for overtime wages.

OVERTIME PAY

See (A, E, Q) on OVERTIME PAGE

07/01/2024- Deduct \$7.00 from hourly wages before calculating overtime.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

Easter Sunday is an observed holiday. Holidays falling on a Saturday will be observed on that Saturday. Holidays falling on a Sunday will be celebrated on the Monday.

REGISTERED APPRENTICES

Wages Per hour:

	1st	2nd	3rd	4th	5th	6th
	0- 1500	1501- 3000	3001- 3750	3751- 4500	4501- 5250	5251- 6000
07/01/2024	\$ 25.19	\$ 32.39	\$ 38.18	\$ 40.78	\$ 49.00	\$ 55.75

Supplemental Benefits per hour:

07/01/2024	\$7.12* + 3.43	\$9.16* + 4.40	\$17.22* + 5.87	\$23.86* + 6.84	\$24.86* + 7.83	\$27.36* + 8.80
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*This portion of benefits subject to same premium rate as shown for overtime wages.

9-7/3

Mason - Building

11/01/2024

JOB DESCRIPTION Mason - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:	07/01/2024	12/02/2024 Additional
Tile Setters	\$ 64.40	\$ 0.72*

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per Hour:	\$ 28.51* + 8.52
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*This portion of benefits subject to same premium rate as shown for overtime wages.

OVERTIME PAY

See (B, *E, Q, V) on OVERTIME PAGE

Work beyond 10 hours on Saturday shall be paid at double the hourly wage rate.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:

750 hour terms at the following wage rate:

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
	1- 750	751- 1500	1501- 2250	2251- 3000	3001- 3750	3751- 4500	4501- 5250	5251- 6000	6001- 6750	6501- 7000
07/01/2024	\$22.19	\$27.21	\$34.45	\$39.46	\$43.07	\$46.58	\$50.23	\$55.24	\$57.71	\$62.00

Supplemental Benefits per hour:

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
07/01/2024									
\$12.55*	\$12.55*	\$15.36*	\$15.36*	\$16.36*	\$17.86*	\$18.86*	\$18.86*	\$18.86*	\$24.11*
+\$.76	+\$.81	+\$.91	+\$.96	+\$1.43	+\$1.48	+\$1.91	+\$1.97	+\$4.57	+\$5.18

*This portion of benefits subject to same premium rate as shown for overtime wages.

9-7/52

Mason - Building	11/01/2024
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JOB DESCRIPTION Mason - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per hour: 07/01/2024 01/06/2025
Additional

Building-Marble Restoration:

Marble, Stone & \$ 47.72 \$ 0.57*

Terrazzo Polisher

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per Hour:
Journeyworker:

Building-Marble Restoration:

Marble, Stone &
Polisher \$ 31.50

OVERTIME PAY

See (B, *E, Q, V) on OVERTIME PAGE

* On Saturdays, 8th hour and successive hours paid at double hourly rate.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 11, 15, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

WAGES per hour:

900 hour term at the following wage:

1st	2nd	3rd	4th
1- 900	901- 1800	1801- 2700	2701
\$ 33.40	\$ 38.18	\$ 42.94	\$ 47.72

Supplemental Benefits Per Hour:

29.06	29.87	30.69	31.50
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9-7/24-MP

Mason - Building	11/01/2024
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JOB DESCRIPTION Mason - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

WAGES

Per Hour: 07/01/2024 01/06/2025
Additional
Marble Cutters & Setters \$ 63.92 \$ 0.75*

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per Hour:

Journeyworker \$ 40.05

OVERTIME PAY

See (B, E, Q, V) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage Per Hour:

07/01/2024

750 hour terms at the following wage

1st	2nd	3rd	4th	5th	6th	7th	8th
0-3000	3001-3750	3751-4500	4501-5250	5251-6000	6001-6750	6751-7500	7500+
\$ 27.01	\$ 40.52	\$ 43.88	\$ 47.26	\$ 50.64	\$ 54.32	\$ 60.71	\$ 63.92

Supplemental Benefits per hour:

07/01/2024

1st	2nd	3rd	4th	5th	6th	7th	8th
\$ 26.42	\$ 29.76	\$ 30.61	\$ 31.44	\$ 32.28	\$ 37.55	\$ 39.23	\$ 40.05

9-7/4

Mason - Building	11/01/2024
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JOB DESCRIPTION Mason - BuildingDISTRICT 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:	07/01/2024	12/02/2024
		Additional
Tile Finisher	\$ 49.46	\$ 0.59*

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per Hour:

\$ 25.36*
+ \$8.33

* This portion of benefits is subject to same premium rate as shown for overtime wages.

OVERTIME PAY

See (A, *E, Q) on OVERTIME PAGE
Double time rate after 10 hours on Saturdays

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 15, 16, 25) on HOLIDAY PAGE

9-7/88-tf

Mason - Building	11/01/2024
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JOB DESCRIPTION Mason - BuildingDISTRICT 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per hour:	07/01/2024	01/06/2025
Marble, Stone,		Additional
Maintenance Finishers:	\$ 27.72	\$ 0.41*

Note 1: An additional \$2.00 per hour for time spent grinding floor using "60 grit" and below.
Note 2: Flaming equipment operator shall be paid an additional \$25.00 per day.

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per Hour:

Marble, Stone
Maintenance Finishers: \$ 15.74

OVERTIME PAY

See (B, *E, Q, V) on OVERTIME PAGE
*Double hourly rate after 8 hours on Saturday

HOLIDAY

Paid: See (5, 6, 8, 11, 15, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 11, 15, 25) on HOLIDAY PAGE
1st term apprentice gets paid for all observed holidays.

REGISTERED APPRENTICES

WAGES per hour:	07/01/2024
0-750	\$ 22.32
751-1500	23.04
1501-2250	23.75
2251-3000	24.48
3001-3750	25.56
3751-4500	27.00
4501+	27.72

Supplemental Benefits:
Per hour:

0-750	12.69
751-1500	13.10
1501-2250	13.51
2251-3000	13.91
3001-3750	14.52
3751-4500	15.33
4501+	15.74

9-7/24M-MF

Mason - Building / Heavy&Highway

11/01/2024

JOB DESCRIPTION Mason - Building / Heavy&HighwayDISTRICT 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per hour:	07/01/2024	01/06/2025 Additional
Marble-Finisher	\$ 49.99	\$ 0.53*

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Journeyworker:
Per hour

Marble- Finisher \$ 37.39

OVERTIME PAY

See (B, E, Q, V) on OVERTIME PAGE
Work beyond 8 hours on a Saturday shall be paid at double the rate.

HOLIDAY

Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

When an observed holiday falls on a Sunday, it will be observed the next day.

9-7/20-MF

Mason - Building / Heavy&Highway

11/01/2024

JOB DESCRIPTION Mason - Building / Heavy&Highway

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2024

Cement Mason \$ 57.72

SUPPLEMENTAL BENEFITS

Per Hour:

Cement Mason \$ 34.66

1.5 X overtime rate \$ 62.95

2 X overtime rate \$ 69.32

OVERTIME PAY

See (B1, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 11, 13, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

(1) year terms at the following wage:

1st Term \$ 23.39

2nd Term \$ 28.29

3rd Term \$ 33.69

Supplement Benefits per hour paid:

	ST	1.5X OT	2X OT
1st Term	\$ 14.86	\$ 22.30	\$ 29.72
2nd Term	\$ 15.16	\$ 22.75	\$ 30.32
3rd Term	\$ 15.27	\$ 22.91	\$ 30.54

4-780

Mason - Building / Heavy&Highway

11/01/2024

JOB DESCRIPTION Mason - Building / Heavy&Highway

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

NOTE: Shall include but not limited to Precast concrete slabs (London Walks) Marble and Granite pavers 2'x 2' or larger.

Per Hour:

	07/01/2024	05/01/2025
Stone Setter	\$ 69.91	Additional
Base Rate	53.84*	\$ 3.42/Hr+
Stone Tender	\$51.82	
Base Rate	44.54*	

(+)To be allocated at a later date for all classes.

SUPPLEMENTAL BENEFITS

Per Hour:

Stone Setter \$ 42.52

Stone Tender 23.15

OVERTIME PAY

See (*C, **E, Q) on OVERTIME PAGE

* Base Rates are used to Calculate Overtime Premiums then adding in: \$15.81/Hr. for Stone Setter or \$7.28/Hr. for Stone Tender.

** On weekdays the eighth (8th) and ninth (9th) hours are time and one-half all work thereafter is paid at double the hourly rate.

*** The first nine (9) hours on Saturday is paid at time and one-half all work thereafter is paid at double the hourly rate.

HOLIDAY

Paid: See (*18) on HOLIDAY PAGE
Overtime: See (5, 6, 10) on HOLIDAY PAGE
Paid: * Must work first 1/2 of day.

REGISTERED APPRENTICES

Per Hour:

Stone Setter(800 hour) terms at the following Percentage of Stone Setters Base wage rate per hour plus \$7.32:

1st	2nd	3rd	4th	5th	6th
50%	60%	70%	80%	90%	100%

Supplemental Benefits:

All Apprentices \$ 25.85

4-1Stn

Mason - Heavy&Highway

11/01/2024

JOB DESCRIPTION Mason - Heavy&Highway

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2024

Pointer, Caulkers &
Cleaners \$ 63.69

SUPPLEMENTAL BENEFITS

Per Hour:

Pointer, Cleaners &
Caulkers \$ 31.90

OVERTIME PAY

See (B, E2, H) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:

One (1) year terms at the following wage rates.

1st	2nd	3rd	4th
\$ 32.76	\$ 37.09	\$ 42.97	\$ 51.60

Apprentices Supplemental Benefits:

(per hour paid) \$ 15.40 \$ 21.70 \$ 24.45 \$ 25.45

4-1PCC

Operating Engineer - Building

11/01/2024

JOB DESCRIPTION Operating Engineer - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Putnam, Queens, Richmond, Westchester

PARTIAL COUNTIES

Dutchess: that part of Dutchess County lying south of the North City Line of the City of Poughkeepsie.

WAGES

NOTE: Construction surveying

Party Chief--One who directs a survey party

Instrument Man--One who runs the instrument and assists Party Chief.

Rodman--One who holds the rod and assists the Survey Crew

Wages:(Per Hour) 07/01/2024

Building Construction:

Party Chief	\$ 79.99
Instrument Man	60.36
Rodman	40.45

Steel Erection:

Party Chief	83.13
Instrument Man	64.21
Rodman	44.33

Heavy Construction-NYC counties only:
(Foundation, Excavation.)

Party Chief	88.06
Instrument man	65.66
Rodman	55.70

SUPPLEMENTAL BENEFITS

Per Hour: 07/01/2024

Building Construction \$ 28.63* +\$ 7.65

Steel Erection 29.23* + 7.65

Heavy Construction 30.04* + 7.64

* This portion subject to SAME premium as wages

Non-Worked Holiday Supplemental Benefit:
21.83

OVERTIME PAY

See (A, B, E, Q) on OVERTIME PAGE

Code "A" applies to Building Construction and has double the rate after 7 hours on Saturdays.

Code "B" applies to Heavy Construction and Steel Erection and had double the rate after 8 hours on Saturdays.

HOLIDAY

Paid: See (5, 6, 9, 11, 15, 16, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 9, 11, 15, 16, 25) on HOLIDAY PAGE

9-15Db

**Operating Engineer - Building, Maintenance, Steel Erection
& Heavy Construction**

11/01/2024

JOB DESCRIPTION Operating Engineer - Building, Maintenance, Steel Erection & Heavy Construction

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

STEEL ERECTION:

Group 1: Derrick, travelers, tower, crawler tower & climbing cranes

Group 2: Oiler (Truck Crane)

Group 3: Oiler (Crawler Crane)

BUILDING CONSTRUCTION:

Group 1: Installing, repairing, maintaining, dismantling of all equipment including Steel cutting& bending machines, mechanical heaters, mine hoists, climbing cranes, tower cranes, Linden Peine, Lorain, Liebherr, Mannes and machines of a similar nature; Well Point system, Deep Well pumps, Concrete mixers with loading devices, Concrete plants, motor generators (When used for temporary power and lights)(Driving maintenance trucks and mounted-welded machines)-All Pumps(excluding River Cofferdam Pumps and Well Point Pumps), Motorized Concrete Buggies(When three or more are on job site), Skid-Steer and similar machines

Group 2:Maintenance of: Pumps, Generators, Mixers, Heaters

Group 3: Oilers of all gasoline, electric, diesel or air operated Gradalls; Concrete Pumps, Overhead Cranes in Power Houses, Assist in oiling, greasing and repairing of all machines, including: Driving Truck Cranes, Driving and operating Fuel and Grease Trucks, Cherry Pickers(Hydraulic Cranes) over 70,000 GVW and machines of a similar nature

Group 4: Oiler on Crawler Cranes, Backhoes, Trenching Machines, Guniting Machines, Compressors(3 or more in battery)

Group 5: Maintenance on Radiant Mechanical Heaters

HEAVY CONSTRUCTION (Excavation, Foundations, etc)

Group 1:Maintenance of: Generators, Light Towers

Group 2:Maintenance of: Pumps, Mixers including mudsucking

Group 3: Base Mounted Tower Cranes

Group 4: Installing, repairing, maintaining, dismantling(of all equipment including Steel cutting & Bending machines, Fusion Coupling Machines, Vermeer Trenching machines, on-site crushing plant, mechanical heaters(1 through 7),Mine hoists, Tower Cranes, Linden Peine, Lorrain, Liebherr, Mannes or machines of a similar nature, Wellpoints)-Driving maintenance trucks and truck mounted welding machines, burning, welding-operating of accumulator for shield-driven tunnels, in addition to the performance of other duties: Handling, installation, jointing, coupling of all permanent steel and plastic pipe. RIDE UPON MOLES-tunnel boring machines-MICRO TUNNELING SYSTEMS, All temporary pipefitting;When three or more motorized concrete buggies(Ride type)are utilized on the jobsite they shall be serviced, maintained and repaired by the maintenance engineer. The Operating Engineer on autogrades(C.M.I.)is to be assisted by the maintenance engineer who shall in addition perform other duties.

WAGES:

Per hour: 07/01/2024

Steel Erection:

Group 1	\$ 81.43
Group 2	76.58
Group 3	58.22

Building Construction:

Group 1	\$ 72.41
Group 2	57.36
Group 3	69.09
Group 4	52.62
Group 5	46.07

Heavy Construction:

Group 1	\$ 57.43
Group 2	58.68
Group 3	108.95
Group 4	84.24

SUPPLEMENTAL BENEFITS

Per Hour: 07/01/2024

Building Construction	\$ 30.52* + \$7.40
Steel Erection & Heavy	31.02* + \$7.40

* This portion of benefits is subject to same OT premium as wages.

Non-Worked Holiday Supplemental Benefits:

21.87

OVERTIME PAY

See (D, O) on OVERTIME PAGE

HOLIDAY

Paid:	See (5, 6, 9, 11, 15, 16, 25) on HOLIDAY PAGE
Overtime:	See (5, 6, 9, 11, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages Per Hour:

(1) year terms at the following wage rates:

1st	2nd	3rd	4th.
\$ 38.52	\$ 45.23	\$ 48.70	\$ 52.17

Supplemental Benefits:

Per Hour:

All Terms \$ 16.52* + 7.40

* This portion of benefits is subject to same OT premium as wages.

9-15Ab

Operating Engineer - Building / Heavy&Highway

11/01/2024

JOB DESCRIPTION Operating Engineer - Building / Heavy&Highway

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

EQUIPMENT COVERED: Jet-Rodder/Vacuum Truck, Flusher, Sewer Rodder, Stetco Hoist and similar, Sewer Winch/Tugger Hoist and similar, Vacall/Vactor, Closed Circuit Television Inspection Equipment, Chemical Grouting Equipment and similar, John Beame, Meyers and similar.

Per Hour: 07/01/2024

Maintenance Engineer \$ 84.24
(Sewer Systems)

SUPPLEMENTAL BENEFITS

Per Hour:

Journeyman \$ 31.02*
+ \$ 7.40

*This portion of benefits subject to SAME premium as OT wages.

Non-Worked Holiday Supplemental Benefits:

\$ 21.87

OVERTIME PAY

See (D, O) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 7, 11, 16) on HOLIDAY PAGE

Overtime: See (5, 6, 7, 11, 16) on HOLIDAY PAGE

REGISTERED APPRENTICES

Per Hour:

(1) year terms at the following wage rates.

1st	2nd	3rd	4th
\$38.52	\$45.23	\$48.70	\$52.17

Supplemental Benefits:

Per Hour:

All Apprentices: \$ 16.52* + \$ 7.40

* This portion of benefits subject to the SAME premium as OT wages

9-15Sewer

Operating Engineer - Building / Heavy&Highway

11/01/2024

JOB DESCRIPTION Operating Engineer - Building / Heavy&Highway

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2024 08/01/2024

Well Driller	\$ 41.85	\$ 43.11
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Well Driller		
Helper	\$ 36.26	\$ 37.35

Hazardous Waste Differential
Added to Hourly Wage:

Level A	\$ 3.00
Level B	\$ 2.00
Level C	\$ 1.00

Monitoring Well Work
Add to Hourly Wage:

Level A	\$ 3.00
Level B	\$ 2.00

SUPPLEMENTAL BENEFITS

Per Hour:

Well Driller	10% of straight
& Helper	time rate plus \$ 13.50

Additional \$ 4.25/Hr. for Premium Time Hours Worked

OVERTIME PAY

See (B2, P, S) on OVERTIME PAGE

HOLIDAY

Paid:	See (5, 6, 16, 23) on HOLIDAY PAGE
Overtime:	See (5, 6, 16, 23) on HOLIDAY PAGE

REGISTERED APPRENTICES

Apprentices at 12 Month Terms

Wages Per Hour:

1st Term	\$ 28.00
2nd Term	\$ 29.00
3rd Term	\$ 30.00

SUPPLEMENTAL BENEFITS

Per Hour:

All Terms	10% of Wage + \$ 13.50
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Additional \$4.25/Hr. for premium time hours worked.

4-138well

Operating Engineer - Building & Steel Erection

11/01/2024

JOB DESCRIPTION Operating Engineer - Building & Steel Erection

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per Hour: 07/01/2024

STEEL ERECTION:

Three Drum Derricks	\$ 107.16
Cranes, Two Drum Derricks, Hydraulic Cranes & Fork Lifts,	
Boom Trucks	103.28
Compressors, Welding Machines	63.36
Compressors	60.71
(not combined with welding machines)	

BUILDING CONSTRUCTION:

Cranes, Stone Derrick, Boom Trucks, Hydraulic Cranes,	
	103.62
Double Drum	98.28
4 Pole Hoists and Single	
Drum Hoists	87.78

Fork Lifts, Plaster(Platform Machine)Plaster Bucket, Concrete Pumps and all other equipment used for hoisting	80.54
*House Cars and Rack & Pinion	71.35
*House Cars (New Projects)	58.47
Erecting and dismantling Cranes	88.64

Compressors, Welding Machines(Cutting Concrete-Tank Work),
Paint Spraying, Sand Blasting, Pumps(With the exclusion of
concrete pumps), House Car (Settlement basis only), All
Engines irrespective of power(Power-Vac)used to drive
auxiliary equipment Air, Hydraulic, etc., Boilers, Jacking System
62.20

APPLICABLE TO BUILDING CATEGORY:

CRANES: Crawler Or Truck

	In Addition To Above Crane Rates
100' to 149' Boom	\$ 1.75/hr
150' to 249' "	\$ 2.00/hr
250' to 349' "	\$ 2.25/hr
350' to 450' "	\$ 2.75/hr
Tower Crane	\$ 2.00/hr

APPLICABLE TO STEEL CATEGORY:

CRANES: Crawler Or Truck

	In Addition To Above Crane Rates
100' to 149' Boom	\$ 2.25/hr
150' to 249' "	\$ 2.50/hr
250' to 349' "	\$ 2.75/hr
350' to 450' "	\$ 3.25/hr
Tower Crane	\$ 2.50/hr

SUPPLEMENTAL BENEFITS

Per Hour: 07/01/2024

All Operator Classes \$ 26.15*
plus \$ 6.30

* This portion of the benefits is subject to the same premium as shown for overtime wages.

OVERTIME PAY

See (*B, **C, ***D, O) on OVERTIME PAGE

*Applies to House Cars and Rack & Pinion after 8 hours worked in a day, Saturday, Sunday and Holidays

**Applies to Building Construction category

***Applies to Steel Erection

HOLIDAY

Paid: See (5, 6, 8, 11, 12, 15, 16, 25, 26) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 11, 12, 15, 16, 25, 26) on HOLIDAY PAGE

Codes 8 and 12 apply ONLY to Steel Erection

Code 16 applies ONLY to Building Construction

REGISTERED APPRENTICES

Wage Per Hour:

Apprentices (1) year terms at the following rates:

	1st	2nd	3rd
07/01/2024	\$ 44.92	\$ 54.40	\$ 63.88

Supplemental Benefits Per Hour:

Straight Time 07/01/2024
\$ 15.65*
plus \$ 6.30

* This portion of benefits subject to the same premium as shown for overtime wages.

9-14 B&S

JOB DESCRIPTION Operating Engineer - Heavy Construction 1

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

(For Groups 23 - 28, see Operating Engineer - Heavy Construction 2)

Group 1: Tower Crane/Climbing Crane

Group 2: Backhoes (Including all track and rubber tire backhoes over 37,000 lbs), Power Shovels, Steel Erection: Hydraulic Clam Shells, Moles and machines of a similar nature

Group 3: Mine Hoists, Cranes, etc, used as Mine Hoists

Group 4: Gradalls, Keystones, Cranes (With digging buckets), Bridge Cranes, Trenching Machines, Vermeer Cutter and machines of a similar nature

Group 5: Pile Drivers and Rigs (Employing Dock-Builders Foreman), Derrick Boats, Tunnel Shovels,

Group 6: All Drills and machines of a similar nature

Group 7: Back-Filling Machines and Cranes, Mucking Machines, Dual Drum Pavers

Group 8: Mixers (Concrete with loading attachment), Concrete Pavers, Cableways, Land Derricks, Power House (Low pressure units)

Group 9: Concrete Pumps, Concrete Plant, Stone Crushers, Double Drum Hoists, Power Houses (Other than above)

Group 10: Concrete Mixer

Group 11: Elevators

Group 12: Concrete Breaking Machines, Single Drum Hoists, Load Masters, Locomotives and Dinkies (Over 10 tons), Hydraulic Crane-Second Engineer

Group 13: On-Site Concrete Plant Engineers, On-Site Asphalt Plant Engineer and Vibratory Console

Group 14: Barrier Mover, Barrier Transport and machines of a similar nature

Group 15: Compressors (Portable, 3 or more), Truck Compressor (Engineer Driver), Tugger Machines, Well Point Pumps, Chum Drill

Group 16: Boilers(High pressure),Compressors, Pumps(River Cofferdam) and Welding Machines(except where arc is operated by another Operating Engineer) Push Button Machines, All Engines, irrespective of power(Power Pac) used to drive auxiliary equipment, Air, Hydraulic, etc.

Group 17: Utility-Horizontal Boring Rig

Group 18: Utility Compressors

Group 19: Paving-Asphalt Spreader, Autogrades (C.M.I.), Roto-Mill

Group 20: Paving-Asphalt Roller

Group 21 Paving-Asphalt Plant

Group 22: Roller (non paving, all sizes)

WAGES:(per hour) 07/01/2024

Group 1	\$ 123.06
Group 2	102.98
Group 3	106.03
Group 4	103.66
Group 5	101.78
Group 6	98.05
Group 7	99.74
Group 8	97.10
Group 9	95.24
Group 10	91.40
Group 11	85.94
Group 12	87.66
Group 13	88.24
Group 14	80.02
Group 15	68.59
Group 16	64.34
Group 17	92.77
Group 18	63.97
Group 19	97.10
Group 20	94.83
Group 21	81.44
Group 22	94.83

Cranes: Crawler or Truck

100' to 149'	\$0.50 per hour additional to above Crane Rates
150' to 249'	\$0.75 per hour additional to above Crane Rates
250' to 349'	\$1.00 per hour additional to above crane Rates
350' to 450'	\$1.50 per hour additional to above crane Rates

SUPPLEMENTAL BENEFITS

Per Hour:

Groups 1-22

Regular Time \$ 26.15* plus \$ 6.30

* This portion of benefits subject to the same premium as shown for wages.

Non-Worked Holiday Supplemental Benefits:
\$ 20.80

OVERTIME PAY

See (D, O) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Per Hour:

(1) year terms at the following wage rates:

Groups 1-22	1st	2nd	3rd
	\$ 44.92	\$ 54.40	\$ 63.88

Supplemental Benefits:

Groups 1-22	
Regular Time	\$ 15.65* plus \$ 6.30

* This portion of benefits is subject to the SAME PREMIUM as shown for overtime wages

9-14 HC

Operating Engineer - Heavy Construction 2

11/01/2024

JOB DESCRIPTION Operating Engineer - Heavy Construction 2

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

(For Groups 1 - 22, see Operating Engineer - Heavy Construction 1)

Group 23: Cherry Picker (Over 20 tons), Loader (Over 6 yards)

Group 24: Backhoes and Loaders (Up to 37,000lbs), Bulldozers, Scrapers, Turn-A-Pulls, Tugger Hoists, Tractors, Hysters, Roustabout Cranes, Conveyors, Ballast Regulators (Ride On), Track Removal Machine or similar, Motor Graders, Locomotives (10 tons and under), Curb & Gutter Pavers and machines of a similar nature

Group 25: Post Hole Digger, Ditch Winch, Road Finishing Machines, Rollers (5 tons and under, Dual Purpose Trucks, Forklifts, Dempsey Dumpsters, Fireman

Group 26: Service Engineer (Gradalls, Concrete Pumps, Cold Planers Grader)

Group 27: Service Mechanic (Shovels, Draglines, Crawler Cranes, Backhoes, Trenching Machines, Compressors (3 or more in battery)

Group 28: Steam Equipment Operator (Water rigs, steam shovels, power boilers, derrick boats)

WAGES:(per hour) 07/01/2024

Group 23	\$ 87.05
Group 24	84.62
Group 25	80.57
Group 26	76.47
Group 27	54.57
Group 28	80.57

Cranes: Crawler or Truck

100' to 149'	\$0.50 per hour additional to above Crane Rates
150' to 249'	\$0.75 per hour additional to above Crane Rates
250' to 349'	\$1.00 per hour additional to above crane Rates
350' to 450'	\$1.50 per hour additional to above crane Rates

SUPPLEMENTAL BENEFITS

Per Hour:

Groups 23-28
Regular Time 31.02* + \$7.40

* This portion of benefits subject to the same OT premium as wages.

Non-Worked Holiday Supplemental Benefits:
21.87

OVERTIME PAY
See (D, O) on OVERTIME PAGE

HOLIDAY
Paid: See (5, 6, 7, 11, 16) on HOLIDAY PAGE
Overtime: See (5, 6, 7, 11, 16) on HOLIDAY PAGE

REGISTERED APPRENTICES

Per Hour:
(1) year terms at the following wage rates:

	1st	2nd	3rd	4th
Groups 23-28	\$38.52	\$45.23	\$48.70	\$52.17

Supplemental Benefits:

Regular Time \$ 16.52* + \$ 7.40

* This portion of benefits subject to same OT premium as wages.

9-15 HC

Operating Engineer - Marine Dredging	11/01/2024
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JOB DESCRIPTION Operating Engineer - Marine Dredging

DISTRICT 4

ENTIRE COUNTIES

Albany, Bronx, Cayuga, Clinton, Columbia, Dutchess, Essex, Franklin, Greene, Jefferson, Kings, Monroe, Nassau, New York, Orange, Oswego, Putnam, Queens, Rensselaer, Richmond, Rockland, St. Lawrence, Suffolk, Ulster, Washington, Wayne, Westchester

WAGES

These wages do not apply to Operating Engineers on land based construction projects. For those projects, please see the Operating Engineer Heavy/Highway Rates. The wage rates below for all equipment and operators are only for marine dredging work in navigable waters found in the counties listed above.

Per Hour: 07/01/2024

CLASS A1 \$ 45.26
Deck Captain, Leverman,
Mechanical Dredge Operator,
Licensed Tug Operator 1000HP or more.

CLASS A2 40.33
Crane Operator (360 swing)

CLASS B To conform to Operating Engineer
Dozer, Front Loader Prevailing Wage in locality where work
Operator on Land is being performed including benefits.

CLASS B1 39.14
Derrick Operator (180 swing)
Spider/Spill Barge Operator
Operator II, Fill Placer, Engineer
Chief Mate, Electrician, Chief Welder,
Maintenance Engineer, Licensed Boat, Crew Boat Operator

CLASS B2 36.84
Certified Welder

CLASS C1 35.83
Drag Barge Operator,
Steward, Mate,
Assistant Fill Placer

CLASS C2 34.68

Boat Operator

CLASS D 28.81

Shoreman, Deckhand, Oiler,
Rodman, Scowman, Cook,
Messman, Porter/Janitor

SUPPLEMENTAL BENEFITS

Per Hour:

THE FOLLOWING SUPPLEMENTAL BENEFITS APPLY TO ALL CATEGORIES

All Classes A & B \$ 12.00 plus 7%
of straight time
wage, Overtime hours
add \$ 0.63

All Class C & D \$ 11.75 plus 7%
of straight time
wage, Overtime hours
add \$ 0.50

OVERTIME PAY

See (B2, F, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 15, 26) on HOLIDAY PAGE

4-25a-MarDredge

Operating Engineer - Survey Crew - Consulting Engineer

11/01/2024

JOB DESCRIPTION Operating Engineer - Survey Crew - Consulting Engineer

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Suffolk, Westchester

PARTIAL COUNTIES

Dutchess: That part in Dutchess County lying South of the North City line of Poughkeepsie.

WAGES

Feasibility and preliminary design surveying, any line and grade surveying for inspection or supervision of construction.

Per hour: 07/01/2024

Survey Classifications

Party Chief \$ 49.39

Instrument Man 40.96

Rodman 35.63

SUPPLEMENTAL BENEFITS

Per Hour:

All Crew Members: \$ 23.75

OVERTIME PAY

OVERTIME:.... See (B, E*, Q, V) ON OVERTIME PAGE.

*Double-time paid on the 9th hour on Saturday.

HOLIDAY

Paid: See (5, 6, 7, 11, 16) on HOLIDAY PAGE

Overtime: See (5, 6, 7, 11, 16) on HOLIDAY PAGE

9-15dconsult

Painter

11/01/2024

JOB DESCRIPTION Painter

DISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Suffolk, Westchester

WAGES

Per hour: 07/01/2024 05/01/2025
Additional

Brush 52.86* \$ 2.62**

Abatement/Removal of lead based
or lead containing paint on
materials to be repainted. 52.86*

Spray & Scaffold \$ 55.86*
Fire Escape 55.86*
Decorator 55.86*
Paperhanger/Wall Coverer 55.09*

*Subtract \$ 0.10 to calculate premium rate.

** To be allocated at a later date.

SHIFT WORK

Counties of Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Suffolk, and Westchester; Agency/Government mandated off-shift work to be paid at time and one-half the hourly wage.

SUPPLEMENTAL BENEFITS

Per hour:

Paperhanger \$ 36.73
All others 34.31
Premium 38.28**

**Applies only to "All others" category, not paperhanger journeyworker.

OVERTIME PAY

See (A, E, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

One (1) year terms at the following wage rate.

Per hour: 07/01/2024
Appr 1st term... \$ 20.22*
Appr 2nd term... 25.93*
Appr 3rd term... 31.61*
Appr 4th term... 42.40*

*Subtract \$ 0.10 to calculate premium rate.

Supplemental benefits:

Per Hour:
Appr 1st term... \$ 16.89
Appr 2nd term... 20.95
Appr 3rd term... 24.10
Appr 4th term... 30.57

8-NYDC9-B/S

Painter

11/01/2024

JOB DESCRIPTION Painter

DISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

PARTIAL COUNTIES

Nassau: Atlantic Beach, Ceadershurst, East Rockaway, Hewlett, Hewlett Bay, Hewlett Neck, Hewlett Park, Inwood, Lawrence, Lido Beach, Long Beach, parts of Lynbrook, parts of Oceanside, parts of Valley Stream, and Woodmere. Starting on South side of Sunrise Hwy in Valley Stream running east to Windsor and Rockaway Ave, Rockville is the boundary line up to Lawson Blvd, turning right going west all the above territory. Starting at Union Turnpike & Lakeville Rd going north to northern Blvd. the west side of Lakeville Rd to Northern Blvd. At Northern Blvd doing east the district north of Northern blvd to Port Washington blvd. West of Port Washington blvd to St. Francis Hospital then north of first traffic light to Port Washington & Sands Point, Manor Haven, & Harbour Acres.

WAGES

Per hour: 07/01/2024
Drywall Taper \$ 57.44

SUPPLEMENTAL BENEFITS

Per Hour:
Journeyworker: \$ 25.29

OVERTIME PAY

See (A, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (4, 6, 8, 11, 18, 19, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:

1st term	\$ 22.30
2nd term	28.99
3rd term	34.67
4th term	46.05

Supplemental Benefits per hour:

1st term	\$ 14.35
2nd term	19.83
3rd term	20.93
4th term	23.12

8-NYC9-1974-DWT

Painter - Bridge & Structural Steel

11/01/2024

JOB DESCRIPTION Painter - Bridge & Structural Steel

DISTRICT 8

ENTIRE COUNTIES

Albany, Bronx, Clinton, Columbia, Dutchess, Essex, Franklin, Fulton, Greene, Hamilton, Kings, Montgomery, Nassau, New York, Orange, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Suffolk, Sullivan, Ulster, Warren, Washington, Westchester

WAGES

Per Hour:

STEEL:

Bridge Painting: 07/01/2024
\$ 56.00
+ 10.35*

ADDITIONAL \$7.00 per hour for POWER TOOL/SPRAY, whether straight time or overtime.

NOTE: All premium wages are to be calculated on base rate per hour only.

* For the period of May 1st to November 15th, this amount is payable up to 40 hours. For the period of Nov 16th to April 30th, this amount is payable up to 50 hours. EXCEPTION: First and last week of employment, and for the weeks of Memorial Day, Independence Day and Labor Day, where the amount is paid for the actual number of hours worked (50 hour cap).

NOTE: Generally, for Bridge Painting Contracts, ALL WORKERS on and off the bridge (including Flagmen) are to be paid Painter's Rate; the contract must be ONLY for Bridge Painting.

SHIFT WORK

When directly specified in public agency or authority contract documents for an employer to work a second shift and works the second shift with employees other than from the first shift, all employees who work the second shift will be paid 10% of the base wage shift differential in lieu of overtime for the first eight (8) hours worked after which the employees shall be paid at time and one half of the regular wage rate. When a single irregular work shift is mandated in the job specifications or by the contracting agency, wages shall be paid at time and one half for single shifts between the hours of 3pm-11pm or 11pm-7am.

SUPPLEMENTAL BENEFITS

Per Hour:

Journeyworker:

\$ 12.43
+ 31.55*

* For the period of May 1st to November 15th, this amount is payable up to 40 hours. For the period of Nov 16th to April 30th, this amount is payable up to 50 hours. EXCEPTION: First and last week of employment, and for the weeks of Memorial Day, Independence Day and Labor Day, where the amount is paid for the actual number of hours worked (50 hour cap).

OVERTIME PAY

See (B, F, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (4, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage - Per hour:

Apprentices: (1) year terms.

1st year	\$ 22.40 + 4.14
2nd year	\$ 33.60 + 6.21
3rd year	\$ 44.80 + 8.28
Supplemental Benefits - Per hour:	
1st year	\$ 1.16 + 12.62
2nd year	\$ 7.46 + 18.93
3rd year	\$ 9.94 + 25.24

NOTE: All premium wages are to be calculated on base rate per hour only.

8-DC-9/806/155-BrSS

Painter - Metal Polisher

11/01/2024

JOB DESCRIPTION Painter - Metal Polisher

DISTRICT 8

ENTIRE COUNTIES

Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

	07/01/2024
Metal Polisher	\$ 39.33
Metal Polisher*	40.43
Metal Polisher**	43.33

*Note: Applies on New Construction & complete renovation

** Note: Applies when working on scaffolds over 34 feet.

SUPPLEMENTAL BENEFITS

Per Hour: 07/01/2024

Journeyworker:

All classification \$ 12.79

OVERTIME PAY

See (B, E, P, T) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:

One (1) year term at the following wage rates:

	07/01/2024
1st year	\$ 19.67
2nd year	21.63
3rd year	23.60
1st year*	\$ 22.06
2nd year*	22.07
3rd year*	24.14

1st year**	\$ 22.17
2nd year**	24.13
3rd year**	26.10

*Note: Applies on New Construction & complete renovation

** Note: Applies when working on scaffolds over 34 feet.

Supplemental benefits:

Per hour:

1st year	\$ 8.69
2nd year	8.69
3rd year	8.69

8-8A/28A-MP

Plasterer	11/01/2024
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JOB DESCRIPTION Plasterer

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per hour:

	07/01/2024	08/01/2024
Building:		
Plasterer/Traditional &	\$ 47.72	\$ 47.99
Spraying Fireproofing	+ \$5.00*	+ \$5.62*

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker	\$ 25.35	\$ 26.10
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OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

*This portion is not subjected to OT premiums.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages:	07/01/2024	08/01/2024
(Per hour)		
800 hours term:		
1st term	\$ 19.30 + 0.68*	\$ 19.44+ 0.68*
2nd term	22.53 + 0.81*	22.69+ 0.81*
3rd term	25.79 + 0.95*	25.98+ 0.95*

*This portion is not subjected to OT premiums.

Supplemental Benefits:

(Per hour):

(800) hours term:

1st term	\$ 11.59	\$ 11.95
2nd term	12.02	12.44
3rd term	12.52	13.08

9-262

Plumber	11/01/2024
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JOB DESCRIPTION Plumber

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:

07/01/2024

Plumber \$ 74.95

Temporary
Service** \$ 60.04

** Temporary Service- Includes Maintenance of cooling & heating apparatus, maintenance work on pneumatic systems during the construction period, and work on temporary heat. All hours paid at straight time, including holidays.

**THERE ARE NO HELPERS UNDER THIS CLASSIFICATION.

On tower work, bridges, elevated highway, or buildings, where pipe is being installed, fifty (50) or more feet vertically in a free drop from its base, an additional \$1.00 per hour.

SHIFT WORK

Shift work, when directly specified in public agency or authority contract documents, and continues for a period of not less than ten (10) consecutive work days. A shift shall consist of seven(7) hours with one-half (1/2) hour for lunch after the first four (4) hours of each shift. A premium of thirty percent (30%) for wages and supplemental benefits on shift work performed Monday through Friday on the 4 P.M. and midnight shifts.

For shift work performed on weekends the shift premium shall be fifty percent (50%) of wages and supplemental benefits.

For shift work performed on holidays designated below, double time wages and supplemental benefits shall be paid. Also noted that the normal workday Monday through Friday 8:00 A.M. to 3:00 P.M. is not considered shift work, and therefore not subject to shift premium.

SUPPLEMENTAL BENEFITS

Per hour:

Plumber \$ 43.00

Temporary
Service \$ 34.32

OVERTIME PAY

See (C, *D, O, V) on OVERTIME PAGE

*Where the plumbing contract price is one and one half million dollars (\$1,500,000.00) or less, code D applies.

HOLIDAY

Plumber
Overtime: See (5, 6, 11, 15, 16, 25) on HOLIDAY PAGE.
Repairs & Maintenance
Paid: See (1) on HOLIDAY PAGE.
Overtime: See (5, 6, 25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wages per hour:

(1/2) year terms at the following wage:

1st	2nd	3rd&4th	5th&6th	7th&8th	9th	10th
\$ 19.00	\$ 21.00	\$ 30.22	\$ 32.32	\$ 35.17	\$ 36.57	\$ 48.64

Supplemental Benefits:

(1/2) year term at the following dollar amount:

1st	2nd	3rd-10th
\$ 5.43	\$ 6.43	\$ 22.73

9-1 Const

Plumber - Pump & Tank: Oil Trades Installation & Maintenance

11/01/2024

JOB DESCRIPTION Plumber - Pump & Tank: Oil Trades Installation & Maintenance

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:

07/01/2024

Pump & Tank \$ 73.00

SUPPLEMENTAL BENEFITS

Per hour:

Plumber \$ 32.81

OVERTIME PAY

Pump & Tank See (B, F, H) on OVERTIME PAGE.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE.

Overtime: See (5, 6, 10, 11, 12, 16, 25) on HOLIDAY PAGE.

9-1-P&T

Plumber - Repairs & Maintenance

11/01/2024

JOB DESCRIPTION Plumber - Repairs & Maintenance

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:

Repairs & 07/01/2024
Maintenance \$ 48.20

*Repair & Maintenance work is any repair and/or replacement of present plumbing system that does not change existing roughing or water supply lines. Projects regardless of work type which have approved plans and specifications wherein the plumbing exceeds \$725,000 are excluded.

SUPPLEMENTAL BENEFITS

Per hour:

Repair \$ 21.36
Maintenance

OVERTIME PAY

Repairs &
Maintenance See (B, H) on OVERTIME PAGE.

HOLIDAY

Repairs & Maintenance

Paid: See (1) on HOLIDAY PAGE.

Overtime: See (5, 6, 25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Note: The Repairs & Maintenance Category has NO Apprentices.

9-1 R&M

Roofer

11/01/2024

JOB DESCRIPTION Roofer

DISTRICT 9

ENTIRE COUNTIES

Bronx, Dutchess, Kings, New York, Orange, Putnam, Queens, Richmond, Rockland, Sullivan, Ulster, Westchester

WAGES

Per Hour: 07/01/2024

Roofer/Waterproofer \$ 48.50
+ \$7.00*

* This portion is not subjected to overtime premiums.

Note: Abatement/Removal of Asbestos containing roofs and roofing material is classified as Roofer.

SUPPLEMENTAL BENEFITS

Per Hour: \$ 31.87

OVERTIME PAY

See (B, H) on OVERTIME PAGE

Note: An observed holiday that falls on a Sunday will be observed the following Monday.

HOLIDAY

Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

(1) year term apprentices indentured prior to 01/01/2023

1st	2nd	3rd	4th
\$ 16.97	\$ 24.25	\$ 29.10	\$ 36.37
	+ 3.50*	+ 4.20*	+ 5.26*

Supplements:

1st	2nd	3rd	4th
\$ 4.10	\$ 16.17	\$ 19.31	\$ 24.02

* This portion is not subjected to overtime premiums.

(1) year term apprentices indentured after 01/01/2023

1st	2nd	3rd	4th	5th
\$ 18.43	\$ 21.82	\$ 24.25	\$ 29.10	\$ 36.37
	+ 3.16*	+ 3.50*	+ 4.20*	+ 5.26

Supplements:

1st	2nd	3rd	4th	5th
\$ 7.73	\$ 14.59	\$ 16.17	\$ 19.31	\$ 24.02

* This portion is not subjected to overtime premiums.

9-8R

Sheetmetal Worker	11/01/2024
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JOB DESCRIPTION Sheetmetal Worker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

Per Hour:

07/01/2024 08/01/2024

Sign Erector \$ 58.00 \$ 60.00

NOTE: Structurally Supported Overhead Highway Signs(See STRUCTURAL IRON WORKER CLASS)

SUPPLEMENTAL BENEFITS

Per Hour: 07/01/2024 08/01/2024

Sign Erector \$ 57.12 \$ 58.31

OVERTIME PAY

See (B, F, S) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 10, 11, 12, 16, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 10, 11, 12, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Per Hour:

6 month Terms at the following percentage of Sign Erectors wage rate:

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
35%	40%	45%	50%	55%	60%	65%	70%	75%	80%

SUPPLEMENTAL BENEFITS

Per Hour:

07/01/2024

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ 18.27	\$ 20.75	\$ 25.22	\$ 25.70	\$ 34.66	\$ 37.74	\$ 41.65	\$ 44.78	\$ 47.93	\$ 51.04

08/01/2024

\$ 18.65	\$ 21.16	\$ 23.69	\$ 26.22	\$35.39	\$ 38.52	\$ 42.55	\$ 45.75	\$ 48.96	\$ 52.15 4-137-SE
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Sheetmetal Worker	11/01/2024
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JOB DESCRIPTION Sheetmetal Worker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour:

07/01/2024

Sheetmetal Worker \$ 61.09

Maintenance of Fans 48.87
Temporary Operation

SUPPLEMENTAL BENEFITS

Per Hour:

Sheetmetal Worker \$ 53.25

Maintenance Worker 53.25

OVERTIME PAY

See (B, E, E2, Q, V) on OVERTIME PAGE

For Maintenance See Codes B,E, Q & V

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Per Hour:Wages

Six(6) Month Terms As Follows:

1st & 2nd Term	\$ 21.26
3rd & 4th Term	27.39
5th & 6th Term	33.52
7th & 8th Term	42.75
9th Term	48.55

Per Hour: Supplemental Benefits

1st & 2nd Term	\$ 19.66
3rd & 4th Term	26.73
5th & 6th Term	31.57
7th & 8th Term	38.78
9th Term	43.62

4-28

Steamfitter

11/01/2024

JOB DESCRIPTION Steamfitter

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2024 01/01/2025

AC Service/Heat Service & Refrigeration	\$ 46.10	Additional \$1.25/Hr.*
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(*)To be allocated at a later date.

Refrigeration, A/C, Oil Burner and Stoker Service and Repair.

NOTE: Refrigeration Compressor installation. (Not to exceed 5 Hp combined on any one project).

NOTE: Air / Heating Compressor installation.(Not to exceed 15 tons combined on any one project).

SUPPLEMENTAL BENEFITS

Per Hour Worked:

AC Service/Heat Service
& Refrigeration \$ 20.96

Per hour Paid: \$ 17.65

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Overtime: See (5, 6, 11, 15, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

1 year terms
Wages per hour:

1st Term	\$ 22.31
2nd Term	26.94
3rd Term	31.38
4th Term	37.90

Benefits per hour worked:

1st Term	\$ 14.44
2nd Term	16.78
3rd Term	17.41
4th Term	19.44

Benefits per hour paid:

1st Term	\$ 11.38
2nd Term	13.72
3rd Term	14.35
4th Term	16.38

4-638B-StmFtrRef

Steamfitter	11/01/2024
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JOB DESCRIPTION SteamfitterDISTRICT 4

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES			
Per Hour:	07/01/2024	10/1/2024	03/31/2025
Sprinkler/Steam AC/Heat Fitter	\$ 69.11	Additional \$0.75/Hr*	Additional \$0.75/Hr*
Temporary Heat & AC Fitter	52.54	Additional \$0.75/Hr*	Additional \$0.75/Hr*

(*)To be allocated at a later date.

SHIFT WORK
Add 15% to Hourly Wage for "Contracting Agency" Mandated Off Shift Work.

Add 15% to Hourly Supplemental Benefit for "Contracting Agency" Mandated Off Shift Work.

SUPPLEMENTAL BENEFITS
Per Hour:

Sprinkler/Steam Fitter	\$ 53.49
Temporary Heat & AC Fitter	43.67

OVERTIME PAY
Note: The posted overtime rates are applicable after 8 hours plus Saturday, Sunday and Holidays:

Per Hour:		
Sprinkler/Steam	WAGES \$ 138.22	SUPPLEMENTAL BENEFIT \$ 105.99
Temp Heat/AC	WAGES \$ 105.08	SUPPLEMENTAL BENEFIT \$ 85.35

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
1 year Terms at the Following:

WAGES per hour:

1st Term \$ 27.98	2nd Term \$ 34.96	3rd Term \$ 41.94	4th Term \$ 48.92	5th Term \$ 55.90
SUPPLEMENTAL BENEFIT per hour:				
1st Term \$ 21.80	2nd Term \$ 27.05	3rd Term \$ 32.28	4th Term \$ 37.53	5th Term \$ 42.76
Premium Time SUPPLEMENTAL BENEFIT Amounts:				
\$ 43.60	\$ 54.10	\$ 64.56	\$ 75.06	\$ 85.52

4-638A-StmSpFtr

Teamster - Heavy Construction	11/01/2024
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JOB DESCRIPTION Teamster - Heavy Construction

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per Hour:

Dump Trucks/Drivers (Debris Removal, Street Level and below)
07/01/2024

Dump Trucks	\$ 44.165
Tractor Trailers	47.315
Euclid/Turnapull	47.88

SUPPLEMENTAL BENEFITS

Per Hour:

Dump Trucks	\$ 59.1525
All Others	56.9025
Up to 40 Hours Worked	

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 11, 15, 16, 25) on HOLIDAY PAGE

Note: Employees receive 2 hours of Holiday Pay for each day worked in holiday week (not to exceed 8 hours)

Note: Employees receive 5 1/3 hours of Holiday Pay for each day worked in Thanksgiving Holiday Week.

4-282

Welder	11/01/2024
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JOB DESCRIPTION Welder

DISTRICT 1

ENTIRE COUNTIES

Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

Per hour 07/01/2024

Welder: To be paid the same rate of the mechanic performing the work.*

*EXCEPTION: If a specific welder certification is required, then the 'Certified Welder' rate in that trade tag will be paid.

OVERTIME PAY

HOLIDAY

1-As Per Trade

Kings County General Construction

Asbestos Worker

11/01/2024

JOB DESCRIPTION Asbestos Worker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2024

Asbestos Worker \$ 47.25
Removal & Abatement Only*

NOTE: *On Mechanical Systems that are NOT to be SCRAPPED.

SUPPLEMENTAL BENEFITS

Per Hour:

Asbestos Worker \$ 13.65
Removal & Abatement Only

OVERTIME PAY

See (B, B2, *E, J) on OVERTIME PAGE

*Hours worked on Saturdays are paid at time and one half only if forty hours have been worked during the week.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8) on HOLIDAY PAGE

REGISTERED APPRENTICES

Apprentice Removal & Abatement Only:

1000 hour terms at the following percentage of Journeyman's rates.

1st	2nd	3rd	4th
78%	80%	83%	89%

SUPPLEMENTAL BENEFIT

Per Hour:

Apprentice
Removal & Abatement \$ 13.65

4-12a - Removal Only

Boilermaker

11/01/2024

JOB DESCRIPTION Boilermaker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

WAGES

Per Hour: 07/01/2024 01/01/2025

Boilermaker \$ 67.38 \$ 68.88

Repairs & Renovations 67.38 68.88

Repairs & Renovation: Includes Repairing, Renovating replacement of parts to an existing unit(s).

SUPPLEMENTAL BENEFITS

Per Hour:

Boilermaker	33.5% of hourly	33.5% of Hourly
Repair & Renovations	Wage Paid	Wage Paid
	+ \$ 26.85	+ \$26.85

NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay.

Repairs & Renovation Includes replacement of parts and repairs & renovation of existing unit.

OVERTIME PAY

See (*B, O, **U) on OVERTIME PAGE

Note: * Includes 9th & 10th hours, double for 11th or more.

** Labor Day ONLY, if worked.

Repairs & Renovation see (B,E,Q) on OT Page

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 12, 15, 25, 26, 29) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:

(1/2) Year Terms at the following percentage of Boilermaker's Wage

1st	2nd	3rd	4th	5th	6th	7th
65%	70%	75%	80%	85%	90%	95%

Supplemental Benefits Per Hour:

	33.5% of Hourly Wage Paid Plus Amount Below	33.5% of Hourly Wage Paid Plus Amount Below
1st Term	\$ 20.36	\$ 20.36
2nd Term	21.28	21.28
3rd Term	22.22	22.22
4th Term	23.12	23.12
5th Term	24.07	24.07
6th Term	25.00	25.00
7th Term	25.93	25.93

NOTE: "Hourly Wage Paid" shall include any and all premium(s)

4-5

Broadband	11/01/2024
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JOB DESCRIPTION Broadband

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour:	07/01/2024	06/29/2025
Field Tech	\$ 52.40	\$ 53.97
Install/Repair		

For outside work (excluding installation on building construction/alteration/renovation projects), stopping at first point of attachment (demarcation), installing/maintaining/repairing broadband internet service.

SUPPLEMENTAL BENEFITS

Per Hour: \$ 23.24

OVERTIME PAY

See (B, K, *R) on OVERTIME PAGE

Note: *Two and one half times the hourly rate after the 8th hour

HOLIDAY

Paid: See (5, 6, 7, 11, 12) on HOLIDAY PAGE

4-CWA-Dist1

Carpenter	11/01/2024
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JOB DESCRIPTION Carpenter

DISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

Per hour:	07/01/2024
Piledriver	\$ 60.59 + 10.00*
Dockbuilder	\$ 60.59 + 10.00*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker \$ 45.79

OVERTIME PAY

See (B, E2, O) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE.

Paid: for 1st & 2nd yr.

Apprentices See (5,6,11,13,25)

Overtime: See (5,6,11,13,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wages per hour

(1)year terms:

1st	2nd	3rd	4th
\$26.98	\$32.58	\$40.96	\$49.35
+ 5.50*	+ 5.50*	+ 5.50*	+ 5.50*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:

All Terms: \$ 32.34

8-1556 Db

Carpenter	11/01/2024
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JOB DESCRIPTION CarpenterDISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

Per hour: 07/01/2024

Carpet/Resilient

Floor Coverer \$ 55.05
+ 8.25*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

INCLUDES HANDLING & INSTALLATION OF ARTIFICIAL TURF AND SIMILAR TURF INDOORS/OUTDOORS.

SUPPLEMENTAL BENEFITS

Per hour:

\$ 39.45

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (18, 19) on HOLIDAY PAGE.

Paid for 1st & 2nd yr.

Apprentices See (5,6,11,13,16,18,19,25)

Overtime: See (5,6,11,13,16,18,19,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wage per hour - (1) year terms:

1st	2nd	3rd	4th
\$ 25.20	\$ 28.20	\$ 32.45	\$ 40.33
+ 1.85*	+ 2.35*	+ 2.85*	+ 3.85*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:

1st	2nd	3rd	4th
\$ 15.22	\$ 16.22	\$ 19.32	\$ 20.32

8-2287

Carpenter

11/01/2024

JOB DESCRIPTION Carpenter

DISTRICT 8

ENTIRE COUNTIES
Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

Per Hour: 07/01/2024

Marine Construction:

Marine Diver \$ 75.46
+ 10.00*

Marine Tender \$ 55.00
+ 10.00*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime

SUPPLEMENTAL BENEFITS

Per Hour:

Journeyworker \$ 45.65

OVERTIME PAY
See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (18, 19) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 13, 16, 18, 19, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:
One (1) year terms.

1st year	\$ 26.98 + 5.50*
2nd year	32.58 + 5.50*
3rd year	40.96 + 5.50*
4th year	49.35 + 5.50*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental Benefits
Per Hour:

All terms \$ 32.20

8-1456MC

Carpenter

11/01/2024

JOB DESCRIPTION Carpenter

DISTRICT 8

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

Per hour: 07/01/2024

Building
Millwright \$ 59.35
+ 13.12*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS

Per hour:

Millwright \$ 45.41

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (18, 19) on HOLIDAY PAGE

Paid: See (18,19) on HOLIDAY PAGE.

Overtime See (5,6,8,11,13,18,19,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wages per hour:

One (1) year terms:

1st.	2nd.	3rd.	4th.
\$ 32.16	\$ 37.61	\$ 43.06	\$ 53.96
+ 7.08*	+ 8.25*	+ 9.42*	+ 11.76*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:

One (1) year terms:

1st.	2nd.	3rd.	4th.
\$ 30.56	\$ 33.09	\$ 36.27	\$ 40.69

8-740.1

Carpenter

11/01/2024

JOB DESCRIPTION Carpenter

DISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per Hour:

07/01/2024

Timberman \$ 55.59
+ 10.26*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS

Per Hour:

07/01/2024

\$ 44.96

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Overtime: See (5, 6, 11, 13, 25) on HOLIDAY PAGE

Paid: See (1) on HOLIDAY PAGE.

Paid: for 1st & 2nd yr.

Apprentices See (5,6,11,13,25)

Overtime: See (5,6,11,13,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wages per hour:

One (1) year terms:

1st	2nd	3rd	4th
\$24.96	\$30.07	\$37.72	\$45.38
+ 5.55*	+ 5.55*	+ 5.55*	+ 5.55*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:

All terms \$ 31.95

Carpenter

11/01/2024**JOB DESCRIPTION** Carpenter**DISTRICT** 8**ENTIRE COUNTIES**

Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland, Westchester

PARTIAL COUNTIES

Orange: South of but including the following, Waterloo Mills, Slate Hill, New Hampton, Goshen, Blooming Grove, Mountainville, east to the Hudson River.

Putnam: South of but including the following, Cold Spring, Tompkins Corner, Mahopac, Croton Falls, east to Connecticut border.

Suffolk: West of Port Jefferson and Patchogue Road to Route 112 to the Atlantic Ocean.

WAGES

Per hour: 07/01/2024

Core Drilling:

Driller \$ 46.25
+ 3.25*Driller Helper \$ 36.28
+ 3.25*

Note: Hazardous Waste Pay Differential:

For Level C, an additional 15% above wage rate per hour

For Level B, an additional 15% above wage rate per hour

For Level A, an additional 15% above wage rate per hour

Note: When required to work on water: an additional \$ 3.00 per hour.

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS

Per hour:

Driller and Helper \$ 30.24

OVERTIME PAY

See (B, G, P) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

8-1536-CoreDriller

Carpenter

11/01/2024**JOB DESCRIPTION** Carpenter**DISTRICT** 8**ENTIRE COUNTIES**

Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond

PARTIAL COUNTIES

Nassau: The portion of the county that lies west of Seaford Creek and south of the Southern State Parkway.

WAGES

Per hour: 07/01/2024

Show Exhibit \$ 55.75
+ 9.80**Bldg. Carpenter* \$57.05
+ 8.39**

* Not applicable in Putnam County

**This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS

Per hour worked:

Show Exhibit \$ 45.20
Bldg. Carpenter 39.75**OVERTIME PAY**

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (18, 19) on HOLIDAY PAGE

Paid: for 1st & 2nd yr.

Apprentices See (5,6,11,13,16,18,19,25)

Overtime: See (5,6,11,13,16,18,19,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wages per hour: Show Exhibit

(1) year terms:

1st.	2nd.	3rd.	4th.
\$22.30	\$27.88	\$36.24	\$44.60
+ 4.90*	+ 4.90*	+ 4.90*	+ 4.90*

*This portion is not subject to overtime premiums

Supplemental benefits per hour:

All terms \$ 30.25

Wages per hour: Bldg. Carpenter

(1) year terms:

1st	2nd	3rd	4th
\$ 22.20	\$ 25.20	\$ 29.45	\$ 37.33
+ 2.14*	+ 2.59*	+ 3.09*	+ 4.09*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:

1st	2nd	3rd	4th
\$ 15.37	\$ 16.42	\$ 19.52	\$ 20.52

8-EXHIB

Carpenter - Heavy&Highway

11/01/2024

JOB DESCRIPTION Carpenter - Heavy&Highway

DISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

PARTIAL COUNTIES

Nassau: That portion of the county that lies West of Seaford Creek and South of the Southern State Parkway.

WAGES

Per hour:

07/01/2024

Heavy & Highway

Carpenter

\$ 60.59
+ 10.00*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS

Per hour worked:

Heavy & Highway

Carpenter

\$ 45.70

OVERTIME PAY

See (B, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 13, 25) on HOLIDAY PAGE

Paid : for 1st & 2nd yr

Apprentices See (5, 6, 11, 13, 25)

REGISTERED APPRENTICES

Wage per hour:

One (1) year terms:

	1st	2nd	3rd	4th
Heavy & Highway	\$ 26.98	\$ 32.58	\$ 40.96	\$ 49.35

+ 5.50*

+ 5.50*

+ 5.50*

+ 5.50*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental Benefits:
Per Hour:

All terms

\$ 32.25

8-NYC H/H

Electrician

11/01/2024

JOB DESCRIPTION Electrician

DISTRICT 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES
Per hour: 07/01/2024

Tree Trimmer

\$ 35.24

Ground Person

20.69

Applies to line clearance, tree work, and right-of-way preparation on all new or existing overhead, electrical, telephone, and CATV lines.

SUPPLEMENTAL BENEFITS
Per hour:

Tree Trimmer

\$ 13.20

Ground Person

7.75

OVERTIME PAY
See (B, *H, Q) on OVERTIME PAGE
*Worked performed on Sundays & Holidays outside of 7.00am - 4.00pm shall be paid at double time, in addition to the holiday pay if applicable.

HOLIDAY
Paid: See (5, 6, 10, 11, 15, 16, 26) on HOLIDAY PAGE
Overtime: See (5, 6, 10, 11, 15, 16, 26) on HOLIDAY PAGE
(An additional floating holiday after four years service)

9-3T

Electrician

11/01/2024

JOB DESCRIPTION Electrician

DISTRICT 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES
Per hour: 07/01/2024

Electrician

\$ 32.00

Telephone

32.00

Maintenance and Jobbing-Electrical and teledata work of limited duration and scope, consisting of repairs and/or replacement of electrical and teledata equipment.

- Includes all work necessary to retrofit, service, maintain and repair all kinds of lighting fixtures and local lighting controls and washing and cleaning of foregoing fixtures.

SUPPLEMENTAL BENEFITS
Journeyworker:

07/01/2024

\$ 27.20

29.23*

* Applies to overtime hours

OVERTIME PAY
See (B, H) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

9-3m

Electrician**11/01/2024**

JOB DESCRIPTION Electrician

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond, Westchester

WAGES

Per hour: 07/01/2024

Service Technician \$ 37.40

Service and Maintenance on Alarm and Security Systems.

Maintenance, repair and /or replacement of defective (or damaged) equipment on, but not limited to, Burglar - Fire - Security - CCTV - Card Access - Life Safety Systems and associated devices. (Whether by service contract of T&M by customer request.)

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker: \$ 21.85

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 11, 15, 16, 17, 25, 26) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 17, 25, 26) on HOLIDAY PAGE

9-3H

Electrician**11/01/2024**

JOB DESCRIPTION Electrician

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per Hour: 07/01/2024

Electrician
Audio/Sound and
Temporary Light/
Power \$ 62.00

Solar-Photovoltaic Systems

Group 1 62.00

All tasks not listed in Group 2

Group 2 32.00

D.C portion and associated mechanical equipment related to solar systems,
(excluding battery storage and its associated equipment) including work related to
Weather Stations and Data Acquisitions/Monitoring Systems on solar photovoltaic systems.

Mounting of PV modules.

Mounting of DC optimizers to back of modules if the installation calls for this equipment.

Mounting of microinverters to back of modules and install trunk cabling on racking if called for.

Module to module connection of PV modules to adjacent modules. If racking manufacturer provides integrated inter-row cable management,
install string jumper to complete the string in full in same sub-array.

If racking manufacturer does not provide integrated inter-row cable management, run conduit between rows, bond it and run string jumper to
complete string in full in same sub-array.

Installation of weather stations and other weather station relevant sensors as specified.

Installation of data acquisition system (DAS) for PV system monitoring.

SHIFT WORK

Evening (Swing Shift):

Electrician

Audio/Sound and Temporary Light/ Power	\$ 72.75
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Night (Graveyard Shift): Electrician Audio/Sound and Temporary Light	\$ 81.49
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SUPPLEMENTAL BENEFITS

Per Hour:

Electrician	\$ 66.09 70.01*
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Swing Shift:	75.07 79.66*
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Graveyard Shift:	82.66 87.81*
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Temporary Light/Power:	30.33 33.64*
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Group 1:	66.09 70.01*
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Group 2:	27.21 29.23*
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* Applies when premium (OT) wages are paid.

Temporary Light and Power benefit rate applies for three or less workers.

Reduce benefit rate by 6.2% for any employee who has accumulated wages of \$168,600 for the same employer.

OVERTIME PAY

See (A, H) on OVERTIME PAGE

See (B) for Temporary Light and Power

HOLIDAY

Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages Per Hour:

One (1) year terms	
First term:	07/01/2024
0-6 mos.	\$ 18.00
7-12 mos.	18.50
Second term:	
0-6 mos.	19.50
7-12 mos.	20.50
Third term	
0-6 mos.	21.50
7-12 mos.	22.50
Fourth term:	
0-6 mos.	23.50
7-12 mos.	25.50
Fifth term/MIJ:	
0-12 mos.	27.50
13-18 mos.	32.00

Supplemental Benefits per hour:

One (1) year terms:

First Term:	Regular	Overtime
0-6 mos.	\$ 17.18	\$ 18.38
7-12 mos.	17.44	18.67

Second Term:		
0-6 mos.	17.97	19.26
7-12 mos.	18.49	19.85
Third Term:		
0-6 mos.	19.02	20.44
7-12 mos.	19.54	21.03
Fourth Term:		
0-6 mos.	20.06	21.62
7-12 mos.	21.11	22.80
Fifth Term/MIJ:		
1-12 mos.	24.79	26.52
13-18 mos.	27.21	29.23

9-3

Electrician - Highway and Street Lighting, Traffic Signals and Controls	11/01/2024
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JOB DESCRIPTION Electrician - Highway and Street Lighting, Traffic Signals and Controls **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:

07/01/2024

Electro Pole Electrician \$ 62.00

Electro Pole Foundation
Installer 47.66

Electro Pole Maintainer 41.61

SUPPLEMENTAL BENEFITS

Per Hour:

07/01/2024

Electro Pole Electrician \$ 68.20
72.12*

Electro Pole Foundation
Installer 51.68
54.69*

Electro Pole Maintainer 47.03
49.66*

*Applies when premium wages are paid

Note: Reduce benefit rate by 6.2% for any employee who has accumulated wages in \$168,600 for the same employer.

OVERTIME PAY

See (A, B, E4, F, K) on OVERTIME PAGE
B - Applies to Electro Pole Foundation Installer
E4 - Applies to Electro Pole Maintainer

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

9-3J

Elevator Constructor	11/01/2024
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JOB DESCRIPTION Elevator Constructor **DISTRICT** 4

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

PARTIAL COUNTIES
Rockland: Entire County except for the Township of Stony Point

Westchester: Entire County except for the Townships of Bedford, Lewisboro, Cortland, Mt. Kisco, North Salem, Pound Ridge, Somers and Yorktown.

WAGES

Per hour:

	07/01/2024	03/17/2025
Elevator Constructor	\$ 80.35	\$ 83.37
Modernization & Service/Repair	63.16	65.54

SUPPLEMENTAL BENEFITS

Per Hour:

Elevator Constructor	\$ 46.367	\$ 47.654
Modernization & Service/Repairs	45.217	46.470

OVERTIME PAY

Constructor See (D, M, T) on OVERTIME PAGE.

Modern/Service See (B, F, S) on OVERTIME PAGE.

HOLIDAY

Paid: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE
 Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

WAGES PER HOUR:

6 MONTH TERMS:

1st Term*	2nd & 3rd Term*	4th & 5th Term	6th & 7th Term	8th & 9th Term
50%	50%	55%	65%	75%

* Note: 1st, 2nd, 3rd Terms are based on Average of the Constructor, the Modernization and the Service/Repair wage.
 Terms 4 thru 9 Based on Journeyman's wage of classification Working in.

SUPPLEMENTAL BENEFITS:

	07/01/2024	03/17/2025
Elevator Constructor		
1st Term	\$ 0.00	\$ 0.00
2nd & 3rd Term	36.15	36.90
4th & 5th Term	37.19	37.99
6th & 7th Term	38.80	39.70
8th & 9th Term	40.41	41.40
Modernization & Service/Repair		
1st Term	\$ 0.00	\$ 0.00
2nd & 3rd Term	36.15	36.90
4th & 5th Term	37.19	37.99
6th & 7th Term	38.80	39.70
8th & 9th Term	40.41	41.40

4-1

Glazier

11/01/2024

JOB DESCRIPTION Glazier

DISTRICT 8

ENTIRE COUNTIES

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

WAGES

Per hour:

	07/01/2024	05/01/2025
Glazier, Glass Tinting and Window Film	\$ 63.28	Additional \$ 1.11***
Scaffolding, including swing scaffold	67.28	

*Mechanical Equipment	64.28
**Repair & Maintenance	30.76

*Mechanical equipment, scissor jacks, man lifts, booms & buckets 30' or more, but not pipe scaffolding.

**Repair & Maintenance- All repair & maintenance work on a particular building whenever performed, where the total cumulative Repair & Maintenance contract value is under \$193,000.

***To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per hour: 7/01/2024

Glazier, Glass Tinting \$ 42.13
Window Film, Scaffolding
and Mechanical Equipment

Repair & Maintenance 24.62

OVERTIME PAY

See (B, E, Q, V) on OVERTIME PAGE

For 'Repair & Maintenance' see (B, B2, I, S) on overtime page.

HOLIDAY

Paid: See (5, 6, 16, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

For 'Repair & Maintenance'

Paid: See(5, 6, 16, 25)

Overtime: See(5, 6, 16, 25)

REGISTERED APPRENTICES

Wage per hour:

(1) year terms at the following wage rates:

7/01/2024

1st term	\$ 22.34
2nd term	30.64
3rd term	40.87
4th term	50.14

Supplemental Benefits:

(Per hour)

1st term	\$ 19.27
2nd term	27.34
3rd term	32.85
4th term	36.01

8-1087 (DC9 NYC)

Insulator - Heat & Frost

11/01/2024

JOB DESCRIPTION Insulator - Heat & Frost

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per Hour: 07/01/2024

Insulators
Heat & Frost \$ 71.01

SUPPLEMENTAL BENEFITS

Per Hour:

Insulators \$ 36.76
Heat & Frost

OVERTIME PAY

See (B, E, *Q, V) on OVERTIME PAGE

* Triple time for Labor Day (If worked)

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages:

1 year terms.

Wages Per Hour:

1st	2nd	3rd	4th
\$ 31.96	\$ 39.06	\$ 46.16	\$ 53.26

Supplemental Benefits:

\$ 16.56	\$ 20.23	\$ 23.91	\$ 27.06
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4-12

Ironworker

11/01/2024

JOB DESCRIPTION Ironworker

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per Hour:	07/01/2024	01/01/2025 Additional
Stone Derrickmen Rigger	\$ 75.40	\$ 1.64*
Stone Handset Derrickman	72.55	1.11*

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per hour:

Stone Derrickmen Rigger	\$ 45.52
Stone Handset Derrickman	44.76

OVERTIME PAY

See (B, D1, *E, Q, **V) on OVERTIME PAGE

*Time and one-half shall be paid for all work on Saturday up to eight (8) hours and double time shall be paid for all work thereafter.

** Benefits same premium as wages on Holidays only

HOLIDAY

Paid: See (18) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 25) on HOLIDAY PAGE

Work stops at schedule lunch break with full day's pay.

REGISTERED APPRENTICES

Wage per hour:

Stone Derrickmen Rigger:

	1st	2nd	3rd	4th
07/01/2024	\$ 37.20	\$ 53.28	\$ 59.32	\$ 65.36

Supplemental Benefits:

Per hour:				
07/01/2024	23.27	34.39	34.39	34.39

Stone Handset:

1/2 year terms at the following hourly wage rate:

	1st	2nd	3rd	4th
07/01/2024	\$ 35.78	\$ 51.04	\$ 56.79	\$ 62.55

Supplemental Benefits:

Per hour:				
07/01/2024	22.95	34.08	34.08	34.08

9-197D/R

Ironworker

11/01/2024

JOB DESCRIPTION Ironworker		DISTRICT 4
ENTIRE COUNTIES Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester		
WAGES		
Per Hour:	07/01/2024	01/01/2025
Ornamental	\$ 47.65	Additional
Chain Link Fence	47.65	\$ 1.25/hr*
Guide Rail	47.65	
(*)To be allocated at a later date.		
SUPPLEMENTAL BENEFITS		
Per hour:		
Journeyworker:	\$ 66.29	
OVERTIME PAY See (B, B1, Q, V) on OVERTIME PAGE		
HOLIDAY		
Paid:	See (1) on HOLIDAY PAGE	
Overtime:	See (5, 6, 25) on HOLIDAY PAGE	
REGISTERED APPRENTICES		
1 year terms	07/01/2024	
1st Term	\$ 25.98	
2nd Term	28.45	
3rd Term	30.80	
4th Term	34.39	
Supplemental Benefits per hour:		
1st Term	\$ 16.29	
2nd Term	18.29	
3rd Term	19.29	
4th Term	20.29	
		4-580-Or
Ironworker		11/01/2024

JOB DESCRIPTION		Ironworker	DISTRICT 4
ENTIRE COUNTIES			
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester			
WAGES			
PER HOUR:		07/01/2024	01/01/2025
Ironworker:			Additional
Structural		\$ 57.20	\$ 1.75/Hr.*
Bridges			
Machinery			
(*)To be allocated at a later date.			
SUPPLEMENTAL BENEFITS			
PER HOUR PAID:			
Journeyman		\$ 89.85	
OVERTIME PAY			
See (B, B1, Q, *V) on OVERTIME PAGE			
*NOTE: Benefits are calculated for every hour paid.			
HOLIDAY			
Paid:		See (1) on HOLIDAY PAGE	
Overtime:		See (5, 6, 18, 19) on HOLIDAY PAGE	
REGISTERED APPRENTICES			
WAGES PER HOUR:			
6 month terms at the following rate:			

1st	\$ 30.23	
2nd	30.83	
3rd - 6th	31.44	
Supplemental Benefits		
PER HOUR PAID:	62.47	4-40/361-Str

Ironworker

11/01/2024

JOB DESCRIPTION Ironworker

DISTRICT 4

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

PARTIAL COUNTIES
Rockland: Southern section - south of Convent Road and east of Blue Hills Road.

WAGES	
Per hour:	07/01/2024
Reinforcing & Metal Lathing	\$ 56.95
"Base" Wage	55.20 plus \$ 1.75

"Base" Wage is used to calculate overtime hours only.

SUPPLEMENTAL BENEFITS	
Per hour:	
Reinforcing & Metal Lathing	\$ 44.63

OVERTIME PAY
See (B, E, Q, *X) on OVERTIME PAGE
*Only \$23.50 per Hour for non worked hours

Supplemental Benefit Premiums for Overtime Hours worked:

Time & One Half	\$ 51.13
Double Time	57.63

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 13, *18, **19, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
(1) year terms at the following wage rates:

Prior to 01/01/2020:			
1st term	2nd term	3rd term	4th Term
Wage Per Hour:			
\$ 22.55	\$ 28.38	\$ 34.68	\$ 37.18
"Base" Wage			
\$21.00	\$26.80	\$33.10	\$35.60
plus \$1.55	plus \$1.58	plus \$1.58	plus \$1.58

"Base" Wage is used to calculate overtime hours ONLY.

SUPPLEMENTAL BENIFITS			
Per Hour:			
1st term	2nd term	3rd term	4th Term
\$18.17	\$21.34	\$22.00	\$22.50
After 01/01/2020:			
1st term	2nd term	3rd term	4th Term
Wage Per Hour:			
\$ 22.55	\$ 23.60	\$ 24.60	\$ 25.65
"Base" Wage			

\$21.00 plus \$1.55	\$22.00 plus \$1.60	\$23.00 plus \$1.60	\$24.00 plus \$1.65
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"Base" Wage is used to calculate overtime hours ONLY.

SUPPLEMENTAL BENIFITS

Per Hour:

1st term \$18.40	2nd term \$17.40	3rd term \$16.45	4th Term \$15.45
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4-46Reinf

Laborer	11/01/2024
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JOB DESCRIPTION Laborer

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:

Striper (Highway/streets):	07/01/2024	07/01/2025
Striping-Machine Operator	\$ 41.00	Additional \$ 3.05**
Striping Thermoplastic	45.00	
Flagger - Traffic Safety*	39.00	

Note: * Includes but is not limited to: Positioning of cones and directing of traffic using handheld devices. Excludes the Driver/Operator of equipment used in protection of traffic safety.

** To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per hour paid:

Journeyworker	\$ 19.27
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OVERTIME PAY

See (B, H) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 8, 13) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 13) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:

1st Term (1-2000 hours)	\$ 31.36
2nd Term (2001-4000 hours)	33.00

Supplemental Benefits per hour:

All Terms	19.27
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9-1010-LS

Laborer	11/01/2024
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JOB DESCRIPTION Laborer

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:	07/01/2024
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Laborer/Excavation

**Asbestos and Lead Abatement &
Removal, Hazardous Waste Removal
(including soil)

\$ 45.00

Basic 45.00

Flagman 45.00

Pipelayer 45.00

*Tree Work, *Landscape 45.00

*Includes trimming, cutting, planting and/or removal of trees.

** Applies to Heavy & Highway projects

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker: \$ 54.03

Note: No payment of Supplemental Benefits is required on paid holidays, when employees do not work.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

When an observed holiday falls on a Saturday, work done shall be paid at double time.

HOLIDAY

Paid: See (2, 20) on HOLIDAY PAGE

Overtime: See (2, 5, 6, 11, 20) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:

1000 hour terms at the following hourly wage rate.

07/01/2024

1st	0 - 1000	\$ 22.50
2nd	1001-2000	27.00
3rd	2001-3000	33.75
4th	3001-4000	40.50

Supplemental Benefits per hour:

All Apprentices 54.03

9-731Ex

Laborer

11/01/2024

JOB DESCRIPTION Laborer

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:

GROUP 14: Blasters.

GROUP 16: Tunnel workers - including Miners, Drill Runners, Iron Men, Maintenance Men, Conveyor Men, Safety Miners, Riggers, Block Layers, Cement Finishers, Rod Men, Caulkers, Powder Carriers, Miners' Helpers, Chuck Tenders, Track Men, Nippers, Brake Men, Derail Men, Form Men, Bottom Bell, Top Bell or Signal men, Form Workers, Movers, Concrete Workers, Shaft Men, Tunnel Laborers and Caulkers' Helpers.

GROUP 17: All others including: Powder Watchmen, Top Laborers and Changehouse Attendants.

Wages: (per hour) 07/01/2024

Laborer (Tunnel)-FREE AIR:

Group 14	\$ 77.13
Group 16	73.75
Group 17*	68.18

Small Bore Micro
Tunnel Machines 80% of rates above

For Repairs on Existing
Water Tunnels 90% of rates above

For Repairs of Sewer &
Drainage Tunnels 85% of rates above

For Repair & Maintenance

of all Subway & Vehicular Tunnels 80% of rates above

*An additional \$3.00 per day when using an air spade, jack hammer or pavement breaker.

Note: Employer shall pay \$10.00 per day for each half mile starting at a point 500 feet from the bottom of the shaft.

SUPPLEMENTAL BENEFITS

Per hour:

GROUP 14	\$ 55.32
GROUP 16	53.06
GROUP 17	49.11

Small Bore Micro Tunnel Machines 80% of rates above

For Repairs on Existing Water Tunnels 90% of rates above

For Repairs of Sewer & Drainage Tunnels 85% of rates above

For Repair & Maintenance of all Subway& Vehicular Tunnels 80% of rates above

OVERTIME PAY

OVERTIME:

For Laborer (Free Air) See (D, M, R*) on OVERTIME PAGE.
For Repair Categories See (B, F, R*) on OVERTIME PAGE.
& Micro Tunneling
* Straight time first 8 hours, double time after 8 hours.

HOLIDAY

Paid: See (5, 6, 9, 11, 12, 15, 16, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 9, 11, 12, 15, 16, 25) on HOLIDAY PAGE
Good Friday may be exchanged for one of the holidays listed.

9-147Tnl/Free

Laborer - Building

11/01/2024

JOB DESCRIPTION Laborer - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:	07/01/2024	01/01/2025 Additional
Basic Laborer and Mason Tender	\$ 44.70*	\$ 1.25**

*Before calculating premium wage deduct \$3.25

** To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per hour:

Basic Laborer and
Mason Tender \$ 29.99

OVERTIME PAY

See (B, B2, E, E2, Q, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:

1000 hour terms at the following wage rate:

Term:	1st	2nd	3rd	4th
Basic Laborer and Mason Tender 07/01/2024	\$ 22.05*	\$ 23.80*	\$ 25.30*	\$ 27.80*
*Before calculating premium wage deduct \$0.50				
Supplemental Benefits per hour:				
All Terms 07/01/2024	\$ 10.77			9-MTDC(79)

Laborer - Building

11/01/2024

JOB DESCRIPTION	Laborer - Building		DISTRICT	9
ENTIRE COUNTIES	Bronx, Kings, New York, Queens, Richmond			
WAGES				
Per hour:			07/01/2024	07/01/2025 Additional
Skilled Interior Demolition Laborer:			\$ 39.70*	\$ 0.75***
General Interior Demolition Laborer:			28.89**	

* Before calculating overtime wages deduct \$1.70

**General Demolition Laborer performs manual work and work incidental to demolition, such as loading and carting of debris from work site to an area where it can be loaded into trucks for removal. Also performs clean-up of the site when demolition is complete.

***To be allocated at a later date.

SUPPLEMENTAL BENEFITS	
Per Hour:	
Skilled Interior Demolition Laborer:	24.84
General Interior Demolition Laborer:	19.16

OVERTIME PAY	
See (B, B2, I, R) on OVERTIME PAGE	
HOLIDAY	
Paid:	See (1) on HOLIDAY PAGE
Overtime:	See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage Per Hour:

1000 hour terms at the following wage rate:

1st	2nd	3rd	4th
\$ 21.80*	\$ 23.55*	\$ 25.05*	\$ 27.55*

* Before calculating overtime wages deduct \$0.50			
Supplemental Benefits Per Hour:			
All Terms:	10.47		
9-MTDC (79-ID)			

Laborer - Building

11/01/2024

JOB DESCRIPTION	Laborer - Building		DISTRICT	9
ENTIRE COUNTIES	Bronx, Kings, New York, Queens, Richmond			
WAGES				
Per hour:	07/01/2024			

Laborer:
Laborer-Concrete
(including flag person) \$ 42.53
+ 8.00*

* This portion is not subjected to overtime premiums.

SUPPLEMENTAL BENEFITS
Per Hour \$ 20.20
+ 9.00**

** This portion subjected to overtime premiums only on codes (E,Q)

OVERTIME PAY
OVERTIME: See (A,E,Q) on OVERTIME PAGE attached.
See (B,E,Q,) for work below street level to top of foundation.

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 11, 13, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES		
Wages per hour:		
Terms based on hours listed:		
1st	2nd	3rd
0-1334	1334-2668	2669-4000
\$ 15.35	\$ 20.15	\$ 20.95
+ 2.49*	+ 7.32*	+ 7.80*

* This portion is not subjected to overtime premiums.

Supplemental Benefits:		
Per hour:		
\$ 12.70	\$ 16.70	\$ 16.70
+ 2.65*	+ 3.45*	+ 4.25*

Journeyworker rate applies after 4000 hours
*This portion subjected to same premium as wages.

9-6A/18A/20-C

Laborer - Building

11/01/2024

JOB DESCRIPTION Laborer - Building

DISTRICT 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES		
Per hour:	07/01/2024	01/01/2025
Building:		Additional
Plasterer Tender and Spray Fireproofing Tender	\$ 44.70*	\$ 1.25**

* Before calculating overtime wages deduct \$3.25

**To be allocated at a later date.

SUPPLEMENTAL BENEFITS
Per hour:
Journeyworker \$ 29.99

OVERTIME PAY
See (B, B2, E, E2, Q, R) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wage per hour:

1000 hours terms at the following wage.

	1st	2nd	3rd	4th
01/01/2024	\$22.05*	\$23.80*	\$25.30*	\$27.80*

* Before calculating overtime wages deduct \$ 0.50

Supplemental Benefits per hour:

All Terms:
07/01/2024

\$ 10.77

9-30 (79)

Laborer - Building

11/01/2024

JOB DESCRIPTION Laborer - Building

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2024 01/06/2025

Asbestos, Lead
and Hazardous
Material Abatement
Laborer

\$ 39.00

Additional
\$ 1.50/Hr.*

(*)To be allocated at a later date.

(Re-Roofing Removal See Roofer)

NOTE: Asbestos removed from Mechanical Systems not to be scrapped
See Asbestos Worker

SUPPLEMENTAL BENEFITS

Per Hour:

Laborer \$ 20.10

OVERTIME PAY

See (B, B2, I) on OVERTIME PAGE

*Calculate at \$39.00 per hour then add \$1.55

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 28) on HOLIDAY PAGE

REGISTERED APPRENTICES

1000 hour terms at the following:

Per Hour:

1st Term	\$ 20.00*
2nd Term	21.00**
3rd Term	24.00***
4th Term	26.00****

SUPPLEMENTAL BENEFIT

Per Hour:

All Terms \$ 14.35

OVERTIME PAY:

*Calculate at \$20.00 per hour then add \$1.00

**Calculate at \$21.00 per hour then add \$1.00

***Calculate at \$24.00 per hour then add \$1.00

****Calculate at \$26.00 per hour then add \$1.00

4-NYDC(78)

Laborer - Building

11/01/2024

JOB DESCRIPTION Laborer - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:	07/01/2024	01/01/2025 Additional
Skilled Demolition Laborer:	\$ 42.48*	\$ 0.50***
General Demolition Laborer:	31.06**	

*Before calculating overtime wages deduct \$3.00
**Before calculating overtime wages deduct \$2.35
***To be allocated at a later date.

**General Demolition Laborer performs manual work and work incidental to demolition, such as loading and carting of debris from work site to an area where it can be loaded into trucks for removal. Also performs clean-up of the site when demolition is complete.

NOTE: Total Demolition Only: Demolition shall be the complete demolition (wrecking) or dismantling of entire buildings or structures. Also may include the removal of all or any portion of a roof in which structural change is to occur. Structural change is defined as the removal of structural slabs, steel members, concrete members and penetration through the structural slab.

SUPPLEMENTAL BENEFITS

Per hour:	
Journeyworker:	
Skilled Demolition Laborer:	\$ 28.92
General Demolition Laborer:	21.98

OVERTIME PAY
See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:				
(1) year terms at the following wage.				
07/01/2024	1st	2nd	3rd	4th
	\$ 22.05*	\$ 23.80*	\$ 25.30*	\$ 27.80*

*Before calculating overtime wages deduct \$0.50
Supplemental Benefits per hour:

All Terms:	
07/01/2024	\$ 10.77

9-79/95

Laborer - Concrete & Asphalt Paving	11/01/2024
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JOB DESCRIPTION	Laborer - Concrete & Asphalt Paving	DISTRICT 9
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ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES

Group 1: Slurry Seal Coater, Maintenance Safety Surface, Small Power Tool Operator, Play Equipment Installer, Temporary Fence Installer & Repairs, Laborer.

Group 2: Production Paving Work: Shoveler, small equipment operator.

Per hour:	07/01/2024
Concrete Formsetter	\$ 49.35 + \$ 8.00*
Asphalt Screeperson/Micro Paver	49.95 + \$ 8.00*
Asphalt Raker	49.35 + \$ 8.00*
Group 1	45.48 + \$ 8.00*
Group 2	45.48 + \$ 8.00*

* This portion is not subjected to overtime premiums.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker: \$ 45.55

Note: No payment of supplemental benefits is required on paid holidays, when employees do not work.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

Note: Saturday premium rate applies from 7:00 am on Saturday to 6:59 am Sunday

Note: Sunday premium rate applies from Sunday 7:00 am to Monday 6:59 am.

HOLIDAY

Paid: See (5, *11, 20) on HOLIDAY PAGE

HOLIDAY:

Overtime: See (21,22)** on HOLIDAY PAGE.

Note: See (5,20) Holiday pay -at the single time pay rate-shall be prorated based on 25% of a day's wages and benefits for each day worked during that calendar week.

**New Year's Day and Christmas Day: If an employee is performing work on these (2) days the employee will receive the single rate plus 25%.

* Columbus Day shall be an unpaid holiday. In the event work is performed on Columbus Day, wages shall be paid on a double time basis.

Note-When Independence day falls on Saturday, it will be observed on that Saturday, however, when it occurs on a Sunday, it will be observed on the Monday.

REGISTERED APPRENTICES

Wage per hour:

2000 hours term:

1st term	2nd term
1-1999	2000-4000
\$ 31.36 + \$ 8.00*	\$ 33.00 + \$ 8.00*

* This portion is not subjected to overtime premiums.

Supplemental Benefits per hour:

2000 hours term:

1st term	2nd term
1-1999	2000-4000
\$ 18.67	\$ 18.67

9-1010H/H

Laborer - Trac Drill

11/01/2024

JOB DESCRIPTION Laborer - Trac Drill

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Group 1: Chipper/Jackhammer, Powder Carrier, Hydraulic Chuck tender, Chuck Tender and Nipper, Magazine Keeper

Group 2: Hydraulic Trac Drill

Group 3: Air Trac, Wagon and Quarry bar

Group 4: Blaster

Per Hour: 07/01/2024

Group 1	\$ 45.00
Group 2	52.35
Group 3	51.52
Group 4	58.21

SUPPLEMENTAL BENEFITS

Per Hour:

All Classifications: 54.03

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

When an observed holiday falls on a Saturday, work done shall be paid at double time.

HOLIDAY

Paid: See (2, 20) on HOLIDAY PAGE

Overtime: See (2, 5, 6, 11, 20) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:

1000 hour terms at the following hourly wage rate.

07/01/2024

1st	0 - 1000	\$ 22.50
2nd	1001-2000	27.00
3rd	2001-3000	33.75
4th	3001-4000	40.50

Supplemental Benefits per hour:

All Apprentices 54.03

9-731/29

Laborer - Tunnel

11/01/2024

JOB DESCRIPTION Laborer - Tunnel

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

GROUP 5: Blasters and Mucking Machine Operators

GROUP 6: Tunnel Workers*(including Miners, Drill Runners, Iron Men, Maintenance Men, Inside Muck Lock Tender, Pumpmen, Electricians, Cement Finishers, Rod Men, Caulkers, Carpenters, Hydraulic Men, Shield Drivers, Monorail Operators, Motor Men, Conveyor Men, Safety Miners, Powder Carriers, Pan Men, Riggers, Miner's Helpers, Chuck Tenders, Track Men, Nippers, Brake Men, Form Workers, Concrete Workers, Tunnel Laborers, Caulker's Helpers), Hose Men, Grout Men, Gravel Men, Derail Men and Cable Men.

GROUP 7: Top Nipper

GROUP 8,9: Outside Man Lock Tender, Outside Muck Lock Tender, Shaft Men, Gauge Tender and Signal Men.

GROUP 10: Powder Watchmen, Top Laborers and Changehouse Attendants.

WAGES: (per hour)

07/01/2024

Laborer (Compressed Air):

GROUP 5	\$ 80.82
GROUP 6	77.95
GROUP 7	76.65
GROUP 8,9	75.10
GROUP 10	66.18

Note: Employer shall pay \$10.00 per day for each one half (1/2) mile or fraction starting from a point 500 feet from the shaft.

SUPPLEMENTAL BENEFITS

SUPPLEMENTAL BENEFITS:

per hour:

GROUP 5	\$ 57.61
GROUP 6	55.81
GROUP 7	54.68
GROUP 8,9	53.84

GROUP 10 50.85

OVERTIME PAY

See (D, M, *R) on OVERTIME PAGE

NOTE: Time and one-half to be paid for all overtime repair-maintenance work on existing equipment and facilities.

* Straight time first 8 hours, double time after 8 hours.

HOLIDAY

Paid: See (5, 6, 9, 11, 12, 15, 16, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 9, 11, 12, 15, 16, 25) on HOLIDAY PAGE

Good Friday may be exchanged for one of the holidays listed.

9-147Tnl/Comp Air

Mason

11/01/2024

JOB DESCRIPTION Mason

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2024

Brick/Block Layer \$ 67.14

Base Wage for OT Calculation \$ 55.93

SUPPLEMENTAL BENEFITS

Per Hour:

Brick/Block Layer \$ 34.90

OVERTIME PAY

See (A, E, E2, Q) on OVERTIME PAGE

Note: OT Calculated on Base Wage plus \$ 11.21/hr.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

(800 hour) Terms at the following Percentage of Journey workers "Base Wage" plus \$ 5.94/hr.:

1st	2nd	3rd	4th	5th
50%	60%	70%	80%	90%

Supplemental Benefits per hour:

All Apprentices \$ 24.70

4-1Brk

Mason - Building

11/01/2024

JOB DESCRIPTION Mason - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Building

	07/01/2024	01/01/2025
Wages per hour:		Additional

Mosaic & Terrazzo Mechanic	\$ 60.98	\$ 1.06*
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Mosaic & Terrazzo Finisher	58.96	
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*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per hour:

Mosaic & Terrazzo Mechanic	\$ 31.36*
	+ \$9.78

Mosaic & Terrazzo Finisher \$ 31.36*
+ \$9.77

*This portion of benefits subject to same premium rate as shown for overtime wages.

OVERTIME PAY

See (A, E, Q) on OVERTIME PAGE

07/01/2024- Deduct \$7.00 from hourly wages before calculating overtime.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

Easter Sunday is an observed holiday. Holidays falling on a Saturday will be observed on that Saturday. Holidays falling on a Sunday will be celebrated on the Monday.

REGISTERED APPRENTICES

Wages Per hour:

	1st	2nd	3rd	4th	5th	6th
	0- 1500	1501- 3000	3001- 3750	3751- 4500	4501- 5250	5251- 6000
07/01/2024	\$ 25.19	\$ 32.39	\$ 38.18	\$ 40.78	\$ 49.00	\$ 55.75

Supplemental Benefits per hour:

07/01/2024	\$7.12* + 3.43	\$9.16* + 4.40	\$17.22* + 5.87	\$23.86* + 6.84	\$24.86* + 7.83	\$27.36* + 8.80
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*This portion of benefits subject to same premium rate as shown for overtime wages.

9-7/3

Mason - Building

11/01/2024

JOB DESCRIPTION Mason - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:	07/01/2024	12/02/2024 Additional
Tile Setters	\$ 64.40	\$ 0.72*

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per Hour:	\$ 28.51* + 8.52
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*This portion of benefits subject to same premium rate as shown for overtime wages.

OVERTIME PAY

See (B, *E, Q, V) on OVERTIME PAGE

Work beyond 10 hours on Saturday shall be paid at double the hourly wage rate.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:

750 hour terms at the following wage rate:

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
	1- 750	751- 1500	1501- 2250	2251- 3000	3001- 3750	3751- 4500	4501- 5250	5251- 6000	6001- 6750	6501- 7000
07/01/2024	\$22.19	\$27.21	\$34.45	\$39.46	\$43.07	\$46.58	\$50.23	\$55.24	\$57.71	\$62.00

Supplemental Benefits per hour:

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
07/01/2024									
\$12.55*	\$12.55*	\$15.36*	\$15.36*	\$16.36*	\$17.86*	\$18.86*	\$18.86*	\$18.86*	\$24.11*
+\$.76	+\$.81	+\$.91	+\$.96	+\$1.43	+\$1.48	+\$1.91	+\$1.97	+\$4.57	+\$5.18

*This portion of benefits subject to same premium rate as shown for overtime wages.

9-7/52

Mason - Building	11/01/2024
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JOB DESCRIPTION Mason - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per hour: 07/01/2024 01/06/2025
Additional

Building-Marble Restoration:

Marble, Stone & \$ 47.72 \$ 0.57*

Terrazzo Polisher

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per Hour:
Journeyworker:

Building-Marble Restoration:

Marble, Stone &
Polisher \$ 31.50

OVERTIME PAY

See (B, *E, Q, V) on OVERTIME PAGE

* On Saturdays, 8th hour and successive hours paid at double hourly rate.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 11, 15, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

WAGES per hour:

900 hour term at the following wage:

1st	2nd	3rd	4th
1-900	901-1800	1801-2700	2701
\$ 33.40	\$ 38.18	\$ 42.94	\$ 47.72

Supplemental Benefits Per Hour:

29.06	29.87	30.69	31.50
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9-7/24-MP

Mason - Building	11/01/2024
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JOB DESCRIPTION Mason - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

WAGES

Per Hour: 07/01/2024 01/06/2025
Additional
Marble Cutters & Setters \$ 63.92 \$ 0.75*

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per Hour:

Journeyworker \$ 40.05

OVERTIME PAY

See (B, E, Q, V) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage Per Hour:

07/01/2024

750 hour terms at the following wage

1st	2nd	3rd	4th	5th	6th	7th	8th
0-3000	3001-3750	3751-4500	4501-5250	5251-6000	6001-6750	6751-7500	7500+
\$ 27.01	\$ 40.52	\$ 43.88	\$ 47.26	\$ 50.64	\$ 54.32	\$ 60.71	\$ 63.92

Supplemental Benefits per hour:

07/01/2024

1st	2nd	3rd	4th	5th	6th	7th	8th
\$ 26.42	\$ 29.76	\$ 30.61	\$ 31.44	\$ 32.28	\$ 37.55	\$ 39.23	\$ 40.05

9-7/4

Mason - Building

11/01/2024

JOB DESCRIPTION Mason - BuildingDISTRICT 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:	07/01/2024	12/02/2024
		Additional
Tile Finisher	\$ 49.46	\$ 0.59*

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per Hour:

\$ 25.36*
+ \$8.33

* This portion of benefits is subject to same premium rate as shown for overtime wages.

OVERTIME PAY

See (A, *E, Q) on OVERTIME PAGE
Double time rate after 10 hours on Saturdays

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 15, 16, 25) on HOLIDAY PAGE

9-7/88-tf

Mason - Building

11/01/2024

JOB DESCRIPTION Mason - BuildingDISTRICT 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per hour:	07/01/2024	01/06/2025
Marble, Stone,		Additional
Maintenance Finishers:	\$ 27.72	\$ 0.41*

Note 1: An additional \$2.00 per hour for time spent grinding floor using "60 grit" and below.
Note 2: Flaming equipment operator shall be paid an additional \$25.00 per day.

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per Hour:

Marble, Stone
Maintenance Finishers: \$ 15.74

OVERTIME PAY

See (B, *E, Q, V) on OVERTIME PAGE
*Double hourly rate after 8 hours on Saturday

HOLIDAY

Paid: See (5, 6, 8, 11, 15, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 11, 15, 25) on HOLIDAY PAGE
1st term apprentice gets paid for all observed holidays.

REGISTERED APPRENTICES

WAGES per hour:	07/01/2024
0-750	\$ 22.32
751-1500	23.04
1501-2250	23.75
2251-3000	24.48
3001-3750	25.56
3751-4500	27.00
4501+	27.72

Supplemental Benefits:
Per hour:

0-750	12.69
751-1500	13.10
1501-2250	13.51
2251-3000	13.91
3001-3750	14.52
3751-4500	15.33
4501+	15.74

9-7/24M-MF

Mason - Building / Heavy&Highway	11/01/2024
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JOB DESCRIPTION Mason - Building / Heavy&HighwayDISTRICT 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per hour:	07/01/2024	01/06/2025 Additional
Marble-Finisher	\$ 49.99	\$ 0.53*

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Journeyworker:
Per hour

Marble- Finisher \$ 37.39

OVERTIME PAY

See (B, E, Q, V) on OVERTIME PAGE
Work beyond 8 hours on a Saturday shall be paid at double the rate.

HOLIDAY

Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

When an observed holiday falls on a Sunday, it will be observed the next day.

9-7/20-MF

Mason - Building / Heavy&Highway	11/01/2024
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JOB DESCRIPTION Mason - Building / Heavy&Highway

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2024

Cement Mason \$ 57.72

SUPPLEMENTAL BENEFITS

Per Hour:

Cement Mason \$ 34.66

1.5 X overtime rate \$ 62.95

2 X overtime rate \$ 69.32

OVERTIME PAY

See (B1, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 11, 13, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

(1) year terms at the following wage:

1st Term \$ 23.39

2nd Term \$ 28.29

3rd Term \$ 33.69

Supplement Benefits per hour paid:

	ST	1.5X OT	2X OT
1st Term	\$ 14.86	\$ 22.30	\$ 29.72
2nd Term	\$ 15.16	\$ 22.75	\$ 30.32
3rd Term	\$ 15.27	\$ 22.91	\$ 30.54

4-780

Mason - Building / Heavy&Highway	11/01/2024
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JOB DESCRIPTION Mason - Building / Heavy&Highway

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

NOTE: Shall include but not limited to Precast concrete slabs (London Walks) Marble and Granite pavers 2'x 2' or larger.

Per Hour:

07/01/2024

05/01/2025

Additional

\$ 3.42/Hr+

Stone Setter \$ 69.91

Base Rate 53.84*

Stone Tender \$51.82

Base Rate 44.54*

(+)To be allocated at a later date for all classes.

SUPPLEMENTAL BENEFITS

Per Hour:

Stone Setter \$ 42.52

Stone Tender 23.15

OVERTIME PAY

See (*C, **E, Q) on OVERTIME PAGE

* Base Rates are used to Calculate Overtime Premiums then adding in: \$15.81/Hr. for Stone Setter or \$7.28/Hr. for Stone Tender.

** On weekdays the eighth (8th) and ninth (9th) hours are time and one-half all work thereafter is paid at double the hourly rate.

*** The first nine (9) hours on Saturday is paid at time and one-half all work thereafter is paid at double the hourly rate.

HOLIDAY

Paid: See (*18) on HOLIDAY PAGE
Overtime: See (5, 6, 10) on HOLIDAY PAGE
Paid: * Must work first 1/2 of day.

REGISTERED APPRENTICES

Per Hour:

Stone Setter(800 hour) terms at the following Percentage of Stone Setters Base wage rate per hour plus \$7.32:

1st	2nd	3rd	4th	5th	6th
50%	60%	70%	80%	90%	100%

Supplemental Benefits:

All Apprentices \$ 25.85

4-1Stn

Mason - Heavy&Highway

11/01/2024

JOB DESCRIPTION Mason - Heavy&Highway

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2024

Pointer, Caulkers &
Cleaners \$ 63.69

SUPPLEMENTAL BENEFITS

Per Hour:

Pointer, Cleaners &
Caulkers \$ 31.90

OVERTIME PAY

See (B, E2, H) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:

One (1) year terms at the following wage rates.

1st	2nd	3rd	4th
\$ 32.76	\$ 37.09	\$ 42.97	\$ 51.60

Apprentices Supplemental Benefits:

(per hour paid) \$ 15.40 \$ 21.70 \$ 24.45 \$ 25.45

4-1PCC

Operating Engineer - Building

11/01/2024

JOB DESCRIPTION Operating Engineer - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Putnam, Queens, Richmond, Westchester

PARTIAL COUNTIES

Dutchess: that part of Dutchess County lying south of the North City Line of the City of Poughkeepsie.

WAGES

NOTE: Construction surveying

Party Chief--One who directs a survey party

Instrument Man--One who runs the instrument and assists Party Chief.

Rodman--One who holds the rod and assists the Survey Crew

Wages:(Per Hour) 07/01/2024

Building Construction:

Party Chief	\$ 79.99
Instrument Man	60.36
Rodman	40.45

Steel Erection:

Party Chief	83.13
Instrument Man	64.21
Rodman	44.33

Heavy Construction-NYC counties only:
(Foundation, Excavation.)

Party Chief	88.06
Instrument man	65.66
Rodman	55.70

SUPPLEMENTAL BENEFITS

Per Hour: 07/01/2024

Building Construction \$ 28.63* +\$ 7.65

Steel Erection 29.23* + 7.65

Heavy Construction 30.04* + 7.64

* This portion subject to SAME premium as wages

Non-Worked Holiday Supplemental Benefit:

21.83

OVERTIME PAY

See (A, B, E, Q) on OVERTIME PAGE

Code "A" applies to Building Construction and has double the rate after 7 hours on Saturdays.

Code "B" applies to Heavy Construction and Steel Erection and had double the rate after 8 hours on Saturdays.

HOLIDAY

Paid: See (5, 6, 9, 11, 15, 16, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 9, 11, 15, 16, 25) on HOLIDAY PAGE

9-15Db

**Operating Engineer - Building, Maintenance, Steel Erection
& Heavy Construction**

11/01/2024

JOB DESCRIPTION Operating Engineer - Building, Maintenance, Steel Erection & Heavy Construction

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

STEEL ERECTION:

Group 1: Derrick, travelers, tower, crawler tower & climbing cranes

Group 2: Oiler (Truck Crane)

Group 3: Oiler (Crawler Crane)

BUILDING CONSTRUCTION:

Group 1: Installing, repairing, maintaining, dismantling of all equipment including Steel cutting& bending machines, mechanical heaters, mine hoists, climbing cranes, tower cranes, Linden Peine, Lorain, Liebherr, Mannes and machines of a similar nature; Well Point system, Deep Well pumps, Concrete mixers with loading devices, Concrete plants, motor generators (When used for temporary power and lights)(Driving maintenance trucks and mounted-welded machines)-All Pumps(excluding River Cofferdam Pumps and Well Point Pumps), Motorized Concrete Buggies(When three or more are on job site), Skid-Steer and similar machines

Group 2:Maintenance of: Pumps, Generators, Mixers, Heaters

Group 3: Oilers of all gasoline, electric, diesel or air operated Gradalls; Concrete Pumps, Overhead Cranes in Power Houses, Assist in oiling, greasing and repairing of all machines, including: Driving Truck Cranes, Driving and operating Fuel and Grease Trucks, Cherry Pickers(Hydraulic Cranes) over 70,000 GVW and machines of a similar nature

Group 4: Oiler on Crawler Cranes, Backhoes, Trenching Machines, Guniting Machines, Compressors(3 or more in battery)

Group 5: Maintenance on Radiant Mechanical Heaters

HEAVY CONSTRUCTION (Excavation, Foundations, etc)

Group 1:Maintenance of: Generators, Light Towers

Group 2:Maintenance of: Pumps, Mixers including mudsucking

Group 3: Base Mounted Tower Cranes

Group 4: Installing, repairing, maintaining, dismantling(of all equipment including Steel cutting & Bending machines, Fusion Coupling Machines, Vermeer Trenching machines, on-site crushing plant, mechanical heaters(1 through 7),Mine hoists, Tower Cranes, Linden Peine, Lorrain, Liebherr, Mannes or machines of a similar nature, Wellpoints)-Driving maintenance trucks and truck mounted welding machines, burning, welding-operating of accumulator for shield-driven tunnels, in addition to the performance of other duties: Handling, installation, jointing, coupling of all permanent steel and plastic pipe. RIDE UPON MOLES-tunnel boring machines-MICRO TUNNELING SYSTEMS, All temporary pipefitting;When three or more motorized concrete buggies(Ride type)are utilized on the jobsite they shall be serviced, maintained and repaired by the maintenance engineer. The Operating Engineer on autogrades(C.M.I.)is to be assisted by the maintenance engineer who shall in addition perform other duties.

WAGES:

Per hour: 07/01/2024

Steel Erection:

Group 1	\$ 81.43
Group 2	76.58
Group 3	58.22

Building Construction:

Group 1	\$ 72.41
Group 2	57.36
Group 3	69.09
Group 4	52.62
Group 5	46.07

Heavy Construction:

Group 1	\$ 57.43
Group 2	58.68
Group 3	108.95
Group 4	84.24

SUPPLEMENTAL BENEFITS

Per Hour: 07/01/2024

Building Construction	\$ 30.52* + \$7.40
Steel Erection & Heavy	31.02* + \$7.40

* This portion of benefits is subject to same OT premium as wages.

Non-Worked Holiday Supplemental Benefits:

21.87

OVERTIME PAY

See (D, O) on OVERTIME PAGE

HOLIDAY

Paid:	See (5, 6, 9, 11, 15, 16, 25) on HOLIDAY PAGE
Overtime:	See (5, 6, 9, 11, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages Per Hour:

(1) year terms at the following wage rates:

1st	2nd	3rd	4th.
\$ 38.52	\$ 45.23	\$ 48.70	\$ 52.17

Supplemental Benefits:

Per Hour:

All Terms \$ 16.52* + 7.40

* This portion of benefits is subject to same OT premium as wages.

9-15Ab

Operating Engineer - Building / Heavy&Highway

11/01/2024

JOB DESCRIPTION Operating Engineer - Building / Heavy&Highway

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

EQUIPMENT COVERED: Jet-Rodder/Vacuum Truck, Flusher, Sewer Rodder, Stetco Hoist and similar, Sewer Winch/Tugger Hoist and similar, Vacall/Vactor, Closed Circuit Television Inspection Equipment, Chemical Grouting Equipment and similar, John Beame, Meyers and similar.

Per Hour: 07/01/2024

Maintenance Engineer \$ 84.24
(Sewer Systems)

SUPPLEMENTAL BENEFITS

Per Hour:

Journeyman \$ 31.02*
+ \$ 7.40

*This portion of benefits subject to SAME premium as OT wages.

Non-Worked Holiday Supplemental Benefits:

\$ 21.87

OVERTIME PAY

See (D, O) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 7, 11, 16) on HOLIDAY PAGE

Overtime: See (5, 6, 7, 11, 16) on HOLIDAY PAGE

REGISTERED APPRENTICES

Per Hour:

(1) year terms at the following wage rates.

1st	2nd	3rd	4th
\$38.52	\$45.23	\$48.70	\$52.17

Supplemental Benefits:

Per Hour:

All Apprentices: \$ 16.52* + \$ 7.40

* This portion of benefits subject to the SAME premium as OT wages

9-15Sewer

Operating Engineer - Building / Heavy&Highway

11/01/2024

JOB DESCRIPTION Operating Engineer - Building / Heavy&Highway

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2024 08/01/2024

Well Driller	\$ 41.85	\$ 43.11
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Well Driller		
Helper	\$ 36.26	\$ 37.35

Hazardous Waste Differential
Added to Hourly Wage:

Level A	\$ 3.00
Level B	\$ 2.00
Level C	\$ 1.00

Monitoring Well Work
Add to Hourly Wage:

Level A	\$ 3.00
Level B	\$ 2.00

SUPPLEMENTAL BENEFITS

Per Hour:

Well Driller	10% of straight
& Helper	time rate plus \$ 13.50

Additional \$ 4.25/Hr. for Premium Time Hours Worked

OVERTIME PAY

See (B2, P, S) on OVERTIME PAGE

HOLIDAY

Paid:	See (5, 6, 16, 23) on HOLIDAY PAGE
Overtime:	See (5, 6, 16, 23) on HOLIDAY PAGE

REGISTERED APPRENTICES

Apprentices at 12 Month Terms

Wages Per Hour:

1st Term	\$ 28.00
2nd Term	\$ 29.00
3rd Term	\$ 30.00

SUPPLEMENTAL BENEFITS

Per Hour:

All Terms	10% of Wage + \$ 13.50
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Additional \$4.25/Hr. for premium time hours worked.

4-138well

Operating Engineer - Building & Steel Erection

11/01/2024

JOB DESCRIPTION Operating Engineer - Building & Steel Erection

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per Hour: 07/01/2024

STEEL ERECTION:

Three Drum Derricks	\$ 107.16
Cranes, Two Drum Derricks, Hydraulic Cranes & Fork Lifts,	
Boom Trucks	103.28
Compressors, Welding Machines	63.36
Compressors	60.71
(not combined with welding machines)	

BUILDING CONSTRUCTION:

Cranes, Stone Derrick, Boom Trucks, Hydraulic Cranes,	
	103.62
Double Drum	98.28
4 Pole Hoists and Single	
Drum Hoists	87.78

Fork Lifts, Plaster(Platform Machine)Plaster Bucket, Concrete Pumps and all other equipment used for hoisting	80.54
*House Cars and Rack & Pinion	71.35
*House Cars (New Projects)	58.47
Erecting and dismantling Cranes	88.64

Compressors, Welding Machines(Cutting Concrete-Tank Work),
 Paint Spraying, Sand Blasting, Pumps(With the exclusion of
 concrete pumps), House Car (Settlement basis only), All
 Engines irrespective of power(Power-Vac)used to drive
 auxiliary equipment Air, Hydraulic, etc., Boilers, Jacking System
 62.20

APPLICABLE TO BUILDING CATEGORY:
 CRANES: Crawler Or Truck

	In Addition To Above Crane Rates
100' to 149' Boom	\$ 1.75/hr
150' to 249' "	\$ 2.00/hr
250' to 349' "	\$ 2.25/hr
350' to 450' "	\$ 2.75/hr
Tower Crane	\$ 2.00/hr

APPLICABLE TO STEEL CATEGORY:
 CRANES: Crawler Or Truck

	In Addition To Above Crane Rates
100' to 149' Boom	\$ 2.25/hr
150' to 249' "	\$ 2.50/hr
250' to 349' "	\$ 2.75/hr
350' to 450' "	\$ 3.25/hr
Tower Crane	\$ 2.50/hr

SUPPLEMENTAL BENEFITS

Per Hour: 07/01/2024

All Operator Classes \$ 26.15*
 plus \$ 6.30

* This portion of the benefits is subject to the same premium as shown for overtime wages.

OVERTIME PAY

See (*B, **C, ***D, O) on OVERTIME PAGE

*Applies to House Cars and Rack & Pinion after 8 hours worked in a day, Saturday, Sunday and Holidays

**Applies to Building Construction category

***Applies to Steel Erection

HOLIDAY

Paid: See (5, 6, 8, 11, 12, 15, 16, 25, 26) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 11, 12, 15, 16, 25, 26) on HOLIDAY PAGE

Codes 8 and 12 apply ONLY to Steel Erection

Code 16 applies ONLY to Building Construction

REGISTERED APPRENTICES

Wage Per Hour:

Apprentices (1) year terms at the following rates:

	1st	2nd	3rd
07/01/2024	\$ 44.92	\$ 54.40	\$ 63.88

Supplemental Benefits Per Hour:

07/01/2024
 Straight Time \$ 15.65*
 plus \$ 6.30

* This portion of benefits subject to the same premium as shown for overtime wages.

9-14 B&S

JOB DESCRIPTION Operating Engineer - Heavy Construction 1

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

(For Groups 23 - 28, see Operating Engineer - Heavy Construction 2)

Group 1: Tower Crane/Climbing Crane

Group 2: Backhoes (Including all track and rubber tire backhoes over 37,000 lbs), Power Shovels, Steel Erection: Hydraulic Clam Shells, Moles and machines of a similar nature

Group 3: Mine Hoists, Cranes, etc, used as Mine Hoists

Group 4: Gradalls, Keystones, Cranes (With digging buckets), Bridge Cranes, Trenching Machines, Vermeer Cutter and machines of a similar nature

Group 5: Pile Drivers and Rigs (Employing Dock-Builders Foreman), Derrick Boats, Tunnel Shovels,

Group 6: All Drills and machines of a similar nature

Group 7: Back-Filling Machines and Cranes, Mucking Machines, Dual Drum Pavers

Group 8: Mixers (Concrete with loading attachment), Concrete Pavers, Cableways, Land Derricks, Power House (Low pressure units)

Group 9: Concrete Pumps, Concrete Plant, Stone Crushers, Double Drum Hoists, Power Houses (Other than above)

Group 10: Concrete Mixer

Group 11: Elevators

Group 12: Concrete Breaking Machines, Single Drum Hoists, Load Masters, Locomotives and Dinkies (Over 10 tons), Hydraulic Crane-Second Engineer

Group 13: On-Site Concrete Plant Engineers, On-Site Asphalt Plant Engineer and Vibratory Console

Group 14: Barrier Mover, Barrier Transport and machines of a similar nature

Group 15: Compressors (Portable, 3 or more), Truck Compressor (Engineer Driver), Tugger Machines, Well Point Pumps, Chum Drill

Group 16: Boilers(High pressure),Compressors, Pumps(River Cofferdam) and Welding Machines(except where arc is operated by another Operating Engineer) Push Button Machines, All Engines, irrespective of power(Power Pac) used to drive auxiliary equipment, Air, Hydraulic, etc.

Group 17: Utility-Horizontal Boring Rig

Group 18: Utility Compressors

Group 19: Paving-Asphalt Spreader, Autogrades (C.M.I.), Roto-Mill

Group 20: Paving-Asphalt Roller

Group 21 Paving-Asphalt Plant

Group 22: Roller (non paving, all sizes)

WAGES:(per hour) 07/01/2024

Group 1	\$ 123.06
Group 2	102.98
Group 3	106.03
Group 4	103.66
Group 5	101.78
Group 6	98.05
Group 7	99.74
Group 8	97.10
Group 9	95.24
Group 10	91.40
Group 11	85.94
Group 12	87.66
Group 13	88.24
Group 14	80.02
Group 15	68.59
Group 16	64.34
Group 17	92.77
Group 18	63.97
Group 19	97.10
Group 20	94.83
Group 21	81.44
Group 22	94.83

Cranes: Crawler or Truck

100' to 149'	\$0.50 per hour additional to above Crane Rates
150' to 249'	\$0.75 per hour additional to above Crane Rates
250' to 349'	\$1.00 per hour additional to above crane Rates
350' to 450'	\$1.50 per hour additional to above crane Rates

SUPPLEMENTAL BENEFITS

Per Hour:

Groups 1-22

Regular Time \$ 26.15* plus \$ 6.30

* This portion of benefits subject to the same premium as shown for wages.

Non-Worked Holiday Supplemental Benefits:
\$ 20.80

OVERTIME PAY

See (D, O) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Per Hour:

(1) year terms at the following wage rates:

Groups 1-22	1st	2nd	3rd
	\$ 44.92	\$ 54.40	\$ 63.88

Supplemental Benefits:

Groups 1-22	
Regular Time	\$ 15.65* plus \$ 6.30

* This portion of benefits is subject to the SAME PREMIUM as shown for overtime wages

9-14 HC

Operating Engineer - Heavy Construction 2

11/01/2024

JOB DESCRIPTION Operating Engineer - Heavy Construction 2

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

(For Groups 1 - 22, see Operating Engineer - Heavy Construction 1)

Group 23: Cherry Picker (Over 20 tons), Loader (Over 6 yards)

Group 24: Backhoes and Loaders (Up to 37,000lbs), Bulldozers, Scrapers, Turn-A-Pulls, Tugger Hoists, Tractors, Hysters, Roustabout Cranes, Conveyors, Ballast Regulators (Ride On), Track Removal Machine or similar, Motor Graders, Locomotives (10 tons and under), Curb & Gutter Pavers and machines of a similar nature

Group 25: Post Hole Digger, Ditch Winch, Road Finishing Machines, Rollers (5 tons and under, Dual Purpose Trucks, Forklifts, Dempsey Dumpsters, Fireman

Group 26: Service Engineer (Gradalls, Concrete Pumps, Cold Planers Grader)

Group 27: Service Mechanic (Shovels, Draglines, Crawler Cranes, Backhoes, Trenching Machines, Compressors (3 or more in battery)

Group 28: Steam Equipment Operator (Water rigs, steam shovels, power boilers, derrick boats)

WAGES:(per hour) 07/01/2024

Group 23	\$ 87.05
Group 24	84.62
Group 25	80.57
Group 26	76.47
Group 27	54.57
Group 28	80.57

Cranes: Crawler or Truck

100' to 149'	\$0.50 per hour additional to above Crane Rates
150' to 249'	\$0.75 per hour additional to above Crane Rates
250' to 349'	\$1.00 per hour additional to above crane Rates
350' to 450'	\$1.50 per hour additional to above crane Rates

SUPPLEMENTAL BENEFITS

Per Hour:

Groups 23-28
Regular Time 31.02* + \$7.40

* This portion of benefits subject to the same OT premium as wages.

Non-Worked Holiday Supplemental Benefits:
21.87

OVERTIME PAY
See (D, O) on OVERTIME PAGE

HOLIDAY
Paid: See (5, 6, 7, 11, 16) on HOLIDAY PAGE
Overtime: See (5, 6, 7, 11, 16) on HOLIDAY PAGE

REGISTERED APPRENTICES

Per Hour:
(1) year terms at the following wage rates:

	1st	2nd	3rd	4th
Groups 23-28	\$38.52	\$45.23	\$48.70	\$52.17

Supplemental Benefits:

Regular Time \$ 16.52* + \$ 7.40

* This portion of benefits subject to same OT premium as wages.

9-15 HC

Operating Engineer - Marine Dredging	11/01/2024
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JOB DESCRIPTION Operating Engineer - Marine Dredging

DISTRICT 4

ENTIRE COUNTIES

Albany, Bronx, Cayuga, Clinton, Columbia, Dutchess, Essex, Franklin, Greene, Jefferson, Kings, Monroe, Nassau, New York, Orange, Oswego, Putnam, Queens, Rensselaer, Richmond, Rockland, St. Lawrence, Suffolk, Ulster, Washington, Wayne, Westchester

WAGES

These wages do not apply to Operating Engineers on land based construction projects. For those projects, please see the Operating Engineer Heavy/Highway Rates. The wage rates below for all equipment and operators are only for marine dredging work in navigable waters found in the counties listed above.

Per Hour: 07/01/2024

CLASS A1 \$ 45.26
Deck Captain, Leverman,
Mechanical Dredge Operator,
Licensed Tug Operator 1000HP or more.

CLASS A2 40.33
Crane Operator (360 swing)

CLASS B To conform to Operating Engineer
Dozer, Front Loader Prevailing Wage in locality where work
Operator on Land is being performed including benefits.

CLASS B1 39.14
Derrick Operator (180 swing)
Spider/Spill Barge Operator
Operator II, Fill Placer, Engineer
Chief Mate, Electrician, Chief Welder,
Maintenance Engineer, Licensed Boat, Crew Boat Operator

CLASS B2 36.84
Certified Welder

CLASS C1 35.83
Drag Barge Operator,
Steward, Mate,
Assistant Fill Placer

CLASS C2 34.68

Boat Operator

CLASS D 28.81

Shoreman, Deckhand, Oiler,
Rodman, Scowman, Cook,
Messman, Porter/Janitor

SUPPLEMENTAL BENEFITS

Per Hour:

THE FOLLOWING SUPPLEMENTAL BENEFITS APPLY TO ALL CATEGORIES

All Classes A & B \$ 12.00 plus 7%
of straight time
wage, Overtime hours
add \$ 0.63

All Class C & D \$ 11.75 plus 7%
of straight time
wage, Overtime hours
add \$ 0.50

OVERTIME PAY

See (B2, F, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 15, 26) on HOLIDAY PAGE

4-25a-MarDredge

Operating Engineer - Survey Crew - Consulting Engineer

11/01/2024

JOB DESCRIPTION Operating Engineer - Survey Crew - Consulting Engineer

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Suffolk, Westchester

PARTIAL COUNTIES

Dutchess: That part in Dutchess County lying South of the North City line of Poughkeepsie.

WAGES

Feasibility and preliminary design surveying, any line and grade surveying for inspection or supervision of construction.

Per hour: 07/01/2024

Survey Classifications

Party Chief \$ 49.39

Instrument Man 40.96

Rodman 35.63

SUPPLEMENTAL BENEFITS

Per Hour:

All Crew Members: \$ 23.75

OVERTIME PAY

OVERTIME:.... See (B, E*, Q, V) ON OVERTIME PAGE.

*Double-time paid on the 9th hour on Saturday.

HOLIDAY

Paid: See (5, 6, 7, 11, 16) on HOLIDAY PAGE

Overtime: See (5, 6, 7, 11, 16) on HOLIDAY PAGE

9-15dconsult

Painter

11/01/2024

JOB DESCRIPTION Painter

DISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Suffolk, Westchester

WAGES

Per hour: 07/01/2024 05/01/2025
Additional

Brush 52.86* \$ 2.62**

Abatement/Removal of lead based
or lead containing paint on
materials to be repainted. 52.86*

Spray & Scaffold \$ 55.86*
Fire Escape 55.86*
Decorator 55.86*
Paperhanger/Wall Coverer 55.09*

*Subtract \$ 0.10 to calculate premium rate.

** To be allocated at a later date.

SHIFT WORK

Counties of Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Suffolk, and Westchester; Agency/Government mandated off-shift work to be paid at time and one-half the hourly wage.

SUPPLEMENTAL BENEFITS

Per hour:

Paperhanger \$ 36.73
All others 34.31
Premium 38.28**

**Applies only to "All others" category, not paperhanger journeyworker.

OVERTIME PAY

See (A, E, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

One (1) year terms at the following wage rate.

Per hour: 07/01/2024
Appr 1st term... \$ 20.22*
Appr 2nd term... 25.93*
Appr 3rd term... 31.61*
Appr 4th term... 42.40*

*Subtract \$ 0.10 to calculate premium rate.

Supplemental benefits:

Per Hour:
Appr 1st term... \$ 16.89
Appr 2nd term... 20.95
Appr 3rd term... 24.10
Appr 4th term... 30.57

8-NYDC9-B/S

Painter

11/01/2024

JOB DESCRIPTION Painter

DISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

PARTIAL COUNTIES

Nassau: Atlantic Beach, Ceadershurst, East Rockaway, Hewlett, Hewlett Bay, Hewlett Neck, Hewlett Park, Inwood, Lawrence, Lido Beach, Long Beach, parts of Lynbrook, parts of Oceanside, parts of Valley Stream, and Woodmere. Starting on South side of Sunrise Hwy in Valley Stream running east to Windsor and Rockaway Ave, Rockville is the boundary line up to Lawson Blvd, turning right going west all the above territory. Starting at Union Turnpike & Lakeville Rd going north to northern Blvd. the west side of Lakeville Rd to Northern Blvd. At Northern Blvd doing east the district north of Northern blvd to Port Washington blvd. West of Port Washington blvd to St. Francis Hospital then north of first traffic light to Port Washington & Sands Point, Manor Haven, & Harbour Acres.

WAGES

Per hour: 07/01/2024
Drywall Taper \$ 57.44

SUPPLEMENTAL BENEFITS

Per Hour:
Journeyworker: \$ 25.29

OVERTIME PAY

See (A, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (4, 6, 8, 11, 18, 19, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:

1st term	\$ 22.30
2nd term	28.99
3rd term	34.67
4th term	46.05

Supplemental Benefits per hour:

1st term	\$ 14.35
2nd term	19.83
3rd term	20.93
4th term	23.12

8-NYC9-1974-DWT

Painter - Bridge & Structural Steel

11/01/2024

JOB DESCRIPTION Painter - Bridge & Structural Steel

DISTRICT 8

ENTIRE COUNTIES

Albany, Bronx, Clinton, Columbia, Dutchess, Essex, Franklin, Fulton, Greene, Hamilton, Kings, Montgomery, Nassau, New York, Orange, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Suffolk, Sullivan, Ulster, Warren, Washington, Westchester

WAGES

Per Hour:

STEEL:

Bridge Painting: 07/01/2024
\$ 56.00
+ 10.35*

ADDITIONAL \$7.00 per hour for POWER TOOL/SPRAY, whether straight time or overtime.

NOTE: All premium wages are to be calculated on base rate per hour only.

* For the period of May 1st to November 15th, this amount is payable up to 40 hours. For the period of Nov 16th to April 30th, this amount is payable up to 50 hours. EXCEPTION: First and last week of employment, and for the weeks of Memorial Day, Independence Day and Labor Day, where the amount is paid for the actual number of hours worked (50 hour cap).

NOTE: Generally, for Bridge Painting Contracts, ALL WORKERS on and off the bridge (including Flagmen) are to be paid Painter's Rate; the contract must be ONLY for Bridge Painting.

SHIFT WORK

When directly specified in public agency or authority contract documents for an employer to work a second shift and works the second shift with employees other than from the first shift, all employees who work the second shift will be paid 10% of the base wage shift differential in lieu of overtime for the first eight (8) hours worked after which the employees shall be paid at time and one half of the regular wage rate. When a single irregular work shift is mandated in the job specifications or by the contracting agency, wages shall be paid at time and one half for single shifts between the hours of 3pm-11pm or 11pm-7am.

SUPPLEMENTAL BENEFITS

Per Hour:

Journeyworker: \$ 12.43
+ 31.55*

* For the period of May 1st to November 15th, this amount is payable up to 40 hours. For the period of Nov 16th to April 30th, this amount is payable up to 50 hours. EXCEPTION: First and last week of employment, and for the weeks of Memorial Day, Independence Day and Labor Day, where the amount is paid for the actual number of hours worked (50 hour cap).

OVERTIME PAY

See (B, F, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (4, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage - Per hour:

Apprentices: (1) year terms.

1st year	\$ 22.40 + 4.14
2nd year	\$ 33.60 + 6.21
3rd year	\$ 44.80 + 8.28
Supplemental Benefits - Per hour:	
1st year	\$ 1.16 + 12.62
2nd year	\$ 7.46 + 18.93
3rd year	\$ 9.94 + 25.24

NOTE: All premium wages are to be calculated on base rate per hour only.

8-DC-9/806/155-BrSS

Painter - Metal Polisher

11/01/2024

JOB DESCRIPTION Painter - Metal Polisher

DISTRICT 8

ENTIRE COUNTIES

Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

	07/01/2024
Metal Polisher	\$ 39.33
Metal Polisher*	40.43
Metal Polisher**	43.33

*Note: Applies on New Construction & complete renovation

** Note: Applies when working on scaffolds over 34 feet.

SUPPLEMENTAL BENEFITS

Per Hour: 07/01/2024

Journeyworker:

All classification \$ 12.79

OVERTIME PAY

See (B, E, P, T) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:

One (1) year term at the following wage rates:

	07/01/2024
1st year	\$ 19.67
2nd year	21.63
3rd year	23.60
1st year*	\$ 22.06
2nd year*	22.07
3rd year*	24.14

1st year**	\$ 22.17
2nd year**	24.13
3rd year**	26.10

*Note: Applies on New Construction & complete renovation

** Note: Applies when working on scaffolds over 34 feet.

Supplemental benefits:

Per hour:

1st year	\$ 8.69
2nd year	8.69
3rd year	8.69

8-8A/28A-MP

Plasterer	11/01/2024
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JOB DESCRIPTION Plasterer

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per hour:

	07/01/2024	08/01/2024
Building:		
Plasterer/Traditional &	\$ 47.72	\$ 47.99
Spraying Fireproofing	+ \$5.00*	+ \$5.62*

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker	\$ 25.35	\$ 26.10
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OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

*This portion is not subjected to OT premiums.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages:	07/01/2024	08/01/2024
(Per hour)		
800 hours term:		
1st term	\$ 19.30 + 0.68*	\$ 19.44+ 0.68*
2nd term	22.53 + 0.81*	22.69+ 0.81*
3rd term	25.79 + 0.95*	25.98+ 0.95*

*This portion is not subjected to OT premiums.

Supplemental Benefits:

(Per hour):

(800) hours term:

1st term	\$ 11.59	\$ 11.95
2nd term	12.02	12.44
3rd term	12.52	13.08

9-262

Plumber	11/01/2024
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JOB DESCRIPTION Plumber

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:

07/01/2024

Plumber \$ 74.95

Temporary
Service** \$ 60.04

** Temporary Service- Includes Maintenance of cooling & heating apparatus, maintenance work on pneumatic systems during the construction period, and work on temporary heat. All hours paid at straight time, including holidays.

**THERE ARE NO HELPERS UNDER THIS CLASSIFICATION.

On tower work, bridges, elevated highway, or buildings, where pipe is being installed, fifty (50) or more feet vertically in a free drop from its base, an additional \$1.00 per hour.

SHIFT WORK

Shift work, when directly specified in public agency or authority contract documents, and continues for a period of not less than ten (10) consecutive work days. A shift shall consist of seven(7) hours with one-half (1/2) hour for lunch after the first four (4) hours of each shift. A premium of thirty percent (30%) for wages and supplemental benefits on shift work performed Monday through Friday on the 4 P.M. and midnight shifts.

For shift work performed on weekends the shift premium shall be fifty percent (50%) of wages and supplemental benefits.

For shift work performed on holidays designated below, double time wages and supplemental benefits shall be paid. Also noted that the normal workday Monday through Friday 8:00 A.M. to 3:00 P.M. is not considered shift work, and therefore not subject to shift premium.

SUPPLEMENTAL BENEFITS

Per hour:

Plumber \$ 43.00

Temporary
Service \$ 34.32

OVERTIME PAY

See (C, *D, O, V) on OVERTIME PAGE

*Where the plumbing contract price is one and one half million dollars (\$1,500,000.00) or less, code D applies.

HOLIDAY

Plumber
Overtime: See (5, 6, 11, 15, 16, 25) on HOLIDAY PAGE.
Repairs & Maintenance
Paid: See (1) on HOLIDAY PAGE.
Overtime: See (5, 6, 25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wages per hour:

(1/2) year terms at the following wage:

1st	2nd	3rd&4th	5th&6th	7th&8th	9th	10th
\$ 19.00	\$ 21.00	\$ 30.22	\$ 32.32	\$ 35.17	\$ 36.57	\$ 48.64

Supplemental Benefits:

(1/2) year term at the following dollar amount:

1st	2nd	3rd-10th
\$ 5.43	\$ 6.43	\$ 22.73

9-1 Const

Plumber - Pump & Tank: Oil Trades Installation & Maintenance

11/01/2024

JOB DESCRIPTION Plumber - Pump & Tank: Oil Trades Installation & Maintenance

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:

07/01/2024

Pump & Tank \$ 73.00

SUPPLEMENTAL BENEFITS

Per hour:

Plumber \$ 32.81

OVERTIME PAY

Pump & Tank See (B, F, H) on OVERTIME PAGE.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE.

Overtime: See (5, 6, 10, 11, 12, 16, 25) on HOLIDAY PAGE.

9-1-P&T

Plumber - Repairs & Maintenance

11/01/2024

JOB DESCRIPTION Plumber - Repairs & Maintenance

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:

Repairs & 07/01/2024
Maintenance \$ 48.20

*Repair & Maintenance work is any repair and/or replacement of present plumbing system that does not change existing roughing or water supply lines. Projects regardless of work type which have approved plans and specifications wherein the plumbing exceeds \$725,000 are excluded.

SUPPLEMENTAL BENEFITS

Per hour:

Repair \$ 21.36
Maintenance

OVERTIME PAY

Repairs &
Maintenance See (B, H) on OVERTIME PAGE.

HOLIDAY

Repairs & Maintenance

Paid: See (1) on HOLIDAY PAGE.

Overtime: See (5, 6, 25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Note: The Repairs & Maintenance Category has NO Apprentices.

9-1 R&M

Roofer

11/01/2024

JOB DESCRIPTION Roofer

DISTRICT 9

ENTIRE COUNTIES

Bronx, Dutchess, Kings, New York, Orange, Putnam, Queens, Richmond, Rockland, Sullivan, Ulster, Westchester

WAGES

Per Hour: 07/01/2024

Roofer/Waterproofer \$ 48.50
+ \$7.00*

* This portion is not subjected to overtime premiums.

Note: Abatement/Removal of Asbestos containing roofs and roofing material is classified as Roofer.

SUPPLEMENTAL BENEFITS

Per Hour: \$ 31.87

OVERTIME PAY

See (B, H) on OVERTIME PAGE

Note: An observed holiday that falls on a Sunday will be observed the following Monday.

HOLIDAY

Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

(1) year term apprentices indentured prior to 01/01/2023

1st	2nd	3rd	4th
\$ 16.97	\$ 24.25	\$ 29.10	\$ 36.37
	+ 3.50*	+ 4.20*	+ 5.26*

Supplements:

1st	2nd	3rd	4th
\$ 4.10	\$ 16.17	\$ 19.31	\$ 24.02

* This portion is not subjected to overtime premiums.

(1) year term apprentices indentured after 01/01/2023

1st	2nd	3rd	4th	5th
\$ 18.43	\$ 21.82	\$ 24.25	\$ 29.10	\$ 36.37
	+ 3.16*	+ 3.50*	+ 4.20*	+ 5.26

Supplements:

1st	2nd	3rd	4th	5th
\$ 7.73	\$ 14.59	\$ 16.17	\$ 19.31	\$ 24.02

* This portion is not subjected to overtime premiums.

9-8R

Sheetmetal Worker

11/01/2024

JOB DESCRIPTION Sheetmetal Worker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

Per Hour:

07/01/2024 08/01/2024

Sign Erector \$ 58.00 \$ 60.00

NOTE: Structurally Supported Overhead Highway Signs(See STRUCTURAL IRON WORKER CLASS)

SUPPLEMENTAL BENEFITS

Per Hour:

07/01/2024 08/01/2024

Sign Erector \$ 57.12 \$ 58.31

OVERTIME PAY

See (B, F, S) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 10, 11, 12, 16, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 10, 11, 12, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Per Hour:

6 month Terms at the following percentage of Sign Erectors wage rate:

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
35%	40%	45%	50%	55%	60%	65%	70%	75%	80%

SUPPLEMENTAL BENEFITS

Per Hour:

07/01/2024

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ 18.27	\$ 20.75	\$ 25.22	\$ 25.70	\$ 34.66	\$ 37.74	\$ 41.65	\$ 44.78	\$ 47.93	\$ 51.04

08/01/2024

\$ 18.65	\$ 21.16	\$ 23.69	\$ 26.22	\$35.39	\$ 38.52	\$ 42.55	\$ 45.75	\$ 48.96	\$ 52.15 4-137-SE
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Sheetmetal Worker

11/01/2024

JOB DESCRIPTION Sheetmetal Worker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour:

07/01/2024

Sheetmetal Worker \$ 61.09

Maintenance of Fans 48.87
Temporary Operation

SUPPLEMENTAL BENEFITS

Per Hour:

Sheetmetal Worker \$ 53.25

Maintenance Worker 53.25

OVERTIME PAY

See (B, E, E2, Q, V) on OVERTIME PAGE

For Maintenance See Codes B,E, Q & V

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Per Hour:Wages

Six(6) Month Terms As Follows:

1st & 2nd Term	\$ 21.26
3rd & 4th Term	27.39
5th & 6th Term	33.52
7th & 8th Term	42.75
9th Term	48.55

Per Hour: Supplemental Benefits

1st & 2nd Term	\$ 19.66
3rd & 4th Term	26.73
5th & 6th Term	31.57
7th & 8th Term	38.78
9th Term	43.62

4-28

Steamfitter

11/01/2024

JOB DESCRIPTION Steamfitter

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2024 01/01/2025

AC Service/Heat Service & Refrigeration	\$ 46.10	Additional \$1.25/Hr.*
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(*)To be allocated at a later date.

Refrigeration, A/C, Oil Burner and Stoker Service and Repair.

NOTE: Refrigeration Compressor installation. (Not to exceed 5 Hp combined on any one project).

NOTE: Air / Heating Compressor installation.(Not to exceed 15 tons combined on any one project).

SUPPLEMENTAL BENEFITS

Per Hour Worked:

AC Service/Heat Service
& Refrigeration \$ 20.96

Per hour Paid: \$ 17.65

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Overtime: See (5, 6, 11, 15, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

1 year terms
Wages per hour:

1st Term	\$ 22.31
2nd Term	26.94
3rd Term	31.38
4th Term	37.90

Benefits per hour worked:

1st Term	\$ 14.44
2nd Term	16.78
3rd Term	17.41
4th Term	19.44

Benefits per hour paid:

1st Term	\$ 11.38
2nd Term	13.72
3rd Term	14.35
4th Term	16.38

4-638B-StmFtrRef

Steamfitter

11/01/2024

JOB DESCRIPTION Steamfitter

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour:	07/01/2024	10/1/2024	03/31/2025
Sprinkler/Steam AC/Heat Fitter	\$ 69.11	Additional \$0.75/Hr*	Additional \$0.75/Hr*
Temporary Heat & AC Fitter	52.54	Additional \$0.75/Hr*	Additional \$0.75/Hr*

(*)To be allocated at a later date.

SHIFT WORK

Add 15% to Hourly Wage for "Contracting Agency" Mandated Off Shift Work.

Add 15% to Hourly Supplemental Benefit for "Contracting Agency" Mandated Off Shift Work.

SUPPLEMENTAL BENEFITS

Per Hour:

Sprinkler/Steam Fitter	\$ 53.49
Temporary Heat & AC Fitter	43.67

OVERTIME PAY

Note: The posted overtime rates are applicable after 8 hours plus Saturday, Sunday and Holidays:

Per Hour:

Sprinkler/Steam	WAGES \$ 138.22	SUPPLEMENTAL BENEFIT \$ 105.99
Temp Heat/AC	WAGES \$ 105.08	SUPPLEMENTAL BENEFIT \$ 85.35

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

1 year Terms at the Following:

WAGES per hour:

1st Term \$ 27.98	2nd Term \$ 34.96	3rd Term \$ 41.94	4th Term \$ 48.92	5th Term \$ 55.90
SUPPLEMENTAL BENEFIT per hour:				
1st Term \$ 21.80	2nd Term \$ 27.05	3rd Term \$ 32.28	4th Term \$ 37.53	5th Term \$ 42.76
Premium Time SUPPLEMENTAL BENEFIT Amounts:				
\$ 43.60	\$ 54.10	\$ 64.56	\$ 75.06	\$ 85.52

4-638A-StmSpFtr

Teamster - Heavy Construction	11/01/2024
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JOB DESCRIPTION Teamster - Heavy Construction

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per Hour:

Dump Trucks/Drivers (Debris Removal, Street Level and below)
07/01/2024

Dump Trucks	\$ 44.165
Tractor Trailers	47.315
Euclid/Turnapull	47.88

SUPPLEMENTAL BENEFITS

Per Hour:

Dump Trucks	\$ 59.1525
All Others	56.9025
Up to 40 Hours Worked	

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 11, 15, 16, 25) on HOLIDAY PAGE

Note: Employees receive 2 hours of Holiday Pay for each day worked in holiday week (not to exceed 8 hours)

Note: Employees receive 5 1/3 hours of Holiday Pay for each day worked in Thanksgiving Holiday Week.

4-282

Welder	11/01/2024
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JOB DESCRIPTION Welder

DISTRICT 1

ENTIRE COUNTIES

Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

Per hour 07/01/2024

Welder: To be paid the same rate of the mechanic performing the work.*

*EXCEPTION: If a specific welder certification is required, then the 'Certified Welder' rate in that trade tag will be paid.

OVERTIME PAY

HOLIDAY

1-As Per Trade

New York County General Construction

Asbestos Worker	11/01/2024
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JOB DESCRIPTION Asbestos Worker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2024

Asbestos Worker \$ 47.25
Removal & Abatement Only*

NOTE: *On Mechanical Systems that are NOT to be SCRAPPED.

SUPPLEMENTAL BENEFITS

Per Hour:

Asbestos Worker \$ 13.65
Removal & Abatement Only

OVERTIME PAY

See (B, B2, *E, J) on OVERTIME PAGE

*Hours worked on Saturdays are paid at time and one half only if forty hours have been worked during the week.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8) on HOLIDAY PAGE

REGISTERED APPRENTICES

Apprentice Removal & Abatement Only:

1000 hour terms at the following percentage of Journeyman's rates.

1st	2nd	3rd	4th
78%	80%	83%	89%

SUPPLEMENTAL BENEFIT

Per Hour:

Apprentice
Removal & Abatement \$ 13.65

4-12a - Removal Only

Boilermaker	11/01/2024
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JOB DESCRIPTION Boilermaker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

WAGES

Per Hour: 07/01/2024 01/01/2025

Boilermaker \$ 67.38 \$ 68.88

Repairs & Renovations 67.38 68.88

Repairs & Renovation: Includes Repairing, Renovating replacement of parts to an existing unit(s).

SUPPLEMENTAL BENEFITS

Per Hour:

Boilermaker	33.5% of hourly	33.5% of Hourly
Repair & Renovations	Wage Paid	Wage Paid
	+ \$ 26.85	+ \$26.85

NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay.

Repairs & Renovation Includes replacement of parts and repairs & renovation of existing unit.

OVERTIME PAY

See (*B, O, **U) on OVERTIME PAGE

Note:* Includes 9th & 10th hours, double for 11th or more.

** Labor Day ONLY, if worked.

Repairs & Renovation see (B,E,Q) on OT Page

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 12, 15, 25, 26, 29) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:

(1/2) Year Terms at the following percentage of Boilermaker's Wage

1st	2nd	3rd	4th	5th	6th	7th
65%	70%	75%	80%	85%	90%	95%

Supplemental Benefits Per Hour:

	33.5% of Hourly Wage Paid Plus Amount Below	33.5% of Hourly Wage Paid Plus Amount Below
1st Term	\$ 20.36	\$ 20.36
2nd Term	21.28	21.28
3rd Term	22.22	22.22
4th Term	23.12	23.12
5th Term	24.07	24.07
6th Term	25.00	25.00
7th Term	25.93	25.93

NOTE: "Hourly Wage Paid" shall include any and all premium(s)

4-5

Broadband

11/01/2024

JOB DESCRIPTION Broadband

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour:	07/01/2024	06/29/2025
Field Tech	\$ 52.40	\$ 53.97
Install/Repair		

For outside work (excluding installation on building construction/alteration/renovation projects), stopping at first point of attachment (demarcation), installing/maintaining/repairing broadband internet service.

SUPPLEMENTAL BENEFITS

Per Hour: \$ 23.24

OVERTIME PAY

See (B, K, *R) on OVERTIME PAGE

Note: *Two and one half times the hourly rate after the 8th hour

HOLIDAY

Paid: See (5, 6, 7, 11, 12) on HOLIDAY PAGE

4-CWA-Dist1

Carpenter

11/01/2024

JOB DESCRIPTION Carpenter

DISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

Per hour:	07/01/2024
Piledriver	\$ 60.59 + 10.00*
Dockbuilder	\$ 60.59 + 10.00*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker \$ 45.79

OVERTIME PAY

See (B, E2, O) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE.

Paid: for 1st & 2nd yr.

Apprentices See (5,6,11,13,25)

Overtime: See (5,6,11,13,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wages per hour

(1)year terms:

1st	2nd	3rd	4th
\$26.98	\$32.58	\$40.96	\$49.35
+ 5.50*	+ 5.50*	+ 5.50*	+ 5.50*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:

All Terms: \$ 32.34

8-1556 Db

Carpenter	11/01/2024
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JOB DESCRIPTION CarpenterDISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

Per hour: 07/01/2024

Carpet/Resilient

Floor Coverer \$ 55.05
+ 8.25*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

INCLUDES HANDLING & INSTALLATION OF ARTIFICIAL TURF AND SIMILAR TURF INDOORS/OUTDOORS.

SUPPLEMENTAL BENEFITS

Per hour:

\$ 39.45

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (18, 19) on HOLIDAY PAGE.

Paid for 1st & 2nd yr.

Apprentices See (5,6,11,13,16,18,19,25)

Overtime: See (5,6,11,13,16,18,19,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wage per hour - (1) year terms:

1st	2nd	3rd	4th
\$ 25.20	\$ 28.20	\$ 32.45	\$ 40.33
+ 1.85*	+ 2.35*	+ 2.85*	+ 3.85*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:

1st	2nd	3rd	4th
\$ 15.22	\$ 16.22	\$ 19.32	\$ 20.32

8-2287

Carpenter

11/01/2024

JOB DESCRIPTION CarpenterDISTRICT 8

ENTIRE COUNTIES

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

Per Hour:07/01/2024

Marine Construction:

Marine Diver

\$ 75.46

+ 10.00*

Marine Tender

\$ 55.00

+ 10.00*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime

SUPPLEMENTAL BENEFITS

Per Hour:

Journeyworker

\$ 45.65

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid:See (18, 19) on HOLIDAY PAGE

Overtime:See (5, 6, 11, 13, 16, 18, 19, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:

One (1) year terms.

1st year	\$ 26.98
	+ 5.50*
2nd year	32.58
	+ 5.50*
3rd year	40.96
	+ 5.50*
4th year	49.35
	+ 5.50*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental Benefits

Per Hour:

All terms

\$ 32.20

8-1456MC

Carpenter

11/01/2024

JOB DESCRIPTION CarpenterDISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

Per hour:07/01/2024

Building
Millwright

\$ 59.35

+ 13.12*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS

Per hour:

Millwright \$ 45.41

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (18, 19) on HOLIDAY PAGE

Paid: See (18,19) on HOLIDAY PAGE.

Overtime See (5,6,8,11,13,18,19,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wages per hour:

One (1) year terms:

1st.	2nd.	3rd.	4th.
\$ 32.16	\$ 37.61	\$ 43.06	\$ 53.96
+ 7.08*	+ 8.25*	+ 9.42*	+ 11.76*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:

One (1) year terms:

1st.	2nd.	3rd.	4th.
\$ 30.56	\$ 33.09	\$ 36.27	\$ 40.69

8-740.1

Carpenter

11/01/2024

JOB DESCRIPTION Carpenter

DISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per Hour:

07/01/2024

Timberman \$ 55.59
+ 10.26*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS

Per Hour:

07/01/2024

\$ 44.96

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Overtime: See (5, 6, 11, 13, 25) on HOLIDAY PAGE

Paid: See (1) on HOLIDAY PAGE.

Paid: for 1st & 2nd yr.

Apprentices See (5,6,11,13,25)

Overtime: See (5,6,11,13,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wages per hour:

One (1) year terms:

1st	2nd	3rd	4th
\$24.96	\$30.07	\$37.72	\$45.38
+ 5.55*	+ 5.55*	+ 5.55*	+ 5.55*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:

All terms \$ 31.95

Carpenter

11/01/2024

JOB DESCRIPTION Carpenter

DISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland, Westchester

PARTIAL COUNTIES

Orange: South of but including the following, Waterloo Mills, Slate Hill, New Hampton, Goshen, Blooming Grove, Mountainville, east to the Hudson River.

Putnam: South of but including the following, Cold Spring, TompkinsCorner, Mahopac, Croton Falls, east to Connecticut border.

Suffolk: West of Port Jefferson and Patchogue Road to Route 112 to the Atlantic Ocean.

WAGES

Per hour: 07/01/2024

Core Drilling:

Driller \$ 46.25
+ 3.25*

Driller Helper \$ 36.28
+ 3.25*

Note: Hazardous Waste Pay Differential:

For Level C, an additional 15% above wage rate per hour

For Level B, an additional 15% above wage rate per hour

For Level A, an additional 15% above wage rate per hour

Note: When required to work on water: an additional \$ 3.00 per hour.

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS

Per hour:

Driller and Helper \$ 30.24

OVERTIME PAY

See (B, G, P) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

8-1536-CoreDriller

Carpenter

11/01/2024

JOB DESCRIPTION Carpenter

DISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, New York, Putnam, Queens, Richmond

PARTIAL COUNTIES

Nassau: The portion of the county that lies west of Seaford Creek and south of the Southern State Parkway.

WAGES

Per hour: 07/01/2024

Show Exhibit \$ 55.75
+ 9.80**

Bldg. Carpenter* \$57.05
+ 8.39**

* Not applicable in Putnam County

**This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS

Per hour worked:

Show Exhibit \$ 45.20
Bldg. Carpenter 39.75

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (18, 19) on HOLIDAY PAGE
Paid: for 1st & 2nd yr.
Apprentices See (5,6,11,13,16,18,19,25)

Overtime: See (5,6,11,13,16,18,19,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wages per hour: Show Exhibit

(1) year terms:

1st.	2nd.	3rd.	4th.
\$22.30	\$27.88	\$36.24	\$44.60
+ 4.90*	+ 4.90*	+ 4.90*	+ 4.90*

*This portion is not subject to overtime premiums

Supplemental benefits per hour:
All terms \$ 30.25

Wages per hour: Bldg. Carpenter

(1) year terms:

1st	2nd	3rd	4th
\$ 22.20	\$ 25.20	\$ 29.45	\$ 37.33
+ 2.14*	+ 2.59*	+ 3.09*	+ 4.09*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:

1st	2nd	3rd	4th
\$ 15.37	\$ 16.42	\$ 19.52	\$ 20.52

8-EXHIB

Carpenter - Heavy&Highway

11/01/2024

JOB DESCRIPTION Carpenter - Heavy&Highway **DISTRICT** 8

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

PARTIAL COUNTIES
Nassau: That portion of the county that lies West of Seaford Creek and South of the Southern State Parkway.

WAGES

Per hour:

07/01/2024
Heavy & Highway
Carpenter \$ 60.59
+ 10.00*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS

Per hour worked:

Heavy & Highway
Carpenter \$ 45.70

OVERTIME PAY
See (B, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 13, 25) on HOLIDAY PAGE
Paid : for 1st & 2nd yr
Apprentices See (5, 6, 11, 13, 25)

REGISTERED APPRENTICES

Wage per hour:
One (1) year terms:

	1st	2nd	3rd	4th
Heavy & Highway	\$ 26.98	\$ 32.58	\$ 40.96	\$ 49.35

+ 5.50*

+ 5.50*

+ 5.50*

+ 5.50*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental Benefits:
Per Hour:

All terms

\$ 32.25

8-NYC H/H

Electrician

11/01/2024

JOB DESCRIPTION Electrician

DISTRICT 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES
Per hour: 07/01/2024

Tree Trimmer

\$ 35.24

Ground Person

20.69

Applies to line clearance, tree work, and right-of-way preparation on all new or existing overhead, electrical, telephone, and CATV lines.

SUPPLEMENTAL BENEFITS
Per hour:

Tree Trimmer

\$ 13.20

Ground Person

7.75

OVERTIME PAY
See (B, *H, Q) on OVERTIME PAGE
*Worked performed on Sundays & Holidays outside of 7.00am - 4.00pm shall be paid at double time, in addition to the holiday pay if applicable.

HOLIDAY
Paid: See (5, 6, 10, 11, 15, 16, 26) on HOLIDAY PAGE
Overtime: See (5, 6, 10, 11, 15, 16, 26) on HOLIDAY PAGE
(An additional floating holiday after four years service)

9-3T

Electrician

11/01/2024

JOB DESCRIPTION Electrician

DISTRICT 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES
Per hour: 07/01/2024

Electrician

\$ 32.00

Telephone

32.00

Maintenance and Jobbing-Electrical and teledata work of limited duration and scope, consisting of repairs and/or replacement of electrical and teledata equipment.

- Includes all work necessary to retrofit, service, maintain and repair all kinds of lighting fixtures and local lighting controls and washing and cleaning of foregoing fixtures.

SUPPLEMENTAL BENEFITS
Journeyworker:

07/01/2024

\$ 27.20

29.23*

* Applies to overtime hours

OVERTIME PAY
See (B, H) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

9-3m

Electrician**11/01/2024**

JOB DESCRIPTION Electrician**DISTRICT** 9**ENTIRE COUNTIES**

Bronx, Kings, New York, Queens, Richmond, Westchester

WAGES

Per hour: 07/01/2024

Service Technician \$ 37.40

Service and Maintenance on Alarm and Security Systems.

Maintenance, repair and /or replacement of defective (or damaged) equipment on, but not limited to, Burglar - Fire - Security - CCTV - Card Access - Life Safety Systems and associated devices. (Whether by service contract of T&M by customer request.)

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker: \$ 21.85

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 11, 15, 16, 17, 25, 26) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 17, 25, 26) on HOLIDAY PAGE

9-3H

Electrician**11/01/2024**

JOB DESCRIPTION Electrician**DISTRICT** 9**ENTIRE COUNTIES**

Bronx, Kings, New York, Queens, Richmond

WAGES

Per Hour: 07/01/2024

Electrician
Audio/Sound and
Temporary Light/
Power \$ 62.00

Solar-Photovoltaic Systems

Group 1 62.00

All tasks not listed in Group 2

Group 2 32.00

D.C portion and associated mechanical equipment related to solar systems,
(excluding battery storage and its associated equipment) including work related to
Weather Stations and Data Acquisitions/Monitoring Systems on solar photovoltaic systems.

Mounting of PV modules.

Mounting of DC optimizers to back of modules if the installation calls for this equipment.

Mounting of microinverters to back of modules and install trunk cabling on racking if called for.

Module to module connection of PV modules to adjacent modules. If racking manufacturer provides integrated inter-row cable management,
install string jumper to complete the string in full in same sub-array.

If racking manufacturer does not provide integrated inter-row cable management, run conduit between rows, bond it and run string jumper to
complete string in full in same sub-array.

Installation of weather stations and other weather station relevant sensors as specified.

Installation of data acquisition system (DAS) for PV system monitoring.

SHIFT WORK

Evening (Swing Shift):

Electrician

Audio/Sound and Temporary Light/ Power	\$ 72.75
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Night (Graveyard Shift): Electrician Audio/Sound and Temporary Light	\$ 81.49
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SUPPLEMENTAL BENEFITS

Per Hour:

Electrician	\$ 66.09 70.01*
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Swing Shift:	75.07 79.66*
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Graveyard Shift:	82.66 87.81*
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Temporary Light/Power:	30.33 33.64*
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Group 1:	66.09 70.01*
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Group 2:	27.21 29.23*
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* Applies when premium (OT) wages are paid.

Temporary Light and Power benefit rate applies for three or less workers.

Reduce benefit rate by 6.2% for any employee who has accumulated wages of \$168,600 for the same employer.

OVERTIME PAY

See (A, H) on OVERTIME PAGE

See (B) for Temporary Light and Power

HOLIDAY

Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages Per Hour:

One (1) year terms	
First term:	07/01/2024
0-6 mos.	\$ 18.00
7-12 mos.	18.50
Second term:	
0-6 mos.	19.50
7-12 mos.	20.50
Third term	
0-6 mos.	21.50
7-12 mos.	22.50
Fourth term:	
0-6 mos.	23.50
7-12 mos.	25.50
Fifth term/MLJ:	
0-12 mos.	27.50
13-18 mos.	32.00

Supplemental Benefits per hour:

One (1) year terms:

First Term:	Regular	Overtime
0-6 mos.	\$ 17.18	\$ 18.38
7-12 mos.	17.44	18.67

Second Term:		
0-6 mos.	17.97	19.26
7-12 mos.	18.49	19.85
Third Term:		
0-6 mos.	19.02	20.44
7-12 mos.	19.54	21.03
Fourth Term:		
0-6 mos.	20.06	21.62
7-12 mos.	21.11	22.80
Fifth Term/MIJ:		
1-12 mos.	24.79	26.52
13-18 mos.	27.21	29.23

9-3

Electrician - Highway and Street Lighting, Traffic Signals and Controls

11/01/2024

JOB DESCRIPTION Electrician - Highway and Street Lighting, Traffic Signals and Controls **DISTRICT** 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:

07/01/2024

Electro Pole Electrician \$ 62.00

Electro Pole Foundation
Installer 47.66

Electro Pole Maintainer 41.61

SUPPLEMENTAL BENEFITS

Per Hour:

07/01/2024

Electro Pole Electrician \$ 68.20
72.12*

Electro Pole Foundation
Installer 51.68
54.69*

Electro Pole Maintainer 47.03
49.66*

*Applies when premium wages are paid

Note: Reduce benefit rate by 6.2% for any employee who has accumulated wages in \$168,600 for the same employer.

OVERTIME PAY

See (A, B, E4, F, K) on OVERTIME PAGE

B - Applies to Electro Pole Foundation Installer

E4 - Applies to Electro Pole Maintainer

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

9-3J

Elevator Constructor

11/01/2024

JOB DESCRIPTION Elevator Constructor **DISTRICT** 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

PARTIAL COUNTIES

Rockland: Entire County except for the Township of Stony Point

Westchester: Entire County except for the Townships of Bedford, Lewisboro, Cortland, Mt. Kisco, North Salem, Pound Ridge, Somers and Yorktown.

WAGES

Per hour:	07/01/2024	03/17/2025
Elevator Constructor	\$ 80.35	\$ 83.37
Modernization & Service/Repair	63.16	65.54

SUPPLEMENTAL BENEFITS

Per Hour:		
Elevator Constructor	\$ 46.367	\$ 47.654
Modernization & Service/Repairs	45.217	46.470

OVERTIME PAY

Constructor See (D, M, T) on OVERTIME PAGE.

Modern/Service See (B, F, S) on OVERTIME PAGE.

HOLIDAY

Paid: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

WAGES PER HOUR:

6 MONTH TERMS:

1st Term*	2nd & 3rd Term*	4th & 5th Term	6th & 7th Term	8th & 9th Term
50%	50%	55%	65%	75%

* Note: 1st, 2nd, 3rd Terms are based on Average of the Constructor, the Modernization and the Service/Repair wage.
Terms 4 thru 9 Based on Journeyman's wage of classification Working in.

SUPPLEMENTAL BENEFITS:

	07/01/2024	03/17/2025
Elevator Constructor		
1st Term	\$ 0.00	\$ 0.00
2nd & 3rd Term	36.15	36.90
4th & 5th Term	37.19	37.99
6th & 7th Term	38.80	39.70
8th & 9th Term	40.41	41.40
Modernization & Service/Repair		
1st Term	\$ 0.00	\$ 0.00
2nd & 3rd Term	36.15	36.90
4th & 5th Term	37.19	37.99
6th & 7th Term	38.80	39.70
8th & 9th Term	40.41	41.40

4-1

Glazier	11/01/2024
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JOB DESCRIPTION Glazier

DISTRICT 8

ENTIRE COUNTIES

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

WAGES

Per hour:	07/01/2024	05/01/2025
		Additional
Glazier, Glass Tinting and Window Film	\$ 63.28	\$ 1.11***
Scaffolding, including swing scaffold	67.28	

*Mechanical Equipment	64.28
**Repair & Maintenance	30.76

*Mechanical equipment, scissor jacks, man lifts, booms & buckets 30' or more, but not pipe scaffolding.

**Repair & Maintenance- All repair & maintenance work on a particular building whenever performed, where the total cumulative Repair & Maintenance contract value is under \$193,000.

***To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per hour: 7/01/2024

Glazier, Glass Tinting \$ 42.13
Window Film, Scaffolding
and Mechanical Equipment

Repair & Maintenance 24.62

OVERTIME PAY

See (B, E, Q, V) on OVERTIME PAGE

For 'Repair & Maintenance' see (B, B2, I, S) on overtime page.

HOLIDAY

Paid: See (5, 6, 16, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

For 'Repair & Maintenance'

Paid: See(5, 6, 16, 25)

Overtime: See(5, 6, 16, 25)

REGISTERED APPRENTICES

Wage per hour:

(1) year terms at the following wage rates:

7/01/2024

1st term	\$ 22.34
2nd term	30.64
3rd term	40.87
4th term	50.14

Supplemental Benefits:

(Per hour)

1st term	\$ 19.27
2nd term	27.34
3rd term	32.85
4th term	36.01

8-1087 (DC9 NYC)

Insulator - Heat & Frost

11/01/2024

JOB DESCRIPTION Insulator - Heat & Frost

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per Hour: 07/01/2024

Insulators
Heat & Frost \$ 71.01

SUPPLEMENTAL BENEFITS

Per Hour:

Insulators \$ 36.76
Heat & Frost

OVERTIME PAY

See (B, E, *Q, V) on OVERTIME PAGE

* Triple time for Labor Day (If worked)

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages:

1 year terms.

Wages Per Hour:

1st	2nd	3rd	4th
\$ 31.96	\$ 39.06	\$ 46.16	\$ 53.26

Supplemental Benefits:

\$ 16.56	\$ 20.23	\$ 23.91	\$ 27.06
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4-12

Ironworker

11/01/2024

JOB DESCRIPTION Ironworker

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per Hour:	07/01/2024	01/01/2025 Additional
Stone Derrickmen Rigger	\$ 75.40	\$ 1.64*
Stone Handset Derrickman	72.55	1.11*

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per hour:

Stone Derrickmen Rigger	\$ 45.52
Stone Handset Derrickman	44.76

OVERTIME PAY

See (B, D1, *E, Q, **V) on OVERTIME PAGE

*Time and one-half shall be paid for all work on Saturday up to eight (8) hours and double time shall be paid for all work thereafter.

** Benefits same premium as wages on Holidays only

HOLIDAY

Paid: See (18) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 25) on HOLIDAY PAGE

Work stops at schedule lunch break with full day's pay.

REGISTERED APPRENTICES

Wage per hour:

Stone Derrickmen Rigger:

	1st	2nd	3rd	4th
07/01/2024	\$ 37.20	\$ 53.28	\$ 59.32	\$ 65.36

Supplemental Benefits:

Per hour:				
07/01/2024	23.27	34.39	34.39	34.39

Stone Handset:

1/2 year terms at the following hourly wage rate:

	1st	2nd	3rd	4th
07/01/2024	\$ 35.78	\$ 51.04	\$ 56.79	\$ 62.55

Supplemental Benefits:

Per hour:				
07/01/2024	22.95	34.08	34.08	34.08

9-197D/R

Ironworker

11/01/2024

JOB DESCRIPTION Ironworker		DISTRICT 4
ENTIRE COUNTIES Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester		
WAGES		
Per Hour:	07/01/2024	01/01/2025
Ornamental	\$ 47.65	Additional
Chain Link Fence	47.65	\$ 1.25/hr*
Guide Rail	47.65	
(*)To be allocated at a later date.		
SUPPLEMENTAL BENEFITS		
Per hour:		
Journeyworker:	\$ 66.29	
OVERTIME PAY See (B, B1, Q, V) on OVERTIME PAGE		
HOLIDAY		
Paid:	See (1) on HOLIDAY PAGE	
Overtime:	See (5, 6, 25) on HOLIDAY PAGE	
REGISTERED APPRENTICES		
1 year terms	07/01/2024	
1st Term	\$ 25.98	
2nd Term	28.45	
3rd Term	30.80	
4th Term	34.39	
Supplemental Benefits per hour:		
1st Term	\$ 16.29	
2nd Term	18.29	
3rd Term	19.29	
4th Term	20.29	
		4-580-Or
Ironworker		11/01/2024

JOB DESCRIPTION Ironworker		DISTRICT 4
ENTIRE COUNTIES Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester		
WAGES		
PER HOUR:	07/01/2024	01/01/2025
Ironworker:		Additional
Structural	\$ 57.20	\$ 1.75/Hr.*
Bridges		
Machinery		
(*)To be allocated at a later date.		
SUPPLEMENTAL BENEFITS		
PER HOUR PAID:		
Journeyman	\$ 89.85	
OVERTIME PAY See (B, B1, Q, *V) on OVERTIME PAGE *NOTE: Benefits are calculated for every hour paid.		
HOLIDAY		
Paid:	See (1) on HOLIDAY PAGE	
Overtime:	See (5, 6, 18, 19) on HOLIDAY PAGE	
REGISTERED APPRENTICES		
WAGES PER HOUR:		
6 month terms at the following rate:		

1st	\$ 30.23
2nd	30.83
3rd - 6th	31.44

Supplemental Benefits
PER HOUR PAID: 62.47

4-40/361-Str

Ironworker

11/01/2024

JOB DESCRIPTION Ironworker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

PARTIAL COUNTIES

Rockland: Southern section - south of Convent Road and east of Blue Hills Road.

WAGES

Per hour: 07/01/2024

Reinforcing &
Metal Lathing \$ 56.95

"Base" Wage 55.20
plus \$ 1.75

"Base" Wage is used to calculate overtime hours only.

SUPPLEMENTAL BENEFITS

Per hour:
Reinforcing & \$ 44.63
Metal Lathing

OVERTIME PAY

See (B, E, Q, *X) on OVERTIME PAGE

*Only \$23.50 per Hour for non worked hours

Supplemental Benefit Premiums for Overtime Hours worked:

Time & One Half \$ 51.13
Double Time 57.63

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 13, *18, **19, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

(1) year terms at the following wage rates:

Prior to 01/01/2020:

1st term	2nd term	3rd term	4th Term
Wage Per Hour:			
\$ 22.55	\$ 28.38	\$ 34.68	\$ 37.18
"Base" Wage			
\$21.00	\$26.80	\$33.10	\$35.60
plus \$1.55	plus \$1.58	plus \$1.58	plus \$1.58

"Base" Wage is used to calculate overtime hours ONLY.

SUPPLEMENTAL BENIFITS

Per Hour:

1st term	2nd term	3rd term	4th Term
\$18.17	\$21.34	\$22.00	\$22.50

After 01/01/2020:

1st term	2nd term	3rd term	4th Term
Wage Per Hour:			
\$ 22.55	\$ 23.60	\$ 24.60	\$ 25.65
"Base" Wage			

\$21.00	\$22.00	\$23.00	\$24.00
plus \$1.55	plus \$1.60	plus \$1.60	plus \$1.65

"Base" Wage is used to calculate overtime hours ONLY.

SUPPLEMENTAL BENIFITS
Per Hour:

1st term	2nd term	3rd term	4th Term	
\$18.40	\$17.40	\$16.45	\$15.45	4-46Reinf

Laborer	11/01/2024
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JOB DESCRIPTION Laborer

DISTRICT 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES
Per hour:

Striper (Highway/streets):	07/01/2024	07/01/2025
Striping-Machine Operator	\$ 41.00	Additional \$ 3.05**
Striping Thermoplastic	45.00	
Flagger - Traffic Safety*	39.00	

Note: * Includes but is not limited to: Positioning of cones and directing of traffic using handheld devices. Excludes the Driver/Operator of equipment used in protection of traffic safety.

** To be allocated at a later date.

SUPPLEMENTAL BENEFITS
Per hour paid:

Journeyworker	\$ 19.27
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OVERTIME PAY
See (B, H) on OVERTIME PAGE

HOLIDAY	
Paid:	See (5, 6, 8, 13) on HOLIDAY PAGE
Overtime:	See (5, 6, 8, 13) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:	
1st Term (1-2000 hours)	\$ 31.36
2nd Term (2001-4000 hours)	33.00

Supplemental Benefits per hour:	
All Terms	19.27

9-1010-LS

Laborer	11/01/2024
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JOB DESCRIPTION Laborer

DISTRICT 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES
Per hour:

Laborer/Excavation	07/01/2024
**Asbestos and Lead Abatement & Removal, Hazardous Waste Removal (including soil)	\$ 45.00
Basic	45.00
Flagman	45.00
Pipelayer	45.00

*Tree Work, *Landscape 45.00

*Includes trimming, cutting, planting and/or removal of trees.

** Applies to Heavy & Highway projects

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker: \$ 54.03

Note: No payment of Supplemental Benefits is required on paid holidays, when employees do not work.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

When an observed holiday falls on a Saturday, work done shall be paid at double time.

HOLIDAY

Paid: See (2, 20) on HOLIDAY PAGE

Overtime: See (2, 5, 6, 11, 20) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:

1000 hour terms at the following hourly wage rate.

07/01/2024

1st	0 - 1000	\$ 22.50
2nd	1001-2000	27.00
3rd	2001-3000	33.75
4th	3001-4000	40.50

Supplemental Benefits per hour:

All Apprentices 54.03

9-731Ex

Laborer

11/01/2024

JOB DESCRIPTION Laborer

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:

GROUP 14: Blasters.

GROUP 16: Tunnel workers - including Miners, Drill Runners, Iron Men, Maintenance Men, Conveyor Men, Safety Miners, Riggers, Block Layers, Cement Finishers, Rod Men, Caulkers, Powder Carriers, Miners' Helpers, Chuck Tenders, Track Men, Nippers, Brake Men, Derail Men, Form Men, Bottom Bell, Top Bell or Signal men, Form Workers, Movers, Concrete Workers, Shaft Men, Tunnel Laborers and Caulkers' Helpers.

GROUP 17: All others including: Powder Watchmen, Top Laborers and Changehouse Attendants.

Wages: (per hour) 07/01/2024

Laborer (Tunnel)-FREE AIR:

Group 14	\$ 77.13
Group 16	73.75
Group 17*	68.18

Small Bore Micro
Tunnel Machines 80% of rates above

For Repairs on Existing
Water Tunnels 90% of rates above

For Repairs of Sewer &
Drainage Tunnels 85% of rates above

For Repair & Maintenance

of all Subway & Vehicular Tunnels 80% of rates above

*An additional \$3.00 per day when using an air spade, jack hammer or pavement breaker.

Note: Employer shall pay \$10.00 per day for each half mile starting at a point 500 feet from the bottom of the shaft.

SUPPLEMENTAL BENEFITS

Per hour:

GROUP 14	\$ 55.32
GROUP 16	53.06
GROUP 17	49.11

Small Bore Micro Tunnel Machines 80% of rates above

For Repairs on Existing Water Tunnels 90% of rates above

For Repairs of Sewer & Drainage Tunnels 85% of rates above

For Repair & Maintenance of all Subway& Vehicular Tunnels 80% of rates above

OVERTIME PAY

OVERTIME:

For Laborer (Free Air) See (D, M, R*) on OVERTIME PAGE.
For Repair Categories See (B, F, R*) on OVERTIME PAGE.
& Micro Tunneling
* Straight time first 8 hours, double time after 8 hours.

HOLIDAY

Paid: See (5, 6, 9, 11, 12, 15, 16, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 9, 11, 12, 15, 16, 25) on HOLIDAY PAGE
Good Friday may be exchanged for one of the holidays listed.

9-147Tnl/Free

Laborer - Building

11/01/2024

JOB DESCRIPTION Laborer - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:	07/01/2024	01/01/2025 Additional
Basic Laborer and Mason Tender	\$ 44.70*	\$ 1.25**

*Before calculating premium wage deduct \$3.25

** To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per hour:

Basic Laborer and
Mason Tender \$ 29.99

OVERTIME PAY

See (B, B2, E, E2, Q, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:

1000 hour terms at the following wage rate:

Term:	1st	2nd	3rd	4th
Basic Laborer and Mason Tender 07/01/2024	\$ 22.05*	\$ 23.80*	\$ 25.30*	\$ 27.80*

*Before calculating premium wage deduct \$0.50

Supplemental Benefits per hour:

All Terms 07/01/2024	\$ 10.77
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9-MTDC(79)

Laborer - Building	11/01/2024
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JOB DESCRIPTION Laborer - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:

07/01/2024	07/01/2025 Additional
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Skilled Interior Demolition Laborer:	\$ 39.70*	\$ 0.75***
General Interior Demolition Laborer:	28.89**	

* Before calculating overtime wages deduct \$1.70

**General Demolition Laborer performs manual work and work incidental to demolition, such as loading and carting of debris from work site to an area where it can be loaded into trucks for removal. Also performs clean-up of the site when demolition is complete.

***To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per Hour:

Skilled Interior Demolition Laborer:	24.84
General Interior Demolition Laborer:	19.16

OVERTIME PAY

See (B, B2, I, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage Per Hour:

1000 hour terms at the following wage rate:

1st	2nd	3rd	4th
\$ 21.80*	\$ 23.55*	\$ 25.05*	\$ 27.55*

* Before calculating overtime wages deduct \$0.50

Supplemental Benefits Per Hour:

All Terms:	10.47
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9-MTDC (79-ID)

Laborer - Building	11/01/2024
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JOB DESCRIPTION Laborer - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:	07/01/2024
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	1st	2nd	3rd	4th
01/01/2024	\$22.05*	\$23.80*	\$25.30*	\$27.80*

* Before calculating overtime wages deduct \$ 0.50

Supplemental Benefits per hour:

All Terms:
07/01/2024

\$ 10.77

9-30 (79)

Laborer - Building

11/01/2024

JOB DESCRIPTION Laborer - Building

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour:	07/01/2024	01/06/2025
Asbestos, Lead and Hazardous Material Abatement Laborer	\$ 39.00	Additional \$ 1.50/Hr.*

(*)To be allocated at a later date.

(Re-Roofing Removal See Roofer)

NOTE: Asbestos removed from Mechanical Systems not to be scrapped
See Asbestos Worker

SUPPLEMENTAL BENEFITS

Per Hour:

Laborer \$ 20.10

OVERTIME PAY

See (B, B2, I) on OVERTIME PAGE

*Calculate at \$39.00 per hour then add \$1.55

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 28) on HOLIDAY PAGE

REGISTERED APPRENTICES

1000 hour terms at the following:

Per Hour:

1st Term	\$ 20.00*
2nd Term	21.00**
3rd Term	24.00***
4th Term	26.00****

SUPPLEMENTAL BENEFIT

Per Hour:

All Terms \$ 14.35

OVERTIME PAY:

*Calculate at \$20.00 per hour then add \$1.00

**Calculate at \$21.00 per hour then add \$1.00

***Calculate at \$24.00 per hour then add \$1.00

****Calculate at \$26.00 per hour then add \$1.00

4-NYDC(78)

Laborer - Building

11/01/2024

JOB DESCRIPTION Laborer - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:	07/01/2024	01/01/2025 Additional
Skilled Demolition Laborer:	\$ 42.48*	\$ 0.50***
General Demolition Laborer:	31.06**	

*Before calculating overtime wages deduct \$3.00

**Before calculating overtime wages deduct \$2.35

***To be allocated at a later date.

**General Demolition Laborer performs manual work and work incidental to demolition, such as loading and carting of debris from work site to an area where it can be loaded into trucks for removal. Also performs clean-up of the site when demolition is complete.

NOTE: Total Demolition Only: Demolition shall be the complete demolition (wrecking) or dismantling of entire buildings or structures. Also may include the removal of all or any portion of a roof in which structural change is to occur. Structural change is defined as the removal of structural slabs, steel members, concrete members and penetration through the structural slab.

SUPPLEMENTAL BENEFITS

Per hour:
Journeyworker:

Skilled Demolition Laborer:	\$ 28.92
General Demolition Laborer:	21.98

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:
(1) year terms at the following wage.

07/01/2024	1st	2nd	3rd	4th
	\$ 22.05*	\$ 23.80*	\$ 25.30*	\$ 27.80*

*Before calculating overtime wages deduct \$0.50

Supplemental Benefits per hour:

All Terms:	
07/01/2024	\$ 10.77

9-79/95

Laborer - Concrete & Asphalt Paving

11/01/2024

JOB DESCRIPTION Laborer - Concrete & Asphalt Paving

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Group 1: Slurry Seal Coater, Maintenance Safety Surface, Small Power Tool Operator, Play Equipment Installer, Temporary Fence Installer & Repairs, Laborer.

Group 2: Production Paving Work: Shoveler, small equipment operator.

Per hour:	07/01/2024
Concrete Formsetter	\$ 49.35 + \$ 8.00*
Asphalt Screeperson/Micro Paver	49.95 + \$ 8.00*
Asphalt Raker	49.35 + \$ 8.00*
Group 1	45.48 + \$ 8.00*
Group 2	45.48 + \$ 8.00*

* This portion is not subjected to overtime premiums.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker: \$ 45.55

Note: No payment of supplemental benefits is required on paid holidays, when employees do not work.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

Note: Saturday premium rate applies from 7:00 am on Saturday to 6:59 am Sunday

Note: Sunday premium rate applies from Sunday 7:00 am to Monday 6:59 am.

HOLIDAY

Paid: See (5, *11, 20) on HOLIDAY PAGE

HOLIDAY:

Overtime: See (21,22)** on HOLIDAY PAGE.

Note: See (5,20) Holiday pay -at the single time pay rate-shall be prorated based on 25% of a day's wages and benefits for each day worked during that calendar week.

**New Year's Day and Christmas Day: If an employee is performing work on these (2) days the employee will receive the single rate plus 25%.

* Columbus Day shall be an unpaid holiday. In the event work is performed on Columbus Day, wages shall be paid on a double time basis.

Note-When Independence day falls on Saturday, it will be observed on that Saturday, however, when it occurs on a Sunday, it will be observed on the Monday.

REGISTERED APPRENTICES

Wage per hour:

2000 hours term:

1st term	2nd term
1-1999	2000-4000
\$ 31.36 + \$ 8.00*	\$ 33.00 + \$ 8.00*

* This portion is not subjected to overtime premiums.

Supplemental Benefits per hour:

2000 hours term:

1st term	2nd term
1-1999	2000-4000
\$ 18.67	\$ 18.67

9-1010H/H

Laborer - Trac Drill

11/01/2024

JOB DESCRIPTION Laborer - Trac Drill

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Group 1: Chipper/Jackhammer, Powder Carrier, Hydraulic Chuck tender, Chuck Tender and Nipper, Magazine Keeper

Group 2: Hydraulic Trac Drill

Group 3: Air Trac, Wagon and Quarry bar

Group 4: Blaster

Per Hour: 07/01/2024

Group 1	\$ 45.00
Group 2	52.35
Group 3	51.52
Group 4	58.21

SUPPLEMENTAL BENEFITS

Per Hour:

All Classifications: 54.03

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

When an observed holiday falls on a Saturday, work done shall be paid at double time.

HOLIDAY

Paid: See (2, 20) on HOLIDAY PAGE

Overtime: See (2, 5, 6, 11, 20) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:

1000 hour terms at the following hourly wage rate.

07/01/2024

1st	0 - 1000	\$ 22.50
2nd	1001-2000	27.00
3rd	2001-3000	33.75
4th	3001-4000	40.50

Supplemental Benefits per hour:

All Apprentices 54.03

9-731/29

Laborer - Tunnel

11/01/2024

JOB DESCRIPTION Laborer - Tunnel

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

GROUP 5: Blasters and Mucking Machine Operators

GROUP 6: Tunnel Workers*(including Miners, Drill Runners, Iron Men, Maintenance Men, Inside Muck Lock Tender, Pumpmen, Electricians, Cement Finishers, Rod Men, Caulkers, Carpenters, Hydraulic Men, Shield Drivers, Monorail Operators, Motor Men, Conveyor Men, Safety Miners, Powder Carriers, Pan Men, Riggers, Miner's Helpers, Chuck Tenders, Track Men, Nippers, Brake Men, Form Workers, Concrete Workers, Tunnel Laborers, Caulker's Helpers), Hose Men, Grout Men, Gravel Men, Derail Men and Cable Men.

GROUP 7: Top Nipper

GROUP 8,9: Outside Man Lock Tender, Outside Muck Lock Tender, Shaft Men, Gauge Tender and Signal Men.

GROUP 10: Powder Watchmen, Top Laborers and Changehouse Attendants.

WAGES: (per hour)

07/01/2024

Laborer (Compressed Air):

GROUP 5	\$ 80.82
GROUP 6	77.95
GROUP 7	76.65
GROUP 8,9	75.10
GROUP 10	66.18

Note: Employer shall pay \$10.00 per day for each one half (1/2) mile or fraction starting from a point 500 feet from the shaft.

SUPPLEMENTAL BENEFITS

SUPPLEMENTAL BENEFITS:

per hour:

GROUP 5	\$ 57.61
GROUP 6	55.81
GROUP 7	54.68
GROUP 8,9	53.84

GROUP 1050.85

OVERTIME PAY
See (D, M, *R) on OVERTIME PAGE
NOTE: Time and one-half to be paid for all overtime repair-maintenance work on existing equipment and facilities.

* Straight time first 8 hours, double time after 8 hours.

HOLIDAY
Paid: See (5, 6, 9, 11, 12, 15, 16, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 9, 11, 12, 15, 16, 25) on HOLIDAY PAGE
Good Friday may be exchanged for one of the holidays listed.

9-147Tnl/Comp Air

Mason

11/01/2024

JOB DESCRIPTION Mason**DISTRICT** 4

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES
Per Hour:07/01/2024

Brick/Block Layer\$ 67.14

Base Wage for OT Calculation\$ 55.93

SUPPLEMENTAL BENEFITS
Per Hour:

Brick/Block Layer\$ 34.90

OVERTIME PAY
See (A, E, E2, Q) on OVERTIME PAGE
Note: OT Calculated on Base Wage plus \$ 11.21/hr.

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
(800 hour) Terms at the following Percentage of Journey workers "Base Wage" plus \$ 5.94/hr.:

1st	2nd	3rd	4th	5th
50%	60%	70%	80%	90%

Supplemental Benefits per hour:

All Apprentices\$ 24.70

4-1Brk

Mason - Building

11/01/2024

JOB DESCRIPTION Mason - Building**DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES
Building

Wages per hour:07/01/202401/01/2025
Additional

Mosaic & Terrazzo Mechanic	\$ 60.98	\$ 1.06*
Mosaic & Terrazzo Finisher	58.96	

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS
Per hour:

Mosaic & Terrazzo Mechanic\$ 31.36*
+ \$9.78

Mosaic & Terrazzo Finisher \$ 31.36*
+ \$9.77

*This portion of benefits subject to same premium rate as shown for overtime wages.

OVERTIME PAY

See (A, E, Q) on OVERTIME PAGE

07/01/2024- Deduct \$7.00 from hourly wages before calculating overtime.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

Easter Sunday is an observed holiday. Holidays falling on a Saturday will be observed on that Saturday. Holidays falling on a Sunday will be celebrated on the Monday.

REGISTERED APPRENTICES

Wages Per hour:

	1st	2nd	3rd	4th	5th	6th
	0- 1500	1501- 3000	3001- 3750	3751- 4500	4501- 5250	5251- 6000
07/01/2024	\$ 25.19	\$ 32.39	\$ 38.18	\$ 40.78	\$ 49.00	\$ 55.75

Supplemental Benefits per hour:

07/01/2024	\$7.12* + 3.43	\$9.16* + 4.40	\$17.22* + 5.87	\$23.86* + 6.84	\$24.86* + 7.83	\$27.36* + 8.80
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*This portion of benefits subject to same premium rate as shown for overtime wages.

9-7/3

Mason - Building

11/01/2024

JOB DESCRIPTION Mason - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:	07/01/2024	12/02/2024 Additional
Tile Setters	\$ 64.40	\$ 0.72*

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per Hour:	\$ 28.51* + 8.52
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*This portion of benefits subject to same premium rate as shown for overtime wages.

OVERTIME PAY

See (B, *E, Q, V) on OVERTIME PAGE

Work beyond 10 hours on Saturday shall be paid at double the hourly wage rate.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:

750 hour terms at the following wage rate:

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
	1- 750	751- 1500	1501- 2250	2251- 3000	3001- 3750	3751- 4500	4501- 5250	5251- 6000	6001- 6750	6501- 7000
07/01/2024	\$22.19	\$27.21	\$34.45	\$39.46	\$43.07	\$46.58	\$50.23	\$55.24	\$57.71	\$62.00

Supplemental Benefits per hour:

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
07/01/2024										
	\$12.55*	\$12.55*	\$15.36*	\$15.36*	\$16.36*	\$17.86*	\$18.86*	\$18.86*	\$18.86*	\$24.11*
	+\$.76	+\$.81	+\$.91	+\$.96	+\$1.43	+\$1.48	+\$1.91	+\$1.97	+\$4.57	+\$5.18

*This portion of benefits subject to same premium rate as shown for overtime wages.

9-7/52

Mason - Building	11/01/2024
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JOB DESCRIPTION Mason - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per hour:	07/01/2024	01/06/2025
		Additional

Building-Marble Restoration:

Marble, Stone &	\$ 47.72	\$ 0.57*
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Terrazzo Polisher

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per Hour:

Journeyworker:

Building-Marble Restoration:

Marble, Stone & Polisher	\$ 31.50
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OVERTIME PAY

See (B, *E, Q, V) on OVERTIME PAGE

* On Saturdays, 8th hour and successive hours paid at double hourly rate.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 11, 15, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

WAGES per hour:

900 hour term at the following wage:

1st	2nd	3rd	4th
1- 900	901- 1800	1801- 2700	2701
\$ 33.40	\$ 38.18	\$ 42.94	\$ 47.72

Supplemental Benefits Per Hour:

29.06	29.87	30.69	31.50
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9-7/24-MP

Mason - Building	11/01/2024
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JOB DESCRIPTION Mason - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

WAGES

Per Hour:	07/01/2024	01/06/2025
		Additional
Marble Cutters & Setters	\$ 63.92	\$ 0.75*

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per Hour:

Journeyworker \$ 40.05

OVERTIME PAY

See (B, E, Q, V) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage Per Hour:

07/01/2024

750 hour terms at the following wage

1st	2nd	3rd	4th	5th	6th	7th	8th
0-3000	3001-3750	3751-4500	4501-5250	5251-6000	6001-6750	6751-7500	7500+
\$ 27.01	\$ 40.52	\$ 43.88	\$ 47.26	\$ 50.64	\$ 54.32	\$ 60.71	\$ 63.92

Supplemental Benefits per hour:

07/01/2024

1st	2nd	3rd	4th	5th	6th	7th	8th
\$ 26.42	\$ 29.76	\$ 30.61	\$ 31.44	\$ 32.28	\$ 37.55	\$ 39.23	\$ 40.05

9-7/4

Mason - Building

11/01/2024

JOB DESCRIPTION Mason - BuildingDISTRICT 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:	07/01/2024	12/02/2024
		Additional
Tile Finisher	\$ 49.46	\$ 0.59*

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per Hour:
\$ 25.36*
+ \$8.33

* This portion of benefits is subject to same premium rate as shown for overtime wages.

OVERTIME PAY

See (A, *E, Q) on OVERTIME PAGE
Double time rate after 10 hours on Saturdays

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 15, 16, 25) on HOLIDAY PAGE

9-7/88-tf

Mason - Building

11/01/2024

JOB DESCRIPTION Mason - BuildingDISTRICT 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per hour:	07/01/2024	01/06/2025
Marble, Stone,		Additional
Maintenance Finishers:	\$ 27.72	\$ 0.41*

Note 1: An additional \$2.00 per hour for time spent grinding floor using "60 grit" and below.
Note 2: Flaming equipment operator shall be paid an additional \$25.00 per day.

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per Hour:

Marble, Stone
Maintenance Finishers: \$ 15.74

OVERTIME PAY

See (B, *E, Q, V) on OVERTIME PAGE
*Double hourly rate after 8 hours on Saturday

HOLIDAY

Paid: See (5, 6, 8, 11, 15, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 11, 15, 25) on HOLIDAY PAGE
1st term apprentice gets paid for all observed holidays.

REGISTERED APPRENTICES

WAGES per hour:	07/01/2024
0-750	\$ 22.32
751-1500	23.04
1501-2250	23.75
2251-3000	24.48
3001-3750	25.56
3751-4500	27.00
4501+	27.72

Supplemental Benefits:
Per hour:

0-750	12.69
751-1500	13.10
1501-2250	13.51
2251-3000	13.91
3001-3750	14.52
3751-4500	15.33
4501+	15.74

9-7/24M-MF

Mason - Building / Heavy&Highway	11/01/2024
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JOB DESCRIPTION Mason - Building / Heavy&HighwayDISTRICT 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per hour:	07/01/2024	01/06/2025 Additional
Marble-Finisher	\$ 49.99	\$ 0.53*

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Journeyworker:
Per hour

Marble- Finisher \$ 37.39

OVERTIME PAY

See (B, E, Q, V) on OVERTIME PAGE
Work beyond 8 hours on a Saturday shall be paid at double the rate.

HOLIDAY

Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

When an observed holiday falls on a Sunday, it will be observed the next day.

9-7/20-MF

Mason - Building / Heavy&Highway

11/01/2024

JOB DESCRIPTION Mason - Building / Heavy&Highway

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2024

Cement Mason \$ 57.72

SUPPLEMENTAL BENEFITS

Per Hour:

Cement Mason \$ 34.66

1.5 X overtime rate \$ 62.95

2 X overtime rate \$ 69.32

OVERTIME PAY

See (B1, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 11, 13, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

(1) year terms at the following wage:

1st Term \$ 23.39

2nd Term \$ 28.29

3rd Term \$ 33.69

Supplement Benefits per hour paid:

	ST	1.5X OT	2X OT
1st Term	\$ 14.86	\$ 22.30	\$ 29.72
2nd Term	\$ 15.16	\$ 22.75	\$ 30.32
3rd Term	\$ 15.27	\$ 22.91	\$ 30.54

4-780

Mason - Building / Heavy&Highway

11/01/2024

JOB DESCRIPTION Mason - Building / Heavy&Highway

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

NOTE: Shall include but not limited to Precast concrete slabs (London Walks) Marble and Granite pavers 2'x 2' or larger.

Per Hour:

	07/01/2024	05/01/2025
Stone Setter	\$ 69.91	Additional
Base Rate	53.84*	\$ 3.42/Hr+
Stone Tender	\$51.82	
Base Rate	44.54*	

(+)To be allocated at a later date for all classes.

SUPPLEMENTAL BENEFITS

Per Hour:

Stone Setter \$ 42.52

Stone Tender 23.15

OVERTIME PAY

See (*C, **E, Q) on OVERTIME PAGE

* Base Rates are used to Calculate Overtime Premiums then adding in: \$15.81/Hr. for Stone Setter or \$7.28/Hr. for Stone Tender.

** On weekdays the eighth (8th) and ninth (9th) hours are time and one-half all work thereafter is paid at double the hourly rate.

*** The first nine (9) hours on Saturday is paid at time and one-half all work thereafter is paid at double the hourly rate.

HOLIDAY

Paid: See (*18) on HOLIDAY PAGE
Overtime: See (5, 6, 10) on HOLIDAY PAGE
Paid: * Must work first 1/2 of day.

REGISTERED APPRENTICES

Per Hour:

Stone Setter(800 hour) terms at the following Percentage of Stone Setters Base wage rate per hour plus \$7.32:

1st	2nd	3rd	4th	5th	6th
50%	60%	70%	80%	90%	100%

Supplemental Benefits:

All Apprentices \$ 25.85

4-1Stn

Mason - Heavy&Highway

11/01/2024

JOB DESCRIPTION Mason - Heavy&Highway

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2024

Pointer, Caulkers &
Cleaners \$ 63.69

SUPPLEMENTAL BENEFITS

Per Hour:

Pointer, Cleaners &
Caulkers \$ 31.90

OVERTIME PAY

See (B, E2, H) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:

One (1) year terms at the following wage rates.

1st	2nd	3rd	4th
\$ 32.76	\$ 37.09	\$ 42.97	\$ 51.60

Apprentices Supplemental Benefits:

(per hour paid) \$ 15.40 \$ 21.70 \$ 24.45 \$ 25.45

4-1PCC

Operating Engineer - Building

11/01/2024

JOB DESCRIPTION Operating Engineer - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Putnam, Queens, Richmond, Westchester

PARTIAL COUNTIES

Dutchess: that part of Dutchess County lying south of the North City Line of the City of Poughkeepsie.

WAGES

NOTE: Construction surveying

Party Chief--One who directs a survey party

Instrument Man--One who runs the instrument and assists Party Chief.

Rodman--One who holds the rod and assists the Survey Crew

Wages:(Per Hour) 07/01/2024

Building Construction:

Party Chief	\$ 79.99
Instrument Man	60.36
Rodman	40.45

Steel Erection:

Party Chief	83.13
Instrument Man	64.21
Rodman	44.33

Heavy Construction-NYC counties only:
(Foundation, Excavation.)

Party Chief	88.06
Instrument man	65.66
Rodman	55.70

SUPPLEMENTAL BENEFITS

Per Hour: 07/01/2024

Building Construction \$ 28.63* +\$ 7.65

Steel Erection 29.23* + 7.65

Heavy Construction 30.04* + 7.64

* This portion subject to SAME premium as wages

Non-Worked Holiday Supplemental Benefit:

21.83

OVERTIME PAY

See (A, B, E, Q) on OVERTIME PAGE

Code "A" applies to Building Construction and has double the rate after 7 hours on Saturdays.

Code "B" applies to Heavy Construction and Steel Erection and had double the rate after 8 hours on Saturdays.

HOLIDAY

Paid: See (5, 6, 9, 11, 15, 16, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 9, 11, 15, 16, 25) on HOLIDAY PAGE

9-15Db

**Operating Engineer - Building, Maintenance, Steel Erection
& Heavy Construction**

11/01/2024

JOB DESCRIPTION Operating Engineer - Building, Maintenance, Steel Erection & Heavy Construction

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

STEEL ERECTION:

Group 1: Derrick, travelers, tower, crawler tower & climbing cranes

Group 2: Oiler (Truck Crane)

Group 3: Oiler (Crawler Crane)

BUILDING CONSTRUCTION:

Group 1: Installing, repairing, maintaining, dismantling of all equipment including Steel cutting& bending machines, mechanical heaters, mine hoists, climbing cranes, tower cranes, Linden Peine, Lorain, Liebherr, Mannes and machines of a similar nature; Well Point system, Deep Well pumps, Concrete mixers with loading devices, Concrete plants, motor generators (When used for temporary power and lights)(Driving maintenance trucks and mounted-welded machines)-All Pumps(excluding River Cofferdam Pumps and Well Point Pumps), Motorized Concrete Buggies(When three or more are on job site), Skid-Steer and similar machines

Group 2:Maintenance of: Pumps, Generators, Mixers, Heaters

Group 3: Oilers of all gasoline, electric, diesel or air operated Gradalls; Concrete Pumps, Overhead Cranes in Power Houses, Assist in oiling, greasing and repairing of all machines, including: Driving Truck Cranes, Driving and operating Fuel and Grease Trucks, Cherry Pickers(Hydraulic Cranes) over 70,000 GVW and machines of a similar nature

Group 4: Oiler on Crawler Cranes, Backhoes, Trenching Machines, Guniting Machines, Compressors(3 or more in battery)

Group 5: Maintenance on Radiant Mechanical Heaters

HEAVY CONSTRUCTION (Excavation, Foundations, etc)

Group 1:Maintenance of: Generators, Light Towers

Group 2:Maintenance of: Pumps, Mixers including mudsucking

Group 3: Base Mounted Tower Cranes

Group 4: Installing, repairing, maintaining, dismantling(of all equipment including Steel cutting & Bending machines, Fusion Coupling Machines, Vermeer Trenching machines, on-site crushing plant, mechanical heaters(1 through 7),Mine hoists, Tower Cranes, Linden Peine, Lorrain, Liebherr, Mannes or machines of a similar nature, Wellpoints)-Driving maintenance trucks and truck mounted welding machines, burning, welding-operating of accumulator for shield-driven tunnels, in addition to the performance of other duties: Handling, installation, jointing, coupling of all permanent steel and plastic pipe. RIDE UPON MOLES-tunnel boring machines-MICRO TUNNELING SYSTEMS, All temporary pipefitting;When three or more motorized concrete buggies(Ride type)are utilized on the jobsite they shall be serviced, maintained and repaired by the maintenance engineer. The Operating Engineer on autogrades(C.M.I.)is to be assisted by the maintenance engineer who shall in addition perform other duties.

WAGES:

Per hour: 07/01/2024

Steel Erection:

Group 1	\$ 81.43
Group 2	76.58
Group 3	58.22

Building Construction:

Group 1	\$ 72.41
Group 2	57.36
Group 3	69.09
Group 4	52.62
Group 5	46.07

Heavy Construction:

Group 1	\$ 57.43
Group 2	58.68
Group 3	108.95
Group 4	84.24

SUPPLEMENTAL BENEFITS

Per Hour: 07/01/2024

Building Construction	\$ 30.52* + \$7.40
Steel Erection & Heavy	31.02* + \$7.40

* This portion of benefits is subject to same OT premium as wages.

Non-Worked Holiday Supplemental Benefits:

21.87

OVERTIME PAY

See (D, O) on OVERTIME PAGE

HOLIDAY

Paid:	See (5, 6, 9, 11, 15, 16, 25) on HOLIDAY PAGE
Overtime:	See (5, 6, 9, 11, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages Per Hour:
(1) year terms at the following wage rates:

1st	2nd	3rd	4th.
\$ 38.52	\$ 45.23	\$ 48.70	\$ 52.17

Supplemental Benefits:
Per Hour:
All Terms \$ 16.52* + 7.40

* This portion of benefits is subject to same OT premium as wages.

9-15Ab

Operating Engineer - Building / Heavy&Highway

11/01/2024

JOB DESCRIPTION Operating Engineer - Building / Heavy&Highway

DISTRICT 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES
EQUIPMENT COVERED: Jet-Rodder/Vacuum Truck, Flusher, Sewer Rodder, Stetco Hoist and similar, Sewer Winch/Tugger Hoist and similar, Vacall/Vactor, Closed Circuit Television Inspection Equipment, Chemical Grouting Equipment and similar, John Beame, Meyers and similar.

Per Hour: 07/01/2024

Maintenance Engineer \$ 84.24
(Sewer Systems)

SUPPLEMENTAL BENEFITS
Per Hour:

Journeyman \$ 31.02*
+ \$ 7.40
*This portion of benefits subject to SAME premium as OT wages.

Non-Worked Holiday Supplemental Benefits:
\$ 21.87

OVERTIME PAY
See (D, O) on OVERTIME PAGE

HOLIDAY
Paid: See (5, 6, 7, 11, 16) on HOLIDAY PAGE
Overtime: See (5, 6, 7, 11, 16) on HOLIDAY PAGE

REGISTERED APPRENTICES

Per Hour:
(1) year terms at the following wage rates.

1st	2nd	3rd	4th
\$38.52	\$45.23	\$48.70	\$52.17

Supplemental Benefits:
Per Hour:

All Apprentices: \$ 16.52* + \$ 7.40

* This portion of benefits subject to the SAME premium as OT wages

9-15Sewer

Operating Engineer - Building / Heavy&Highway

11/01/2024

JOB DESCRIPTION Operating Engineer - Building / Heavy&Highway

DISTRICT 4

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES
Per Hour: 07/01/2024 08/01/2024

Well Driller	\$ 41.85	\$ 43.11
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Well Driller		
Helper	\$ 36.26	\$ 37.35

Hazardous Waste Differential
Added to Hourly Wage:

Level A	\$ 3.00
Level B	\$ 2.00
Level C	\$ 1.00

Monitoring Well Work
Add to Hourly Wage:

Level A	\$ 3.00
Level B	\$ 2.00

SUPPLEMENTAL BENEFITS

Per Hour:

Well Driller	10% of straight
& Helper	time rate plus \$ 13.50

Additional \$ 4.25/Hr. for Premium Time Hours Worked

OVERTIME PAY

See (B2, P, S) on OVERTIME PAGE

HOLIDAY

Paid:	See (5, 6, 16, 23) on HOLIDAY PAGE
Overtime:	See (5, 6, 16, 23) on HOLIDAY PAGE

REGISTERED APPRENTICES

Apprentices at 12 Month Terms

Wages Per Hour:

1st Term	\$ 28.00
2nd Term	\$ 29.00
3rd Term	\$ 30.00

SUPPLEMENTAL BENEFITS

Per Hour:

All Terms	10% of Wage + \$ 13.50
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Additional \$4.25/Hr. for premium time hours worked.

4-138well

Operating Engineer - Building & Steel Erection

11/01/2024

JOB DESCRIPTION Operating Engineer - Building & Steel Erection

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per Hour: 07/01/2024

STEEL ERECTION:

Three Drum Derricks	\$ 107.16
Cranes, Two Drum Derricks, Hydraulic Cranes & Fork Lifts,	
Boom Trucks	103.28
Compressors, Welding Machines	63.36
Compressors	60.71
(not combined with welding machines)	

BUILDING CONSTRUCTION:

Cranes, Stone Derrick, Boom Trucks, Hydraulic Cranes,	
	103.62
Double Drum	98.28
4 Pole Hoists and Single	
Drum Hoists	87.78

Fork Lifts, Plaster(Platform Machine)Plaster Bucket, Concrete
Pumps and all other equipment used for hoisting

80.54

*House Cars and Rack & Pinion

71.35

*House Cars (New Projects)

58.47

Erecting and dismantling Cranes

88.64

Compressors, Welding Machines(Cutting Concrete-Tank Work),
Paint Spraying, Sand Blasting, Pumps(With the exclusion of
concrete pumps), House Car (Settlement basis only), All
Engines irrespective of power(Power-Vac)used to drive
auxiliary equipment Air, Hydraulic, etc., Boilers, Jacking System
62.20

APPLICABLE TO BUILDING CATEGORY:

CRANES: Crawler Or Truck

In Addition To Above Crane Rates

100' to 149' Boom

\$ 1.75/hr

150' to 249' "

\$ 2.00/hr

250' to 349' "

\$ 2.25/hr

350' to 450' "

\$ 2.75/hr

Tower Crane

\$ 2.00/hr

APPLICABLE TO STEEL CATEGORY:

CRANES: Crawler Or Truck

In Addition To Above Crane Rates

100' to 149' Boom

\$ 2.25/hr

150' to 249' "

\$ 2.50/hr

250' to 349' "

\$ 2.75/hr

350' to 450' "

\$ 3.25/hr

Tower Crane

\$ 2.50/hr

SUPPLEMENTAL BENEFITS

Per Hour:

07/01/2024

All Operator Classes

\$ 26.15*
plus \$ 6.30

* This portion of the benefits is subject to the same premium as shown for overtime wages.

OVERTIME PAY

See (*B, **C, ***D, O) on OVERTIME PAGE

*Applies to House Cars and Rack & Pinion after 8 hours worked in a day, Saturday, Sunday and Holidays

**Applies to Building Construction category

***Applies to Steel Erection

HOLIDAY

Paid: See (5, 6, 8, 11, 12, 15, 16, 25, 26) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 11, 12, 15, 16, 25, 26) on HOLIDAY PAGE

Codes 8 and 12 apply ONLY to Steel Erection

Code 16 applies ONLY to Building Construction

REGISTERED APPRENTICES

Wage Per Hour:

Apprentices (1) year terms at the following rates:

	1st	2nd	3rd
07/01/2024	\$ 44.92	\$ 54.40	\$ 63.88

Supplemental Benefits Per Hour:

07/01/2024

Straight Time

\$ 15.65*
plus \$ 6.30

* This portion of benefits subject to the same premium as shown for overtime wages.

9-14 B&S

JOB DESCRIPTION Operating Engineer - Heavy Construction 1

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

(For Groups 23 - 28, see Operating Engineer - Heavy Construction 2)

Group 1: Tower Crane/Climbing Crane

Group 2: Backhoes (Including all track and rubber tire backhoes over 37,000 lbs), Power Shovels, Steel Erection: Hydraulic Clam Shells, Moles and machines of a similar nature

Group 3: Mine Hoists, Cranes, etc, used as Mine Hoists

Group 4: Gradalls, Keystones, Cranes (With digging buckets), Bridge Cranes, Trenching Machines, Vermeer Cutter and machines of a similar nature

Group 5: Pile Drivers and Rigs (Employing Dock-Builders Foreman), Derrick Boats, Tunnel Shovels,

Group 6: All Drills and machines of a similar nature

Group 7: Back-Filling Machines and Cranes, Mucking Machines, Dual Drum Pavers

Group 8: Mixers (Concrete with loading attachment), Concrete Pavers, Cableways, Land Derricks, Power House (Low pressure units)

Group 9: Concrete Pumps, Concrete Plant, Stone Crushers, Double Drum Hoists, Power Houses (Other than above)

Group 10: Concrete Mixer

Group 11: Elevators

Group 12: Concrete Breaking Machines, Single Drum Hoists, Load Masters, Locomotives and Dinkies (Over 10 tons), Hydraulic Crane-Second Engineer

Group 13: On-Site Concrete Plant Engineers, On-Site Asphalt Plant Engineer and Vibratory Console

Group 14: Barrier Mover, Barrier Transport and machines of a similar nature

Group 15: Compressors (Portable, 3 or more), Truck Compressor (Engineer Driver), Tugger Machines, Well Point Pumps, Chum Drill

Group 16: Boilers(High pressure),Compressors, Pumps(River Cofferdam) and Welding Machines(except where arc is operated by another Operating Engineer) Push Button Machines, All Engines, irrespective of power(Power Pac) used to drive auxiliary equipment, Air, Hydraulic, etc.

Group 17: Utility-Horizontal Boring Rig

Group 18: Utility Compressors

Group 19: Paving-Asphalt Spreader, Autogrades (C.M.I.), Roto-Mill

Group 20: Paving-Asphalt Roller

Group 21 Paving-Asphalt Plant

Group 22: Roller (non paving, all sizes)

WAGES:(per hour) 07/01/2024

Group 1	\$ 123.06
Group 2	102.98
Group 3	106.03
Group 4	103.66
Group 5	101.78
Group 6	98.05
Group 7	99.74
Group 8	97.10
Group 9	95.24
Group 10	91.40
Group 11	85.94
Group 12	87.66
Group 13	88.24
Group 14	80.02
Group 15	68.59
Group 16	64.34
Group 17	92.77
Group 18	63.97
Group 19	97.10
Group 20	94.83
Group 21	81.44
Group 22	94.83

Cranes: Crawler or Truck

100' to 149'	\$0.50 per hour additional to above Crane Rates
150' to 249'	\$0.75 per hour additional to above Crane Rates
250' to 349'	\$1.00 per hour additional to above crane Rates
350' to 450'	\$1.50 per hour additional to above crane Rates

SUPPLEMENTAL BENEFITS

Per Hour:

Groups 1-22

Regular Time \$ 26.15* plus \$ 6.30

* This portion of benefits subject to the same premium as shown for wages.

Non-Worked Holiday Supplemental Benefits:
\$ 20.80

OVERTIME PAY

See (D, O) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Per Hour:

(1) year terms at the following wage rates:

Groups 1-22	1st	2nd	3rd
	\$ 44.92	\$ 54.40	\$ 63.88

Supplemental Benefits:

Groups 1-22	
Regular Time	\$ 15.65* plus \$ 6.30

* This portion of benefits is subject to the SAME PREMIUM as shown for overtime wages

9-14 HC

Operating Engineer - Heavy Construction 2

11/01/2024

JOB DESCRIPTION Operating Engineer - Heavy Construction 2

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

(For Groups 1 - 22, see Operating Engineer - Heavy Construction 1)

Group 23: Cherry Picker (Over 20 tons), Loader (Over 6 yards)

Group 24: Backhoes and Loaders (Up to 37,000lbs), Bulldozers, Scrapers, Turn-A-Pulls, Tugger Hoists, Tractors, Hysters, Roustabout Cranes, Conveyors, Ballast Regulators (Ride On), Track Removal Machine or similar, Motor Graders, Locomotives (10 tons and under), Curb & Gutter Pavers and machines of a similar nature

Group 25: Post Hole Digger, Ditch Winch, Road Finishing Machines, Rollers (5 tons and under, Dual Purpose Trucks, Forklifts, Dempsey Dumpsters, Fireman

Group 26: Service Engineer (Gradalls, Concrete Pumps, Cold Planers Grader)

Group 27: Service Mechanic (Shovels, Draglines, Crawler Cranes, Backhoes, Trenching Machines, Compressors (3 or more in battery)

Group 28: Steam Equipment Operator (Water rigs, steam shovels, power boilers, derrick boats)

WAGES:(per hour) 07/01/2024

Group 23	\$ 87.05
Group 24	84.62
Group 25	80.57
Group 26	76.47
Group 27	54.57
Group 28	80.57

Cranes: Crawler or Truck

100' to 149'	\$0.50 per hour additional to above Crane Rates
150' to 249'	\$0.75 per hour additional to above Crane Rates
250' to 349'	\$1.00 per hour additional to above crane Rates
350' to 450'	\$1.50 per hour additional to above crane Rates

SUPPLEMENTAL BENEFITS

Per Hour:

Groups 23-28
Regular Time 31.02* + \$7.40

* This portion of benefits subject to the same OT premium as wages.

Non-Worked Holiday Supplemental Benefits:
21.87

OVERTIME PAY
See (D, O) on OVERTIME PAGE

HOLIDAY
Paid: See (5, 6, 7, 11, 16) on HOLIDAY PAGE
Overtime: See (5, 6, 7, 11, 16) on HOLIDAY PAGE

REGISTERED APPRENTICES

Per Hour:
(1) year terms at the following wage rates:

	1st	2nd	3rd	4th
Groups 23-28	\$38.52	\$45.23	\$48.70	\$52.17

Supplemental Benefits:

Regular Time \$ 16.52* + \$ 7.40

* This portion of benefits subject to same OT premium as wages.

9-15 HC

Operating Engineer - Marine Dredging	11/01/2024
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JOB DESCRIPTION Operating Engineer - Marine Dredging

DISTRICT 4

ENTIRE COUNTIES

Albany, Bronx, Cayuga, Clinton, Columbia, Dutchess, Essex, Franklin, Greene, Jefferson, Kings, Monroe, Nassau, New York, Orange, Oswego, Putnam, Queens, Rensselaer, Richmond, Rockland, St. Lawrence, Suffolk, Ulster, Washington, Wayne, Westchester

WAGES

These wages do not apply to Operating Engineers on land based construction projects. For those projects, please see the Operating Engineer Heavy/Highway Rates. The wage rates below for all equipment and operators are only for marine dredging work in navigable waters found in the counties listed above.

Per Hour: 07/01/2024

CLASS A1 \$ 45.26
Deck Captain, Leverman,
Mechanical Dredge Operator,
Licensed Tug Operator 1000HP or more.

CLASS A2 40.33
Crane Operator (360 swing)

CLASS B To conform to Operating Engineer
Dozer, Front Loader Prevailing Wage in locality where work
Operator on Land is being performed including benefits.

CLASS B1 39.14
Derrick Operator (180 swing)
Spider/Spill Barge Operator
Operator II, Fill Placer, Engineer
Chief Mate, Electrician, Chief Welder,
Maintenance Engineer, Licensed Boat, Crew Boat Operator

CLASS B2 36.84
Certified Welder

CLASS C1 35.83
Drag Barge Operator,
Steward, Mate,
Assistant Fill Placer

CLASS C2 34.68

Boat Operator

CLASS D 28.81
Shoreman, Deckhand, Oiler,
Rodman, Scowman, Cook,
Messman, Porter/Janitor

SUPPLEMENTAL BENEFITS

Per Hour:

THE FOLLOWING SUPPLEMENTAL BENEFITS APPLY TO ALL CATEGORIES

All Classes A & B \$ 12.00 plus 7%
of straight time
wage, Overtime hours
add \$ 0.63

All Class C & D \$ 11.75 plus 7%
of straight time
wage, Overtime hours
add \$ 0.50

OVERTIME PAY

See (B2, F, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 15, 26) on HOLIDAY PAGE

4-25a-MarDredge

Operating Engineer - Survey Crew - Consulting Engineer

11/01/2024

JOB DESCRIPTION Operating Engineer - Survey Crew - Consulting Engineer

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Suffolk, Westchester

PARTIAL COUNTIES

Dutchess: That part in Dutchess County lying South of the North City line of Poughkeepsie.

WAGES

Feasibility and preliminary design surveying, any line and grade surveying for inspection or supervision of construction.

Per hour: 07/01/2024
Survey Classifications

Party Chief \$ 49.39
Instrument Man 40.96
Rodman 35.63

SUPPLEMENTAL BENEFITS

Per Hour:

All Crew Members: \$ 23.75

OVERTIME PAY

OVERTIME:.... See (B, E*, Q, V) ON OVERTIME PAGE.

*Double-time paid on the 9th hour on Saturday.

HOLIDAY

Paid: See (5, 6, 7, 11, 16) on HOLIDAY PAGE
Overtime: See (5, 6, 7, 11, 16) on HOLIDAY PAGE

9-15dconsult

Painter

11/01/2024

JOB DESCRIPTION Painter

DISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Suffolk, Westchester

WAGES

Per hour: 07/01/2024 05/01/2025
Additional

Brush 52.86* \$ 2.62**

Abatement/Removal of lead based or lead containing paint on materials to be repainted.	52.86*
Spray & Scaffold	\$ 55.86*
Fire Escape	55.86*
Decorator	55.86*
Paperhanger/Wall Coverer	55.09*

*Subtract \$ 0.10 to calculate premium rate.

** To be allocated at a later date.

SHIFT WORK
Counties of Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Suffolk, and Westchester; Agency/Government mandated off-shift work to be paid at time and one-half the hourly wage.

SUPPLEMENTAL BENEFITS
Per hour:

Paperhanger	\$ 36.73
All others	34.31
Premium	38.28**

**Applies only to "All others" category, not paperhanger journeyworker.

OVERTIME PAY
See (A, E, R) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
One (1) year terms at the following wage rate.

Per hour:	07/01/2024
Appr 1st term...	\$ 20.22*
Appr 2nd term...	25.93*
Appr 3rd term...	31.61*
Appr 4th term...	42.40*

*Subtract \$ 0.10 to calculate premium rate.

Supplemental benefits:	
Per Hour:	
Appr 1st term...	\$ 16.89
Appr 2nd term...	20.95
Appr 3rd term...	24.10
Appr 4th term...	30.57

8-NYDC9-B/S

Painter	11/01/2024
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JOB DESCRIPTION Painter **DISTRICT 8**

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

PARTIAL COUNTIES
Nassau: Atlantic Beach, Ceadershurst, East Rockaway, Hewlett, Hewlett Bay, Hewlett Neck, Hewlett Park, Inwood, Lawrence, Lido Beach, Long Beach, parts of Lynbrook, parts of Oceanside, parts of Valley Stream, and Woodmere. Starting on South side of Sunrise Hwy in Valley Stream running east to Windsor and Rockaway Ave, Rockville is the boundary line up to Lawson Blvd, turning right going west all the above territory. Starting at Union Turnpike & Lakeville Rd going north to northern Blvd. the west side of Lakeville Rd to Northern Blvd. At Northern Blvd doing east the district north of Northern blvd to Port Washington blvd. West of Port Washington blvd to St. Francis Hospital then north of first traffic light to Port Washington & Sands Point, Manor Haven, & Harbour Acres.

WAGES	
Per hour:	07/01/2024
Drywall Taper	\$ 57.44

SUPPLEMENTAL BENEFITS
Per Hour:
Journeyworker: \$ 25.29

OVERTIME PAY

See (A, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (4, 6, 8, 11, 18, 19, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:

1st term	\$ 22.30
2nd term	28.99
3rd term	34.67
4th term	46.05

Supplemental Benefits per hour:

1st term	\$ 14.35
2nd term	19.83
3rd term	20.93
4th term	23.12

8-NYC9-1974-DWT

Painter - Bridge & Structural Steel

11/01/2024

JOB DESCRIPTION Painter - Bridge & Structural Steel

DISTRICT 8

ENTIRE COUNTIES

Albany, Bronx, Clinton, Columbia, Dutchess, Essex, Franklin, Fulton, Greene, Hamilton, Kings, Montgomery, Nassau, New York, Orange, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Suffolk, Sullivan, Ulster, Warren, Washington, Westchester

WAGES

Per Hour:

STEEL:

Bridge Painting: 07/01/2024
\$ 56.00
+ 10.35*

ADDITIONAL \$7.00 per hour for POWER TOOL/SPRAY, whether straight time or overtime.

NOTE: All premium wages are to be calculated on base rate per hour only.

* For the period of May 1st to November 15th, this amount is payable up to 40 hours. For the period of Nov 16th to April 30th, this amount is payable up to 50 hours. EXCEPTION: First and last week of employment, and for the weeks of Memorial Day, Independence Day and Labor Day, where the amount is paid for the actual number of hours worked (50 hour cap).

NOTE: Generally, for Bridge Painting Contracts, ALL WORKERS on and off the bridge (including Flagmen) are to be paid Painter's Rate; the contract must be ONLY for Bridge Painting.

SHIFT WORK

When directly specified in public agency or authority contract documents for an employer to work a second shift and works the second shift with employees other than from the first shift, all employees who work the second shift will be paid 10% of the base wage shift differential in lieu of overtime for the first eight (8) hours worked after which the employees shall be paid at time and one half of the regular wage rate. When a single irregular work shift is mandated in the job specifications or by the contracting agency, wages shall be paid at time and one half for single shifts between the hours of 3pm-11pm or 11pm-7am.

SUPPLEMENTAL BENEFITS

Per Hour:

Journeyworker: \$ 12.43
+ 31.55*

* For the period of May 1st to November 15th, this amount is payable up to 40 hours. For the period of Nov 16th to April 30th, this amount is payable up to 50 hours. EXCEPTION: First and last week of employment, and for the weeks of Memorial Day, Independence Day and Labor Day, where the amount is paid for the actual number of hours worked (50 hour cap).

OVERTIME PAY

See (B, F, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (4, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage - Per hour:

Apprentices: (1) year terms.

1st year	\$ 22.40 + 4.14
2nd year	\$ 33.60 + 6.21
3rd year	\$ 44.80 + 8.28
Supplemental Benefits - Per hour:	
1st year	\$ 1.16 + 12.62
2nd year	\$ 7.46 + 18.93
3rd year	\$ 9.94 + 25.24

NOTE: All premium wages are to be calculated on base rate per hour only.

8-DC-9/806/155-BrSS

Painter - Metal Polisher

11/01/2024

JOB DESCRIPTION Painter - Metal Polisher

DISTRICT 8

ENTIRE COUNTIES

Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

	07/01/2024
Metal Polisher	\$ 39.33
Metal Polisher*	40.43
Metal Polisher**	43.33

*Note: Applies on New Construction & complete renovation

** Note: Applies when working on scaffolds over 34 feet.

SUPPLEMENTAL BENEFITS

Per Hour: 07/01/2024

Journeyworker:

All classification \$ 12.79

OVERTIME PAY

See (B, E, P, T) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:

One (1) year term at the following wage rates:

	07/01/2024
1st year	\$ 19.67
2nd year	21.63
3rd year	23.60
1st year*	\$ 22.06
2nd year*	22.07
3rd year*	24.14

1st year**	\$ 22.17
2nd year**	24.13
3rd year**	26.10

*Note: Applies on New Construction & complete renovation

** Note: Applies when working on scaffolds over 34 feet.

Supplemental benefits:
Per hour:

1st year	\$ 8.69
2nd year	8.69
3rd year	8.69

8-8A/28A-MP

Plasterer	11/01/2024
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JOB DESCRIPTION Plasterer

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per hour:

	07/01/2024	08/01/2024
Building:		
Plasterer/Traditional &	\$ 47.72	\$ 47.99
Spraying Fireproofing	+ \$5.00*	+ \$5.62*

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker	\$ 25.35	\$ 26.10
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OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

*This portion is not subjected to OT premiums.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages:	07/01/2024	08/01/2024
(Per hour)		
800 hours term:		
1st term	\$ 19.30 + 0.68*	\$ 19.44+ 0.68*
2nd term	22.53 + 0.81*	22.69+ 0.81*
3rd term	25.79 + 0.95*	25.98+ 0.95*

*This portion is not subjected to OT premiums.

Supplemental Benefits:

(Per hour):

(800) hours term:

1st term	\$ 11.59	\$ 11.95
2nd term	12.02	12.44
3rd term	12.52	13.08

9-262

Plumber	11/01/2024
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JOB DESCRIPTION Plumber

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:

07/01/2024

Plumber \$ 74.95

Temporary
Service** \$ 60.04

** Temporary Service- Includes Maintenance of cooling & heating apparatus, maintenance work on pneumatic systems during the construction period, and work on temporary heat. All hours paid at straight time, including holidays.

**THERE ARE NO HELPERS UNDER THIS CLASSIFICATION.

On tower work, bridges, elevated highway, or buildings, where pipe is being installed, fifty (50) or more feet vertically in a free drop from its base, an additional \$1.00 per hour.

SHIFT WORK

Shift work, when directly specified in public agency or authority contract documents, and continues for a period of not less than ten (10) consecutive work days. A shift shall consist of seven(7) hours with one-half (1/2) hour for lunch after the first four (4) hours of each shift. A premium of thirty percent (30%) for wages and supplemental benefits on shift work performed Monday through Friday on the 4 P.M. and midnight shifts.

For shift work performed on weekends the shift premium shall be fifty percent (50%) of wages and supplemental benefits.

For shift work performed on holidays designated below, double time wages and supplemental benefits shall be paid. Also noted that the normal workday Monday through Friday 8:00 A.M. to 3:00 P.M. is not considered shift work, and therefore not subject to shift premium.

SUPPLEMENTAL BENEFITS

Per hour:

Plumber \$ 43.00

Temporary
Service \$ 34.32

OVERTIME PAY

See (C, *D, O, V) on OVERTIME PAGE

*Where the plumbing contract price is one and one half million dollars (\$1,500,000.00) or less, code D applies.

HOLIDAY

Plumber
Overtime: See (5, 6, 11, 15, 16, 25) on HOLIDAY PAGE.
Repairs & Maintenance
Paid: See (1) on HOLIDAY PAGE.
Overtime: See (5, 6, 25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wages per hour:

(1/2) year terms at the following wage:

1st	2nd	3rd&4th	5th&6th	7th&8th	9th	10th
\$ 19.00	\$ 21.00	\$ 30.22	\$ 32.32	\$ 35.17	\$ 36.57	\$ 48.64

Supplemental Benefits:

(1/2) year term at the following dollar amount:

1st	2nd	3rd-10th
\$ 5.43	\$ 6.43	\$ 22.73

9-1 Const

Plumber - Pump & Tank: Oil Trades Installation & Maintenance

11/01/2024

JOB DESCRIPTION Plumber - Pump & Tank: Oil Trades Installation & Maintenance

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:

07/01/2024

Pump & Tank \$ 73.00

SUPPLEMENTAL BENEFITS

Per hour:

Plumber \$ 32.81

OVERTIME PAY

Pump & Tank See (B, F, H) on OVERTIME PAGE.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE.

Overtime: See (5, 6, 10, 11, 12, 16, 25) on HOLIDAY PAGE.

9-1-P&T

Plumber - Repairs & Maintenance

11/01/2024

JOB DESCRIPTION Plumber - Repairs & Maintenance

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:

Repairs & 07/01/2024
Maintenance \$ 48.20

*Repair & Maintenance work is any repair and/or replacement of present plumbing system that does not change existing roughing or water supply lines. Projects regardless of work type which have approved plans and specifications wherein the plumbing exceeds \$725,000 are excluded.

SUPPLEMENTAL BENEFITS

Per hour:

Repair \$ 21.36
Maintenance

OVERTIME PAY

Repairs &
Maintenance See (B, H) on OVERTIME PAGE.

HOLIDAY

Repairs & Maintenance

Paid: See (1) on HOLIDAY PAGE.

Overtime: See (5, 6, 25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Note: The Repairs & Maintenance Category has NO Apprentices.

9-1 R&M

Roofer

11/01/2024

JOB DESCRIPTION Roofer

DISTRICT 9

ENTIRE COUNTIES

Bronx, Dutchess, Kings, New York, Orange, Putnam, Queens, Richmond, Rockland, Sullivan, Ulster, Westchester

WAGES

Per Hour: 07/01/2024

Roofer/Waterproofer \$ 48.50
+ \$7.00*

* This portion is not subjected to overtime premiums.

Note: Abatement/Removal of Asbestos containing roofs and roofing material is classified as Roofer.

SUPPLEMENTAL BENEFITS

Per Hour: \$ 31.87

OVERTIME PAY

See (B, H) on OVERTIME PAGE

Note: An observed holiday that falls on a Sunday will be observed the following Monday.

HOLIDAY

Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

(1) year term apprentices indentured prior to 01/01/2023

1st	2nd	3rd	4th
\$ 16.97	\$ 24.25	\$ 29.10	\$ 36.37
	+ 3.50*	+ 4.20*	+ 5.26*

Supplements:

1st	2nd	3rd	4th
\$ 4.10	\$ 16.17	\$ 19.31	\$ 24.02

* This portion is not subjected to overtime premiums.

(1) year term apprentices indentured after 01/01/2023

1st	2nd	3rd	4th	5th
\$ 18.43	\$ 21.82	\$ 24.25	\$ 29.10	\$ 36.37
	+ 3.16*	+ 3.50*	+ 4.20*	+ 5.26

Supplements:

1st	2nd	3rd	4th	5th
\$ 7.73	\$ 14.59	\$ 16.17	\$ 19.31	\$ 24.02

* This portion is not subjected to overtime premiums.

9-8R

Sheetmetal Worker	11/01/2024
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JOB DESCRIPTION Sheetmetal Worker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

Per Hour:

07/01/2024 08/01/2024

Sign Erector \$ 58.00 \$ 60.00

NOTE: Structurally Supported Overhead Highway Signs(See STRUCTURAL IRON WORKER CLASS)

SUPPLEMENTAL BENEFITS

Per Hour: 07/01/2024 08/01/2024

Sign Erector \$ 57.12 \$ 58.31

OVERTIME PAY

See (B, F, S) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 10, 11, 12, 16, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 10, 11, 12, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Per Hour:

6 month Terms at the following percentage of Sign Erectors wage rate:

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
35%	40%	45%	50%	55%	60%	65%	70%	75%	80%

SUPPLEMENTAL BENEFITS

Per Hour:

07/01/2024

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ 18.27	\$ 20.75	\$ 25.22	\$ 25.70	\$ 34.66	\$ 37.74	\$ 41.65	\$ 44.78	\$ 47.93	\$ 51.04

08/01/2024

\$ 18.65	\$ 21.16	\$ 23.69	\$ 26.22	\$35.39	\$ 38.52	\$ 42.55	\$ 45.75	\$ 48.96	\$ 52.15 4-137-SE
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Sheetmetal Worker	11/01/2024
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JOB DESCRIPTION Sheetmetal Worker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour:

07/01/2024

Sheetmetal Worker \$ 61.09

Maintenance of Fans 48.87
Temporary Operation

SUPPLEMENTAL BENEFITS

Per Hour:

Sheetmetal Worker \$ 53.25

Maintenance Worker 53.25

OVERTIME PAY

See (B, E, E2, Q, V) on OVERTIME PAGE

For Maintenance See Codes B,E, Q & V

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Per Hour:Wages

Six(6) Month Terms As Follows:

1st & 2nd Term	\$ 21.26
3rd & 4th Term	27.39
5th & 6th Term	33.52
7th & 8th Term	42.75
9th Term	48.55

Per Hour: Supplemental Benefits

1st & 2nd Term	\$ 19.66
3rd & 4th Term	26.73
5th & 6th Term	31.57
7th & 8th Term	38.78
9th Term	43.62

4-28

Steamfitter

11/01/2024

JOB DESCRIPTION Steamfitter

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2024 01/01/2025

AC Service/Heat Service & Refrigeration	\$ 46.10	Additional \$1.25/Hr.*
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(*)To be allocated at a later date.

Refrigeration, A/C, Oil Burner and Stoker Service and Repair.

NOTE: Refrigeration Compressor installation. (Not to exceed 5 Hp combined on any one project).

NOTE: Air / Heating Compressor installation.(Not to exceed 15 tons combined on any one project).

SUPPLEMENTAL BENEFITS

Per Hour Worked:

AC Service/Heat Service
& Refrigeration \$ 20.96

Per hour Paid: \$ 17.65

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Overtime: See (5, 6, 11, 15, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

1 year terms
Wages per hour:

1st Term	\$ 22.31
2nd Term	26.94
3rd Term	31.38
4th Term	37.90

Benefits per hour worked:

1st Term	\$ 14.44
2nd Term	16.78
3rd Term	17.41
4th Term	19.44

Benefits per hour paid:

1st Term	\$ 11.38
2nd Term	13.72
3rd Term	14.35
4th Term	16.38

4-638B-StmFtrRef

Steamfitter

11/01/2024

JOB DESCRIPTION Steamfitter

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour:	07/01/2024	10/1/2024	03/31/2025
Sprinkler/Steam AC/Heat Fitter	\$ 69.11	Additional \$0.75/Hr*	Additional \$0.75/Hr*
Temporary Heat & AC Fitter	52.54	Additional \$0.75/Hr*	Additional \$0.75/Hr*

(*)To be allocated at a later date.

SHIFT WORK

Add 15% to Hourly Wage for "Contracting Agency" Mandated Off Shift Work.

Add 15% to Hourly Supplemental Benefit for "Contracting Agency" Mandated Off Shift Work.

SUPPLEMENTAL BENEFITS

Per Hour:

Sprinkler/Steam Fitter	\$ 53.49
Temporary Heat & AC Fitter	43.67

OVERTIME PAY

Note: The posted overtime rates are applicable after 8 hours plus Saturday, Sunday and Holidays:

Per Hour:

Sprinkler/Steam	WAGES \$ 138.22	SUPPLEMENTAL BENEFIT \$ 105.99
Temp Heat/AC	WAGES \$ 105.08	SUPPLEMENTAL BENEFIT \$ 85.35

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

1 year Terms at the Following:

WAGES per hour:

1st Term \$ 27.98	2nd Term \$ 34.96	3rd Term \$ 41.94	4th Term \$ 48.92	5th Term \$ 55.90
SUPPLEMENTAL BENEFIT per hour:				
1st Term \$ 21.80	2nd Term \$ 27.05	3rd Term \$ 32.28	4th Term \$ 37.53	5th Term \$ 42.76
Premium Time SUPPLEMENTAL BENEFIT Amounts:				
\$ 43.60	\$ 54.10	\$ 64.56	\$ 75.06	\$ 85.52

4-638A-StmSpFtr

Teamster - Heavy Construction	11/01/2024
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JOB DESCRIPTION Teamster - Heavy Construction

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per Hour:

Dump Trucks/Drivers (Debris Removal, Street Level and below)
07/01/2024

Dump Trucks	\$ 44.165
Tractor Trailers	47.315
Euclid/Turnapull	47.88

SUPPLEMENTAL BENEFITS

Per Hour:

Dump Trucks	\$ 59.1525
All Others	56.9025
Up to 40 Hours Worked	

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 11, 15, 16, 25) on HOLIDAY PAGE

Note: Employees receive 2 hours of Holiday Pay for each day worked in holiday week (not to exceed 8 hours)

Note: Employees receive 5 1/3 hours of Holiday Pay for each day worked in Thanksgiving Holiday Week.

4-282

Welder	11/01/2024
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JOB DESCRIPTION Welder

DISTRICT 1

ENTIRE COUNTIES

Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

Per hour 07/01/2024

Welder: To be paid the same rate of the mechanic performing the work.*

*EXCEPTION: If a specific welder certification is required, then the 'Certified Welder' rate in that trade tag will be paid.

OVERTIME PAY

HOLIDAY

1-As Per Trade

Queens County General Construction

Asbestos Worker

11/01/2024

JOB DESCRIPTION Asbestos Worker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2024

Asbestos Worker \$ 47.25
Removal & Abatement Only*

NOTE: *On Mechanical Systems that are NOT to be SCRAPPED.

SUPPLEMENTAL BENEFITS

Per Hour:

Asbestos Worker \$ 13.65
Removal & Abatement Only

OVERTIME PAY

See (B, B2, *E, J) on OVERTIME PAGE

*Hours worked on Saturdays are paid at time and one half only if forty hours have been worked during the week.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8) on HOLIDAY PAGE

REGISTERED APPRENTICES

Apprentice Removal & Abatement Only:

1000 hour terms at the following percentage of Journeyman's rates.

1st	2nd	3rd	4th
78%	80%	83%	89%

SUPPLEMENTAL BENEFIT

Per Hour:

Apprentice
Removal & Abatement \$ 13.65

4-12a - Removal Only

Boilermaker

11/01/2024

JOB DESCRIPTION Boilermaker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

WAGES

Per Hour: 07/01/2024 01/01/2025

Boilermaker \$ 67.38 \$ 68.88

Repairs & Renovations 67.38 68.88

Repairs & Renovation: Includes Repairing, Renovating replacement of parts to an existing unit(s).

SUPPLEMENTAL BENEFITS

Per Hour:

Boilermaker	33.5% of hourly	33.5% of Hourly
Repair & Renovations	Wage Paid	Wage Paid
	+ \$ 26.85	+ \$26.85

NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay.

Repairs & Renovation Includes replacement of parts and repairs & renovation of existing unit.

OVERTIME PAY

See (*B, O, **U) on OVERTIME PAGE

Note:* Includes 9th & 10th hours, double for 11th or more.

** Labor Day ONLY, if worked.

Repairs & Renovation see (B,E,Q) on OT Page

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 12, 15, 25, 26, 29) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:

(1/2) Year Terms at the following percentage of Boilermaker's Wage

1st	2nd	3rd	4th	5th	6th	7th
65%	70%	75%	80%	85%	90%	95%

Supplemental Benefits Per Hour:

	33.5% of Hourly Wage Paid Plus Amount Below	33.5% of Hourly Wage Paid Plus Amount Below
1st Term	\$ 20.36	\$ 20.36
2nd Term	21.28	21.28
3rd Term	22.22	22.22
4th Term	23.12	23.12
5th Term	24.07	24.07
6th Term	25.00	25.00
7th Term	25.93	25.93

NOTE: "Hourly Wage Paid" shall include any and all premium(s)

4-5

Broadband	11/01/2024
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JOB DESCRIPTION Broadband

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour:	07/01/2024	06/29/2025
Field Tech	\$ 52.40	\$ 53.97
Install/Repair		

For outside work (excluding installation on building construction/alteration/renovation projects), stopping at first point of attachment (demarcation), installing/maintaining/repairing broadband internet service.

SUPPLEMENTAL BENEFITS

Per Hour: \$ 23.24

OVERTIME PAY

See (B, K, *R) on OVERTIME PAGE

Note: *Two and one half times the hourly rate after the 8th hour

HOLIDAY

Paid: See (5, 6, 7, 11, 12) on HOLIDAY PAGE

4-CWA-Dist1

Carpenter	11/01/2024
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JOB DESCRIPTION Carpenter

DISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

Per hour:	07/01/2024
Piledriver	\$ 60.59 + 10.00*
Dockbuilder	\$ 60.59 + 10.00*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker \$ 45.79

OVERTIME PAY

See (B, E2, O) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE.

Paid: for 1st & 2nd yr.

Apprentices See (5,6,11,13,25)

Overtime: See (5,6,11,13,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wages per hour

(1)year terms:

1st	2nd	3rd	4th
\$26.98	\$32.58	\$40.96	\$49.35
+ 5.50*	+ 5.50*	+ 5.50*	+ 5.50*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:

All Terms: \$ 32.34

8-1556 Db

Carpenter	11/01/2024
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JOB DESCRIPTION CarpenterDISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

Per hour: 07/01/2024

Carpet/Resilient

Floor Coverer \$ 55.05
+ 8.25*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

INCLUDES HANDLING & INSTALLATION OF ARTIFICIAL TURF AND SIMILAR TURF INDOORS/OUTDOORS.

SUPPLEMENTAL BENEFITS

Per hour:

\$ 39.45

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (18, 19) on HOLIDAY PAGE.

Paid for 1st & 2nd yr.

Apprentices See (5,6,11,13,16,18,19,25)

Overtime: See (5,6,11,13,16,18,19,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wage per hour - (1) year terms:

1st	2nd	3rd	4th
\$ 25.20	\$ 28.20	\$ 32.45	\$ 40.33
+ 1.85*	+ 2.35*	+ 2.85*	+ 3.85*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:

1st	2nd	3rd	4th
\$ 15.22	\$ 16.22	\$ 19.32	\$ 20.32

8-2287

Carpenter

11/01/2024

JOB DESCRIPTION Carpenter

DISTRICT 8

ENTIRE COUNTIES
Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

Per Hour: 07/01/2024

Marine Construction:

Marine Diver \$ 75.46
+ 10.00*

Marine Tender \$ 55.00
+ 10.00*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime

SUPPLEMENTAL BENEFITS

Per Hour:

Journeyworker \$ 45.65

OVERTIME PAY
See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (18, 19) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 13, 16, 18, 19, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:
One (1) year terms.

1st year	\$ 26.98 + 5.50*
2nd year	32.58 + 5.50*
3rd year	40.96 + 5.50*
4th year	49.35 + 5.50*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental Benefits
Per Hour:

All terms \$ 32.20

8-1456MC

Carpenter

11/01/2024

JOB DESCRIPTION Carpenter

DISTRICT 8

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

Per hour: 07/01/2024

Building
Millwright \$ 59.35
+ 13.12*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS

Per hour:

Millwright \$ 45.41

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (18, 19) on HOLIDAY PAGE

Paid: See (18,19) on HOLIDAY PAGE.

Overtime See (5,6,8,11,13,18,19,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wages per hour:

One (1) year terms:

1st.	2nd.	3rd.	4th.
\$ 32.16	\$ 37.61	\$ 43.06	\$ 53.96
+ 7.08*	+ 8.25*	+ 9.42*	+ 11.76*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:

One (1) year terms:

1st.	2nd.	3rd.	4th.
\$ 30.56	\$ 33.09	\$ 36.27	\$ 40.69

8-740.1

Carpenter

11/01/2024

JOB DESCRIPTION Carpenter

DISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per Hour:

07/01/2024

Timberman \$ 55.59
+ 10.26*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS

Per Hour:

07/01/2024

\$ 44.96

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Overtime: See (5, 6, 11, 13, 25) on HOLIDAY PAGE

Paid: See (1) on HOLIDAY PAGE.

Paid: for 1st & 2nd yr.

Apprentices See (5,6,11,13,25)

Overtime: See (5,6,11,13,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wages per hour:

One (1) year terms:

1st	2nd	3rd	4th
\$24.96	\$30.07	\$37.72	\$45.38
+ 5.55*	+ 5.55*	+ 5.55*	+ 5.55*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:

All terms \$ 31.95

Carpenter

11/01/2024

JOB DESCRIPTION Carpenter

DISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland, Westchester

PARTIAL COUNTIES

Orange: South of but including the following, Waterloo Mills, Slate Hill, New Hampton, Goshen, Blooming Grove, Mountainville, east to the Hudson River.

Putnam: South of but including the following, Cold Spring, Tompkins Corner, Mahopac, Croton Falls, east to Connecticut border.

Suffolk: West of Port Jefferson and Patchogue Road to Route 112 to the Atlantic Ocean.

WAGES

Per hour: 07/01/2024

Core Drilling:

Driller \$ 46.25
+ 3.25*

Driller Helper \$ 36.28
+ 3.25*

Note: Hazardous Waste Pay Differential:

For Level C, an additional 15% above wage rate per hour

For Level B, an additional 15% above wage rate per hour

For Level A, an additional 15% above wage rate per hour

Note: When required to work on water: an additional \$ 3.00 per hour.

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS

Per hour:

Driller and Helper \$ 30.24

OVERTIME PAY

See (B, G, P) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

8-1536-CoreDriller

Carpenter

11/01/2024

JOB DESCRIPTION Carpenter

DISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, New York, Putnam, Queens, Richmond

PARTIAL COUNTIES

Nassau: The portion of the county that lies west of Seaford Creek and south of the Southern State Parkway.

WAGES

Per hour: 07/01/2024

Show Exhibit \$ 55.75
+ 9.80**

Bldg. Carpenter* \$57.05
+ 8.39**

* Not applicable in Putnam County

**This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS

Per hour worked:

Show Exhibit \$ 45.20
Bldg. Carpenter 39.75

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (18, 19) on HOLIDAY PAGE

Paid: for 1st & 2nd yr.

Apprentices See (5,6,11,13,16,18,19,25)

Overtime: See (5,6,11,13,16,18,19,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wages per hour: Show Exhibit

(1) year terms:

1st.	2nd.	3rd.	4th.
\$22.30	\$27.88	\$36.24	\$44.60
+ 4.90*	+ 4.90*	+ 4.90*	+ 4.90*

*This portion is not subject to overtime premiums

Supplemental benefits per hour:

All terms \$ 30.25

Wages per hour: Bldg. Carpenter

(1) year terms:

1st	2nd	3rd	4th
\$ 22.20	\$ 25.20	\$ 29.45	\$ 37.33
+ 2.14*	+ 2.59*	+ 3.09*	+ 4.09*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:

1st	2nd	3rd	4th
\$ 15.37	\$ 16.42	\$ 19.52	\$ 20.52

8-EXHIB

Carpenter - Heavy&Highway

11/01/2024

JOB DESCRIPTION Carpenter - Heavy&Highway

DISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

PARTIAL COUNTIES

Nassau: That portion of the county that lies West of Seaford Creek and South of the Southern State Parkway.

WAGES

Per hour:

07/01/2024

Heavy & Highway

Carpenter

\$ 60.59
+ 10.00*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS

Per hour worked:

Heavy & Highway

Carpenter

\$ 45.70

OVERTIME PAY

See (B, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 13, 25) on HOLIDAY PAGE

Paid : for 1st & 2nd yr

Apprentices See (5, 6, 11, 13, 25)

REGISTERED APPRENTICES

Wage per hour:

One (1) year terms:

	1st	2nd	3rd	4th
Heavy & Highway	\$ 26.98	\$ 32.58	\$ 40.96	\$ 49.35

+ 5.50*

+ 5.50*

+ 5.50*

+ 5.50*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental Benefits:
Per Hour:

All terms
\$ 32.25

8-NYC H/H

Electrician

11/01/2024

JOB DESCRIPTION Electrician

DISTRICT 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES
Per hour: 07/01/2024

Tree Trimmer \$ 35.24
Ground Person 20.69

Applies to line clearance, tree work, and right-of-way preparation on all new or existing overhead, electrical, telephone, and CATV lines.

SUPPLEMENTAL BENEFITS
Per hour:

Tree Trimmer \$ 13.20
Ground Person 7.75

OVERTIME PAY
See (B, *H, Q) on OVERTIME PAGE
*Worked performed on Sundays & Holidays outside of 7.00am - 4.00pm shall be paid at double time, in addition to the holiday pay if applicable.

HOLIDAY
Paid: See (5, 6, 10, 11, 15, 16, 26) on HOLIDAY PAGE
Overtime: See (5, 6, 10, 11, 15, 16, 26) on HOLIDAY PAGE
(An additional floating holiday after four years service)

9-3T

Electrician

11/01/2024

JOB DESCRIPTION Electrician

DISTRICT 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES
Per hour: 07/01/2024

Electrician \$ 32.00
Telephone 32.00

Maintenance and Jobbing-Electrical and teledata work of limited duration and scope, consisting of repairs and/or replacement of electrical and teledata equipment.

- Includes all work necessary to retrofit, service, maintain and repair all kinds of lighting fixtures and local lighting controls and washing and cleaning of foregoing fixtures.

SUPPLEMENTAL BENEFITS
Journeyworker:

07/01/2024
\$ 27.20
29.23*

* Applies to overtime hours

OVERTIME PAY
See (B, H) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

9-3m

Electrician**11/01/2024**

JOB DESCRIPTION Electrician

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond, Westchester

WAGES

Per hour: 07/01/2024

Service Technician \$ 37.40

Service and Maintenance on Alarm and Security Systems.

Maintenance, repair and /or replacement of defective (or damaged) equipment on, but not limited to, Burglar - Fire - Security - CCTV - Card Access - Life Safety Systems and associated devices. (Whether by service contract of T&M by customer request.)

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker: \$ 21.85

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 11, 15, 16, 17, 25, 26) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 17, 25, 26) on HOLIDAY PAGE

9-3H

Electrician**11/01/2024**

JOB DESCRIPTION Electrician

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per Hour: 07/01/2024

Electrician
Audio/Sound and
Temporary Light/
Power \$ 62.00

Solar-Photovoltaic Systems

Group 1 62.00

All tasks not listed in Group 2

Group 2 32.00

D.C portion and associated mechanical equipment related to solar systems,
(excluding battery storage and its associated equipment) including work related to
Weather Stations and Data Acquisitions/Monitoring Systems on solar photovoltaic systems.

Mounting of PV modules.

Mounting of DC optimizers to back of modules if the installation calls for this equipment.

Mounting of microinverters to back of modules and install trunk cabling on racking if called for.

Module to module connection of PV modules to adjacent modules. If racking manufacturer provides integrated inter-row cable management,
install string jumper to complete the string in full in same sub-array.

If racking manufacturer does not provide integrated inter-row cable management, run conduit between rows, bond it and run string jumper to
complete string in full in same sub-array.

Installation of weather stations and other weather station relevant sensors as specified.

Installation of data acquisition system (DAS) for PV system monitoring.

SHIFT WORK

Evening (Swing Shift):

Electrician

Audio/Sound and Temporary Light/ Power	\$ 72.75
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Night (Graveyard Shift): Electrician Audio/Sound and Temporary Light	\$ 81.49
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SUPPLEMENTAL BENEFITS

Per Hour:

Electrician	\$ 66.09 70.01*
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Swing Shift:	75.07 79.66*
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Graveyard Shift:	82.66 87.81*
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Temporary Light/Power:	30.33 33.64*
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Group 1:	66.09 70.01*
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Group 2:	27.21 29.23*
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* Applies when premium (OT) wages are paid.

Temporary Light and Power benefit rate applies for three or less workers.

Reduce benefit rate by 6.2% for any employee who has accumulated wages of \$168,600 for the same employer.

OVERTIME PAY

See (A, H) on OVERTIME PAGE

See (B) for Temporary Light and Power

HOLIDAY

Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages Per Hour:

One (1) year terms	
First term:	07/01/2024
0-6 mos.	\$ 18.00
7-12 mos.	18.50
Second term:	
0-6 mos.	19.50
7-12 mos.	20.50
Third term	
0-6 mos.	21.50
7-12 mos.	22.50
Fourth term:	
0-6 mos.	23.50
7-12 mos.	25.50
Fifth term/MIJ:	
0-12 mos.	27.50
13-18 mos.	32.00

Supplemental Benefits per hour:

One (1) year terms:

First Term:	Regular	Overtime
0-6 mos.	\$ 17.18	\$ 18.38
7-12 mos.	17.44	18.67

Second Term:		
0-6 mos.	17.97	19.26
7-12 mos.	18.49	19.85
Third Term:		
0-6 mos.	19.02	20.44
7-12 mos.	19.54	21.03
Fourth Term:		
0-6 mos.	20.06	21.62
7-12 mos.	21.11	22.80
Fifth Term/MIJ:		
1-12 mos.	24.79	26.52
13-18 mos.	27.21	29.23

9-3

Electrician - Highway and Street Lighting, Traffic Signals and Controls

11/01/2024

JOB DESCRIPTION Electrician - Highway and Street Lighting, Traffic Signals and Controls **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:	07/01/2024
Electro Pole Electrician	\$ 62.00

Electro Pole Foundation Installer	47.66
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Electro Pole Maintainer	41.61
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SUPPLEMENTAL BENEFITS

Per Hour:	07/01/2024
Electro Pole Electrician	\$ 68.20 72.12*

Electro Pole Foundation Installer	51.68 54.69*
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Electro Pole Maintainer	47.03 49.66*
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*Applies when premium wages are paid

Note: Reduce benefit rate by 6.2% for any employee who has accumulated wages in \$168,600 for the same employer.

OVERTIME PAY
See (A, B, E4, F, K) on OVERTIME PAGE
B - Applies to Electro Pole Foundation Installer
E4 - Applies to Electro Pole Maintainer

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

9-3J

Electrician Lineman

11/01/2024

JOB DESCRIPTION Electrician Lineman **DISTRICT** 4

ENTIRE COUNTIES
Nassau, Queens, Suffolk

WAGES
For Utility Distribution & Transmission Line Construction:
Per Hour: 07/01/2024

Lineman/Splicer	\$65.25
Material Man	56.77
Heavy Equip. Operator	52.20
Groundman	39.15
Flagman	29.36

For Natural Gasline Construction
Per Hour:
Journeyman U.G.Mech \$ 57.63

SUPPLEMENTAL BENEFITS

Per Hour:
Utility Distribution & Transmission Line Construction:

All Classifications	07/01/2024
	32.75% of Hourly Wage Paid + \$15.04

NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay

Natural Gasline Construction
Per Hour: 07/01/2024

Journeyman U.G.Mech.	33.24
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OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE
OVERTIME for Natural Gas Mechanic:(B,G,P)

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 16, 23, 25, 26) on HOLIDAY PAGE
Same as Above for Natural Gas Mechanic.

REGISTERED APPRENTICES

1000 hour Terms at the following Percentage of Journeyman's Wage.
(Lineman Only)

1st	2nd	3rd	4th	5th	6th	7th
60%	65%	70%	75%	80%	85%	90%

SUPPLEMENTAL BENEFIT:	07/01/2024
All Terms	31.75% of Hourly Wage Paid + \$ 15.04

4-1049 Line/Gas

Elevator Constructor	11/01/2024
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JOB DESCRIPTION Elevator ConstructorDISTRICT 4

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

PARTIAL COUNTIES
Rockland: Entire County except for the Township of Stony Point
Westchester: Entire County except for the Townships of Bedford, Lewisboro, Cortland, Mt. Kisco, North Salem, Pound Ridge, Somers and Yorktown.

WAGES

Per hour:	07/01/2024	03/17/2025
Elevator Constructor	\$ 80.35	\$ 83.37

Modernization &

Service/Repair	63.16	65.54
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SUPPLEMENTAL BENEFITS

Per Hour:

Elevator Constructor	\$ 46.367	\$ 47.654
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Modernization & Service/Repairs	45.217	46.470
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OVERTIME PAY

Constructor See (D, M, T) on OVERTIME PAGE.

Modern/Service See (B, F, S) on OVERTIME PAGE.

HOLIDAY

Paid: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

WAGES PER HOUR:

6 MONTH TERMS:

1st Term*	2nd & 3rd Term*	4th & 5th Term	6th & 7th Term	8th & 9th Term
50%	50%	55%	65%	75%

* Note: 1st, 2nd, 3rd Terms are based on Average of the Constructor, the Modernization and the Service/Repair wage.
Terms 4 thru 9 Based on Journeyman's wage of classification Working in.

SUPPLEMENTAL BENEFITS:

	07/01/2024	03/17/2025
Elevator Constructor		
1st Term	\$ 0.00	\$ 0.00
2nd & 3rd Term	36.15	36.90
4th & 5th Term	37.19	37.99
6th & 7th Term	38.80	39.70
8th & 9th Term	40.41	41.40

Modernization & Service/Repair		
1st Term	\$ 0.00	\$ 0.00
2nd & 3rd Term	36.15	36.90
4th & 5th Term	37.19	37.99
6th & 7th Term	38.80	39.70
8th & 9th Term	40.41	41.40

4-1

Glazier

11/01/2024

JOB DESCRIPTION Glazier

DISTRICT 8

ENTIRE COUNTIES

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

WAGES

Per hour:

	07/01/2024	05/01/2025
		Additional
Glazier, Glass Tinting and Window Film	\$ 63.28	\$ 1.11***
Scaffolding, including swing scaffold	67.28	
*Mechanical Equipment	64.28	
**Repair & Maintenance	30.76	

*Mechanical equipment, scissor jacks, man lifts, booms & buckets 30' or more, but not pipe scaffolding.

**Repair & Maintenance- All repair & maintenance work on a particular building whenever performed, where the total cumulative Repair & Maintenance contract value is under \$193,000.

***To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per hour:	7/01/2024
Glazier, Glass Tinting Window Film, Scaffolding and Mechanical Equipment	\$ 42.13
Repair & Maintenance	24.62

OVERTIME PAY

See (B, E, Q, V) on OVERTIME PAGE
For 'Repair & Maintenance' see (B, B2, I, S) on overtime page.

HOLIDAY

Paid: See (5, 6, 16, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE
For 'Repair & Maintenance'
Paid: See(5, 6, 16, 25)
Overtime: See(5, 6, 16, 25)

REGISTERED APPRENTICES

Wage per hour:	
(1) year terms at the following wage rates:	7/01/2024
1st term	\$ 22.34
2nd term	30.64
3rd term	40.87
4th term	50.14

Supplemental Benefits:	
(Per hour)	
1st term	\$ 19.27
2nd term	27.34
3rd term	32.85
4th term	36.01

8-1087 (DC9 NYC)

Insulator - Heat & Frost	11/01/2024
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JOB DESCRIPTION Insulator - Heat & FrostDISTRICT 4

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES
Per Hour: 07/01/2024

Insulators	
Heat & Frost	\$ 71.01

SUPPLEMENTAL BENEFITS

Per Hour:	
Insulators	\$ 36.76
Heat & Frost	

OVERTIME PAY

See (B, E, *Q, V) on OVERTIME PAGE
* Triple time for Labor Day (If worked)

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages:				
1 year terms.				
Wages Per Hour:				
	1st	2nd	3rd	4th
	\$ 31.96	\$ 39.06	\$ 46.16	\$ 53.26

Supplemental Benefits:

\$ 16.56 \$ 20.23 \$ 23.91 \$ 27.06

4-12

Ironworker

11/01/2024

JOB DESCRIPTION Ironworker

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per Hour:	07/01/2024	01/01/2025
Stone Derrickmen Rigger	\$ 75.40	Additional \$ 1.64*
Stone Handset Derrickman	72.55	1.11*

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per hour:

Stone Derrickmen Rigger	\$ 45.52
Stone Handset Derrickman	44.76

OVERTIME PAY

See (B, D1, *E, Q, **V) on OVERTIME PAGE

*Time and one-half shall be paid for all work on Saturday up to eight (8) hours and double time shall be paid for all work thereafter.

** Benefits same premium as wages on Holidays only

HOLIDAY

Paid: See (18) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 25) on HOLIDAY PAGE
Work stops at schedule lunch break with full day's pay.

REGISTERED APPRENTICES

Wage per hour:

Stone Derrickmen Rigger:	1st	2nd	3rd	4th
07/01/2024	\$ 37.20	\$ 53.28	\$ 59.32	\$ 65.36

Supplemental Benefits:

Per hour:				
07/01/2024	23.27	34.39	34.39	34.39

Stone Handset:

1/2 year terms at the following hourly wage rate:

	1st	2nd	3rd	4th
07/01/2024	\$ 35.78	\$ 51.04	\$ 56.79	\$ 62.55

Supplemental Benefits:

Per hour:				
07/01/2024	22.95	34.08	34.08	34.08

9-197D/R

Ironworker

11/01/2024

JOB DESCRIPTION Ironworker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per Hour:	07/01/2024	01/01/2025
Ornamental	\$ 47.65	Additional

Chain Link Fence	47.65	\$ 1.25/hr*
Guide Rail	47.65	

(*)To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker: \$ 66.29

OVERTIME PAY

See (B, B1, Q, V) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

1 year terms

07/01/2024

1st Term	\$ 25.98
2nd Term	28.45
3rd Term	30.80
4th Term	34.39

Supplemental Benefits per hour:

1st Term	\$ 16.29
2nd Term	18.29
3rd Term	19.29
4th Term	20.29

4-580-Or

Ironworker

11/01/2024

JOB DESCRIPTION Ironworker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

PER HOUR:

07/01/2024

01/01/2025

Ironworker:

Structural \$ 57.20

Bridges

Machinery

Additional

\$ 1.75/Hr.*

(*)To be allocated at a later date.

SUPPLEMENTAL BENEFITS

PER HOUR PAID:

Journeyman \$ 89.85

OVERTIME PAY

See (B, B1, Q, *V) on OVERTIME PAGE

*NOTE: Benefits are calculated for every hour paid.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 18, 19) on HOLIDAY PAGE

REGISTERED APPRENTICES

WAGES PER HOUR:

6 month terms at the following rate:

1st	\$ 30.23
2nd	30.83
3rd - 6th	31.44

Supplemental Benefits

PER HOUR PAID: 62.47

4-40/361-Str

Ironworker

11/01/2024

JOB DESCRIPTION Ironworker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

PARTIAL COUNTIES

Rockland: Southern section - south of Convent Road and east of Blue Hills Road.

WAGES

Per hour: 07/01/2024

Reinforcing &
Metal Lathing \$ 56.95

"Base" Wage 55.20
plus \$ 1.75

"Base" Wage is used to calculate overtime hours only.

SUPPLEMENTAL BENEFITS

Per hour:
Reinforcing & Metal Lathing \$ 44.63

OVERTIME PAY

See (B, E, Q, *X) on OVERTIME PAGE

*Only \$23.50 per Hour for non worked hours

Supplemental Benefit Premiums for Overtime Hours worked:

Time & One Half \$ 51.13
Double Time 57.63

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 13, *18, **19, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

(1) year terms at the following wage rates:

Prior to 01/01/2020:

1st term	2nd term	3rd term	4th Term
Wage Per Hour:			
\$ 22.55	\$ 28.38	\$ 34.68	\$ 37.18
"Base" Wage			
\$21.00	\$26.80	\$33.10	\$35.60
plus \$1.55	plus \$1.58	plus \$1.58	plus \$1.58

"Base" Wage is used to calculate overtime hours ONLY.

SUPPLEMENTAL BENIFITS

Per Hour:

1st term	2nd term	3rd term	4th Term
\$18.17	\$21.34	\$22.00	\$22.50

After 01/01/2020:

1st term	2nd term	3rd term	4th Term
Wage Per Hour:			
\$ 22.55	\$ 23.60	\$ 24.60	\$ 25.65
"Base" Wage			
\$21.00	\$22.00	\$23.00	\$24.00
plus \$1.55	plus \$1.60	plus \$1.60	plus \$1.65

"Base" Wage is used to calculate overtime hours ONLY.

SUPPLEMENTAL BENIFITS

Per Hour:

1st term	2nd term	3rd term	4th Term
\$18.40	\$17.40	\$16.45	\$15.45

4-46Reinf

Laborer	11/01/2024
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JOB DESCRIPTION Laborer

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:

Striper (Highway/streets):	07/01/2024	07/01/2025
Striping-Machine Operator	\$ 41.00	Additional \$ 3.05**
Striping Thermoplastic	45.00	
Flagger - Traffic Safety*	39.00	

Note: * Includes but is not limited to: Positioning of cones and directing of traffic using handheld devices. Excludes the Driver/Operator of equipment used in protection of traffic safety.

** To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per hour paid:

Journeyworker	\$ 19.27
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OVERTIME PAY

See (B, H) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 8, 13) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 13) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:

1st Term (1-2000 hours)	\$ 31.36
2nd Term (2001-4000 hours)	33.00

Supplemental Benefits per hour:

All Terms	19.27
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9-1010-LS

Laborer	11/01/2024
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JOB DESCRIPTION Laborer

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:	07/01/2024
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Laborer/Excavation

**Asbestos and Lead Abatement &

Removal, Hazardous Waste Removal

(including soil) \$ 45.00

Basic 45.00

Flagman 45.00

Pipelayer 45.00

*Tree Work, *Landscape 45.00

*Includes trimming, cutting, planting and/or removal of trees.

** Applies to Heavy & Highway projects

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker: \$ 54.03

Note: No payment of Supplemental Benefits is required on paid holidays, when employees do not work.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

When an observed holiday falls on a Saturday, work done shall be paid at double time.

HOLIDAY

Paid: See (2, 20) on HOLIDAY PAGE

Overtime: See (2, 5, 6, 11, 20) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:

1000 hour terms at the following hourly wage rate.

07/01/2024

1st	0 - 1000	\$ 22.50
2nd	1001-2000	27.00
3rd	2001-3000	33.75
4th	3001-4000	40.50

Supplemental Benefits per hour:

All Apprentices 54.03

9-731Ex

Laborer

11/01/2024

JOB DESCRIPTION Laborer

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:

GROUP 14: Blasters.

GROUP 16: Tunnel workers - including Miners, Drill Runners, Iron Men, Maintenance Men, Conveyor Men, Safety Miners, Riggers, Block Layers, Cement Finishers, Rod Men, Caulkers, Powder Carriers, Miners' Helpers, Chuck Tenders, Track Men, Nippers, Brake Men, Derail Men, Form Men, Bottom Bell, Top Bell or Signal men, Form Workers, Movers, Concrete Workers, Shaft Men, Tunnel Laborers and Caulkers' Helpers.

GROUP 17: All others including: Powder Watchmen, Top Laborers and Changehouse Attendants.

Wages: (per hour) 07/01/2024

Laborer (Tunnel)-FREE AIR:

Group 14	\$ 77.13
Group 16	73.75
Group 17*	68.18

Small Bore Micro
Tunnel Machines 80% of rates above

For Repairs on Existing
Water Tunnels 90% of rates above

For Repairs of Sewer &
Drainage Tunnels 85% of rates above

For Repair & Maintenance
of all Subway &
Vehicular Tunnels 80% of rates above

*An additional \$3.00 per day when using an air spade, jack hammer or pavement breaker.

Note: Employer shall pay \$10.00 per day for each half mile starting at a point 500 feet from the bottom of the shaft.

SUPPLEMENTAL BENEFITS

Per hour:

GROUP 14	\$ 55.32
GROUP 16	53.06
GROUP 17	49.11

Small Bore Micro
Tunnel Machines 80% of rates above

For Repairs on Existing
Water Tunnels 90% of rates above

For Repairs of Sewer &
Drainage Tunnels 85% of rates above

For Repair & Maintenance
of all Subway &
Vehicular Tunnels 80% of rates above

OVERTIME PAY

OVERTIME: For Laborer (Free Air) See (D, M, R*) on OVERTIME PAGE.
For Repair Categories See (B, F, R*) on OVERTIME PAGE.
& Micro Tunneling
* Straight time first 8 hours, double time after 8 hours.

HOLIDAY

Paid: See (5, 6, 9, 11, 12, 15, 16, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 9, 11, 12, 15, 16, 25) on HOLIDAY PAGE
Good Friday may be exchanged for one of the holidays listed.

9-147Tnl/Free

Laborer - Building

11/01/2024

JOB DESCRIPTION Laborer - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:	07/01/2024	01/01/2025
		Additional
Basic Laborer and Mason Tender	\$ 44.70*	\$ 1.25**

*Before calculating premium wage deduct \$3.25

** To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per hour:

Basic Laborer and
Mason Tender \$ 29.99

OVERTIME PAY

See (B, B2, E, E2, Q, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:

1000 hour terms at the following wage rate:

Term:	1st	2nd	3rd	4th
Basic Laborer and Mason Tender 07/01/2024	\$ 22.05*	\$ 23.80*	\$ 25.30*	\$ 27.80*

*Before calculating premium wage deduct \$0.50

Supplemental Benefits per hour:

All Terms		
07/01/2024	\$ 10.77	9-MTDC(79)

Laborer - Building	11/01/2024
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JOB DESCRIPTION Laborer - Building

DISTRICT 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:	07/01/2024	07/01/2025 Additional
Skilled Interior Demolition Laborer:	\$ 39.70*	\$ 0.75***
General Interior Demolition Laborer:	28.89**	

* Before calculating overtime wages deduct \$1.70

**General Demolition Laborer performs manual work and work incidental to demolition, such as loading and carting of debris from work site to an area where it can be loaded into trucks for removal. Also performs clean-up of the site when demolition is complete.

***To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per Hour:	
Skilled Interior Demolition Laborer:	24.84
General Interior Demolition Laborer:	19.16

OVERTIME PAY
See (B, B2, I, R) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage Per Hour:				
1000 hour terms at the following wage rate:	1st	2nd	3rd	4th
	\$ 21.80*	\$ 23.55*	\$ 25.05*	\$ 27.55*

* Before calculating overtime wages deduct \$0.50

Supplemental Benefits Per Hour:

All Terms:	10.47	9-MTDC (79-ID)
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Laborer - Building	11/01/2024
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JOB DESCRIPTION Laborer - Building

DISTRICT 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:	07/01/2024
Laborer:	
Laborer-Concrete (including flag person)	\$ 42.53 + 8.00*

* This portion is not subjected to overtime premiums.

SUPPLEMENTAL BENEFITS

Per Hour

\$ 20.20
+ 9.00**

** This portion subjected to overtime premiums only on codes (E,Q)

OVERTIME PAY

OVERTIME: See (A,E,Q) on OVERTIME PAGE attached.
See (B,E,Q,) for work below street level to top of foundation.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 11, 13, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:

Terms based on hours listed:

1st	2nd	3rd
0-1334	1334-2668	2669-4000
\$ 15.35 + 2.49*	\$ 20.15 + 7.32*	\$ 20.95 + 7.80*

* This portion is not subjected to overtime premiums.

Supplemental Benefits:

Per hour:

\$ 12.70 + 2.65*	\$ 16.70 + 3.45*	\$ 16.70 + 4.25*
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Journeyworker rate applies after 4000 hours

*This portion subjected to same premium as wages.

9-6A/18A/20-C

Laborer - Building

11/01/2024

JOB DESCRIPTION Laborer - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:	07/01/2024	01/01/2025
Building:		Additional

Plasterer Tender and Spray Fireproofing Tender	\$ 44.70*	\$ 1.25**
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* Before calculating overtime wages deduct \$3.25

**To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per hour:
Journeyworker \$ 29.99

OVERTIME PAY

See (B, B2, E, E2, Q, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:

1000 hours terms at the following wage.

	1st	2nd	3rd	4th
01/01/2024	\$22.05*	\$23.80*	\$25.30*	\$27.80*

* Before calculating overtime wages deduct \$ 0.50

Supplemental Benefits per hour:

All Terms:
07/01/2024

\$ 10.77

9-30 (79)

Laborer - Building

11/01/2024

JOB DESCRIPTION Laborer - Building

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2024 01/06/2025

Asbestos, Lead \$ 39.00 Additional
and Hazardous \$ 1.50/Hr.*
Material Abatement
Laborer

(*)To be allocated at a later date.

(Re-Roofing Removal See Roofer)

NOTE: Asbestos removed from Mechanical Systems not to be scrapped
See Asbestos Worker

SUPPLEMENTAL BENEFITS

Per Hour:

Laborer \$ 20.10

OVERTIME PAY

See (B, B2, I) on OVERTIME PAGE

*Calculate at \$39.00 per hour then add \$1.55

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 28) on HOLIDAY PAGE

REGISTERED APPRENTICES

1000 hour terms at the following:

Per Hour:

1st Term \$ 20.00*
2nd Term 21.00**
3rd Term 24.00***
4th Term 26.00****

SUPPLEMENTAL BENEFIT

Per Hour:

All Terms \$ 14.35

OVERTIME PAY:

*Calculate at \$20.00 per hour then add \$1.00

**Calculate at \$21.00 per hour then add \$1.00

***Calculate at \$24.00 per hour then add \$1.00

****Calculate at \$26.00 per hour then add \$1.00

4-NYDC(78)

Laborer - Building

11/01/2024

JOB DESCRIPTION Laborer - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour: 07/01/2024 01/01/2025
Additional

Skilled Demolition Laborer: \$ 42.48* \$ 0.50***

General Demolition Laborer: 31.06**

*Before calculating overtime wages deduct \$3.00

**Before calculating overtime wages deduct \$2.35

***To be allocated at a later date.

**General Demolition Laborer performs manual work and work incidental to demolition, such as loading and carting of debris from work site to an area where it can be loaded into trucks for removal. Also performs clean-up of the site when demolition is complete.

NOTE: Total Demolition Only: Demolition shall be the complete demolition (wrecking) or dismantling of entire buildings or structures. Also may include the removal of all or any portion of a roof in which structural change is to occur. Structural change is defined as the removal of structural slabs, steel members, concrete members and penetration through the structural slab.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker:

Skilled Demolition Laborer: \$ 28.92

General Demolition Laborer: 21.98

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:

(1) year terms at the following wage.

07/01/2024	1st	2nd	3rd	4th
	\$ 22.05*	\$ 23.80*	\$ 25.30*	\$ 27.80*

*Before calculating overtime wages deduct \$0.50

Supplemental Benefits per hour:

All Terms:

07/01/2024 \$ 10.77

9-79/95

Laborer - Concrete & Asphalt Paving

11/01/2024

JOB DESCRIPTION Laborer - Concrete & Asphalt Paving

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Group 1: Slurry Seal Coater, Maintenance Safety Surface, Small Power Tool Operator, Play Equipment Installer, Temporary Fence Installer & Repairs, Laborer.

Group 2: Production Paving Work: Shoveler, small equipment operator.

Per hour: 07/01/2024

Concrete Formsetter \$ 49.35 + \$ 8.00*

Asphalt Screeperson/Micro Paver 49.95 + \$ 8.00*

Asphalt Raker 49.35 + \$ 8.00*

Group 1 45.48 + \$ 8.00*

Group 2 45.48 + \$ 8.00*

* This portion is not subjected to overtime premiums.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker: \$ 45.55

Note: No payment of supplemental benefits is required on paid holidays, when employees do not work.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

Note: Saturday premium rate applies from 7:00 am on Saturday to 6:59 am Sunday

Note: Sunday premium rate applies from Sunday 7:00 am to Monday 6:59 am.

HOLIDAY

Paid: See (5, *11, 20) on HOLIDAY PAGE

HOLIDAY:

Overtime: See (21,22)** on HOLIDAY PAGE.

Note: See (5,20) Holiday pay -at the single time pay rate-shall be prorated based on 25% of a day's wages and benefits for each day worked during that calendar week.

**New Year's Day and Christmas Day: If an employee is performing work on these (2) days the employee will receive the single rate plus 25%.

* Columbus Day shall be an unpaid holiday. In the event work is performed on Columbus Day, wages shall be paid on a double time basis.

Note-When Independence day falls on Saturday, it will be observed on that Saturday, however, when it occurs on a Sunday, it will be observed on the Monday.

REGISTERED APPRENTICES

Wage per hour:

2000 hours term:

1st term	2nd term
1-1999	2000-4000
\$ 31.36 + \$ 8.00*	\$ 33.00 + \$ 8.00*

* This portion is not subjected to overtime premiums.

Supplemental Benefits per hour:

2000 hours term:

1st term	2nd term
1-1999	2000-4000
\$ 18.67	\$ 18.67

9-1010H/H

Laborer - Trac Drill

11/01/2024

JOB DESCRIPTION Laborer - Trac Drill

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Group 1: Chipper/Jackhammer, Powder Carrier, Hydraulic Chuck tender, Chuck Tender and Nipper, Magazine Keeper

Group 2: Hydraulic Trac Drill

Group 3: Air Trac, Wagon and Quarry bar

Group 4: Blaster

Per Hour: 07/01/2024

Group 1	\$ 45.00
Group 2	52.35
Group 3	51.52
Group 4	58.21

SUPPLEMENTAL BENEFITS

Per Hour:

All Classifications: 54.03

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

When an observed holiday falls on a Saturday, work done shall be paid at double time.

HOLIDAY

Paid: See (2, 20) on HOLIDAY PAGE
Overtime: See (2, 5, 6, 11, 20) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:

1000 hour terms at the following hourly wage rate.

07/01/2024

1st	0 - 1000	\$ 22.50
2nd	1001-2000	27.00
3rd	2001-3000	33.75
4th	3001-4000	40.50

Supplemental Benefits per hour:

All Apprentices 54.03

9-731/29

Laborer - Tunnel

11/01/2024

JOB DESCRIPTION Laborer - Tunnel

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

GROUP 5: Blasters and Mucking Machine Operators

GROUP 6: Tunnel Workers*(including Miners, Drill Runners, Iron Men, Maintenance Men, Inside Muck Lock Tender, Pumpmen, Electricians, Cement Finishers, Rod Men, Caulkers, Carpenters, Hydraulic Men, Shield Drivers, Monorail Operators, Motor Men, Conveyor Men, Safety Miners, Powder Carriers, Pan Men, Riggers, Miner's Helpers, Chuck Tenders, Track Men, Nippers, Brake Men, Form Workers, Concrete Workers, Tunnel Laborers, Caulker's Helpers), Hose Men, Grout Men, Gravel Men, Derail Men and Cable Men.

GROUP 7: Top Nipper

GROUP 8,9: Outside Man Lock Tender, Outside Muck Lock Tender, Shaft Men, Gauge Tender and Signal Men.

GROUP 10: Powder Watchmen, Top Laborers and Changehouse Attendants.

WAGES: (per hour)

07/01/2024

Laborer (Compressed Air):

GROUP 5	\$ 80.82
GROUP 6	77.95
GROUP 7	76.65
GROUP 8,9	75.10
GROUP 10	66.18

Note: Employer shall pay \$10.00 per day for each one half (1/2) mile or fraction starting from a point 500 feet from the shaft.

SUPPLEMENTAL BENEFITS

SUPPLEMENTAL BENEFITS:

per hour:

GROUP 5	\$ 57.61
GROUP 6	55.81
GROUP 7	54.68
GROUP 8,9	53.84
GROUP 10	50.85

OVERTIME PAY

See (D, M, *R) on OVERTIME PAGE

NOTE: Time and one-half to be paid for all overtime repair-maintenance work on existing equipment and facilities.

* Straight time first 8 hours, double time after 8 hours.

HOLIDAY

Paid: See (5, 6, 9, 11, 12, 15, 16, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 9, 11, 12, 15, 16, 25) on HOLIDAY PAGE
Good Friday may be exchanged for one of the holidays listed.

9-147Tnl/Comp Air

Mason

11/01/2024

JOB DESCRIPTION Mason

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2024

Brick/Block Layer \$ 67.14

Base Wage for OT Calculation \$ 55.93

SUPPLEMENTAL BENEFITS

Per Hour:

Brick/Block Layer \$ 34.90

OVERTIME PAY

See (A, E, E2, Q) on OVERTIME PAGE
Note: OT Calculated on Base Wage plus \$ 11.21/hr.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

(800 hour) Terms at the following Percentage of Journey workers "Base Wage" plus \$ 5.94/hr.:

1st	2nd	3rd	4th	5th
50%	60%	70%	80%	90%

Supplemental Benefits per hour:

All Apprentices \$ 24.70

4-1Brk

Mason - Building

11/01/2024

JOB DESCRIPTION Mason - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Building	07/01/2024	01/01/2025
Wages per hour:		Additional

Mosaic & Terrazzo Mechanic	\$ 60.98	\$ 1.06*
Mosaic & Terrazzo Finisher	58.96	

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per hour:

Mosaic & Terrazzo Mechanic	\$ 31.36*
	+ \$9.78

Mosaic & Terrazzo Finisher	\$ 31.36*
	+ \$9.77

*This portion of benefits subject to same premium rate as shown for overtime wages.

OVERTIME PAY

See (A, E, Q) on OVERTIME PAGE

07/01/2024- Deduct \$7.00 from hourly wages before calculating overtime.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

Easter Sunday is an observed holiday. Holidays falling on a Saturday will be observed on that Saturday. Holidays falling on a Sunday will be celebrated on the Monday.

REGISTERED APPRENTICES

Wages Per hour:

	1st 0- 1500	2nd 1501- 3000	3rd 3001- 3750	4th 3751- 4500	5th 4501- 5250	6th 5251- 6000
07/01/2024	\$ 25.19	\$ 32.39	\$ 38.18	\$ 40.78	\$ 49.00	\$ 55.75

Supplemental Benefits per hour:

07/01/2024	\$7.12* + 3.43	\$9.16* + 4.40	\$17.22* + 5.87	\$23.86* + 6.84	\$24.86* + 7.83	\$27.36* + 8.80
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*This portion of benefits subject to same premium rate as shown for overtime wages.

9-7/3

Mason - Building

11/01/2024

JOB DESCRIPTION Mason - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:	07/01/2024	12/02/2024 Additional
Tile Setters	\$ 64.40	\$ 0.72*

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per Hour:	\$ 28.51* + 8.52
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*This portion of benefits subject to same premium rate as shown for overtime wages.

OVERTIME PAY

See (B, *E, Q, V) on OVERTIME PAGE

Work beyond 10 hours on Saturday shall be paid at double the hourly wage rate.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:

750 hour terms at the following wage rate:

	1st 1- 750	2nd 751- 1500	3rd 1501- 2250	4th 2251- 3000	5th 3001- 3750	6th 3751- 4500	7th 4501- 5250	8th 5251- 6000	9th 6001- 6750	10th 6501- 7000
07/01/2024	\$22.19	\$27.21	\$34.45	\$39.46	\$43.07	\$46.58	\$50.23	\$55.24	\$57.71	\$62.00

Supplemental Benefits per hour:

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
07/01/2024	\$12.55* + \$.76	\$12.55* + \$.81	\$15.36* + \$.91	\$15.36* + \$.96	\$16.36* + \$1.43	\$17.86* + \$1.48	\$18.86* + \$1.91	\$18.86* + \$1.97	\$18.86* + \$4.57	\$24.11* + \$5.18

*This portion of benefits subject to same premium rate as shown for overtime wages.

9-7/52

Mason - Building

11/01/2024

JOB DESCRIPTION Mason - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per hour:07/01/202401/06/2025
Additional

Building-Marble Restoration:

Marble, Stone &\$ 47.72\$ 0.57*

Terrazzo Polisher

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per Hour:

Journeyworker:

Building-Marble Restoration:

Marble, Stone &
Polisher\$ 31.50

OVERTIME PAY

See (B, *E, Q, V) on OVERTIME PAGE

* On Saturdays, 8th hour and successive hours paid at double hourly rate.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 11, 15, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

WAGES per hour:

900 hour term at the following wage:

1st	2nd	3rd	4th
1- 900	901- 1800	1801- 2700	2701
\$ 33.40	\$ 38.18	\$ 42.94	\$ 47.72
Supplemental Benefits Per Hour: 29.06	29.87	30.69	31.50

9-7/24-MP

Mason - Building

11/01/2024

JOB DESCRIPTION Mason - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

WAGES

Per Hour:07/01/202401/06/2025
Additional\$ 0.75*

Marble Cutters & Setters\$ 63.92

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per Hour:

Journeyworker\$ 40.05

OVERTIME PAY
See (B, E, Q, V) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage Per Hour: 07/01/2024							
750 hour terms at the following wage							
1st	2nd	3rd	4th	5th	6th	7th	8th
0-3000	3001-3750	3751-4500	4501-5250	5251-6000	6001-6750	6751-7500	7500+
\$ 27.01	\$ 40.52	\$ 43.88	\$ 47.26	\$ 50.64	\$ 54.32	\$ 60.71	\$ 63.92

Supplemental Benefits per hour:
07/01/2024

1st	2nd	3rd	4th	5th	6th	7th	8th
\$ 26.42	\$ 29.76	\$ 30.61	\$ 31.44	\$ 32.28	\$ 37.55	\$ 39.23	\$ 40.05

9-7/4

Mason - Building

11/01/2024

JOB DESCRIPTION Mason - Building

DISTRICT 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES	
Per hour:	07/01/202412/02/2024
Tile Finisher	\$ 49.46Additional \$ 0.59*

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS	
Per Hour:	\$ 25.36* + \$8.33

* This portion of benefits is subject to same premium rate as shown for overtime wages.

OVERTIME PAY
See (A, *E, Q) on OVERTIME PAGE
Double time rate after 10 hours on Saturdays

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 15, 16, 25) on HOLIDAY PAGE

9-7/88-tf

Mason - Building

11/01/2024

JOB DESCRIPTION Mason - Building

DISTRICT 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES	
Per hour:	07/01/202401/06/2025
Marble, Stone, Maintenance Finishers:	\$ 27.72Additional \$ 0.41*

Note 1: An additional \$2.00 per hour
for time spent grinding floor using
"60 grit" and below.
Note 2: Flaming equipment operator
shall be paid an additional \$25.00 per day.

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per Hour:

Marble, Stone
Maintenance Finishers: \$ 15.74

OVERTIME PAY

See (B, *E, Q, V) on OVERTIME PAGE

*Double hourly rate after 8 hours on Saturday

HOLIDAY

Paid: See (5, 6, 8, 11, 15, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 11, 15, 25) on HOLIDAY PAGE

1st term apprentice gets paid for all observed holidays.

REGISTERED APPRENTICES

WAGES per hour:

07/01/2024

0-750	\$ 22.32
751-1500	23.04
1501-2250	23.75
2251-3000	24.48
3001-3750	25.56
3751-4500	27.00
4501+	27.72

Supplemental Benefits:

Per hour:

0-750	12.69
751-1500	13.10
1501-2250	13.51
2251-3000	13.91
3001-3750	14.52
3751-4500	15.33
4501+	15.74

9-7/24M-MF

Mason - Building / Heavy&Highway

11/01/2024

JOB DESCRIPTION Mason - Building / Heavy&Highway

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per hour:	07/01/2024	01/06/2025 Additional
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Marble-Finisher	\$ 49.99	\$ 0.53*
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*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Journeyworker:

Per hour

Marble- Finisher \$ 37.39

OVERTIME PAY

See (B, E, Q, V) on OVERTIME PAGE

Work beyond 8 hours on a Saturday shall be paid at double the rate.

HOLIDAY

Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

When an observed holiday falls on a Sunday, it will be observed the next day.

9-7/20-MF

Mason - Building / Heavy&Highway

11/01/2024

JOB DESCRIPTION Mason - Building / Heavy&Highway

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2024

Cement Mason \$ 57.72

SUPPLEMENTAL BENEFITS

Per Hour:

Cement Mason \$ 34.66

1.5 X overtime rate \$ 62.95

2 X overtime rate \$ 69.32

OVERTIME PAY

See (B1, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 11, 13, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

(1) year terms at the following wage:

1st Term \$ 23.39

2nd Term \$ 28.29

3rd Term \$ 33.69

Supplement Benefits per hour paid:

	ST	1.5X OT	2X OT
1st Term	\$ 14.86	\$ 22.30	\$ 29.72
2nd Term	\$ 15.16	\$ 22.75	\$ 30.32
3rd Term	\$ 15.27	\$ 22.91	\$ 30.54

4-780

Mason - Building / Heavy&Highway

11/01/2024

JOB DESCRIPTION Mason - Building / Heavy&Highway

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

NOTE: Shall include but not limited to Precast concrete slabs (London Walks) Marble and Granite pavers 2'x 2' or larger.

Per Hour:

07/01/2024

05/01/2025

Additional

\$ 3.42/Hr+

Stone Setter \$ 69.91

Base Rate 53.84*

Stone Tender \$51.82

Base Rate 44.54*

(+)To be allocated at a later date for all classes.

SUPPLEMENTAL BENEFITS

Per Hour:

Stone Setter \$ 42.52

Stone Tender 23.15

OVERTIME PAY

See (*C, **E, Q) on OVERTIME PAGE

* Base Rates are used to Calculate Overtime Premiums then adding in: \$15.81/Hr. for Stone Setter or \$7.28/Hr. for Stone Tender.

** On weekdays the eighth (8th) and ninth (9th) hours are time and one-half all work thereafter is paid at double the hourly rate.

*** The first nine (9) hours on Saturday is paid at time and one-half all work thereafter is paid at double the hourly rate.

HOLIDAY

Paid: See (*18) on HOLIDAY PAGE

Overtime: See (5, 6, 10) on HOLIDAY PAGE

Paid: * Must work first 1/2 of day.

REGISTERED APPRENTICES

Per Hour:

Stone Setter(800 hour) terms at the following Percentage of Stone Setters Base wage rate per hour plus \$7.32:

1st	2nd	3rd	4th	5th	6th
50%	60%	70%	80%	90%	100%

Supplemental Benefits:

All Apprentices \$ 25.85

4-1Stn

Mason - Heavy&Highway

11/01/2024

JOB DESCRIPTION Mason - Heavy&Highway

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2024

Pointer, Caulkers &
Cleaners \$ 63.69

SUPPLEMENTAL BENEFITS

Per Hour:

Pointer, Cleaners &
Caulkers \$ 31.90

OVERTIME PAY

See (B, E2, H) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:

One (1) year terms at the following wage rates.

1st	2nd	3rd	4th
\$ 32.76	\$ 37.09	\$ 42.97	\$ 51.60

Apprentices Supplemental Benefits:

(per hour paid)

\$ 15.40	\$ 21.70	\$ 24.45	\$ 25.45
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4-1PCC

Operating Engineer - Building

11/01/2024

JOB DESCRIPTION Operating Engineer - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Putnam, Queens, Richmond, Westchester

PARTIAL COUNTIES

Dutchess: that part of Dutchess County lying south of the North City Line of the City of Poughkeepsie.

WAGES

NOTE: Construction surveying

Party Chief--One who directs a survey party

Instrument Man--One who runs the instrument and assists Party Chief.

Rodman--One who holds the rod and assists the Survey Crew

Wages:(Per Hour) 07/01/2024

Building Construction:

Party Chief \$ 79.99

Instrument Man	60.36
Rodman	40.45

Steel Erection:

Party Chief	83.13
Instrument Man	64.21

Rodman	44.33
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Heavy Construction-NYC counties only:
(Foundation, Excavation.)

Party Chief	88.06
Instrument man	65.66
Rodman	55.70

SUPPLEMENTAL BENEFITS

Per Hour: 07/01/2024

Building Construction \$ 28.63* +\$ 7.65

Steel Erection 29.23* + 7.65

Heavy Construction 30.04* + 7.64

* This portion subject to SAME premium as wages

Non-Worked Holiday Supplemental Benefit:

21.83

OVERTIME PAY

See (A, B, E, Q) on OVERTIME PAGE

Code "A" applies to Building Construction and has double the rate after 7 hours on Saturdays.

Code "B" applies to Heavy Construction and Steel Erection and had double the rate after 8 hours on Saturdays.

HOLIDAY

Paid: See (5, 6, 9, 11, 15, 16, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 9, 11, 15, 16, 25) on HOLIDAY PAGE

9-15Db

**Operating Engineer - Building, Maintenance, Steel Erection
& Heavy Construction**

11/01/2024

JOB DESCRIPTION Operating Engineer - Building, Maintenance, Steel Erection & Heavy Construction

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

STEEL ERECTION:

Group 1: Derrick, travelers, tower, crawler tower & climbing cranes

Group 2: Oiler (Truck Crane)

Group 3: Oiler (Crawler Crane)

BUILDING CONSTRUCTION:

Group 1: Installing, repairing, maintaining, dismantling of all equipment including Steel cutting& bending machines, mechanical heaters, mine hoists, climbing cranes, tower cranes, Linden Peine, Lorain, Liebherr, Mannes and machines of a similar nature; Well Point system, Deep Well pumps, Concrete mixers with loading devices, Concrete plants, motor generators (When used for temporary power and lights)(Driving maintenance trucks and mounted-welded machines)-All Pumps(excluding River Cofferdam Pumps and Well Point Pumps), Motorized Concrete Buggies(When three or more are on job site), Skid-Steer and similar machines

Group 2:Maintenance of: Pumps, Generators, Mixers, Heaters

Group 3: Oilers of all gasoline, electric, diesel or air operated Gradalls; Concrete Pumps, Overhead Cranes in Power Houses, Assist in oiling, greasing and repairing of all machines, including: Driving Truck Cranes, Driving and operating Fuel and Grease Trucks, Cherry Pickers(Hydraulic Cranes) over 70,000 GVW and machines of a similar nature

Group 4: Oiler on Crawler Cranes, Backhoes, Trenching Machines, Guniting Machines, Compressors(3 or more in battery)

Group 5: Maintenance on Radiant Mechanical Heaters

HEAVY CONSTRUCTION (Excavation, Foundations, etc)

Group 1:Maintenance of: Generators, Light Towers

Group 2:Maintenance of: Pumps, Mixers including mudsucking

Group 3: Base Mounted Tower Cranes

Group 4: Installing, repairing, maintaining, dismantling(of all equipment including Steel cutting & Bending machines, Fusion Coupling Machines, Vermeer Trenching machines, on-site crushing plant, mechanical heaters(1 through 7),Mine hoists, Tower Cranes, Linden Peine, Lorrain, Lebherr, Mannes or machines of a similar nature, Wellpoints)-Driving maintenance trucks and truck mounted welding machines, burning, welding-operating of accumulator for shield-driven tunnels, in addition to the performance of other duties: Handling, installation, jointing, coupling of all permanent steel and plastic pipe. RIDE UPON MOLES-tunnel boring machines-MICRO TUNNELING SYSTEMS, All temporary pipefitting;When three or more motorized concrete buggies(Ride type)are utilized on the jobsite they shall be serviced, maintained and repaired by the maintenance engineer. The Operating Engineer on autogrades(C.M.I.)is to be assisted by the maintenance engineer who shall in addition perform other duties.

WAGES:

Per hour: 07/01/2024

Steel Erection:

Group 1 \$ 81.43

Group 2 76.58

Group 3 58.22

Building Construction:

Group 1 \$ 72.41

Group 2 57.36

Group 3 69.09

Group 4 52.62

Group 5 46.07

Heavy Construction:

Group 1 \$ 57.43

Group 2 58.68

Group 3 108.95

Group 4 84.24

SUPPLEMENTAL BENEFITS

Per Hour: 07/01/2024

Building Construction \$ 30.52* + \$7.40

Steel Erection & Heavy 31.02* + \$7.40

* This portion of benefits is subject to same OT premium as wages.

Non-Worked Holiday Supplemental Benefits:

21.87

OVERTIME PAY

See (D, O) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 9, 11, 15, 16, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 9, 11, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages Per Hour:

(1) year terms at the following wage rates:

1st	2nd	3rd	4th.
\$ 38.52	\$ 45.23	\$ 48.70	\$ 52.17

Supplemental Benefits:

Per Hour:
All Terms \$ 16.52* + 7.40

* This portion of benefits is subject to same OT premium as wages.

9-15Ab

Operating Engineer - Building / Heavy&Highway

11/01/2024

JOB DESCRIPTION Operating Engineer - Building / Heavy&Highway

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

EQUIPMENT COVERED: Jet-Rodder/Vacuum Truck, Flusher, Sewer Rodder, Stetco Hoist and similar, Sewer Winch/Tugger Hoist and similar, Vacall/Vactor, Closed Circuit Television Inspection Equipment, Chemical Grouting Equipment and similar, John Beame, Meyers and similar.

Per Hour: 07/01/2024

Maintenance Engineer \$ 84.24
(Sewer Systems)

SUPPLEMENTAL BENEFITS

Per Hour:

Journeyman \$ 31.02*
+ \$ 7.40

*This portion of benefits subject to SAME premium as OT wages.

Non-Worked Holiday Supplemental Benefits:
\$ 21.87

OVERTIME PAY

See (D, O) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 7, 11, 16) on HOLIDAY PAGE
Overtime: See (5, 6, 7, 11, 16) on HOLIDAY PAGE

REGISTERED APPRENTICES

Per Hour:

(1) year terms at the following wage rates.

1st	2nd	3rd	4th
\$38.52	\$45.23	\$48.70	\$52.17

Supplemental Benefits:
Per Hour:

All Apprentices: \$ 16.52* + \$ 7.40

* This portion of benefits subject to the SAME premium as OT wages

9-15Sewer

Operating Engineer - Building / Heavy&Highway

11/01/2024

JOB DESCRIPTION Operating Engineer - Building / Heavy&Highway

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2024 08/01/2024

Well Driller \$ 41.85 \$ 43.11

Well Driller
Helper \$ 36.26 \$ 37.35

Hazardous Waste Differential
Added to Hourly Wage:
Level A \$ 3.00

Level B	\$ 2.00
Level C	\$ 1.00

Monitoring Well Work

Add to Hourly Wage:

Level A	\$ 3.00
Level B	\$ 2.00

SUPPLEMENTAL BENEFITS

Per Hour:

Well Driller & Helper	10% of straight time rate plus \$ 13.50
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Additional \$ 4.25/Hr. for Premium Time Hours Worked

OVERTIME PAY

See (B2, P, S) on OVERTIME PAGE

HOLIDAY

Paid:	See (5, 6, 16, 23) on HOLIDAY PAGE
Overtime:	See (5, 6, 16, 23) on HOLIDAY PAGE

REGISTERED APPRENTICES

Apprentices at 12 Month Terms

Wages Per Hour:

1st Term	\$ 28.00
2nd Term	\$ 29.00
3rd Term	\$ 30.00

SUPPLEMENTAL BENEFITS

Per Hour:

All Terms	10% of Wage + \$ 13.50
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Additional \$4.25/Hr. for premium time hours worked.

4-138well

Operating Engineer - Building & Steel Erection

11/01/2024

JOB DESCRIPTION Operating Engineer - Building & Steel Erection

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per Hour: 07/01/2024

STEEL ERECTION:

Three Drum Derricks	\$ 107.16
Cranes, Two Drum Derricks, Hydraulic Cranes & Fork Lifts, Boom Trucks	103.28
Compressors, Welding Machines	63.36
Compressors (not combined with welding machines)	60.71

BUILDING CONSTRUCTION:

Cranes, Stone Derrick, Boom Trucks, Hydraulic Cranes, Double Drum	103.62
4 Pole Hoists and Single Drum Hoists	98.28
Fork Lifts, Plaster(Platform Machine)Plaster Bucket, Concrete Pumps and all other equipment used for hoisting	87.78
	80.54
*House Cars and Rack & Pinion	71.35
*House Cars (New Projects)	58.47
Erecting and dismantling Cranes	88.64

Compressors, Welding Machines(Cutting Concrete-Tank Work),
Paint Spraying, Sand Blasting, Pumps(With the exclusion of
concrete pumps), House Car (Settlement basis only), All
Engines irrespective of power(Power-Vac)used to drive
auxiliary equipment Air, Hydraulic, etc., Boilers, Jacking System
62.20

APPLICABLE TO BUILDING CATEGORY:

CRANES: Crawler Or Truck

	In Addition To Above Crane Rates
100' to 149' Boom	\$ 1.75/hr
150' to 249' "	\$ 2.00/hr
250' to 349' "	\$ 2.25/hr
350' to 450' "	\$ 2.75/hr
Tower Crane	\$ 2.00/hr

APPLICABLE TO STEEL CATEGORY:

CRANES: Crawler Or Truck

	In Addition To Above Crane Rates
100' to 149' Boom	\$ 2.25/hr
150' to 249' "	\$ 2.50/hr
250' to 349' "	\$ 2.75/hr
350' to 450' "	\$ 3.25/hr
Tower Crane	\$ 2.50/hr

SUPPLEMENTAL BENEFITS

Per Hour: 07/01/2024

All Operator Classes \$ 26.15*
plus \$ 6.30

* This portion of the benefits is subject to the same premium as shown for overtime wages.

OVERTIME PAY

See (*B, **C, ***D, O) on OVERTIME PAGE

*Applies to House Cars and Rack & Pinion after 8 hours worked in a day, Saturday, Sunday and Holidays

**Applies to Building Construction category

***Applies to Steel Erection

HOLIDAY

Paid: See (5, 6, 8, 11, 12, 15, 16, 25, 26) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 11, 12, 15, 16, 25, 26) on HOLIDAY PAGE

Codes 8 and 12 apply ONLY to Steel Erection

Code 16 applies ONLY to Building Construction

REGISTERED APPRENTICES

Wage Per Hour:

Apprentices (1) year terms at the following rates:

	1st	2nd	3rd
07/01/2024	\$ 44.92	\$ 54.40	\$ 63.88

Supplemental Benefits Per Hour:

07/01/2024
Straight Time \$ 15.65*
plus \$ 6.30

* This portion of benefits subject to the same premium as shown for overtime wages.

9-14 B&S

Operating Engineer - Heavy Construction 1

11/01/2024

JOB DESCRIPTION Operating Engineer - Heavy Construction 1

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

(For Groups 23 - 28, see Operating Engineer - Heavy Construction 2)

Group 1: Tower Crane/Climbing Crane

Group 2: Backhoes (Including all track and rubber tire backhoes over 37,000 lbs), Power Shovels, Steel Erection: Hydraulic Clam Shells, Moles and machines of a similar nature
Group 3: Mine Hoists, Cranes, etc, used as Mine Hoists
Group 4: Gradalls, Keystones, Cranes (With digging buckets), Bridge Cranes, Trenching Machines, Vermeer Cutter and machines of a similar nature
Group 5: Pile Drivers and Rigs (Employing Dock-Builders Foreman), Derrick Boats, Tunnel Shovels,
Group 6: All Drills and machines of a similar nature
Group 7: Back-Filling Machines and Cranes, Mucking Machines, Dual Drum Pavers
Group 8: Mixers (Concrete with loading attachment), Concrete Pavers, Cableways, Land Derricks, Power House (Low pressure units)
Group 9: Concrete Pumps, Concrete Plant, Stone Crushers, Double Drum Hoists, Power Houses (Other than above)
Group 10: Concrete Mixer
Group 11: Elevators
Group 12: Concrete Breaking Machines, Single Drum Hoists, Load Masters, Locomotives and Dinkies (Over 10 tons), Hydraulic Crane-Second Engineer
Group 13: On-Site Concrete Plant Engineers, On-Site Asphalt Plant Engineer and Vibratory Console
Group 14: Barrier Mover, Barrier Transport and machines of a similar nature
Group 15: Compressors (Portable, 3 or more), Truck Compressor (Engineer Driver), Tugger Machines, Well Point Pumps, Chum Drill
Group 16: Boilers(High pressure),Compressors, Pumps(River Cofferdam) and Welding Machines(except where arc is operated by another Operating Engineer) Push Button Machines, All Engines, irrespective of power(Power Pac) used to drive auxiliary equipment, Air, Hydraulic, etc.
Group 17: Utility-Horizontal Boring Rig
Group 18: Utility Compressors
Group 19: Paving-Asphalt Spreader, Autogrades (C.M.I.), Roto-Mill
Group 20: Paving-Asphalt Roller
Group 21 Paving-Asphalt Plant
Group 22: Roller (non paving, all sizes)

WAGES:(per hour) 07/01/2024

Group 1	\$ 123.06
Group 2	102.98
Group 3	106.03
Group 4	103.66
Group 5	101.78
Group 6	98.05
Group 7	99.74
Group 8	97.10
Group 9	95.24
Group 10	91.40
Group 11	85.94
Group 12	87.66
Group 13	88.24
Group 14	80.02
Group 15	68.59
Group 16	64.34
Group 17	92.77
Group 18	63.97
Group 19	97.10
Group 20	94.83
Group 21	81.44
Group 22	94.83

Cranes: Crawler or Truck

100' to 149'	\$0.50 per hour additional to above Crane Rates
150' to 249'	\$0.75 per hour additional to above Crane Rates
250' to 349'	\$1.00 per hour additional to above crane Rates
350' to 450'	\$1.50 per hour additional to above crane Rates

SUPPLEMENTAL BENEFITS

Per Hour:

Groups 1-22

Regular Time \$ 26.15* plus \$ 6.30

* This portion of benefits subject to the same premium as shown for wages.

Non-Worked Holiday Supplemental Benefits:

\$ 20.80

OVERTIME PAY

See (D, O) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Per Hour:

(1) year terms at the following wage rates:

Groups 1-22	1st	2nd	3rd
	\$ 44.92	\$ 54.40	\$ 63.88

Supplemental Benefits:

Groups 1-22	
Regular Time	\$ 15.65* plus \$ 6.30

* This portion of benefits is subject to the SAME PREMIUM as shown for overtime wages

9-14 HC

Operating Engineer - Heavy Construction 2

11/01/2024

JOB DESCRIPTION Operating Engineer - Heavy Construction 2

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

(For Groups 1 - 22, see Operating Engineer - Heavy Construction 1)

Group 23: Cherry Picker (Over 20 tons), Loader (Over 6 yards)

Group 24: Backhoes and Loaders (Up to 37,000lbs), Bulldozers, Scrapers, Turn-A-Pulls, Tugger Hoists, Tractors, Hysters, Roustabout Cranes, Conveyors, Ballast Regulators (Ride On), Track Removal Machine or similar, Motor Graders, Locomotives (10 tons and under), Curb & Gutter Pavers and machines of a similar nature

Group 25: Post Hole Digger, Ditch Winch, Road Finishing Machines, Rollers (5 tons and under, Dual Purpose Trucks, Forklifts, Dempsey Dumpsters, Fireman

Group 26: Service Engineer (Gradalls, Concrete Pumps, Cold Planers Grader)

Group 27: Service Mechanic (Shovels, Draglines, Crawler Cranes, Backhoes, Trenching Machines, Compressors (3 or more in battery)

Group 28: Steam Equipment Operator (Water rigs, steam shovels, power boilers, derrick boats)

WAGES:(per hour) 07/01/2024

Group 23	\$ 87.05
Group 24	84.62
Group 25	80.57
Group 26	76.47
Group 27	54.57
Group 28	80.57

Cranes: Crawler or Truck

100' to 149'	\$0.50 per hour additional to above Crane Rates
150' to 249'	\$0.75 per hour additional to above Crane Rates
250' to 349'	\$1.00 per hour additional to above crane Rates
350' to 450'	\$1.50 per hour additional to above crane Rates

SUPPLEMENTAL BENEFITS

Per Hour:

Groups 23-28

Regular Time 31.02* + \$7.40

* This portion of benefits subject to the same OT premium as wages.

Non-Worked Holiday Supplemental Benefits:

21.87

OVERTIME PAY

See (D, O) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 7, 11, 16) on HOLIDAY PAGE
Overtime: See (5, 6, 7, 11, 16) on HOLIDAY PAGE

REGISTERED APPRENTICES

Per Hour:

(1) year terms at the following wage rates:

	1st	2nd	3rd	4th
Groups 23-28	\$38.52	\$45.23	\$48.70	\$52.17

Supplemental Benefits:

Regular Time \$ 16.52* + \$ 7.40

* This portion of benefits subject to same OT premium as wages.

9-15 HC

Operating Engineer - Marine Dredging

11/01/2024

JOB DESCRIPTION Operating Engineer - Marine Dredging

DISTRICT 4

ENTIRE COUNTIES

Albany, Bronx, Cayuga, Clinton, Columbia, Dutchess, Essex, Franklin, Greene, Jefferson, Kings, Monroe, Nassau, New York, Orange, Oswego, Putnam, Queens, Rensselaer, Richmond, Rockland, St. Lawrence, Suffolk, Ulster, Washington, Wayne, Westchester

WAGES

These wages do not apply to Operating Engineers on land based construction projects. For those projects, please see the Operating Engineer Heavy/Highway Rates. The wage rates below for all equipment and operators are only for marine dredging work in navigable waters found in the counties listed above.

Per Hour: 07/01/2024

CLASS A1 \$ 45.26
Deck Captain, Leverman,
Mechanical Dredge Operator,
Licensed Tug Operator 1000HP or more.

CLASS A2 40.33
Crane Operator (360 swing)

CLASS B To conform to Operating Engineer
Dozer, Front Loader Prevailing Wage in locality where work
Operator on Land is being performed including benefits.

CLASS B1 39.14
Derrick Operator (180 swing)
Spider/Spill Barge Operator
Operator II, Fill Placer, Engineer
Chief Mate, Electrician, Chief Welder,
Maintenance Engineer, Licensed Boat, Crew Boat Operator

CLASS B2 36.84
Certified Welder

CLASS C1 35.83
Drag Barge Operator,
Steward, Mate,
Assistant Fill Placer

CLASS C2 34.68
Boat Operator

CLASS D 28.81
Shoreman, Deckhand, Oiler,
Rodman, Scowman, Cook,
Messman, Porter/Janitor

SUPPLEMENTAL BENEFITS

Per Hour:
THE FOLLOWING SUPPLEMENTAL BENEFITS APPLY TO ALL CATEGORIES

All Classes A & B	\$ 12.00 plus 7% of straight time wage, Overtime hours add \$ 0.63
All Class C & D	\$ 11.75 plus 7% of straight time wage, Overtime hours add \$ 0.50

OVERTIME PAY
See (B2, F, R) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 15, 26) on HOLIDAY PAGE

4-25a-MarDredge

Operating Engineer - Survey Crew - Consulting Engineer

11/01/2024

JOB DESCRIPTION Operating Engineer - Survey Crew - Consulting Engineer **DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Suffolk, Westchester

PARTIAL COUNTIES
Dutchess: That part in Dutchess County lying South of the North City line of Poughkeepsie.

WAGES
Feasibility and preliminary design surveying, any line and grade surveying for inspection or supervision of construction.

Per hour: 07/01/2024
Survey Classifications

Party Chief	\$ 49.39
Instrument Man	40.96
Rodman	35.63

SUPPLEMENTAL BENEFITS
Per Hour:

All Crew Members: \$ 23.75

OVERTIME PAY
OVERTIME:..... See (B, E*, Q, V) ON OVERTIME PAGE.
*Double-time paid on the 9th hour on Saturday.

HOLIDAY
Paid: See (5, 6, 7, 11, 16) on HOLIDAY PAGE
Overtime: See (5, 6, 7, 11, 16) on HOLIDAY PAGE

9-15dconsult

Painter

11/01/2024

JOB DESCRIPTION Painter **DISTRICT** 8

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Suffolk, Westchester

WAGES		
Per hour:	07/01/2024	05/01/2025 Additional
Brush	52.86*	\$ 2.62**
Abatement/Removal of lead based or lead containing paint on materials to be repainted.	52.86*	
Spray & Scaffold	\$ 55.86*	
Fire Escape	55.86*	

Decorator	55.86*
Paperhanger/Wall Coverer	55.09*

*Subtract \$ 0.10 to calculate premium rate.

** To be allocated at a later date.

SHIFT WORK

Counties of Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Suffolk, and Westchester; Agency/Government mandated off-shift work to be paid at time and one-half the hourly wage.

SUPPLEMENTAL BENEFITS

Per hour:

Paperhanger	\$ 36.73
All others	34.31
Premium	38.28**

**Applies only to "All others" category, not paperhanger journeyworker.

OVERTIME PAY

See (A, E, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

One (1) year terms at the following wage rate.

Per hour:	07/01/2024
Appr 1st term...	\$ 20.22*
Appr 2nd term...	25.93*
Appr 3rd term...	31.61*
Appr 4th term...	42.40*

*Subtract \$ 0.10 to calculate premium rate.

Supplemental benefits:

Per Hour:	
Appr 1st term...	\$ 16.89
Appr 2nd term...	20.95
Appr 3rd term...	24.10
Appr 4th term...	30.57

8-NYDC9-B/S

Painter

11/01/2024

JOB DESCRIPTION Painter

DISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

PARTIAL COUNTIES

Nassau: Atlantic Beach, Ceadershurst, East Rockaway, Hewlett, Hewlett Bay, Hewlett Neck, Hewlett Park, Inwood, Lawrence, Lido Beach, Long Beach, parts of Lynbrook, parts of Oceanside, parts of Valley Stream, and Woodmere. Starting on South side of Sunrise Hwy in Valley Stream running east to Windsor and Rockaway Ave, Rockville is the boundary line up to Lawson Blvd, turning right going west all the above territory. Starting at Union Turnpike & Lakeville Rd going north to northern Blvd. the west side of Lakeville Rd to Northern Blvd. At Northern Blvd doing east the district north of Northern blvd to Port Washington blvd. West of Port Washington blvd to St. Francis Hospital then north of first traffic light to Port Washington & Sands Point, Manor Haven, & Harbour Acres.

WAGES

Per hour:	07/01/2024
Drywall Taper	\$ 57.44

SUPPLEMENTAL BENEFITS

Per Hour:	
Journeyworker:	\$ 25.29

OVERTIME PAY

See (A, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (4, 6, 8, 11, 18, 19, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:

1st term	\$ 22.30
2nd term	28.99
3rd term	34.67
4th term	46.05

Supplemental Benefits per hour:

1st term	\$ 14.35
2nd term	19.83
3rd term	20.93
4th term	23.12

8-NYC9-1974-DWT

Painter - Bridge & Structural Steel

11/01/2024

JOB DESCRIPTION Painter - Bridge & Structural Steel

DISTRICT 8

ENTIRE COUNTIES

Albany, Bronx, Clinton, Columbia, Dutchess, Essex, Franklin, Fulton, Greene, Hamilton, Kings, Montgomery, Nassau, New York, Orange, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Suffolk, Sullivan, Ulster, Warren, Washington, Westchester

WAGES

Per Hour:

STEEL:

Bridge Painting: 07/01/2024
\$ 56.00
+ 10.35*

ADDITIONAL \$7.00 per hour for POWER TOOL/SPRAY, whether straight time or overtime.

NOTE: All premium wages are to be calculated on base rate per hour only.

* For the period of May 1st to November 15th, this amount is payable up to 40 hours. For the period of Nov 16th to April 30th, this amount is payable up to 50 hours. EXCEPTION: First and last week of employment, and for the weeks of Memorial Day, Independence Day and Labor Day, where the amount is paid for the actual number of hours worked (50 hour cap).

NOTE: Generally, for Bridge Painting Contracts, ALL WORKERS on and off the bridge (including Flagmen) are to be paid Painter's Rate; the contract must be ONLY for Bridge Painting.

SHIFT WORK

When directly specified in public agency or authority contract documents for an employer to work a second shift and works the second shift with employees other than from the first shift, all employees who work the second shift will be paid 10% of the base wage shift differential in lieu of overtime for the first eight (8) hours worked after which the employees shall be paid at time and one half of the regular wage rate. When a single irregular work shift is mandated in the job specifications or by the contracting agency, wages shall be paid at time and one half for single shifts between the hours of 3pm-11pm or 11pm-7am.

SUPPLEMENTAL BENEFITS

Per Hour:

Journeyworker: \$ 12.43
+ 31.55*

* For the period of May 1st to November 15th, this amount is payable up to 40 hours. For the period of Nov 16th to April 30th, this amount is payable up to 50 hours. EXCEPTION: First and last week of employment, and for the weeks of Memorial Day, Independence Day and Labor Day, where the amount is paid for the actual number of hours worked (50 hour cap).

OVERTIME PAY

See (B, F, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (4, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage - Per hour:

Apprentices: (1) year terms.

1st year \$ 22.40
+ 4.14

2nd year	\$ 33.60 + 6.21
3rd year	\$ 44.80 + 8.28
Supplemental Benefits - Per hour:	
1st year	\$ 1.16 + 12.62
2nd year	\$ 7.46 + 18.93
3rd year	\$ 9.94 + 25.24

NOTE: All premium wages are to be calculated on base rate per hour only.

8-DC-9/806/155-BrSS

Painter - Metal Polisher

11/01/2024

JOB DESCRIPTION Painter - Metal Polisher

DISTRICT 8

ENTIRE COUNTIES

Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

	07/01/2024
Metal Polisher	\$ 39.33
Metal Polisher*	40.43
Metal Polisher**	43.33

*Note: Applies on New Construction & complete renovation

** Note: Applies when working on scaffolds over 34 feet.

SUPPLEMENTAL BENEFITS

Per Hour:	07/01/2024
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Journeyworker:

All classification	\$ 12.79
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OVERTIME PAY

See (B, E, P, T) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:

One (1) year term at the following wage rates:

	07/01/2024
1st year	\$ 19.67
2nd year	21.63
3rd year	23.60
1st year*	\$ 22.06
2nd year*	22.07
3rd year*	24.14
1st year**	\$ 22.17
2nd year**	24.13
3rd year**	26.10

*Note: Applies on New Construction & complete renovation

** Note: Applies when working on scaffolds over 34 feet.

Supplemental benefits:
Per hour:

1st year	\$ 8.69
2nd year	8.69
3rd year	8.69

8-8A/28A-MP

Plasterer

11/01/2024

JOB DESCRIPTION Plasterer

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per hour:

	07/01/2024	08/01/2024
Building:		
Plasterer/Traditional &	\$ 47.72	\$ 47.99
Spraying Fireproofing	+ \$5.00*	+ \$5.62*

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker	\$ 25.35	\$ 26.10
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OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

*This portion is not subjected to OT premiums.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages:	07/01/2024	08/01/2024
(Per hour)		
800 hours term:		
1st term	\$ 19.30 + 0.68*	\$ 19.44+ 0.68*
2nd term	22.53 + 0.81*	22.69+ 0.81*
3rd term	25.79 + 0.95*	25.98+ 0.95*

*This portion is not subjected to OT premiums.

Supplemental Benefits:

(Per hour):

(800) hours term:

1st term	\$ 11.59	\$ 11.95
2nd term	12.02	12.44
3rd term	12.52	13.08

9-262

Plumber

11/01/2024

JOB DESCRIPTION Plumber

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:

	07/01/2024
Plumber	\$ 74.95
Temporary Service**	\$ 60.04

** Temporary Service- Includes Maintenance of cooling & heating apparatus, maintenance work on pneumatic systems during the construction period, and work on temporary heat. All hours paid at straight time, including holidays.

**THERE ARE NO HELPERS UNDER THIS CLASSIFICATION.

On tower work, bridges, elevated highway, or buildings, where pipe is being installed, fifty (50) or more feet vertically in a free drop from its base, an additional \$1.00 per hour.

SHIFT WORK

Shift work, when directly specified in public agency or authority contract documents, and continues for a period of not less than ten (10) consecutive work days. A shift shall consist of seven(7) hours with one-half (1/2) hour for lunch after the first four (4) hours of each shift. A premium of thirty percent (30%) for wages and supplemental benefits on shift work performed Monday through Friday on the 4 P.M. and midnight shifts.

For shift work performed on weekends the shift premium shall be fifty percent (50%) of wages and supplemental benefits.
For shift work performed on holidays designated below, double time wages and supplemental benefits shall be paid. Also noted that the normal workday Monday through Friday 8:00 A.M. to 3:00 P.M. is not considered shift work, and therefore not subject to shift premium.

SUPPLEMENTAL BENEFITS

Per hour:

Plumber	\$ 43.00
Temporary Service	\$ 34.32

OVERTIME PAY

See (C, *D, O, V) on OVERTIME PAGE
*Where the plumbing contract price is one and one half million dollars (\$1,500,000.00) or less, code D applies.

HOLIDAY

Plumber	
Overtime:	See (5, 6, 11, 15, 16, 25) on HOLIDAY PAGE.
Repairs & Maintenance	
Paid:	See (1) on HOLIDAY PAGE.
Overtime:	See (5, 6, 25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wages per hour:

(1/2) year terms at the following wage:							
	1st	2nd	3rd&4th	5th&6th	7th&8th	9th	10th
	\$ 19.00	\$ 21.00	\$ 30.22	\$ 32.32	\$ 35.17	\$ 36.57	\$ 48.64

Supplemental Benefits:
(1/2) year term at the following dollar amount:

1st	2nd	3rd-10th
\$ 5.43	\$ 6.43	\$ 22.73

9-1 Const

Plumber - Pump & Tank: Oil Trades Installation & Maintenance	11/01/2024
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JOB DESCRIPTION Plumber - Pump & Tank: Oil Trades Installation & MaintenanceDISTRICT 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:	07/01/2024
Pump & Tank	\$ 73.00

SUPPLEMENTAL BENEFITS

Per hour:

Plumber	\$ 32.81
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OVERTIME PAY

Pump & Tank See (B, F, H) on OVERTIME PAGE.

HOLIDAY

Paid:	See (1) on HOLIDAY PAGE.
Overtime:	See (5, 6, 10, 11, 12, 16, 25) on HOLIDAY PAGE.

9-1-P&T

Plumber - Repairs & Maintenance

11/01/2024

JOB DESCRIPTION

Plumber - Repairs & Maintenance

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:

Repairs & Maintenance

07/01/2024

\$ 48.20

*Repair & Maintenance work is any repair and/or replacement of present plumbing system that does not change existing roughing or water supply lines. Projects regardless of work type which have approved plans and specifications wherein the plumbing exceeds \$725,000 are excluded.

SUPPLEMENTAL BENEFITS

Per hour:

Repair Maintenance

\$ 21.36

OVERTIME PAY

Repairs & Maintenance

See (B, H) on OVERTIME PAGE.

HOLIDAY

Repairs & Maintenance

Paid: See (1) on HOLIDAY PAGE.

Overtime: See (5, 6, 25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Note: The Repairs & Maintenance Category has NO Apprentices.

9-1 R&M

Roofer

11/01/2024

JOB DESCRIPTION

Roofer

DISTRICT 9

ENTIRE COUNTIES

Bronx, Dutchess, Kings, New York, Orange, Putnam, Queens, Richmond, Rockland, Sullivan, Ulster, Westchester

WAGES

Per Hour:

07/01/2024

Roofer/Waterproofer

\$ 48.50

+ \$7.00*

* This portion is not subjected to overtime premiums.

Note: Abatement/Removal of Asbestos containing roofs and roofing material is classified as Roofer.

SUPPLEMENTAL BENEFITS

Per Hour:

\$ 31.87

OVERTIME PAY

See (B, H) on OVERTIME PAGE

Note: An observed holiday that falls on a Sunday will be observed the following Monday.

HOLIDAY

Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

(1) year term apprentices indentured prior to 01/01/2023

1st	2nd	3rd	4th
\$ 16.97	\$ 24.25	\$ 29.10	\$ 36.37
	+ 3.50*	+ 4.20*	+ 5.26*

Supplements:

1st	2nd	3rd	4th
\$ 4.10	\$ 16.17	\$ 19.31	\$ 24.02

* This portion is not subjected to overtime premiums.

(1) year term apprentices indentured after 01/01/2023

	1st	2nd	3rd	4th	5th
	\$ 18.43	\$ 21.82	\$ 24.25	\$ 29.10	\$ 36.37
		+ 3.16*	+ 3.50*	+ 4.20*	+ 5.26
Supplements:	1st	2nd	3rd	4th	5th
	\$ 7.73	\$ 14.59	\$ 16.17	\$ 19.31	\$ 24.02

* This portion is not subjected to overtime premiums.

9-8R

Sheetmetal Worker

11/01/2024

JOB DESCRIPTION Sheetmetal Worker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES		
Per Hour:	07/01/2024	08/01/2024
Sign Erector	\$ 58.00	\$ 60.00

NOTE: Structurally Supported Overhead Highway Signs(See STRUCTURAL IRON WORKER CLASS)

SUPPLEMENTAL BENEFITS		
Per Hour:	07/01/2024	08/01/2024
Sign Erector	\$ 57.12	\$ 58.31

OVERTIME PAY

See (B, F, S) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 10, 11, 12, 16, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 10, 11, 12, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Per Hour:

6 month Terms at the following percentage of Sign Erectors wage rate:

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
35%	40%	45%	50%	55%	60%	65%	70%	75%	80%
SUPPLEMENTAL BENEFITS									
Per Hour:									
07/01/2024									
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ 18.27	\$ 20.75	\$ 25.22	\$ 25.70	\$ 34.66	\$ 37.74	\$ 41.65	\$ 44.78	\$ 47.93	\$ 51.04
08/01/2024									
\$ 18.65	\$ 21.16	\$ 23.69	\$ 26.22	\$35.39	\$ 38.52	\$ 42.55	\$ 45.75	\$ 48.96	\$ 52.15
4-137-SE									

Sheetmetal Worker

11/01/2024

JOB DESCRIPTION Sheetmetal Worker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES	
Per Hour:	07/01/2024
Sheetmetal Worker	\$ 61.09

Maintenance of Fans

48.87

Temporary Operation

SUPPLEMENTAL BENEFITS	
Per Hour:	
Sheetmetal Worker	\$ 53.25

Maintenance Worker 53.25

OVERTIME PAY

See (B, E, E2, Q, V) on OVERTIME PAGE
For Maintenance See Codes B,E, Q & V

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Per Hour:Wages

Six(6) Month Terms As Follows:

1st & 2nd Term	\$ 21.26
3rd & 4th Term	27.39
5th & 6th Term	33.52
7th & 8th Term	42.75
9th Term	48.55

Per Hour: Supplemental Benefits

1st & 2nd Term	\$ 19.66
3rd & 4th Term	26.73
5th & 6th Term	31.57
7th & 8th Term	38.78
9th Term	43.62

4-28

Steamfitter

11/01/2024

JOB DESCRIPTION Steamfitter

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2024 01/01/2025

AC Service/Heat Service & Refrigeration	\$ 46.10	Additional \$1.25/Hr.*
--	----------	---------------------------

(*)To be allocated at a later date.

Refrigeration, A/C, Oil Burner and Stoker Service and Repair.

NOTE: Refrigeration Compressor installation. (Not to exceed 5 Hp combined on any one project).

NOTE: Air / Heating Compressor installation.(Not to exceed 15 tons combined on any one project).

SUPPLEMENTAL BENEFITS

Per Hour Worked:

AC Service/Heat Service & Refrigeration	\$ 20.96
--	----------

Per hour Paid: \$ 17.65

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Overtime: See (5, 6, 11, 15, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

1 year terms

Wages per hour:

1st Term	\$ 22.31
2nd Term	26.94
3rd Term	31.38
4th Term	37.90

Benefits per hour worked:	
1st Term	\$ 14.44
2nd Term	16.78
3rd Term	17.41
4th Term	19.44

Benefits per hour paid:	
1st Term	\$ 11.38
2nd Term	13.72
3rd Term	14.35
4th Term	16.38

4-638B-StmFtrRef

Steamfitter

11/01/2024

JOB DESCRIPTION

Steamfitter

DISTRICT 4

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES			
Per Hour:	07/01/2024	10/1/2024	03/31/2025
Sprinkler/Steam AC/Heat Fitter	\$ 69.11	Additional \$0.75/Hr*	Additional \$0.75/Hr*
Temporary Heat & AC Fitter	52.54	Additional \$0.75/Hr*	Additional \$0.75/Hr*

(*)To be allocated at a later date.

SHIFT WORK
Add 15% to Hourly Wage for "Contracting Agency" Mandated Off Shift Work.

Add 15% to Hourly Supplemental Benefit for "Contracting Agency" Mandated Off Shift Work.

SUPPLEMENTAL BENEFITS
Per Hour:

Sprinkler/Steam Fitter	\$ 53.49
Temporary Heat & AC Fitter	43.67

OVERTIME PAY
Note: The posted overtime rates are applicable after 8 hours plus Saturday, Sunday and Holidays:

Per Hour:		
Sprinkler/Steam	WAGES \$ 138.22	SUPPLEMENTAL BENEFIT \$ 105.99
Temp Heat/AC	WAGES \$ 105.08	SUPPLEMENTAL BENEFIT \$ 85.35

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
1 year Terms at the Following:

WAGES per hour:				
1st Term	2nd Term	3rd Term	4th Term	5th Term
\$ 27.98	\$ 34.96	\$ 41.94	\$ 48.92	\$ 55.90
SUPPLEMENTAL BENEFIT per hour:				
1st Term	2nd Term	3rd Term	4th Term	5th Term
\$ 21.80	\$ 27.05	\$ 32.28	\$ 37.53	\$ 42.76

Premium Time SUPPLEMENTAL BENEFIT Amounts:				
\$ 43.60	\$ 54.10	\$ 64.56	\$ 75.06	\$ 85.52
				4-638A-StmSpFtr

Teamster - Heavy Construction	11/01/2024
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JOB DESCRIPTION Teamster - Heavy Construction

DISTRICT 4

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES
Per Hour:

Dump Trucks/Drivers (Debris Removal, Street Level and below)
07/01/2024

Dump Trucks	\$ 44.165
Tractor Trailers	47.315
Euclid/Turnapull	47.88

SUPPLEMENTAL BENEFITS
Per Hour:

Dump Trucks	\$ 59.1525
All Others	56.9025
Up to 40 Hours Worked	

OVERTIME PAY
See (B, E, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (5, 6, 11, 15, 16, 25) on HOLIDAY PAGE
Note: Employees receive 2 hours of Holiday Pay for each day worked in holiday week (not to exceed 8 hours)
Note: Employees receive 5 1/3 hours of Holiday Pay for each day worked in Thanksgiving Holiday Week.

4-282

Welder	11/01/2024
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JOB DESCRIPTION Welder

DISTRICT 1

ENTIRE COUNTIES
Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES
Per hour 07/01/2024

Welder: To be paid the same rate of the mechanic performing the work.*

*EXCEPTION: If a specific welder certification is required, then the 'Certified Welder' rate in that trade tag will be paid.

OVERTIME PAY

HOLIDAY
1-As Per Trade

Richmond County General Construction

Asbestos Worker

11/01/2024

JOB DESCRIPTION Asbestos Worker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2024

Asbestos Worker \$ 47.25
Removal & Abatement Only*

NOTE: *On Mechanical Systems that are NOT to be SCRAPPED.

SUPPLEMENTAL BENEFITS

Per Hour:

Asbestos Worker \$ 13.65
Removal & Abatement Only

OVERTIME PAY

See (B, B2, *E, J) on OVERTIME PAGE

*Hours worked on Saturdays are paid at time and one half only if forty hours have been worked during the week.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8) on HOLIDAY PAGE

REGISTERED APPRENTICES

Apprentice Removal & Abatement Only:

1000 hour terms at the following percentage of Journeyman's rates.

1st	2nd	3rd	4th
78%	80%	83%	89%

SUPPLEMENTAL BENEFIT

Per Hour:

Apprentice
Removal & Abatement \$ 13.65

4-12a - Removal Only

Boilermaker

11/01/2024

JOB DESCRIPTION Boilermaker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

WAGES

Per Hour: 07/01/2024 01/01/2025

Boilermaker \$ 67.38 \$ 68.88

Repairs & Renovations 67.38 68.88

Repairs & Renovation: Includes Repairing, Renovating replacement of parts to an existing unit(s).

SUPPLEMENTAL BENEFITS

Per Hour:

Boilermaker	33.5% of hourly	33.5% of Hourly
Repair & Renovations	Wage Paid	Wage Paid
	+ \$ 26.85	+ \$26.85

NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay.

Repairs & Renovation Includes replacement of parts and repairs & renovation of existing unit.

OVERTIME PAY

See (*B, O, **U) on OVERTIME PAGE

Note: * Includes 9th & 10th hours, double for 11th or more.

** Labor Day ONLY, if worked.

Repairs & Renovation see (B,E,Q) on OT Page

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 12, 15, 25, 26, 29) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:

(1/2) Year Terms at the following percentage of Boilermaker's Wage

1st	2nd	3rd	4th	5th	6th	7th
65%	70%	75%	80%	85%	90%	95%

Supplemental Benefits Per Hour:

	33.5% of Hourly Wage Paid Plus Amount Below	33.5% of Hourly Wage Paid Plus Amount Below
1st Term	\$ 20.36	\$ 20.36
2nd Term	21.28	21.28
3rd Term	22.22	22.22
4th Term	23.12	23.12
5th Term	24.07	24.07
6th Term	25.00	25.00
7th Term	25.93	25.93

NOTE: "Hourly Wage Paid" shall include any and all premium(s)

4-5

Broadband	11/01/2024
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JOB DESCRIPTION Broadband

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2024 06/29/2025

Field Tech \$ 52.40 \$ 53.97
Install/Repair

For outside work (excluding installation on building construction/alteration/renovation projects), stopping at first point of attachment (demarcation), installing/maintaining/repairing broadband internet service.

SUPPLEMENTAL BENEFITS

Per Hour: \$ 23.24

OVERTIME PAY

See (B, K, *R) on OVERTIME PAGE

Note: *Two and one half times the hourly rate after the 8th hour

HOLIDAY

Paid: See (5, 6, 7, 11, 12) on HOLIDAY PAGE

4-CWA-Dist1

Carpenter	11/01/2024
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JOB DESCRIPTION Carpenter

DISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

Per hour: 07/01/2024

Piledriver \$ 60.59
+ 10.00*

Dockbuilder \$ 60.59
+ 10.00*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker \$ 45.79

OVERTIME PAY

See (B, E2, O) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE.

Paid: for 1st & 2nd yr.

Apprentices See (5,6,11,13,25)

Overtime: See (5,6,11,13,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wages per hour

(1)year terms:

1st	2nd	3rd	4th
\$26.98	\$32.58	\$40.96	\$49.35
+ 5.50*	+ 5.50*	+ 5.50*	+ 5.50*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:

All Terms: \$ 32.34

8-1556 Db

Carpenter	11/01/2024
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JOB DESCRIPTION CarpenterDISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

Per hour: 07/01/2024

Carpet/Resilient

Floor Coverer \$ 55.05
+ 8.25*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

INCLUDES HANDLING & INSTALLATION OF ARTIFICIAL TURF AND SIMILAR TURF INDOORS/OUTDOORS.

SUPPLEMENTAL BENEFITS

Per hour:

\$ 39.45

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (18, 19) on HOLIDAY PAGE.

Paid for 1st & 2nd yr.

Apprentices See (5,6,11,13,16,18,19,25)

Overtime: See (5,6,11,13,16,18,19,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wage per hour - (1) year terms:

1st	2nd	3rd	4th
\$ 25.20	\$ 28.20	\$ 32.45	\$ 40.33
+ 1.85*	+ 2.35*	+ 2.85*	+ 3.85*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:

1st	2nd	3rd	4th
\$ 15.22	\$ 16.22	\$ 19.32	\$ 20.32

8-2287

Carpenter

11/01/2024

JOB DESCRIPTION Carpenter

DISTRICT 8

ENTIRE COUNTIES
Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

Per Hour: 07/01/2024

Marine Construction:

Marine Diver \$ 75.46
+ 10.00*

Marine Tender \$ 55.00
+ 10.00*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime

SUPPLEMENTAL BENEFITS

Per Hour:

Journeyworker \$ 45.65

OVERTIME PAY
See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (18, 19) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 13, 16, 18, 19, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:
One (1) year terms.

1st year	\$ 26.98 + 5.50*
2nd year	32.58 + 5.50*
3rd year	40.96 + 5.50*
4th year	49.35 + 5.50*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental Benefits
Per Hour:

All terms \$ 32.20

8-1456MC

Carpenter

11/01/2024

JOB DESCRIPTION Carpenter

DISTRICT 8

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

Per hour: 07/01/2024

Building
Millwright \$ 59.35
+ 13.12*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS

Per hour:

Millwright \$ 45.41

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (18, 19) on HOLIDAY PAGE

Paid: See (18,19) on HOLIDAY PAGE.

Overtime See (5,6,8,11,13,18,19,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wages per hour:

One (1) year terms:

1st.	2nd.	3rd.	4th.
\$ 32.16	\$ 37.61	\$ 43.06	\$ 53.96
+ 7.08*	+ 8.25*	+ 9.42*	+ 11.76*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:

One (1) year terms:

1st.	2nd.	3rd.	4th.
\$ 30.56	\$ 33.09	\$ 36.27	\$ 40.69

8-740.1

Carpenter

11/01/2024

JOB DESCRIPTION Carpenter

DISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per Hour:

07/01/2024

Timberman \$ 55.59
+ 10.26*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS

Per Hour:

07/01/2024

\$ 44.96

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Overtime: See (5, 6, 11, 13, 25) on HOLIDAY PAGE

Paid: See (1) on HOLIDAY PAGE.

Paid: for 1st & 2nd yr.

Apprentices See (5,6,11,13,25)

Overtime: See (5,6,11,13,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wages per hour:

One (1) year terms:

1st	2nd	3rd	4th
\$24.96	\$30.07	\$37.72	\$45.38
+ 5.55*	+ 5.55*	+ 5.55*	+ 5.55*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:

All terms \$ 31.95

Carpenter

11/01/2024

JOB DESCRIPTION Carpenter

DISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland, Westchester

PARTIAL COUNTIES

Orange: South of but including the following, Waterloo Mills, Slate Hill, New Hampton, Goshen, Blooming Grove, Mountainville, east to the Hudson River.

Putnam: South of but including the following, Cold Spring, TompkinsCorner, Mahopac, Croton Falls, east to Connecticut border.

Suffolk: West of Port Jefferson and Patchogue Road to Route 112 to the Atlantic Ocean.

WAGES

Per hour: 07/01/2024

Core Drilling:

Driller \$ 46.25
+ 3.25*

Driller Helper \$ 36.28
+ 3.25*

Note: Hazardous Waste Pay Differential:

For Level C, an additional 15% above wage rate per hour

For Level B, an additional 15% above wage rate per hour

For Level A, an additional 15% above wage rate per hour

Note: When required to work on water: an additional \$ 3.00 per hour.

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS

Per hour:

Driller and Helper \$ 30.24

OVERTIME PAY

See (B, G, P) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

8-1536-CoreDriller

Carpenter

11/01/2024

JOB DESCRIPTION Carpenter

DISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond

PARTIAL COUNTIES

Nassau: The portion of the county that lies west of Seaford Creek and south of the Southern State Parkway.

WAGES

Per hour: 07/01/2024

Show Exhibit \$ 55.75
+ 9.80**

Bldg. Carpenter* \$57.05
+ 8.39**

* Not applicable in Putnam County

**This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS

Per hour worked:

Show Exhibit \$ 45.20
Bldg. Carpenter 39.75

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (18, 19) on HOLIDAY PAGE
Paid: for 1st & 2nd yr.
Apprentices See (5,6,11,13,16,18,19,25)

Overtime: See (5,6,11,13,16,18,19,25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wages per hour: Show Exhibit

(1) year terms:

1st.	2nd.	3rd.	4th.
\$22.30	\$27.88	\$36.24	\$44.60
+ 4.90*	+ 4.90*	+ 4.90*	+ 4.90*

*This portion is not subject to overtime premiums

Supplemental benefits per hour:
All terms \$ 30.25

Wages per hour: Bldg. Carpenter

(1) year terms:

1st	2nd	3rd	4th
\$ 22.20	\$ 25.20	\$ 29.45	\$ 37.33
+ 2.14*	+ 2.59*	+ 3.09*	+ 4.09*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental benefits per hour:

1st	2nd	3rd	4th
\$ 15.37	\$ 16.42	\$ 19.52	\$ 20.52

8-EXHIB

Carpenter - Heavy&Highway

11/01/2024

JOB DESCRIPTION Carpenter - Heavy&Highway **DISTRICT** 8

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

PARTIAL COUNTIES
Nassau: That portion of the county that lies West of Seaford Creek and South of the Southern State Parkway.

WAGES

Per hour:

07/01/2024
Heavy & Highway
Carpenter \$ 60.59
+ 10.00*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

SUPPLEMENTAL BENEFITS

Per hour worked:

Heavy & Highway
Carpenter \$ 45.70

OVERTIME PAY
See (B, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 13, 25) on HOLIDAY PAGE
Paid : for 1st & 2nd yr
Apprentices See (5, 6, 11, 13, 25)

REGISTERED APPRENTICES

Wage per hour:
One (1) year terms:

	1st	2nd	3rd	4th
Heavy & Highway	\$ 26.98	\$ 32.58	\$ 40.96	\$ 49.35

+ 5.50*

+ 5.50*

+ 5.50*

+ 5.50*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

Supplemental Benefits:
Per Hour:

All terms

\$ 32.25

8-NYC H/H

Electrician

11/01/2024

JOB DESCRIPTION Electrician

DISTRICT 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES
Per hour: 07/01/2024

Tree Trimmer

\$ 35.24

Ground Person

20.69

Applies to line clearance, tree work, and right-of-way preparation on all new or existing overhead, electrical, telephone, and CATV lines.

SUPPLEMENTAL BENEFITS
Per hour:

Tree Trimmer

\$ 13.20

Ground Person

7.75

OVERTIME PAY
See (B, *H, Q) on OVERTIME PAGE
*Worked performed on Sundays & Holidays outside of 7.00am - 4.00pm shall be paid at double time, in addition to the holiday pay if applicable.

HOLIDAY
Paid: See (5, 6, 10, 11, 15, 16, 26) on HOLIDAY PAGE
Overtime: See (5, 6, 10, 11, 15, 16, 26) on HOLIDAY PAGE
(An additional floating holiday after four years service)

9-3T

Electrician

11/01/2024

JOB DESCRIPTION Electrician

DISTRICT 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES
Per hour: 07/01/2024

Electrician

\$ 32.00

Telephone

32.00

Maintenance and Jobbing-Electrical and teledata work of limited duration and scope, consisting of repairs and/or replacement of electrical and teledata equipment.

- Includes all work necessary to retrofit, service, maintain and repair all kinds of lighting fixtures and local lighting controls and washing and cleaning of foregoing fixtures.

SUPPLEMENTAL BENEFITS
Journeyworker:

07/01/2024

\$ 27.20

29.23*

* Applies to overtime hours

OVERTIME PAY
See (B, H) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

9-3m

Electrician**11/01/2024**

JOB DESCRIPTION Electrician

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond, Westchester

WAGES

Per hour: 07/01/2024

Service Technician \$ 37.40

Service and Maintenance on Alarm and Security Systems.

Maintenance, repair and /or replacement of defective (or damaged) equipment on, but not limited to, Burglar - Fire - Security - CCTV - Card Access - Life Safety Systems and associated devices. (Whether by service contract of T&M by customer request.)

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker: \$ 21.85

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 11, 15, 16, 17, 25, 26) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 17, 25, 26) on HOLIDAY PAGE

9-3H

Electrician**11/01/2024**

JOB DESCRIPTION Electrician

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per Hour: 07/01/2024

Electrician
Audio/Sound and
Temporary Light/
Power \$ 62.00

Solar-Photovoltaic Systems

Group 1 62.00

All tasks not listed in Group 2

Group 2 32.00

D.C portion and associated mechanical equipment related to solar systems,
(excluding battery storage and its associated equipment) including work related to
Weather Stations and Data Acquisitions/Monitoring Systems on solar photovoltaic systems.

Mounting of PV modules.

Mounting of DC optimizers to back of modules if the installation calls for this equipment.

Mounting of microinverters to back of modules and install trunk cabling on racking if called for.

Module to module connection of PV modules to adjacent modules. If racking manufacturer provides integrated inter-row cable management,
install string jumper to complete the string in full in same sub-array.

If racking manufacturer does not provide integrated inter-row cable management, run conduit between rows, bond it and run string jumper to
complete string in full in same sub-array.

Installation of weather stations and other weather station relevant sensors as specified.

Installation of data acquisition system (DAS) for PV system monitoring.

SHIFT WORK

Evening (Swing Shift):

Electrician

Audio/Sound and Temporary Light/ Power	\$ 72.75
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Night (Graveyard Shift): Electrician Audio/Sound and Temporary Light	\$ 81.49
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SUPPLEMENTAL BENEFITS

Per Hour:

Electrician	\$ 66.09 70.01*
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Swing Shift:	75.07 79.66*
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Graveyard Shift:	82.66 87.81*
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Temporary Light/Power:	30.33 33.64*
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Group 1:	66.09 70.01*
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Group 2:	27.21 29.23*
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* Applies when premium (OT) wages are paid.

Temporary Light and Power benefit rate applies for three or less workers.

Reduce benefit rate by 6.2% for any employee who has accumulated wages of \$168,600 for the same employer.

OVERTIME PAY

See (A, H) on OVERTIME PAGE

See (B) for Temporary Light and Power

HOLIDAY

Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages Per Hour:

One (1) year terms	
First term:	07/01/2024
0-6 mos.	\$ 18.00
7-12 mos.	18.50
Second term:	
0-6 mos.	19.50
7-12 mos.	20.50
Third term	
0-6 mos.	21.50
7-12 mos.	22.50
Fourth term:	
0-6 mos.	23.50
7-12 mos.	25.50
Fifth term/MIJ:	
0-12 mos.	27.50
13-18 mos.	32.00

Supplemental Benefits per hour:

One (1) year terms:

First Term:	Regular	Overtime
0-6 mos.	\$ 17.18	\$ 18.38
7-12 mos.	17.44	18.67

Second Term:		
0-6 mos.	17.97	19.26
7-12 mos.	18.49	19.85
Third Term:		
0-6 mos.	19.02	20.44
7-12 mos.	19.54	21.03
Fourth Term:		
0-6 mos.	20.06	21.62
7-12 mos.	21.11	22.80
Fifth Term/MIJ:		
1-12 mos.	24.79	26.52
13-18 mos.	27.21	29.23

9-3

Electrician - Highway and Street Lighting, Traffic Signals and Controls

11/01/2024

JOB DESCRIPTION Electrician - Highway and Street Lighting, Traffic Signals and Controls **DISTRICT** 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:

07/01/2024

Electro Pole Electrician \$ 62.00

Electro Pole Foundation
Installer 47.66

Electro Pole Maintainer 41.61

SUPPLEMENTAL BENEFITS

Per Hour:

07/01/2024

Electro Pole Electrician \$ 68.20
72.12*

Electro Pole Foundation
Installer 51.68
54.69*

Electro Pole Maintainer 47.03
49.66*

*Applies when premium wages are paid

Note: Reduce benefit rate by 6.2% for any employee who has accumulated wages in \$168,600 for the same employer.

OVERTIME PAY

See (A, B, E4, F, K) on OVERTIME PAGE

B - Applies to Electro Pole Foundation Installer

E4 - Applies to Electro Pole Maintainer

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

9-3J

Elevator Constructor

11/01/2024

JOB DESCRIPTION Elevator Constructor **DISTRICT** 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

PARTIAL COUNTIES

Rockland: Entire County except for the Township of Stony Point

Westchester: Entire County except for the Townships of Bedford, Lewisboro, Cortland, Mt. Kisco, North Salem, Pound Ridge, Somers and Yorktown.

WAGES

Per hour:	07/01/2024	03/17/2025
Elevator Constructor	\$ 80.35	\$ 83.37
Modernization & Service/Repair	63.16	65.54

SUPPLEMENTAL BENEFITS

Per Hour:		
Elevator Constructor	\$ 46.367	\$ 47.654
Modernization & Service/Repairs	45.217	46.470

OVERTIME PAY

Constructor See (D, M, T) on OVERTIME PAGE.

Modern/Service See (B, F, S) on OVERTIME PAGE.

HOLIDAY

Paid: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

WAGES PER HOUR:

6 MONTH TERMS:

1st Term*	2nd & 3rd Term*	4th & 5th Term	6th & 7th Term	8th & 9th Term
50%	50%	55%	65%	75%

* Note: 1st, 2nd, 3rd Terms are based on Average of the Constructor, the Modernization and the Service/Repair wage.
Terms 4 thru 9 Based on Journeyman's wage of classification Working in.

SUPPLEMENTAL BENEFITS:

	07/01/2024	03/17/2025
Elevator Constructor		
1st Term	\$ 0.00	\$ 0.00
2nd & 3rd Term	36.15	36.90
4th & 5th Term	37.19	37.99
6th & 7th Term	38.80	39.70
8th & 9th Term	40.41	41.40
Modernization & Service/Repair		
1st Term	\$ 0.00	\$ 0.00
2nd & 3rd Term	36.15	36.90
4th & 5th Term	37.19	37.99
6th & 7th Term	38.80	39.70
8th & 9th Term	40.41	41.40

4-1

Glazier	11/01/2024
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JOB DESCRIPTION Glazier

DISTRICT 8

ENTIRE COUNTIES

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

WAGES

Per hour:	07/01/2024	05/01/2025
		Additional
Glazier, Glass Tinting and Window Film	\$ 63.28	\$ 1.11***
Scaffolding, including swing scaffold	67.28	

*Mechanical Equipment	64.28
**Repair & Maintenance	30.76

*Mechanical equipment, scissor jacks, man lifts, booms & buckets 30' or more, but not pipe scaffolding.

**Repair & Maintenance- All repair & maintenance work on a particular building whenever performed, where the total cumulative Repair & Maintenance contract value is under \$193,000.

***To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per hour: 7/01/2024

Glazier, Glass Tinting \$ 42.13
Window Film, Scaffolding
and Mechanical Equipment

Repair & Maintenance 24.62

OVERTIME PAY

See (B, E, Q, V) on OVERTIME PAGE

For 'Repair & Maintenance' see (B, B2, I, S) on overtime page.

HOLIDAY

Paid: See (5, 6, 16, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

For 'Repair & Maintenance'

Paid: See(5, 6, 16, 25)

Overtime: See(5, 6, 16, 25)

REGISTERED APPRENTICES

Wage per hour:

(1) year terms at the following wage rates:

7/01/2024

1st term	\$ 22.34
2nd term	30.64
3rd term	40.87
4th term	50.14

Supplemental Benefits:

(Per hour)

1st term	\$ 19.27
2nd term	27.34
3rd term	32.85
4th term	36.01

8-1087 (DC9 NYC)

Insulator - Heat & Frost

11/01/2024

JOB DESCRIPTION Insulator - Heat & Frost

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per Hour: 07/01/2024

Insulators
Heat & Frost \$ 71.01

SUPPLEMENTAL BENEFITS

Per Hour:

Insulators \$ 36.76
Heat & Frost

OVERTIME PAY

See (B, E, *Q, V) on OVERTIME PAGE

* Triple time for Labor Day (If worked)

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages:

1 year terms.

Wages Per Hour:

1st	2nd	3rd	4th
\$ 31.96	\$ 39.06	\$ 46.16	\$ 53.26

Supplemental Benefits:

\$ 16.56	\$ 20.23	\$ 23.91	\$ 27.06
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4-12

Ironworker

11/01/2024

JOB DESCRIPTION Ironworker

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per Hour:	07/01/2024	01/01/2025 Additional
Stone Derrickmen Rigger	\$ 75.40	\$ 1.64*
Stone Handset Derrickman	72.55	1.11*

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per hour:

Stone Derrickmen Rigger	\$ 45.52
Stone Handset Derrickman	44.76

OVERTIME PAY

See (B, D1, *E, Q, **V) on OVERTIME PAGE

*Time and one-half shall be paid for all work on Saturday up to eight (8) hours and double time shall be paid for all work thereafter.

** Benefits same premium as wages on Holidays only

HOLIDAY

Paid: See (18) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 25) on HOLIDAY PAGE

Work stops at schedule lunch break with full day's pay.

REGISTERED APPRENTICES

Wage per hour:

Stone Derrickmen Rigger:

	1st	2nd	3rd	4th
07/01/2024	\$ 37.20	\$ 53.28	\$ 59.32	\$ 65.36

Supplemental Benefits:

Per hour:				
07/01/2024	23.27	34.39	34.39	34.39

Stone Handset:

1/2 year terms at the following hourly wage rate:

	1st	2nd	3rd	4th
07/01/2024	\$ 35.78	\$ 51.04	\$ 56.79	\$ 62.55

Supplemental Benefits:

Per hour:				
07/01/2024	22.95	34.08	34.08	34.08

9-197D/R

Ironworker

11/01/2024

JOB DESCRIPTION Ironworker		DISTRICT 4
ENTIRE COUNTIES Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester		
WAGES		
Per Hour:	07/01/2024	01/01/2025
Ornamental	\$ 47.65	Additional
Chain Link Fence	47.65	\$ 1.25/hr*
Guide Rail	47.65	
(*)To be allocated at a later date.		
SUPPLEMENTAL BENEFITS		
Per hour:		
Journeyworker:	\$ 66.29	
OVERTIME PAY See (B, B1, Q, V) on OVERTIME PAGE		
HOLIDAY		
Paid:	See (1) on HOLIDAY PAGE	
Overtime:	See (5, 6, 25) on HOLIDAY PAGE	
REGISTERED APPRENTICES		
1 year terms	07/01/2024	
1st Term	\$ 25.98	
2nd Term	28.45	
3rd Term	30.80	
4th Term	34.39	
Supplemental Benefits per hour:		
1st Term	\$ 16.29	
2nd Term	18.29	
3rd Term	19.29	
4th Term	20.29	
		4-580-Or
Ironworker		11/01/2024

JOB DESCRIPTION Ironworker		DISTRICT 4
ENTIRE COUNTIES Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester		
WAGES		
PER HOUR:	07/01/2024	01/01/2025
Ironworker:		Additional
Structural	\$ 57.20	\$ 1.75/Hr.*
Bridges		
Machinery		
(*)To be allocated at a later date.		
SUPPLEMENTAL BENEFITS		
PER HOUR PAID:		
Journeyman	\$ 89.85	
OVERTIME PAY See (B, B1, Q, *V) on OVERTIME PAGE *NOTE: Benefits are calculated for every hour paid.		
HOLIDAY		
Paid:	See (1) on HOLIDAY PAGE	
Overtime:	See (5, 6, 18, 19) on HOLIDAY PAGE	
REGISTERED APPRENTICES		
WAGES PER HOUR:		
6 month terms at the following rate:		

1st	\$ 30.23
2nd	30.83
3rd - 6th	31.44

Supplemental Benefits
PER HOUR PAID: 62.47

4-40/361-Str

Ironworker

11/01/2024

JOB DESCRIPTION Ironworker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

PARTIAL COUNTIES

Rockland: Southern section - south of Convent Road and east of Blue Hills Road.

WAGES

Per hour: 07/01/2024

Reinforcing &
Metal Lathing \$ 56.95

"Base" Wage 55.20
plus \$ 1.75

"Base" Wage is used to calculate overtime hours only.

SUPPLEMENTAL BENEFITS

Per hour:
Reinforcing & \$ 44.63
Metal Lathing

OVERTIME PAY

See (B, E, Q, *X) on OVERTIME PAGE

*Only \$23.50 per Hour for non worked hours

Supplemental Benefit Premiums for Overtime Hours worked:

Time & One Half \$ 51.13
Double Time 57.63

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 13, *18, **19, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

(1) year terms at the following wage rates:

Prior to 01/01/2020:

1st term	2nd term	3rd term	4th Term
Wage Per Hour:			
\$ 22.55	\$ 28.38	\$ 34.68	\$ 37.18
"Base" Wage			
\$21.00	\$26.80	\$33.10	\$35.60
plus \$1.55	plus \$1.58	plus \$1.58	plus \$1.58

"Base" Wage is used to calculate overtime hours ONLY.

SUPPLEMENTAL BENIFITS

Per Hour:

1st term	2nd term	3rd term	4th Term
\$18.17	\$21.34	\$22.00	\$22.50

After 01/01/2020:

1st term	2nd term	3rd term	4th Term
Wage Per Hour:			
\$ 22.55	\$ 23.60	\$ 24.60	\$ 25.65
"Base" Wage			

\$21.00 plus \$1.55	\$22.00 plus \$1.60	\$23.00 plus \$1.60	\$24.00 plus \$1.65
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"Base" Wage is used to calculate overtime hours ONLY.

SUPPLEMENTAL BENIFITS
Per Hour:

1st term \$18.40	2nd term \$17.40	3rd term \$16.45	4th Term \$15.45	4-46Reinf
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Laborer	11/01/2024
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JOB DESCRIPTION LaborerDISTRICT 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES
Per hour:

Striper (Highway/streets):	07/01/2024	07/01/2025 Additional \$ 3.05**
Striping-Machine Operator	\$ 41.00	
Striping Thermoplastic	45.00	
Flagger - Traffic Safety*	39.00	

Note: * Includes but is not limited to: Positioning of cones and directing of traffic using handheld devices. Excludes the Driver/Operator of equipment used in protection of traffic safety.

** To be allocated at a later date.

SUPPLEMENTAL BENEFITS
Per hour paid:

Journeyworker	\$ 19.27
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OVERTIME PAY
See (B, H) on OVERTIME PAGE

HOLIDAY	
Paid:	See (5, 6, 8, 13) on HOLIDAY PAGE
Overtime:	See (5, 6, 8, 13) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:	
1st Term (1-2000 hours)	\$ 31.36
2nd Term (2001-4000 hours)	33.00

Supplemental Benefits per hour:	
All Terms	19.27

9-1010-LS

Laborer	11/01/2024
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JOB DESCRIPTION LaborerDISTRICT 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES
Per hour:

Laborer/Excavation	07/01/2024
**Asbestos and Lead Abatement & Removal, Hazardous Waste Removal (including soil)	\$ 45.00
Basic	45.00
Flagman	45.00
Pipelayer	45.00

*Tree Work, *Landscape 45.00

*Includes trimming, cutting, planting and/or removal of trees.

** Applies to Heavy & Highway projects

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker: \$ 54.03

Note: No payment of Supplemental Benefits is required on paid holidays, when employees do not work.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

When an observed holiday falls on a Saturday, work done shall be paid at double time.

HOLIDAY

Paid: See (2, 20) on HOLIDAY PAGE

Overtime: See (2, 5, 6, 11, 20) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:

1000 hour terms at the following hourly wage rate.

07/01/2024

1st	0 - 1000	\$ 22.50
2nd	1001-2000	27.00
3rd	2001-3000	33.75
4th	3001-4000	40.50

Supplemental Benefits per hour:

All Apprentices 54.03

9-731Ex

Laborer

11/01/2024

JOB DESCRIPTION Laborer

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:

GROUP 14: Blasters.

GROUP 16: Tunnel workers - including Miners, Drill Runners, Iron Men, Maintenance Men, Conveyor Men, Safety Miners, Riggers, Block Layers, Cement Finishers, Rod Men, Caulkers, Powder Carriers, Miners' Helpers, Chuck Tenders, Track Men, Nippers, Brake Men, Derail Men, Form Men, Bottom Bell, Top Bell or Signal men, Form Workers, Movers, Concrete Workers, Shaft Men, Tunnel Laborers and Caulkers' Helpers.

GROUP 17: All others including: Powder Watchmen, Top Laborers and Changehouse Attendants.

Wages: (per hour) 07/01/2024

Laborer (Tunnel)-FREE AIR:

Group 14	\$ 77.13
Group 16	73.75
Group 17*	68.18

Small Bore Micro
Tunnel Machines 80% of rates above

For Repairs on Existing
Water Tunnels 90% of rates above

For Repairs of Sewer &
Drainage Tunnels 85% of rates above

For Repair & Maintenance

of all Subway & 80% of rates above
Vehicular Tunnels

*An additional \$3.00 per day when using an air spade, jack hammer or pavement breaker.

Note: Employer shall pay \$10.00 per day for each half mile starting at a point 500 feet from the bottom of the shaft.

SUPPLEMENTAL BENEFITS

Per hour:

GROUP 14	\$ 55.32
GROUP 16	53.06
GROUP 17	49.11

Small Bore Micro
Tunnel Machines 80% of rates above

For Repairs on Existing
Water Tunnels 90% of rates above

For Repairs of Sewer &
Drainage Tunnels 85% of rates above

For Repair & Maintenance
of all Subway& 80% of rates above
Vehicular Tunnels

OVERTIME PAY

OVERTIME:

For Laborer (Free Air) See (D, M, R*) on OVERTIME PAGE.

For Repair Categories See (B, F, R*) on OVERTIME PAGE.
& Micro Tunneling

* Straight time first 8 hours, double time after 8 hours.

HOLIDAY

Paid: See (5, 6, 9, 11, 12, 15, 16, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 9, 11, 12, 15, 16, 25) on HOLIDAY PAGE

Good Friday may be exchanged for one of the holidays listed.

9-147Tnl/Free

Laborer - Building

11/01/2024

JOB DESCRIPTION Laborer - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:	07/01/2024	01/01/2025 Additional
Basic Laborer and Mason Tender	\$ 44.70*	\$ 1.25**

*Before calculating premium wage deduct \$3.25

** To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per hour:

Basic Laborer and
Mason Tender \$ 29.99

OVERTIME PAY

See (B, B2, E, E2, Q, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:

1000 hour terms at the following wage rate:

Term:	1st	2nd	3rd	4th
Basic Laborer and Mason Tender 07/01/2024	\$ 22.05*	\$ 23.80*	\$ 25.30*	\$ 27.80*

*Before calculating premium wage deduct \$0.50

Supplemental Benefits per hour:

All Terms 07/01/2024	\$ 10.77	9-MTDC(79)
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Laborer - Building	11/01/2024
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JOB DESCRIPTION Laborer - Building **DISTRICT** 9
ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:	07/01/2024	07/01/2025 Additional
Skilled Interior Demolition Laborer:	\$ 39.70*	\$ 0.75***
General Interior Demolition Laborer:	28.89**	

* Before calculating overtime wages deduct \$1.70

**General Demolition Laborer performs manual work and work incidental to demolition, such as loading and carting of debris from work site to an area where it can be loaded into trucks for removal. Also performs clean-up of the site when demolition is complete.

***To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per Hour:	
Skilled Interior Demolition Laborer:	24.84
General Interior Demolition Laborer:	19.16

OVERTIME PAY

See (B, B2, I, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage Per Hour:

1000 hour terms at the following wage rate:

1st	2nd	3rd	4th
\$ 21.80*	\$ 23.55*	\$ 25.05*	\$ 27.55*

* Before calculating overtime wages deduct \$0.50

Supplemental Benefits Per Hour:

All Terms:	10.47
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9-MTDC (79-ID)

Laborer - Building	11/01/2024
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JOB DESCRIPTION Laborer - Building **DISTRICT** 9
ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:	07/01/2024
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Laborer:
Laborer-Concrete
(including flag person) \$ 42.53
+ 8.00*

* This portion is not subjected to overtime premiums.

SUPPLEMENTAL BENEFITS
Per Hour

\$ 20.20
+ 9.00**

** This portion subjected to overtime premiums only on codes (E,Q)

OVERTIME PAY
OVERTIME: See (A,E,Q) on OVERTIME PAGE attached.
See (B,E,Q,) for work below street level to top of foundation.

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 11, 13, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:		
Terms based on hours listed:		
1st	2nd	3rd
0-1334	1334-2668	2669-4000
\$ 15.35	\$ 20.15	\$ 20.95
+ 2.49*	+ 7.32*	+ 7.80*

* This portion is not subjected to overtime premiums.

Supplemental Benefits:		
Per hour:		
\$ 12.70	\$ 16.70	\$ 16.70
+ 2.65*	+ 3.45*	+ 4.25*

Journeyworker rate applies after 4000 hours
*This portion subjected to same premium as wages.

9-6A/18A/20-C

Laborer - Building	11/01/2024
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JOB DESCRIPTION Laborer - Building	DISTRICT 9
ENTIRE COUNTIES Bronx, Kings, New York, Queens, Richmond	

WAGES		
Per hour:	07/01/2024	01/01/2025
Building:		Additional
Plasterer Tender and Spray Fireproofing Tender	\$ 44.70*	\$ 1.25**

* Before calculating overtime wages deduct \$3.25

**To be allocated at a later date.

SUPPLEMENTAL BENEFITS
Per hour:
Journeyworker \$ 29.99

OVERTIME PAY
See (B, B2, E, E2, Q, R) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:

1000 hours terms at the following wage.

	1st	2nd	3rd	4th
01/01/2024	\$22.05*	\$23.80*	\$25.30*	\$27.80*

* Before calculating overtime wages deduct \$ 0.50

Supplemental Benefits per hour:

All Terms:
07/01/2024

\$ 10.77

9-30 (79)

Laborer - Building

11/01/2024

JOB DESCRIPTION Laborer - Building

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2024 01/06/2025

Asbestos, Lead
and Hazardous
Material Abatement
Laborer

\$ 39.00

Additional
\$ 1.50/Hr.*

(*)To be allocated at a later date.

(Re-Roofing Removal See Roofer)

NOTE: Asbestos removed from Mechanical Systems not to be scrapped
See Asbestos Worker

SUPPLEMENTAL BENEFITS

Per Hour:

Laborer \$ 20.10

OVERTIME PAY

See (B, B2, I) on OVERTIME PAGE

*Calculate at \$39.00 per hour then add \$1.55

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 28) on HOLIDAY PAGE

REGISTERED APPRENTICES

1000 hour terms at the following:

Per Hour:

1st Term	\$ 20.00*
2nd Term	21.00**
3rd Term	24.00***
4th Term	26.00****

SUPPLEMENTAL BENEFIT

Per Hour:

All Terms \$ 14.35

OVERTIME PAY:

*Calculate at \$20.00 per hour then add \$1.00

**Calculate at \$21.00 per hour then add \$1.00

***Calculate at \$24.00 per hour then add \$1.00

****Calculate at \$26.00 per hour then add \$1.00

4-NYDC(78)

Laborer - Building

11/01/2024

JOB DESCRIPTION Laborer - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:	07/01/2024	01/01/2025 Additional
Skilled Demolition Laborer:	\$ 42.48*	\$ 0.50***
General Demolition Laborer:	31.06**	

*Before calculating overtime wages deduct \$3.00
**Before calculating overtime wages deduct \$2.35
***To be allocated at a later date.

**General Demolition Laborer performs manual work and work incidental to demolition, such as loading and carting of debris from work site to an area where it can be loaded into trucks for removal. Also performs clean-up of the site when demolition is complete.

NOTE: Total Demolition Only: Demolition shall be the complete demolition (wrecking) or dismantling of entire buildings or structures. Also may include the removal of all or any portion of a roof in which structural change is to occur. Structural change is defined as the removal of structural slabs, steel members, concrete members and penetration through the structural slab.

SUPPLEMENTAL BENEFITS

Per hour:	
Journeyworker:	
Skilled Demolition Laborer:	\$ 28.92
General Demolition Laborer:	21.98

OVERTIME PAY
See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:				
(1) year terms at the following wage.				
07/01/2024	1st	2nd	3rd	4th
	\$ 22.05*	\$ 23.80*	\$ 25.30*	\$ 27.80*

*Before calculating overtime wages deduct \$0.50
Supplemental Benefits per hour:

All Terms:	
07/01/2024	\$ 10.77

9-79/95

Laborer - Concrete & Asphalt Paving	11/01/2024
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JOB DESCRIPTION	Laborer - Concrete & Asphalt Paving	DISTRICT 9
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ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES

Group 1: Slurry Seal Coater, Maintenance Safety Surface, Small Power Tool Operator, Play Equipment Installer, Temporary Fence Installer & Repairs, Laborer.

Group 2: Production Paving Work: Shoveler, small equipment operator.

Per hour:	07/01/2024
Concrete Formsetter	\$ 49.35 + \$ 8.00*
Asphalt Screeperson/Micro Paver	49.95 + \$ 8.00*
Asphalt Raker	49.35 + \$ 8.00*
Group 1	45.48 + \$ 8.00*
Group 2	45.48 + \$ 8.00*

* This portion is not subjected to overtime premiums.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker: \$ 45.55

Note: No payment of supplemental benefits is required on paid holidays, when employees do not work.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

Note: Saturday premium rate applies from 7:00 am on Saturday to 6:59 am Sunday

Note: Sunday premium rate applies from Sunday 7:00 am to Monday 6:59 am.

HOLIDAY

Paid: See (5, *11, 20) on HOLIDAY PAGE

HOLIDAY:

Overtime: See (21,22)** on HOLIDAY PAGE.

Note: See (5,20) Holiday pay -at the single time pay rate-shall be prorated based on 25% of a day's wages and benefits for each day worked during that calendar week.

**New Year's Day and Christmas Day: If an employee is performing work on these (2) days the employee will receive the single rate plus 25%.

* Columbus Day shall be an unpaid holiday. In the event work is performed on Columbus Day, wages shall be paid on a double time basis.

Note-When Independence day falls on Saturday, it will be observed on that Saturday, however, when it occurs on a Sunday, it will be observed on the Monday.

REGISTERED APPRENTICES

Wage per hour:

2000 hours term:

1st term	2nd term
1-1999	2000-4000
\$ 31.36 + \$ 8.00*	\$ 33.00 + \$ 8.00*

* This portion is not subjected to overtime premiums.

Supplemental Benefits per hour:

2000 hours term:

1st term	2nd term
1-1999	2000-4000
\$ 18.67	\$ 18.67

9-1010H/H

Laborer - Trac Drill

11/01/2024

JOB DESCRIPTION Laborer - Trac Drill

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Group 1: Chipper/Jackhammer, Powder Carrier, Hydraulic Chuck tender, Chuck Tender and Nipper, Magazine Keeper

Group 2: Hydraulic Trac Drill

Group 3: Air Trac, Wagon and Quarry bar

Group 4: Blaster

Per Hour: 07/01/2024

Group 1	\$ 45.00
Group 2	52.35
Group 3	51.52
Group 4	58.21

SUPPLEMENTAL BENEFITS

Per Hour:

All Classifications: 54.03

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

When an observed holiday falls on a Saturday, work done shall be paid at double time.

HOLIDAY

Paid: See (2, 20) on HOLIDAY PAGE

Overtime: See (2, 5, 6, 11, 20) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:

1000 hour terms at the following hourly wage rate.

07/01/2024

1st	0 - 1000	\$ 22.50
2nd	1001-2000	27.00
3rd	2001-3000	33.75
4th	3001-4000	40.50

Supplemental Benefits per hour:

All Apprentices 54.03

9-731/29

Laborer - Tunnel

11/01/2024

JOB DESCRIPTION Laborer - Tunnel

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

GROUP 5: Blasters and Mucking Machine Operators

GROUP 6: Tunnel Workers*(including Miners, Drill Runners, Iron Men, Maintenance Men, Inside Muck Lock Tender, Pumpmen, Electricians, Cement Finishers, Rod Men, Caulkers, Carpenters, Hydraulic Men, Shield Drivers, Monorail Operators, Motor Men, Conveyor Men, Safety Miners, Powder Carriers, Pan Men, Riggers, Miner's Helpers, Chuck Tenders, Track Men, Nippers, Brake Men, Form Workers, Concrete Workers, Tunnel Laborers, Caulker's Helpers), Hose Men, Grout Men, Gravel Men, Derail Men and Cable Men.

GROUP 7: Top Nipper

GROUP 8,9: Outside Man Lock Tender, Outside Muck Lock Tender, Shaft Men, Gauge Tender and Signal Men.

GROUP 10: Powder Watchmen, Top Laborers and Changehouse Attendants.

WAGES: (per hour)

07/01/2024

Laborer (Compressed Air):

GROUP 5	\$ 80.82
GROUP 6	77.95
GROUP 7	76.65
GROUP 8,9	75.10
GROUP 10	66.18

Note: Employer shall pay \$10.00 per day for each one half (1/2) mile or fraction starting from a point 500 feet from the shaft.

SUPPLEMENTAL BENEFITS

SUPPLEMENTAL BENEFITS:

per hour:

GROUP 5	\$ 57.61
GROUP 6	55.81
GROUP 7	54.68
GROUP 8,9	53.84

GROUP 1050.85

OVERTIME PAY
See (D, M, *R) on OVERTIME PAGE
NOTE: Time and one-half to be paid for all overtime repair-maintenance work on existing equipment and facilities.

* Straight time first 8 hours, double time after 8 hours.

HOLIDAY
Paid: See (5, 6, 9, 11, 12, 15, 16, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 9, 11, 12, 15, 16, 25) on HOLIDAY PAGE
Good Friday may be exchanged for one of the holidays listed.

9-147Tnl/Comp Air

Mason

11/01/2024

JOB DESCRIPTION Mason**DISTRICT** 4

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES
Per Hour:07/01/2024

Brick/Block Layer\$ 67.14

Base Wage for OT Calculation\$ 55.93

SUPPLEMENTAL BENEFITS
Per Hour:

Brick/Block Layer\$ 34.90

OVERTIME PAY
See (A, E, E2, Q) on OVERTIME PAGE
Note: OT Calculated on Base Wage plus \$ 11.21/hr.

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
(800 hour) Terms at the following Percentage of Journey workers "Base Wage" plus \$ 5.94/hr.:

1st	2nd	3rd	4th	5th
50%	60%	70%	80%	90%

Supplemental Benefits per hour:

All Apprentices\$ 24.70

4-1Brk

Mason - Building

11/01/2024

JOB DESCRIPTION Mason - Building**DISTRICT** 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES
Building

Wages per hour:07/01/202401/01/2025
Additional

Mosaic & Terrazzo Mechanic	\$ 60.98	\$ 1.06*
Mosaic & Terrazzo Finisher	58.96	

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS
Per hour:

Mosaic & Terrazzo Mechanic\$ 31.36*
+ \$9.78

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	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
07/01/2024										
	\$12.55*	\$12.55*	\$15.36*	\$15.36*	\$16.36*	\$17.86*	\$18.86*	\$18.86*	\$18.86*	\$24.11*
	+\$.76	+\$.81	+\$.91	+\$.96	+\$1.43	+\$1.48	+\$1.91	+\$1.97	+\$4.57	+\$5.18

*This portion of benefits subject to same premium rate as shown for overtime wages.

9-7/52

Mason - Building

11/01/2024

JOB DESCRIPTION Mason - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per hour: 07/01/2024 01/06/2025
Additional

Building-Marble Restoration:

Marble, Stone & \$ 47.72 \$ 0.57*

Terrazzo Polisher

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per Hour:
Journeyworker:

Building-Marble Restoration:

Marble, Stone &
Polisher \$ 31.50

OVERTIME PAY

See (B, *E, Q, V) on OVERTIME PAGE

* On Saturdays, 8th hour and successive hours paid at double hourly rate.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 11, 15, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

WAGES per hour:

900 hour term at the following wage:

1st	2nd	3rd	4th
1- 900	901- 1800	1801- 2700	2701
\$ 33.40	\$ 38.18	\$ 42.94	\$ 47.72

Supplemental Benefits Per Hour:

29.06	29.87	30.69	31.50
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9-7/24-MP

Mason - Building

11/01/2024

JOB DESCRIPTION Mason - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

WAGES

Per Hour: 07/01/2024 01/06/2025
Additional
Marble Cutters & Setters \$ 63.92 \$ 0.75*

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per Hour:

Journeyworker \$ 40.05

OVERTIME PAY

See (B, E, Q, V) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage Per Hour:

07/01/2024

750 hour terms at the following wage

1st	2nd	3rd	4th	5th	6th	7th	8th
0-3000	3001-3750	3751-4500	4501-5250	5251-6000	6001-6750	6751-7500	7500+
\$ 27.01	\$ 40.52	\$ 43.88	\$ 47.26	\$ 50.64	\$ 54.32	\$ 60.71	\$ 63.92

Supplemental Benefits per hour:

07/01/2024

1st	2nd	3rd	4th	5th	6th	7th	8th
\$ 26.42	\$ 29.76	\$ 30.61	\$ 31.44	\$ 32.28	\$ 37.55	\$ 39.23	\$ 40.05

9-7/4

Mason - Building	11/01/2024
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JOB DESCRIPTION Mason - BuildingDISTRICT 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:	07/01/2024	12/02/2024
Tile Finisher	\$ 49.46	Additional \$ 0.59*

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per Hour:
\$ 25.36*
+ \$8.33

* This portion of benefits is subject to same premium rate as shown for overtime wages.

OVERTIME PAY

See (A, *E, Q) on OVERTIME PAGE
Double time rate after 10 hours on Saturdays

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 15, 16, 25) on HOLIDAY PAGE

9-7/88-tf

Mason - Building	11/01/2024
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JOB DESCRIPTION Mason - BuildingDISTRICT 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per hour:	07/01/2024	01/06/2025
Marble, Stone, Maintenance Finishers:	\$ 27.72	Additional \$ 0.41*

Note 1: An additional \$2.00 per hour for time spent grinding floor using "60 grit" and below.
Note 2: Flaming equipment operator shall be paid an additional \$25.00 per day.

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Per Hour:

Marble, Stone
Maintenance Finishers: \$ 15.74

OVERTIME PAY

See (B, *E, Q, V) on OVERTIME PAGE
*Double hourly rate after 8 hours on Saturday

HOLIDAY

Paid: See (5, 6, 8, 11, 15, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 11, 15, 25) on HOLIDAY PAGE
1st term apprentice gets paid for all observed holidays.

REGISTERED APPRENTICES

WAGES per hour:	07/01/2024
0-750	\$ 22.32
751-1500	23.04
1501-2250	23.75
2251-3000	24.48
3001-3750	25.56
3751-4500	27.00
4501+	27.72

Supplemental Benefits:
Per hour:

0-750	12.69
751-1500	13.10
1501-2250	13.51
2251-3000	13.91
3001-3750	14.52
3751-4500	15.33
4501+	15.74

9-7/24M-MF

Mason - Building / Heavy&Highway	11/01/2024
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JOB DESCRIPTION Mason - Building / Heavy&HighwayDISTRICT 9

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

WAGES

Per hour:	07/01/2024	01/06/2025 Additional
Marble-Finisher	\$ 49.99	\$ 0.53*

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS

Journeyworker:
Per hour

Marble- Finisher \$ 37.39

OVERTIME PAY

See (B, E, Q, V) on OVERTIME PAGE
Work beyond 8 hours on a Saturday shall be paid at double the rate.

HOLIDAY

Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

When an observed holiday falls on a Sunday, it will be observed the next day.

9-7/20-MF

Mason - Building / Heavy&Highway

11/01/2024

JOB DESCRIPTION Mason - Building / Heavy&Highway

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour:07/01/2024

Cement Mason\$ 57.72

SUPPLEMENTAL BENEFITS

Per Hour:

Cement Mason\$ 34.66

1.5 X overtime rate\$ 62.95

2 X overtime rate\$ 69.32

OVERTIME PAY

See (B1, Q) on OVERTIME PAGE

HOLIDAY

Paid:See (1) on HOLIDAY PAGE

Overtime:See (5, 6, 8, 11, 13, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

(1) year terms at the following wage:

1st Term\$ 23.39

2nd Term\$ 28.29

3rd Term\$ 33.69

Supplement Benefits per hour paid:

	ST	1.5X OT	2X OT
1st Term	\$ 14.86	\$ 22.30	\$ 29.72
2nd Term	\$ 15.16	\$ 22.75	\$ 30.32
3rd Term	\$ 15.27	\$ 22.91	\$ 30.54

4-780

Mason - Building / Heavy&Highway

11/01/2024

JOB DESCRIPTION Mason - Building / Heavy&Highway

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

NOTE: Shall include but not limited to Precast concrete slabs (London Walks) Marble and Granite pavers 2'x 2' or larger.

Per Hour:

	07/01/2024	05/01/2025
Stone Setter	\$ 69.91	Additional
Base Rate	53.84*	\$ 3.42/Hr+
Stone Tender	\$51.82	
Base Rate	44.54*	

(+)To be allocated at a later date for all classes.

SUPPLEMENTAL BENEFITS

Per Hour:

Stone Setter\$ 42.52

Stone Tender23.15

OVERTIME PAY

See (*C, **E, Q) on OVERTIME PAGE

* Base Rates are used to Calculate Overtime Premiums then adding in: \$15.81/Hr. for Stone Setter or \$7.28/Hr. for Stone Tender.

** On weekdays the eighth (8th) and ninth (9th) hours are time and one-half all work thereafter is paid at double the hourly rate.

*** The first nine (9) hours on Saturday is paid at time and one-half all work thereafter is paid at double the hourly rate.

HOLIDAY

Paid: See (*18) on HOLIDAY PAGE
Overtime: See (5, 6, 10) on HOLIDAY PAGE
Paid: * Must work first 1/2 of day.

REGISTERED APPRENTICES

Per Hour:

Stone Setter(800 hour) terms at the following Percentage of Stone Setters Base wage rate per hour plus \$7.32:

1st	2nd	3rd	4th	5th	6th
50%	60%	70%	80%	90%	100%

Supplemental Benefits:

All Apprentices \$ 25.85

4-1Stn

Mason - Heavy&Highway

11/01/2024

JOB DESCRIPTION Mason - Heavy&Highway

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2024

Pointer, Caulkers &
Cleaners \$ 63.69

SUPPLEMENTAL BENEFITS

Per Hour:

Pointer, Cleaners &
Caulkers \$ 31.90

OVERTIME PAY

See (B, E2, H) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:

One (1) year terms at the following wage rates.

1st	2nd	3rd	4th
\$ 32.76	\$ 37.09	\$ 42.97	\$ 51.60

Apprentices Supplemental Benefits:

(per hour paid) \$ 15.40 \$ 21.70 \$ 24.45 \$ 25.45

4-1PCC

Operating Engineer - Building

11/01/2024

JOB DESCRIPTION Operating Engineer - Building

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Putnam, Queens, Richmond, Westchester

PARTIAL COUNTIES

Dutchess: that part of Dutchess County lying south of the North City Line of the City of Poughkeepsie.

WAGES

NOTE: Construction surveying

Party Chief--One who directs a survey party

Instrument Man--One who runs the instrument and assists Party Chief.

Rodman--One who holds the rod and assists the Survey Crew

Wages:(Per Hour) 07/01/2024

Building Construction:

Party Chief	\$ 79.99
Instrument Man	60.36
Rodman	40.45

Steel Erection:

Party Chief	83.13
Instrument Man	64.21
Rodman	44.33

Heavy Construction-NYC counties only:
(Foundation, Excavation.)

Party Chief	88.06
Instrument man	65.66
Rodman	55.70

SUPPLEMENTAL BENEFITS

Per Hour: 07/01/2024

Building Construction \$ 28.63* +\$ 7.65

Steel Erection 29.23* + 7.65

Heavy Construction 30.04* + 7.64

* This portion subject to SAME premium as wages

Non-Worked Holiday Supplemental Benefit:

21.83

OVERTIME PAY

See (A, B, E, Q) on OVERTIME PAGE

Code "A" applies to Building Construction and has double the rate after 7 hours on Saturdays.

Code "B" applies to Heavy Construction and Steel Erection and had double the rate after 8 hours on Saturdays.

HOLIDAY

Paid: See (5, 6, 9, 11, 15, 16, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 9, 11, 15, 16, 25) on HOLIDAY PAGE

9-15Db

**Operating Engineer - Building, Maintenance, Steel Erection
& Heavy Construction**

11/01/2024

JOB DESCRIPTION Operating Engineer - Building, Maintenance, Steel Erection & Heavy Construction

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

STEEL ERECTION:

Group 1: Derrick, travelers, tower, crawler tower & climbing cranes

Group 2: Oiler (Truck Crane)

Group 3: Oiler (Crawler Crane)

BUILDING CONSTRUCTION:

Group 1: Installing, repairing, maintaining, dismantling of all equipment including Steel cutting& bending machines, mechanical heaters, mine hoists, climbing cranes, tower cranes, Linden Peine, Lorain, Liebherr, Mannes and machines of a similar nature; Well Point system, Deep Well pumps, Concrete mixers with loading devices, Concrete plants, motor generators (When used for temporary power and lights)(Driving maintenance trucks and mounted-welded machines)-All Pumps(excluding River Cofferdam Pumps and Well Point Pumps), Motorized Concrete Buggies(When three or more are on job site), Skid-Steer and similar machines

Group 2:Maintenance of: Pumps, Generators, Mixers, Heaters

Group 3: Oilers of all gasoline, electric, diesel or air operated Gradalls; Concrete Pumps, Overhead Cranes in Power Houses, Assist in oiling, greasing and repairing of all machines, including: Driving Truck Cranes, Driving and operating Fuel and Grease Trucks, Cherry Pickers(Hydraulic Cranes) over 70,000 GVW and machines of a similar nature

Group 4: Oiler on Crawler Cranes, Backhoes, Trenching Machines, Guniting Machines, Compressors(3 or more in battery)

Group 5: Maintenance on Radiant Mechanical Heaters

HEAVY CONSTRUCTION (Excavation, Foundations, etc)

Group 1:Maintenance of: Generators, Light Towers

Group 2:Maintenance of: Pumps, Mixers including mudsucking

Group 3: Base Mounted Tower Cranes

Group 4: Installing, repairing, maintaining, dismantling(of all equipment including Steel cutting & Bending machines, Fusion Coupling Machines, Vermeer Trenching machines, on-site crushing plant, mechanical heaters(1 through 7),Mine hoists, Tower Cranes, Linden Peine, Lorrain, Liebherr, Mannes or machines of a similar nature, Wellpoints)-Driving maintenance trucks and truck mounted welding machines, burning, welding-operating of accumulator for shield-driven tunnels, in addition to the performance of other duties: Handling, installation, jointing, coupling of all permanent steel and plastic pipe. RIDE UPON MOLES-tunnel boring machines-MICRO TUNNELING SYSTEMS, All temporary pipefitting;When three or more motorized concrete buggies(Ride type)are utilized on the jobsite they shall be serviced, maintained and repaired by the maintenance engineer. The Operating Engineer on autogrades(C.M.I.)is to be assisted by the maintenance engineer who shall in addition perform other duties.

WAGES:

Per hour: 07/01/2024

Steel Erection:

Group 1	\$ 81.43
Group 2	76.58
Group 3	58.22

Building Construction:

Group 1	\$ 72.41
Group 2	57.36
Group 3	69.09
Group 4	52.62
Group 5	46.07

Heavy Construction:

Group 1	\$ 57.43
Group 2	58.68
Group 3	108.95
Group 4	84.24

SUPPLEMENTAL BENEFITS

Per Hour: 07/01/2024

Building Construction	\$ 30.52* + \$7.40
Steel Erection & Heavy	31.02* + \$7.40

* This portion of benefits is subject to same OT premium as wages.

Non-Worked Holiday Supplemental Benefits:

21.87

OVERTIME PAY

See (D, O) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 9, 11, 15, 16, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 9, 11, 15, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages Per Hour:
(1) year terms at the following wage rates:

1st	2nd	3rd	4th.
\$ 38.52	\$ 45.23	\$ 48.70	\$ 52.17

Supplemental Benefits:
Per Hour:
All Terms \$ 16.52* + 7.40

* This portion of benefits is subject to same OT premium as wages.

9-15Ab

Operating Engineer - Building / Heavy&Highway

11/01/2024

JOB DESCRIPTION Operating Engineer - Building / Heavy&Highway

DISTRICT 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES
EQUIPMENT COVERED: Jet-Rodder/Vacuum Truck, Flusher, Sewer Rodder, Stetco Hoist and similar, Sewer Winch/Tugger Hoist and similar, Vacall/Vactor, Closed Circuit Television Inspection Equipment, Chemical Grouting Equipment and similar, John Beame, Meyers and similar.

Per Hour: 07/01/2024

Maintenance Engineer \$ 84.24
(Sewer Systems)

SUPPLEMENTAL BENEFITS
Per Hour:

Journeyman \$ 31.02*
+ \$ 7.40
*This portion of benefits subject to SAME premium as OT wages.

Non-Worked Holiday Supplemental Benefits:
\$ 21.87

OVERTIME PAY
See (D, O) on OVERTIME PAGE

HOLIDAY
Paid: See (5, 6, 7, 11, 16) on HOLIDAY PAGE
Overtime: See (5, 6, 7, 11, 16) on HOLIDAY PAGE

REGISTERED APPRENTICES

Per Hour:
(1) year terms at the following wage rates.

1st	2nd	3rd	4th
\$38.52	\$45.23	\$48.70	\$52.17

Supplemental Benefits:
Per Hour:

All Apprentices: \$ 16.52* + \$ 7.40

* This portion of benefits subject to the SAME premium as OT wages

9-15Sewer

Operating Engineer - Building / Heavy&Highway

11/01/2024

JOB DESCRIPTION Operating Engineer - Building / Heavy&Highway

DISTRICT 4

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES
Per Hour: 07/01/2024 08/01/2024

Well Driller	\$ 41.85	\$ 43.11
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Well Driller		
Helper	\$ 36.26	\$ 37.35

Hazardous Waste Differential
Added to Hourly Wage:

Level A	\$ 3.00
Level B	\$ 2.00
Level C	\$ 1.00

Monitoring Well Work
Add to Hourly Wage:

Level A	\$ 3.00
Level B	\$ 2.00

SUPPLEMENTAL BENEFITS

Per Hour:

Well Driller	10% of straight
& Helper	time rate plus \$ 13.50

Additional \$ 4.25/Hr. for Premium Time Hours Worked

OVERTIME PAY

See (B2, P, S) on OVERTIME PAGE

HOLIDAY

Paid:	See (5, 6, 16, 23) on HOLIDAY PAGE
Overtime:	See (5, 6, 16, 23) on HOLIDAY PAGE

REGISTERED APPRENTICES

Apprentices at 12 Month Terms

Wages Per Hour:

1st Term	\$ 28.00
2nd Term	\$ 29.00
3rd Term	\$ 30.00

SUPPLEMENTAL BENEFITS

Per Hour:

All Terms	10% of Wage + \$ 13.50
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Additional \$4.25/Hr. for premium time hours worked.

4-138well

Operating Engineer - Building & Steel Erection

11/01/2024

JOB DESCRIPTION Operating Engineer - Building & Steel Erection

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per Hour: 07/01/2024

STEEL ERECTION:

Three Drum Derricks	\$ 107.16
Cranes, Two Drum Derricks, Hydraulic Cranes & Fork Lifts,	
Boom Trucks	103.28
Compressors, Welding Machines	63.36
Compressors	60.71
(not combined with welding machines)	

BUILDING CONSTRUCTION:

Cranes, Stone Derrick, Boom Trucks, Hydraulic Cranes,	
Double Drum	103.62
4 Pole Hoists and Single	98.28
Drum Hoists	87.78

Fork Lifts, Plaster(Platform Machine)Plaster Bucket, Concrete
Pumps and all other equipment used for hoisting

80.54

*House Cars and Rack & Pinion

71.35

*House Cars (New Projects)

58.47

Erecting and dismantling Cranes

88.64

Compressors, Welding Machines(Cutting Concrete-Tank Work),
Paint Spraying, Sand Blasting, Pumps(With the exclusion of
concrete pumps), House Car (Settlement basis only), All
Engines irrespective of power(Power-Vac)used to drive
auxiliary equipment Air, Hydraulic, etc., Boilers, Jacking System
62.20

APPLICABLE TO BUILDING CATEGORY:

CRANES: Crawler Or Truck

In Addition To Above Crane Rates

100' to 149' Boom

\$ 1.75/hr

150' to 249' "

\$ 2.00/hr

250' to 349' "

\$ 2.25/hr

350' to 450' "

\$ 2.75/hr

Tower Crane

\$ 2.00/hr

APPLICABLE TO STEEL CATEGORY:

CRANES: Crawler Or Truck

In Addition To Above Crane Rates

100' to 149' Boom

\$ 2.25/hr

150' to 249' "

\$ 2.50/hr

250' to 349' "

\$ 2.75/hr

350' to 450' "

\$ 3.25/hr

Tower Crane

\$ 2.50/hr

SUPPLEMENTAL BENEFITS

Per Hour:

07/01/2024

All Operator Classes

\$ 26.15*
plus \$ 6.30

* This portion of the benefits is subject to the same premium as shown for overtime wages.

OVERTIME PAY

See (*B, **C, ***D, O) on OVERTIME PAGE

*Applies to House Cars and Rack & Pinion after 8 hours worked in a day, Saturday, Sunday and Holidays

**Applies to Building Construction category

***Applies to Steel Erection

HOLIDAY

Paid: See (5, 6, 8, 11, 12, 15, 16, 25, 26) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 11, 12, 15, 16, 25, 26) on HOLIDAY PAGE

Codes 8 and 12 apply ONLY to Steel Erection

Code 16 applies ONLY to Building Construction

REGISTERED APPRENTICES

Wage Per Hour:

Apprentices (1) year terms at the following rates:

	1st	2nd	3rd
07/01/2024	\$ 44.92	\$ 54.40	\$ 63.88

Supplemental Benefits Per Hour:

07/01/2024

Straight Time

\$ 15.65*
plus \$ 6.30

* This portion of benefits subject to the same premium as shown for overtime wages.

9-14 B&S

JOB DESCRIPTION Operating Engineer - Heavy Construction 1

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

(For Groups 23 - 28, see Operating Engineer - Heavy Construction 2)

Group 1: Tower Crane/Climbing Crane

Group 2: Backhoes (Including all track and rubber tire backhoes over 37,000 lbs), Power Shovels, Steel Erection: Hydraulic Clam Shells, Moles and machines of a similar nature

Group 3: Mine Hoists, Cranes, etc, used as Mine Hoists

Group 4: Gradalls, Keystones, Cranes (With digging buckets), Bridge Cranes, Trenching Machines, Vermeer Cutter and machines of a similar nature

Group 5: Pile Drivers and Rigs (Employing Dock-Builders Foreman), Derrick Boats, Tunnel Shovels,

Group 6: All Drills and machines of a similar nature

Group 7: Back-Filling Machines and Cranes, Mucking Machines, Dual Drum Pavers

Group 8: Mixers (Concrete with loading attachment), Concrete Pavers, Cableways, Land Derricks, Power House (Low pressure units)

Group 9: Concrete Pumps, Concrete Plant, Stone Crushers, Double Drum Hoists, Power Houses (Other than above)

Group 10: Concrete Mixer

Group 11: Elevators

Group 12: Concrete Breaking Machines, Single Drum Hoists, Load Masters, Locomotives and Dinkies (Over 10 tons), Hydraulic Crane-Second Engineer

Group 13: On-Site Concrete Plant Engineers, On-Site Asphalt Plant Engineer and Vibratory Console

Group 14: Barrier Mover, Barrier Transport and machines of a similar nature

Group 15: Compressors (Portable, 3 or more), Truck Compressor (Engineer Driver), Tugger Machines, Well Point Pumps, Chum Drill

Group 16: Boilers(High pressure),Compressors, Pumps(River Cofferdam) and Welding Machines(except where arc is operated by another Operating Engineer) Push Button Machines, All Engines, irrespective of power(Power Pac) used to drive auxiliary equipment, Air, Hydraulic, etc.

Group 17: Utility-Horizontal Boring Rig

Group 18: Utility Compressors

Group 19: Paving-Asphalt Spreader, Autogrades (C.M.I.), Roto-Mill

Group 20: Paving-Asphalt Roller

Group 21 Paving-Asphalt Plant

Group 22: Roller (non paving, all sizes)

WAGES:(per hour) 07/01/2024

Group 1	\$ 123.06
Group 2	102.98
Group 3	106.03
Group 4	103.66
Group 5	101.78
Group 6	98.05
Group 7	99.74
Group 8	97.10
Group 9	95.24
Group 10	91.40
Group 11	85.94
Group 12	87.66
Group 13	88.24
Group 14	80.02
Group 15	68.59
Group 16	64.34
Group 17	92.77
Group 18	63.97
Group 19	97.10
Group 20	94.83
Group 21	81.44
Group 22	94.83

Cranes: Crawler or Truck

100' to 149'	\$0.50 per hour additional to above Crane Rates
150' to 249'	\$0.75 per hour additional to above Crane Rates
250' to 349'	\$1.00 per hour additional to above crane Rates
350' to 450'	\$1.50 per hour additional to above crane Rates

SUPPLEMENTAL BENEFITS

Per Hour:

Groups 1-22

Regular Time \$ 26.15* plus \$ 6.30

* This portion of benefits subject to the same premium as shown for wages.

Non-Worked Holiday Supplemental Benefits:
\$ 20.80

OVERTIME PAY

See (D, O) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Per Hour:

(1) year terms at the following wage rates:

Groups 1-22	1st	2nd	3rd
	\$ 44.92	\$ 54.40	\$ 63.88

Supplemental Benefits:

Groups 1-22	
Regular Time	\$ 15.65* plus \$ 6.30

* This portion of benefits is subject to the SAME PREMIUM as shown for overtime wages

9-14 HC

Operating Engineer - Heavy Construction 2

11/01/2024

JOB DESCRIPTION Operating Engineer - Heavy Construction 2

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

(For Groups 1 - 22, see Operating Engineer - Heavy Construction 1)

Group 23: Cherry Picker (Over 20 tons), Loader (Over 6 yards)

Group 24: Backhoes and Loaders (Up to 37,000lbs), Bulldozers, Scrapers, Turn-A-Pulls, Tugger Hoists, Tractors, Hysters, Roustabout Cranes, Conveyors, Ballast Regulators (Ride On), Track Removal Machine or similar, Motor Graders, Locomotives (10 tons and under), Curb & Gutter Pavers and machines of a similar nature

Group 25: Post Hole Digger, Ditch Winch, Road Finishing Machines, Rollers (5 tons and under, Dual Purpose Trucks, Forklifts, Dempsey Dumpsters, Fireman

Group 26: Service Engineer (Gradalls, Concrete Pumps, Cold Planers Grader)

Group 27: Service Mechanic (Shovels, Draglines, Crawler Cranes, Backhoes, Trenching Machines, Compressors (3 or more in battery)

Group 28: Steam Equipment Operator (Water rigs, steam shovels, power boilers, derrick boats)

WAGES:(per hour) 07/01/2024

Group 23	\$ 87.05
Group 24	84.62
Group 25	80.57
Group 26	76.47
Group 27	54.57
Group 28	80.57

Cranes: Crawler or Truck

100' to 149'	\$0.50 per hour additional to above Crane Rates
150' to 249'	\$0.75 per hour additional to above Crane Rates
250' to 349'	\$1.00 per hour additional to above crane Rates
350' to 450'	\$1.50 per hour additional to above crane Rates

SUPPLEMENTAL BENEFITS

Per Hour:

Groups 23-28
Regular Time 31.02* + \$7.40

* This portion of benefits subject to the same OT premium as wages.

Non-Worked Holiday Supplemental Benefits:
21.87

OVERTIME PAY
See (D, O) on OVERTIME PAGE

HOLIDAY
Paid: See (5, 6, 7, 11, 16) on HOLIDAY PAGE
Overtime: See (5, 6, 7, 11, 16) on HOLIDAY PAGE

REGISTERED APPRENTICES

Per Hour:
(1) year terms at the following wage rates:

	1st	2nd	3rd	4th
Groups 23-28	\$38.52	\$45.23	\$48.70	\$52.17

Supplemental Benefits:

Regular Time \$ 16.52* + \$ 7.40

* This portion of benefits subject to same OT premium as wages.

9-15 HC

Operating Engineer - Marine Dredging	11/01/2024
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JOB DESCRIPTION Operating Engineer - Marine Dredging

DISTRICT 4

ENTIRE COUNTIES

Albany, Bronx, Cayuga, Clinton, Columbia, Dutchess, Essex, Franklin, Greene, Jefferson, Kings, Monroe, Nassau, New York, Orange, Oswego, Putnam, Queens, Rensselaer, Richmond, Rockland, St. Lawrence, Suffolk, Ulster, Washington, Wayne, Westchester

WAGES

These wages do not apply to Operating Engineers on land based construction projects. For those projects, please see the Operating Engineer Heavy/Highway Rates. The wage rates below for all equipment and operators are only for marine dredging work in navigable waters found in the counties listed above.

Per Hour: 07/01/2024

CLASS A1 \$ 45.26
Deck Captain, Leverman,
Mechanical Dredge Operator,
Licensed Tug Operator 1000HP or more.

CLASS A2 40.33
Crane Operator (360 swing)

CLASS B To conform to Operating Engineer
Dozer, Front Loader Prevailing Wage in locality where work
Operator on Land is being performed including benefits.

CLASS B1 39.14
Derrick Operator (180 swing)
Spider/Spill Barge Operator
Operator II, Fill Placer, Engineer
Chief Mate, Electrician, Chief Welder,
Maintenance Engineer, Licensed Boat, Crew Boat Operator

CLASS B2 36.84
Certified Welder

CLASS C1 35.83
Drag Barge Operator,
Steward, Mate,
Assistant Fill Placer

CLASS C2 34.68

Boat Operator

CLASS D 28.81
Shoreman, Deckhand, Oiler,
Rodman, Scowman, Cook,
Messman, Porter/Janitor

SUPPLEMENTAL BENEFITS

Per Hour:

THE FOLLOWING SUPPLEMENTAL BENEFITS APPLY TO ALL CATEGORIES

All Classes A & B \$ 12.00 plus 7%
of straight time
wage, Overtime hours
add \$ 0.63

All Class C & D \$ 11.75 plus 7%
of straight time
wage, Overtime hours
add \$ 0.50

OVERTIME PAY

See (B2, F, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 15, 26) on HOLIDAY PAGE

4-25a-MarDredge

Operating Engineer - Survey Crew - Consulting Engineer

11/01/2024

JOB DESCRIPTION Operating Engineer - Survey Crew - Consulting Engineer

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Suffolk, Westchester

PARTIAL COUNTIES

Dutchess: That part in Dutchess County lying South of the North City line of Poughkeepsie.

WAGES

Feasibility and preliminary design surveying, any line and grade surveying for inspection or supervision of construction.

Per hour: 07/01/2024
Survey Classifications

Party Chief \$ 49.39
Instrument Man 40.96
Rodman 35.63

SUPPLEMENTAL BENEFITS

Per Hour:

All Crew Members: \$ 23.75

OVERTIME PAY

OVERTIME:.... See (B, E*, Q, V) ON OVERTIME PAGE.

*Double-time paid on the 9th hour on Saturday.

HOLIDAY

Paid: See (5, 6, 7, 11, 16) on HOLIDAY PAGE
Overtime: See (5, 6, 7, 11, 16) on HOLIDAY PAGE

9-15dconsult

Painter

11/01/2024

JOB DESCRIPTION Painter

DISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Suffolk, Westchester

WAGES

Per hour: 07/01/2024 05/01/2025
Additional

Brush 52.86* \$ 2.62**

Abatement/Removal of lead based
or lead containing paint on
materials to be repainted. 52.86*

Spray & Scaffold \$ 55.86*
Fire Escape 55.86*
Decorator 55.86*
Paperhanger/Wall Coverer 55.09*

*Subtract \$ 0.10 to calculate premium rate.

** To be allocated at a later date.

SHIFT WORK

Counties of Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Suffolk, and Westchester; Agency/Government mandated off-shift work to be paid at time and one-half the hourly wage.

SUPPLEMENTAL BENEFITS

Per hour:

Paperhanger \$ 36.73
All others 34.31
Premium 38.28**

**Applies only to "All others" category, not paperhanger journeyworker.

OVERTIME PAY

See (A, E, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

One (1) year terms at the following wage rate.

Per hour: 07/01/2024
Appr 1st term... \$ 20.22*
Appr 2nd term... 25.93*
Appr 3rd term... 31.61*
Appr 4th term... 42.40*

*Subtract \$ 0.10 to calculate premium rate.

Supplemental benefits:

Per Hour:
Appr 1st term... \$ 16.89
Appr 2nd term... 20.95
Appr 3rd term... 24.10
Appr 4th term... 30.57

8-NYDC9-B/S

Painter

11/01/2024

JOB DESCRIPTION Painter

DISTRICT 8

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

PARTIAL COUNTIES

Nassau: Atlantic Beach, Ceadershurst, East Rockaway, Hewlett, Hewlett Bay, Hewlett Neck, Hewlett Park, Inwood, Lawrence, Lido Beach, Long Beach, parts of Lynbrook, parts of Oceanside, parts of Valley Stream, and Woodmere. Starting on South side of Sunrise Hwy in Valley Stream running east to Windsor and Rockaway Ave, Rockville is the boundary line up to Lawson Blvd, turning right going west all the above territory. Starting at Union Turnpike & Lakeville Rd going north to northern Blvd. the west side of Lakeville Rd to Northern Blvd. At Northern Blvd doing east the district north of Northern blvd to Port Washington blvd. West of Port Washington blvd to St. Francis Hospital then north of first traffic light to Port Washington & Sands Point, Manor Haven, & Harbour Acres.

WAGES

Per hour: 07/01/2024
Drywall Taper \$ 57.44

SUPPLEMENTAL BENEFITS

Per Hour:
Journeyworker: \$ 25.29

OVERTIME PAY

See (A, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (4, 6, 8, 11, 18, 19, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage per hour:

1st term	\$ 22.30
2nd term	28.99
3rd term	34.67
4th term	46.05

Supplemental Benefits per hour:

1st term	\$ 14.35
2nd term	19.83
3rd term	20.93
4th term	23.12

8-NYC9-1974-DWT

Painter - Bridge & Structural Steel

11/01/2024

JOB DESCRIPTION Painter - Bridge & Structural Steel

DISTRICT 8

ENTIRE COUNTIES

Albany, Bronx, Clinton, Columbia, Dutchess, Essex, Franklin, Fulton, Greene, Hamilton, Kings, Montgomery, Nassau, New York, Orange, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Suffolk, Sullivan, Ulster, Warren, Washington, Westchester

WAGES

Per Hour:

STEEL:

Bridge Painting: 07/01/2024
\$ 56.00
+ 10.35*

ADDITIONAL \$7.00 per hour for POWER TOOL/SPRAY, whether straight time or overtime.

NOTE: All premium wages are to be calculated on base rate per hour only.

* For the period of May 1st to November 15th, this amount is payable up to 40 hours. For the period of Nov 16th to April 30th, this amount is payable up to 50 hours. EXCEPTION: First and last week of employment, and for the weeks of Memorial Day, Independence Day and Labor Day, where the amount is paid for the actual number of hours worked (50 hour cap).

NOTE: Generally, for Bridge Painting Contracts, ALL WORKERS on and off the bridge (including Flagmen) are to be paid Painter's Rate; the contract must be ONLY for Bridge Painting.

SHIFT WORK

When directly specified in public agency or authority contract documents for an employer to work a second shift and works the second shift with employees other than from the first shift, all employees who work the second shift will be paid 10% of the base wage shift differential in lieu of overtime for the first eight (8) hours worked after which the employees shall be paid at time and one half of the regular wage rate. When a single irregular work shift is mandated in the job specifications or by the contracting agency, wages shall be paid at time and one half for single shifts between the hours of 3pm-11pm or 11pm-7am.

SUPPLEMENTAL BENEFITS

Per Hour:

Journeyworker:

\$ 12.43
+ 31.55*

* For the period of May 1st to November 15th, this amount is payable up to 40 hours. For the period of Nov 16th to April 30th, this amount is payable up to 50 hours. EXCEPTION: First and last week of employment, and for the weeks of Memorial Day, Independence Day and Labor Day, where the amount is paid for the actual number of hours worked (50 hour cap).

OVERTIME PAY

See (B, F, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (4, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage - Per hour:

Apprentices: (1) year terms.

1st year	\$ 22.40 + 4.14
2nd year	\$ 33.60 + 6.21
3rd year	\$ 44.80 + 8.28
Supplemental Benefits - Per hour:	
1st year	\$ 1.16 + 12.62
2nd year	\$ 7.46 + 18.93
3rd year	\$ 9.94 + 25.24

NOTE: All premium wages are to be calculated on base rate per hour only.

8-DC-9/806/155-BrSS

Painter - Metal Polisher

11/01/2024

JOB DESCRIPTION Painter - Metal Polisher

DISTRICT 8

ENTIRE COUNTIES

Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

	07/01/2024
Metal Polisher	\$ 39.33
Metal Polisher*	40.43
Metal Polisher**	43.33

*Note: Applies on New Construction & complete renovation

** Note: Applies when working on scaffolds over 34 feet.

SUPPLEMENTAL BENEFITS

Per Hour: 07/01/2024

Journeyworker:

All classification \$ 12.79

OVERTIME PAY

See (B, E, P, T) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:

One (1) year term at the following wage rates:

	07/01/2024
1st year	\$ 19.67
2nd year	21.63
3rd year	23.60
1st year*	\$ 22.06
2nd year*	22.07
3rd year*	24.14

1st year**	\$ 22.17
2nd year**	24.13
3rd year**	26.10

*Note: Applies on New Construction & complete renovation

** Note: Applies when working on scaffolds over 34 feet.

Supplemental benefits:
Per hour:

1st year	\$ 8.69
2nd year	8.69
3rd year	8.69

8-8A/28A-MP

Plasterer	11/01/2024
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JOB DESCRIPTION Plasterer

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per hour:

	07/01/2024	08/01/2024
Building:		
Plasterer/Traditional &	\$ 47.72	\$ 47.99
Spraying Fireproofing	+ \$5.00*	+ \$5.62*

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker	\$ 25.35	\$ 26.10
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OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

*This portion is not subjected to OT premiums.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages:	07/01/2024	08/01/2024
(Per hour)		
800 hours term:		
1st term	\$ 19.30 + 0.68*	\$ 19.44+ 0.68*
2nd term	22.53 + 0.81*	22.69+ 0.81*
3rd term	25.79 + 0.95*	25.98+ 0.95*

*This portion is not subjected to OT premiums.

Supplemental Benefits:

(Per hour):

(800) hours term:

1st term	\$ 11.59	\$ 11.95
2nd term	12.02	12.44
3rd term	12.52	13.08

9-262

Plumber	11/01/2024
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JOB DESCRIPTION Plumber

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:

07/01/2024

Plumber \$ 74.95

Temporary
Service** \$ 60.04

** Temporary Service- Includes Maintenance of cooling & heating apparatus, maintenance work on pneumatic systems during the construction period, and work on temporary heat. All hours paid at straight time, including holidays.

**THERE ARE NO HELPERS UNDER THIS CLASSIFICATION.

On tower work, bridges, elevated highway, or buildings, where pipe is being installed, fifty (50) or more feet vertically in a free drop from its base, an additional \$1.00 per hour.

SHIFT WORK

Shift work, when directly specified in public agency or authority contract documents, and continues for a period of not less than ten (10) consecutive work days. A shift shall consist of seven(7) hours with one-half (1/2) hour for lunch after the first four (4) hours of each shift. A premium of thirty percent (30%) for wages and supplemental benefits on shift work performed Monday through Friday on the 4 P.M. and midnight shifts.

For shift work performed on weekends the shift premium shall be fifty percent (50%) of wages and supplemental benefits.

For shift work performed on holidays designated below, double time wages and supplemental benefits shall be paid. Also noted that the normal workday Monday through Friday 8:00 A.M. to 3:00 P.M. is not considered shift work, and therefore not subject to shift premium.

SUPPLEMENTAL BENEFITS

Per hour:

Plumber \$ 43.00

Temporary
Service \$ 34.32

OVERTIME PAY

See (C, *D, O, V) on OVERTIME PAGE

*Where the plumbing contract price is one and one half million dollars (\$1,500,000.00) or less, code D applies.

HOLIDAY

Plumber
Overtime: See (5, 6, 11, 15, 16, 25) on HOLIDAY PAGE.
Repairs & Maintenance
Paid: See (1) on HOLIDAY PAGE.
Overtime: See (5, 6, 25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Wages per hour:

(1/2) year terms at the following wage:

1st	2nd	3rd&4th	5th&6th	7th&8th	9th	10th
\$ 19.00	\$ 21.00	\$ 30.22	\$ 32.32	\$ 35.17	\$ 36.57	\$ 48.64

Supplemental Benefits:

(1/2) year term at the following dollar amount:

1st	2nd	3rd-10th
\$ 5.43	\$ 6.43	\$ 22.73

9-1 Const

Plumber - Pump & Tank: Oil Trades Installation & Maintenance

11/01/2024

JOB DESCRIPTION Plumber - Pump & Tank: Oil Trades Installation & Maintenance

DISTRICT 9

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:

07/01/2024

Pump & Tank \$ 73.00

SUPPLEMENTAL BENEFITS

Per hour:

Plumber \$ 32.81

OVERTIME PAY

Pump & Tank See (B, F, H) on OVERTIME PAGE.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE.
Overtime: See (5, 6, 10, 11, 12, 16, 25) on HOLIDAY PAGE.

9-1-P&T

Plumber - Repairs & Maintenance

11/01/2024

JOB DESCRIPTION Plumber - Repairs & MaintenanceDISTRICT 9

ENTIRE COUNTIES
Bronx, Kings, New York, Queens, Richmond

WAGES

Per hour:

Repairs &07/01/2024
Maintenance\$ 48.20

*Repair & Maintenance work is any repair and/or replacement of present plumbing system that does not change existing roughing or water supply lines. Projects regardless of work type which have approved plans and specifications wherein the plumbing exceeds \$725,000 are excluded.

SUPPLEMENTAL BENEFITS

Per hour:

Repair\$ 21.36
Maintenance

OVERTIME PAY

Repairs &
MaintenanceSee (B, H) on OVERTIME PAGE.

HOLIDAY

Repairs & Maintenance
Paid: See (1) on HOLIDAY PAGE.
Overtime: See (5, 6, 25) on HOLIDAY PAGE.

REGISTERED APPRENTICES

Note: The Repairs & Maintenance Category has NO Apprentices.

9-1 R&M

Roofer

11/01/2024

JOB DESCRIPTION RooferDISTRICT 9

ENTIRE COUNTIES
Bronx, Dutchess, Kings, New York, Orange, Putnam, Queens, Richmond, Rockland, Sullivan, Ulster, Westchester

WAGES

Per Hour:07/01/2024

Roofer/Waterproofer\$ 48.50
+ \$7.00*

* This portion is not subjected to overtime premiums.

Note: Abatement/Removal of Asbestos containing roofs and roofing material is classified as Roofer.

SUPPLEMENTAL BENEFITS

Per Hour:\$ 31.87

OVERTIME PAY

See (B, H) on OVERTIME PAGE
Note: An observed holiday that falls on a Sunday will be observed the following Monday.

HOLIDAY

Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

(1) year term apprentices indentured prior to 01/01/2023

1st	2nd	3rd	4th
\$ 16.97	\$ 24.25	\$ 29.10	\$ 36.37
	+ 3.50*	+ 4.20*	+ 5.26*

Supplements:

1st	2nd	3rd	4th
\$ 4.10	\$ 16.17	\$ 19.31	\$ 24.02

* This portion is not subjected to overtime premiums.

(1) year term apprentices indentured after 01/01/2023

1st	2nd	3rd	4th	5th
\$ 18.43	\$ 21.82	\$ 24.25	\$ 29.10	\$ 36.37
	+ 3.16*	+ 3.50*	+ 4.20*	+ 5.26

Supplements:

1st	2nd	3rd	4th	5th
\$ 7.73	\$ 14.59	\$ 16.17	\$ 19.31	\$ 24.02

* This portion is not subjected to overtime premiums.

9-8R

Sheetmetal Worker

11/01/2024

JOB DESCRIPTION Sheetmetal Worker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland, Suffolk, Westchester

WAGES

Per Hour:

07/01/2024 08/01/2024

Sign Erector \$ 58.00 \$ 60.00

NOTE: Structurally Supported Overhead Highway Signs(See STRUCTURAL IRON WORKER CLASS)

SUPPLEMENTAL BENEFITS

Per Hour: 07/01/2024 08/01/2024

Sign Erector \$ 57.12 \$ 58.31

OVERTIME PAY

See (B, F, S) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 10, 11, 12, 16, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 10, 11, 12, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES

Per Hour:

6 month Terms at the following percentage of Sign Erectors wage rate:

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
35%	40%	45%	50%	55%	60%	65%	70%	75%	80%

SUPPLEMENTAL BENEFITS

Per Hour:

07/01/2024

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ 18.27	\$ 20.75	\$ 25.22	\$ 25.70	\$ 34.66	\$ 37.74	\$ 41.65	\$ 44.78	\$ 47.93	\$ 51.04

08/01/2024

\$ 18.65	\$ 21.16	\$ 23.69	\$ 26.22	\$35.39	\$ 38.52	\$ 42.55	\$ 45.75	\$ 48.96	\$ 52.15 4-137-SE
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Sheetmetal Worker

11/01/2024

JOB DESCRIPTION Sheetmetal Worker

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour:

07/01/2024

Sheetmetal Worker \$ 61.09

Maintenance of Fans 48.87
Temporary Operation

SUPPLEMENTAL BENEFITS

Per Hour:

Sheetmetal Worker \$ 53.25

Maintenance Worker 53.25

OVERTIME PAY

See (B, E, E2, Q, V) on OVERTIME PAGE

For Maintenance See Codes B,E, Q & V

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Per Hour:Wages

Six(6) Month Terms As Follows:

1st & 2nd Term	\$ 21.26
3rd & 4th Term	27.39
5th & 6th Term	33.52
7th & 8th Term	42.75
9th Term	48.55

Per Hour: Supplemental Benefits

1st & 2nd Term	\$ 19.66
3rd & 4th Term	26.73
5th & 6th Term	31.57
7th & 8th Term	38.78
9th Term	43.62

4-28

Steamfitter

11/01/2024

JOB DESCRIPTION Steamfitter

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES

Per Hour: 07/01/2024 01/01/2025

AC Service/Heat Service & Refrigeration	\$ 46.10	Additional \$1.25/Hr.*
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(*)To be allocated at a later date.

Refrigeration, A/C, Oil Burner and Stoker Service and Repair.

NOTE: Refrigeration Compressor installation. (Not to exceed 5 Hp combined on any one project).

NOTE: Air / Heating Compressor installation.(Not to exceed 15 tons combined on any one project).

SUPPLEMENTAL BENEFITS

Per Hour Worked:

AC Service/Heat Service
& Refrigeration \$ 20.96

Per hour Paid: \$ 17.65

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Overtime: See (5, 6, 11, 15, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

1 year terms
Wages per hour:

1st Term	\$ 22.31
2nd Term	26.94
3rd Term	31.38
4th Term	37.90

Benefits per hour worked:

1st Term	\$ 14.44
2nd Term	16.78
3rd Term	17.41
4th Term	19.44

Benefits per hour paid:

1st Term	\$ 11.38
2nd Term	13.72
3rd Term	14.35
4th Term	16.38

4-638B-StmFtrRef

Steamfitter	11/01/2024
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JOB DESCRIPTION Steamfitter

DISTRICT 4

ENTIRE COUNTIES
Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

WAGES			
Per Hour:	07/01/2024	10/1/2024	03/31/2025
Sprinkler/Steam AC/Heat Fitter	\$ 69.11	Additional \$0.75/Hr*	Additional \$0.75/Hr*
Temporary Heat & AC Fitter	52.54	Additional \$0.75/Hr*	Additional \$0.75/Hr*

(*)To be allocated at a later date.

SHIFT WORK
Add 15% to Hourly Wage for "Contracting Agency" Mandated Off Shift Work.

Add 15% to Hourly Supplemental Benefit for "Contracting Agency" Mandated Off Shift Work.

SUPPLEMENTAL BENEFITS
Per Hour:

Sprinkler/Steam Fitter	\$ 53.49
Temporary Heat & AC Fitter	43.67

OVERTIME PAY
Note: The posted overtime rates are applicable after 8 hours plus Saturday, Sunday and Holidays:

Per Hour:		
Sprinkler/Steam	WAGES \$ 138.22	SUPPLEMENTAL BENEFIT \$ 105.99
Temp Heat/AC	WAGES \$ 105.08	SUPPLEMENTAL BENEFIT \$ 85.35

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 11, 16, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
1 year Terms at the Following:

WAGES per hour:

1st Term \$ 27.98	2nd Term \$ 34.96	3rd Term \$ 41.94	4th Term \$ 48.92	5th Term \$ 55.90
SUPPLEMENTAL BENEFIT per hour:				
1st Term \$ 21.80	2nd Term \$ 27.05	3rd Term \$ 32.28	4th Term \$ 37.53	5th Term \$ 42.76
Premium Time SUPPLEMENTAL BENEFIT Amounts:				
\$ 43.60	\$ 54.10	\$ 64.56	\$ 75.06	\$ 85.52

4-638A-StmSpFtr

Teamster - Heavy Construction	11/01/2024
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JOB DESCRIPTION Teamster - Heavy Construction

DISTRICT 4

ENTIRE COUNTIES

Bronx, Kings, New York, Queens, Richmond

WAGES

Per Hour:

Dump Trucks/Drivers (Debris Removal, Street Level and below)
07/01/2024

Dump Trucks	\$ 44.165
Tractor Trailers	47.315
Euclid/Turnapull	47.88

SUPPLEMENTAL BENEFITS

Per Hour:

Dump Trucks	\$ 59.1525
All Others	56.9025
Up to 40 Hours Worked	

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 11, 15, 16, 25) on HOLIDAY PAGE

Note: Employees receive 2 hours of Holiday Pay for each day worked in holiday week (not to exceed 8 hours)

Note: Employees receive 5 1/3 hours of Holiday Pay for each day worked in Thanksgiving Holiday Week.

4-282

Welder	11/01/2024
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JOB DESCRIPTION Welder

DISTRICT 1

ENTIRE COUNTIES

Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

Per hour 07/01/2024

Welder: To be paid the same rate of the mechanic performing the work.*

*EXCEPTION: If a specific welder certification is required, then the 'Certified Welder' rate in that trade tag will be paid.

OVERTIME PAY

HOLIDAY

1-As Per Trade

Overtime Codes

Following is an explanation of the code(s) listed in the OVERTIME section of each classification contained in the attached schedule. Additional requirements may also be listed in the HOLIDAY section.

NOTE: Supplemental Benefits are 'Per hour worked' (for each hour worked) unless otherwise noted

- (AA) Time and one half of the hourly rate after 7 and one half hours per day
- (A) Time and one half of the hourly rate after 7 hours per day
- (B) Time and one half of the hourly rate after 8 hours per day
- (B1) Time and one half of the hourly rate for the 9th & 10th hours week days and the 1st 8 hours on Saturday.
Double the hourly rate for all additional hours
- (B2) Time and one half of the hourly rate after 40 hours per week
- (C) Double the hourly rate after 7 hours per day
- (C1) Double the hourly rate after 7 and one half hours per day
- (D) Double the hourly rate after 8 hours per day
- (D1) Double the hourly rate after 9 hours per day
- (E) Time and one half of the hourly rate on Saturday
- (E1) Time and one half 1st 4 hours on Saturday; Double the hourly rate all additional Saturday hours
- (E2) Saturday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather
- (E3) Between November 1st and March 3rd Saturday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather, provided a given employee has worked between 16 and 32 hours that week
- (E4) Saturday and Sunday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather
- (E5) Double time after 8 hours on Saturdays
- (F) Time and one half of the hourly rate on Saturday and Sunday
- (G) Time and one half of the hourly rate on Saturday and Holidays
- (H) Time and one half of the hourly rate on Saturday, Sunday, and Holidays
- (I) Time and one half of the hourly rate on Sunday
- (J) Time and one half of the hourly rate on Sunday and Holidays
- (K) Time and one half of the hourly rate on Holidays
- (L) Double the hourly rate on Saturday
- (M) Double the hourly rate on Saturday and Sunday
- (N) Double the hourly rate on Saturday and Holidays
- (O) Double the hourly rate on Saturday, Sunday, and Holidays
- (P) Double the hourly rate on Sunday
- (Q) Double the hourly rate on Sunday and Holidays
- (R) Double the hourly rate on Holidays
- (S) Two and one half times the hourly rate for Holidays

- (S1) Two and one half times the hourly rate the first 8 hours on Sunday or Holidays One and one half times the hourly rate all additional hours.
- (T) Triple the hourly rate for Holidays
- (U) Four times the hourly rate for Holidays
- (V) Including benefits at SAME PREMIUM as shown for overtime
- (W) Time and one half for benefits on all overtime hours.
- (X) Benefits payable on Paid Holiday at straight time. If worked, additional benefit amount will be required for worked hours. (Refer to other codes listed.)

Holiday Codes

PAID Holidays:

Paid Holidays are days for which an eligible employee receives a regular day's pay, but is not required to perform work. If an employee works on a day listed as a paid holiday, this remuneration is in addition to payment of the required prevailing rate for the work actually performed.

OVERTIME Holiday Pay:

Overtime holiday pay is the premium pay that is required for work performed on specified holidays. It is only required where the employee actually performs work on such holidays. The applicable holidays are listed under HOLIDAYS: OVERTIME. The required rate of pay for these covered holidays can be found in the OVERTIME PAY section listings for each classification.

Following is an explanation of the code(s) listed in the HOLIDAY section of each classification contained in the attached schedule. The Holidays as listed below are to be paid at the wage rates at which the employee is normally classified.

- (1) None
- (2) Labor Day
- (3) Memorial Day and Labor Day
- (4) Memorial Day and July 4th
- (5) Memorial Day, July 4th, and Labor Day
- (6) New Year's, Thanksgiving, and Christmas
- (7) Lincoln's Birthday, Washington's Birthday, and Veterans Day
- (8) Good Friday
- (9) Lincoln's Birthday
- (10) Washington's Birthday
- (11) Columbus Day
- (12) Election Day
- (13) Presidential Election Day
- (14) 1/2 Day on Presidential Election Day
- (15) Veterans Day
- (16) Day after Thanksgiving
- (17) July 4th
- (18) 1/2 Day before Christmas
- (19) 1/2 Day before New Years
- (20) Thanksgiving
- (21) New Year's Day
- (22) Christmas
- (23) Day before Christmas
- (24) Day before New Year's
- (25) Presidents' Day
- (26) Martin Luther King, Jr. Day
- (27) Memorial Day
- (28) Easter Sunday

(29) Juneteenth

New York State Department of Labor - Bureau of Public Work
State Office Building Campus
Building 12 - Room 130
Albany, New York 12226

REQUEST FOR WAGE AND SUPPLEMENT INFORMATION

As Required by Articles 8 and 9 of the NYS Labor Law

Fax (518) 485-1870 or mail this form for new schedules or for determination for additional occupations.

This Form Must Be Typed

Submitted By:

(Check Only One) ☐ Contracting Agency ☐ Architect or Engineering Firm ☐ Public Work District Office Date:

A. Public Work Contract to be let by: (Enter Data Pertaining to Contracting/Public Agency)

<p>1. Name and complete address <input type="checkbox"/> (Check if new or change)</p> <p>Telephone _____ Fax _____</p> <p>E-Mail: _____</p>	<p>2. NY State Units (see Item 5).</p> <table style="width: 100%;"><tr><td><input type="checkbox"/> 01 DOT</td><td><input type="checkbox"/> 07 City</td></tr><tr><td><input type="checkbox"/> 02 OGS</td><td><input type="checkbox"/> 08 Local School District</td></tr><tr><td><input type="checkbox"/> 03 Dormitory Authority</td><td><input type="checkbox"/> 09 Special Local District, i.e., Fire, Sewer, Water District</td></tr><tr><td><input type="checkbox"/> 04 State University Construction Fund</td><td><input type="checkbox"/> 10 Village</td></tr><tr><td><input type="checkbox"/> 05 Mental Hygiene Facilities Corp.</td><td><input type="checkbox"/> 11 Town</td></tr><tr><td><input type="checkbox"/> 06 OTHER N.Y. STATE UNIT</td><td><input type="checkbox"/> 12 County</td></tr><tr><td></td><td><input type="checkbox"/> 13 Other Non-N.Y. State (Describe)</td></tr></table>	<input type="checkbox"/> 01 DOT	<input type="checkbox"/> 07 City	<input type="checkbox"/> 02 OGS	<input type="checkbox"/> 08 Local School District	<input type="checkbox"/> 03 Dormitory Authority	<input type="checkbox"/> 09 Special Local District, i.e., Fire, Sewer, Water District	<input type="checkbox"/> 04 State University Construction Fund	<input type="checkbox"/> 10 Village	<input type="checkbox"/> 05 Mental Hygiene Facilities Corp.	<input type="checkbox"/> 11 Town	<input type="checkbox"/> 06 OTHER N.Y. STATE UNIT	<input type="checkbox"/> 12 County		<input type="checkbox"/> 13 Other Non-N.Y. State (Describe)
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	<input type="checkbox"/> 13 Other Non-N.Y. State (Describe)														
<p>3. SEND REPLY TO <input type="checkbox"/> (check if new or change) Name and complete address:</p> <p>Telephone _____ Fax _____</p> <p>E-Mail: _____</p>	<p>4. SERVICE REQUIRED. Check appropriate box and provide project information.</p> <p><input type="checkbox"/> New Schedule of Wages and Supplements. APPROXIMATE BID DATE : _____</p> <p><input type="checkbox"/> Additional Occupation and/or Redetermination</p> <table style="width: 100%;"><tr><td style="border: 1px solid black; padding: 5px; width: 50%;">PRC NUMBER ISSUED PREVIOUSLY FOR THIS PROJECT :</td><td style="border: 1px solid black; padding: 5px; width: 50%;">OFFICE USE ONLY</td></tr></table>	PRC NUMBER ISSUED PREVIOUSLY FOR THIS PROJECT :	OFFICE USE ONLY												
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B. PROJECT PARTICULARS

<p>5. <u>Project Title</u> _____</p> <p><u>Description of Work</u> _____</p> <p>_____</p> <p><u>Contract Identification Number</u> _____</p> <p><u>Note: For NYS units, the OSC Contract No.</u> _____</p>	<p>6. Location of Project: <u>Location on Site</u> _____</p> <p><u>Route No/Street Address</u> _____</p> <p><u>Village or City</u> _____</p> <p><u>Town</u> _____</p> <p><u>County</u> _____</p>																						
<p>7. Nature of Project - Check One:</p> <table style="width: 100%;"><tr><td><input type="checkbox"/> 1. New Building</td></tr><tr><td><input type="checkbox"/> 2. Addition to Existing Structure</td></tr><tr><td><input type="checkbox"/> 3. Heavy and Highway Construction (New and Repair)</td></tr><tr><td><input type="checkbox"/> 4. New Sewer or Waterline</td></tr><tr><td><input type="checkbox"/> 5. Other New Construction (Explain)</td></tr><tr><td><input type="checkbox"/> 6. Other Reconstruction, Maintenance, Repair or Alteration</td></tr><tr><td><input type="checkbox"/> 7. Demolition</td></tr><tr><td><input type="checkbox"/> 8. Building Service Contract</td></tr></table>	<input type="checkbox"/> 1. New Building	<input type="checkbox"/> 2. Addition to Existing Structure	<input type="checkbox"/> 3. Heavy and Highway Construction (New and Repair)	<input type="checkbox"/> 4. New Sewer or Waterline	<input type="checkbox"/> 5. Other New Construction (Explain)	<input type="checkbox"/> 6. Other Reconstruction, Maintenance, Repair or Alteration	<input type="checkbox"/> 7. Demolition	<input type="checkbox"/> 8. Building Service Contract	<p>8. OCCUPATION FOR PROJECT :</p> <table style="width: 100%;"><tr><td><input type="checkbox"/> Construction (Building, Heavy Highway/Sewer/Water)</td><td><input type="checkbox"/> Fuel Delivery</td></tr><tr><td><input type="checkbox"/> Tunnel</td><td><input type="checkbox"/> Guards, Watchmen</td></tr><tr><td><input type="checkbox"/> Residential</td><td><input type="checkbox"/> Janitors, Porters, Cleaners, Elevator Operators</td></tr><tr><td><input type="checkbox"/> Landscape Maintenance</td><td><input type="checkbox"/> Moving furniture and equipment</td></tr><tr><td><input type="checkbox"/> Elevator maintenance</td><td><input type="checkbox"/> Trash and refuse removal</td></tr><tr><td><input type="checkbox"/> Exterminators, Fumigators</td><td><input type="checkbox"/> Window cleaners</td></tr><tr><td><input type="checkbox"/> Fire Safety Director, NYC Only</td><td><input type="checkbox"/> Other (Describe)</td></tr></table>	<input type="checkbox"/> Construction (Building, Heavy Highway/Sewer/Water)	<input type="checkbox"/> Fuel Delivery	<input type="checkbox"/> Tunnel	<input type="checkbox"/> Guards, Watchmen	<input type="checkbox"/> Residential	<input type="checkbox"/> Janitors, Porters, Cleaners, Elevator Operators	<input type="checkbox"/> Landscape Maintenance	<input type="checkbox"/> Moving furniture and equipment	<input type="checkbox"/> Elevator maintenance	<input type="checkbox"/> Trash and refuse removal	<input type="checkbox"/> Exterminators, Fumigators	<input type="checkbox"/> Window cleaners	<input type="checkbox"/> Fire Safety Director, NYC Only	<input type="checkbox"/> Other (Describe)
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9. Does this project comply with the Wicks Law involving separate bidding? YES ☐ NO ☐

10. Name and Title of Requester

Signature



NEW YORK STATE DEPARTMENT OF LABOR
Bureau of Public Work - Debarment List

**LIST OF EMPLOYERS INELIGIBLE TO BID ON OR BE
AWARDED ANY PUBLIC WORK CONTRACT**

Under Article 8 and Article 9 of the NYS Labor Law, a contractor, sub-contractor and/or its successor shall be debarred and ineligible to submit a bid on or be awarded any public work or public building service contract/sub-contract with the state, any municipal corporation or public body for a period of five (5) years from the date of debarment when:

- Two (2) final determinations have been rendered within any consecutive six-year (6) period determining that such contractor, sub-contractor and/or its successor has WILLFULLY failed to pay the prevailing wage and/or supplements;
- One (1) final determination involves falsification of payroll records or the kickback of wages and/or supplements.

The agency issuing the determination and providing the information, is denoted under the heading 'Fiscal Officer'. DOL = New York State Department of Labor; NYC = New York City Comptroller's Office; AG = New York State Attorney General's Office; DA = County District Attorney's Office.

Debarment Database: To search for contractors, sub-contractors and/or their successors debarred from bidding or being awarded any public work contract or subcontract under NYS Labor Law Articles 8 and 9, or under NYS Workers' Compensation Law Section 141-b, access the database at this link: <https://apps.labor.ny.gov/EDList/searchPage.do>

For inquiries please call 518-457-5589.

NYSDOL Bureau of Public Work Debarment List 11/01/2024

Article 8

AGENCY	Fiscal Officer	FEIN	EMPLOYER NAME	EMPLOYER DBA NAME	ADDRESS	DEBARMENT START DATE	DEBARMENT END DATE
DOL	DOL	*****5754	0369 CONTRACTORS, LLC		515 WEST AVE UNIT PH 13NORWALK CT 06850	05/12/2021	05/12/2026
DOL	DOL	*****5784	A.J.M. TRUCKING, INC.		PO BOX 2064 MONROE NY 10950	02/12/2024	02/12/2029
DOL	DOL		AKHLAQ OULAKH		4307 28TH AVE ASTORIA NY 11103	10/11/2024	10/11/2029
DOL	NYC		ALL COUNTY SEWER & DRAIN, INC.		7 GREENFIELD DR WARWICK NY 10990	03/25/2022	03/25/2027
DOL	DOL	*****8387	AMERICAN PAVING & MASONRY, CORP.		8 FOREST AVE GLEN COVE NY 11542	05/24/2024	05/24/2029
DOL	DOL	*****8654	AMERICAN PAVING, INC.		8 FORREST AVE. GLEN COVE NY 11542	05/24/2024	05/24/2029
DOL	NYC		AMJED PARVEZ		401 HANOVER AVENUE STATEN ISLAND NY 10304	01/11/2021	01/11/2026
DOL	DOL		ANGELO F COKER		2610 SOUTH SALINA STREET SUITE 14SYRACUSE NY 13205	09/17/2020	09/17/2025
DOL	DOL		ANGELO GARCIA		515 WEST AVE UNIT PH 13NORWALK CT 06850	05/12/2021	05/12/2026
DOL	DOL		ANGELO STANCO		8 FOREST AVE. GLEN COVE NY 11542	05/24/2024	05/24/2029
DOL	DOL		ANGELO TONDO		449 WEST MOMBSHA ROAD MONROE NY 10950	06/06/2022	06/06/2027
DOL	DOL	*****4231	ANKER'S ELECTRIC SERVICE, INC.		10 SOUTH 5TH ST LOCUST VALLEY NY 11560	09/26/2022	09/26/2027
DOL	DOL		ANTHONY MONGELLI		PO BOX 2064 MONROE NY 10950	02/12/2024	02/12/2029
DOL	NYC		ARADCO CONSTRUCTION CORP		115-46 132RD ST SOUTH OZONE PARK NY 11420	09/17/2020	09/17/2025
DOL	DOL		ARNOLD A. PAOLINI		1250 BROADWAY ST BUFFALO NY 14212	02/03/2020	02/03/2025
DOL	NYC		ARSHAD MEHMOOD		168-42 88TH AVENUE JAMAICA NY 11432	11/20/2019	11/20/2024
DOL	NYC		AVM CONSTRUCTION CORP		117-72 123RD ST SOUTH OZONE PARK NY 11420	09/17/2020	09/17/2025
DOL	NYC		AZIDABEGUM		524 MCDONALD AVENUE BROOKLYN NY 11218	09/17/2020	09/17/2025
DOL	DOL	*****8421	B & B DRYWALL, INC		206 WARREN AVE APT 1WHITE PLAINS NY 10603	12/14/2021	12/14/2026
DOL	DOL		B&L RENOVATION CO.		618 OCEAN PARKWAY APT A6BROOKLYN NY 11230	09/17/2020	09/17/2025
DOL	DOL		BERNARD BEGLEY		38 LONG RIDGE ROAD BEDFORD NY 10506	12/18/2019	12/18/2024
DOL	NYC	*****2113	BHW CONTRACTING, INC.		401 HANOVER AVENUE STATEN ISLAND NY 10304	01/11/2021	01/11/2026
DOL	DOL	*****3627	BJB CONSTRUCTION CORP.		38 LONG RIDGE ROAD BEDFORD NY 10506	12/18/2019	12/18/2024
DOL	DOL	*****5078	BLACK RIVER TREE REMOVAL, LLC		29807 ANDREWS ROAD BLACK RIVER NY 13032	10/17/2023	10/17/2028
DOL	DOL		BRADLEY J SCHUKA		4 BROTHERS ROAD WAPPINGERS FALLS NY 12590	10/20/2020	10/20/2025
DOL	DOL	*****9383	C.C. PAVING AND EXCAVATING, INC.		2610 SOUTH SALINA ST SUITE 12SYRACUSE NY 13205	09/17/2020	09/17/2025
DOL	DOL	*****4083	C.P.D. ENTERPRISES, INC		P.O BOX 281 WALDEN NY 12586	03/03/2020	03/03/2025
DOL	DOL	*****5161	CALADRI DEVELOPMENT CORP.		1223 PARK ST. PEEKSKILL NY 10566	05/17/2021	05/17/2026
DOL	DOL	*****3391	CALI ENTERPRISES, INC.		1223 PARK STREET PEEKSKILL NY 10566	05/17/2021	05/17/2026
DOL	DOL	*****4155	CASA BUILDERS, INC.	FRIEDLANDER CONSTRUCTI ON	64 N PUTT CONNERS ROAD NEW PALTZ NY 12561	05/10/2023	05/10/2028
DOL	AG	*****7247	CENTURY CONCRETE CORP		2375 RAYNOR ST RONKONKOMA NY 11779	08/04/2021	08/04/2026
DOL	DOL	*****0026	CHANTICLEER CONSTRUCTION LLC		4 BROTHERS ROAD WAPPINGERS FALLS NY 12590	10/20/2020	10/20/2025
DOL	NYC	*****2117	CHARAN ELECTRICAL ENTERPRISES		9-11 40TH AVENUE LONG ISLAND CITY NY 11101	09/26/2023	09/26/2028
DOL	NYC		CHARLES ZAHRADKA		863 WASHINGTON STREET FRANKLIN SQUARE NY 11010	03/10/2020	03/10/2025

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DOL	DOL		CHRISTOPHER GRECO		26 NORTH MYRTLE AVENUE SPRING VALLEY NY 10956	02/18/2021	02/18/2026
DOL	DOL	*****2281	CORRAO TRUCKING, INC.		PO BOX 393 NANUET NY 10954	09/17/2024	09/17/2029
DOL	DOL		CRAIG JOHANSEN		10 SOUTH 5TH ST LOCUST VALLEY NY 11560	09/26/2022	09/26/2027
DOL	DOL	*****3228	CROSS-COUNTY LANDSCAPING AND TREE SERVICE, INC.	ROCKLAND TREE SERVICE	26 NORTH MYRTLE AVENUE SPRING VALLEY NY 10956	02/18/2021	02/18/2026
DOL	DOL	*****7619	DANCO CONSTRUCTION UNLIMITED INC.		485 RAFT AVENUE HOLBROOK NY 11741	10/19/2021	10/19/2026
DOL	DOL		DANIEL ROBERT MCNALLY		7 GREENFIELD DRIVE WARWICK NY 10990	03/25/2022	03/25/2027
DOL	DOL		DARIAN L COKER		2610 SOUTH SALINA ST SUITE 2CSYRACUSE NY 13205	09/17/2020	09/17/2025
DOL	DOL		DARWIN PEQUESE		6400 BALTIMORE NATIONAL SUITE 602CANTONSVILLE NY 21228	10/24/2024	10/24/2029
DOL	DOL		DAVID FRIEDLANDER		64 NORTH PUTT CORNERS RD NEW PALTZ NY 12561	05/10/2023	05/10/2028
DOL	NYC		DAVID WEINER		14 NEW DROP LANE 2ND FLOORSTATEN ISLAND NY 10306	11/14/2019	11/14/2024
DOL	DOL		DINA TAYLOR		64 N PUTT CONNERS RD NEW PALTZ NY 12561	05/10/2023	05/10/2028
DOL	DOL	*****5175	EAGLE MECHANICAL AND GENERAL CONSTRUCTION LLC		11371 RIDGE RD WOLCOTT NY 14590	02/03/2020	02/03/2025
DOL	AG		EDWIN HUTZLER		23 NORTH HOWELLS RD BELLPORT NY 11713	08/04/2021	08/04/2026
DOL	DA		EDWIN HUTZLER		2375 RAYNOR STREET RONKONKOMA NY 11779	08/04/2021	08/04/2026
DOL	DOL	*****0780	EMES HEATING & PLUMBING CONTR		5 EMES LANE MONSEY NY 10952	01/20/2002	01/20/3002
DOL	DOL		EMIL KISZKO		84 DIAMOND ST BROOKLYN NY 11222	07/18/2024	07/18/2029
DOL	DOL	*****3298	EMJACK CONSTRUCTION CORP.		84 DIAMOND ST BROOKLYN NY 11222	07/18/2024	07/18/2029
DOL	DOL	*****3298	EMJACK CONSTRUCTION LLC		4192 SIR ANDREW CIRCLE DOYLESTOWN PA 18902	07/18/2024	07/18/2029
DOL	DOL		EUGENIUSZ "GINO" KUCHAR		195 KINGSLAND AVE BROOKLYN NY 11222	12/22/2023	12/22/2028
DOL	DA		FREDERICK HUTZLER		2375 RAYNOR STREET RONKONKOMA NY 11779	08/04/2021	08/04/2026
DOL	NYC	*****6616	G & G MECHANICAL ENTERPRISES, LLC.		1936 HEMPSTEAD TURNPIKE EAST MEDOW NY 11554	11/29/2019	11/29/2024
DOL	DOL	*****2998	G.E.M. AMERICAN CONSTRUCTION CORP.		195 KINGSLAND AVE BROOKLYN NY 11222	12/22/2023	12/22/2028
DOL	NYC		GAYATRI MANGRU		21 DAREWOOD LANE VALLEY STREAM NY 11581	09/17/2020	09/17/2025
DOL	DA		GEORGE LUCEY		150 KINGS STREET BROOKLYN NY 11231	01/19/1998	01/19/2998
DOL	DA		GIOVANNA TRAVALJA		3735 9TH ST LONG ISLAND CITY NY 11101	01/05/2023	01/05/2028
DOL	DA		GIOVANNI NAPOLITANO		2501 BAYVIEW AVENUE WANTAGH NY 11793	02/21/2024	02/21/2029
DOL	DA	*****0213	GORILLA CONTRACTING GROUP, LLC		505 MANHATTAN AVE WEST BABYLON NY 11704	10/05/2023	10/05/2028
DOL	DA	*****4760	GTX CONSTRUCTION ASSOCIATES, CORP		2501 BAYVIEW AVE WANTAGH NY 11793	02/21/2024	02/21/2029
DOL	DOL		HANS RATH		24 ELDOR AVENUE NEW CITY NY 10956	02/03/2020	02/03/2025
DOL	DOL		HERBERT CLEMEN		42 FOWLER AVENUE CORTLAND MANOR NY 10567	01/24/2023	01/24/2028
DOL	DOL		HERBERT CLEMEN		42 FOWLER AVENUE CORTLAND MANOR NY 10567	10/25/2022	10/25/2027
DOL	DOL	*****2397	ISLAND BREEZE MARINE, INC.		6400 BALTIMORE NATIONAL CANTONSVILLE MD 21228	10/24/2024	10/24/2029
DOL	DOL	*****9211	J. WASE CONSTRUCTION CORP.		8545 RT 9W ATHENS NY 12015	03/09/2021	03/09/2026
DOL	DOL		J.M.J CONSTRUCTION		151 OSTRANDER AVENUE SYRACUSE NY 13205	11/21/2022	11/21/2027
DOL	DOL		J.R. NELSON CONSTRUCTION		531 THIRD STREET ALBANY NY 12206	11/07/2023	11/07/2028

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DOL	DOL		J.R. NELSON CONSTRUCTION		531 THIRD STREET ALBANY NY 12206	12/22/2022	12/22/2027
DOL	DOL		J.R. NELSON CONSTRUCTION		531 THIRD STREET ALBANY NY 12206	10/25/2022	10/25/2027
DOL	DOL		J.R. NELSON, LLC		531 THIRD STREET ALBANY NY 12206	12/22/2022	12/22/2027
DOL	DOL		J.R. NELSON, LLC		531 THIRD STREET ALBANY NY 12206	11/07/2023	11/07/2028
DOL	DOL		J.R. NELSON, LLC		531 THIRD STREET ALBANY NY 12206	10/25/2022	10/25/2027
DOL	DOL		J.R.N COMPANIES, LLC		531 THIRD STREET ALBANY NY 12206	12/12/2022	12/12/2027
DOL	DOL		J.R.N COMPANIES, LLC		531 THIRD STREET ALBANY NY 12206	11/07/2023	11/07/2028
DOL	DOL		J.R.N COMPANIES, LLC		531 THIRD STREET ALBANY NY 12206	10/25/2022	10/25/2027
DOL	DOL	*****1147	J.R.N. CONSTRUCTION, LLC		531 THIRD ST ALBANY NY 12206	11/07/2023	11/07/2028
DOL	DOL	*****1147	J.R.N. CONSTRUCTION, LLC		531 THIRD ST ALBANY NY 12206	12/22/2022	12/22/2027
DOL	DOL	*****1147	J.R.N. CONSTRUCTION, LLC		531 THIRD ST ALBANY NY 12206	10/25/2022	10/25/2027
DOL	DOL		JAMES J. BAKER		7901 GEE ROAD CANASTOTA NY 13032	08/17/2021	08/17/2026
DOL	DOL		JASON P. RACE		3469 STATE RT. 69 PERISH NY 13131	09/29/2021	09/29/2026
DOL	DOL		JASON P. RACE		3469 STATE RT. 69 PERISH NY 13131	02/09/2022	02/09/2027
DOL	DOL		JASON P. RACE		3469 STATE RT. 69 PERISH NY 13131	11/15/2022	11/15/2027
DOL	DOL		JASON P. RACE		3469 STATE RT. 69 PERISH NY 13131	03/01/2022	03/01/2027
DOL	DOL	*****7993	JBS DIRT, INC.		7901 GEE ROAD CANASTOTA NY 13032	08/17/2021	08/17/2026
DOL	DOL	*****2435	JEFFEL D. JOHNSON	JMJ7 AND SON	5553 CAIRNSTRAIL CLAY NY 13041	11/21/2022	11/21/2027
DOL	DOL		JEFFEL JOHNSON ELITE CARPENTER REMODEL AND CONSTRUCTION		C2 EVERGREEN CIRCLE LIVERPOOL NY 13090	11/21/2022	11/21/2027
DOL	DOL	*****2435	JEFFREY M. JOHNSON	JMJ7 AND SON	5553 CAIRNS TRAIL CLAY NY 13041	11/21/2022	11/21/2027
DOL	NYC		JENNIFER GUERRERO		1936 HEMPSTEAD TURNPIKE EAST MEADOW NY 11554	11/29/2019	11/29/2024
DOL	DOL		JIM PLAUGHER		17613 SANTE FE LINE ROAD WAYNEFIELD OH 45896	07/16/2021	07/16/2026
DOL	DOL		JMJ7 & SON CONSTRUCTION, LLC		5553 CAIRNS TRAIL LIVERPOOL NY 13041	11/21/2022	11/21/2027
DOL	DOL		JMJ7 AND SONS CONTRACTORS		5553 CAIRNS TRAIL CLAY NY 13041	11/21/2022	11/21/2027
DOL	DOL		JMJ7 CONTRACTORS		7014 13TH AVENUE BROOKLYN NY 11228	11/21/2022	11/21/2027
DOL	DOL		JMJ7 CONTRACTORS AND SONS		5553 CAIRNS TRAIL CLAY NY 13041	11/21/2022	11/21/2027
DOL	DOL		JMJ7 CONTRACTORS, LLC		5553 CAIRNS TRAIL CLAY NY 13041	11/21/2022	11/21/2027
DOL	DOL		JOHN GOCEK		14B COMMERCIAL AVE ALBANY NY 12065	11/14/2019	11/14/2024
DOL	DOL		JOHN MARKOVIC		47 MANDON TERRACE HAWTHORN NJ 07506	03/29/2021	03/29/2026
DOL	DOL		JOHN WASE		8545 RT 9W ATHENS NY 12015	03/09/2021	03/09/2026
DOL	DOL		JORGE RAMOS		8970 MIKE GARCIA DR MANASSAS VA 20109	07/16/2021	07/16/2026
DOL	DOL		JOSEPH K. SALERNO		1010 TILDEN AVE UTICA NY 13501	07/24/2023	07/24/2028
DOL	DOL		JOSEPH K. SALERNO II		1010 TILDEN AVE UTICA NY 13501	07/24/2023	07/24/2028
DOL	DOL	*****5116	JP RACE PAINTING, INC. T/A RACE PAINTING		3469 STATE RT. 69 PERISH NY 13131	02/09/2022	02/09/2027
DOL	DOL	*****5116	JP RACE PAINTING, INC. T/A RACE PAINTING		3469 STATE RT. 69 PERISH NY 13131	11/15/2022	11/15/2027
DOL	DOL	*****5116	JP RACE PAINTING, INC. T/A RACE PAINTING		3469 STATE RT. 69 PERISH NY 13131	09/29/2021	09/29/2026
DOL	DOL	*****5116	JP RACE PAINTING, INC. T/A RACE PAINTING		3469 STATE RT. 69 PERISH NY 13131	03/01/2022	03/01/2027

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DOL	DOL	*****5116	JP RACE PAINTING, INC. T/A RACE PAINTING		3469 STATE RT. 69 PERISH NY 13131	03/01/2022	03/01/2027
DOL	DOL		JRN CONSTRUCTION CO, LLC		1024 BROADWAY ALBANY NY 12204	11/07/2023	11/07/2028
DOL	DOL	*****1147	JRN CONSTRUCTION, LLC		531 THIRD STREET ALBANY NY 12206	10/25/2022	10/25/2027
DOL	DOL	*****1147	JRN CONSTRUCTION, LLC		531 THIRD STREET ALBANY NY 12206	12/22/2022	12/22/2027
DOL	DOL	*****1147	JRN CONSTRUCTION, LLC		531 THIRD STREET ALBANY NY 12206	11/07/2023	11/07/2028
DOL	DOL		JRN PAVING, LLC		531 THIRD STREET ALBANY NY 12206	10/25/2022	10/25/2027
DOL	DOL		JRN PAVING, LLC		531 THIRD STREET ALBANY NY 12206	12/22/2022	12/22/2027
DOL	DOL		JRN PAVING, LLC		531 THIRD STREET ALBANY NY 12206	11/07/2023	11/07/2028
DOL	DOL		JULIUS AND GITA BEHREND		5 EMES LANE MONSEY NY 10952	11/20/2002	11/20/3002
DOL	DOL		KARIN MANGIN		796 PHELPS ROAD FRANKLIN LAKES NJ 07417	12/01/2020	12/01/2025
DOL	DOL		KATE E. CONNOR		7088 INTERSTATE ISLAND RD SYRACUSE NY 13209	03/31/2021	03/31/2026
DOL	DOL		KEAN INDUSTRIES, LLC		2345 RT. 52 SUITE 2NHOPEWELL JUNCTION NY 12533	12/18/2023	12/18/2028
DOL	DOL	*****2959	KELC DEVELOPMENT, INC		7088 INTERSTATE ISLAND RD SYRACUSE NY 13209	03/31/2021	03/31/2026
DOL	DOL		KIMBERLY F. BAKER		7901 GEE ROAD CANASTOTA NY 13032	08/17/2021	08/17/2026
DOL	DOL		KMA GROUP II, INC.		29-10 38TH AVENUE LONG ISLAND CITY NY 11101	10/11/2023	10/11/2028
DOL	DOL	*****1833	KMA GROUP INC.		29-10 38TH AVENUE LONG ISLAND CITY NY 11101	10/11/2023	10/11/2028
DOL	DOL		KMA INSULATION, INC.		29-10 38TH AVENUE LONG ISLAND CITY NY 11101	10/11/2023	10/11/2028
DOL	DOL		KRIN HEINEMANN		2345 ROUTE 52, SUITE 2N HOPEWELL JUNCTION NY 12533	12/18/2023	12/18/2028
DOL	NYC		KULWANT S. DEOL		9-11 40TH AVENUE LONG ISLAND CITY NY 11101	09/26/2023	09/26/2028
DOL	DA	*****8816	LAKE CONSTRUCTION AND DEVELOPMENT CORPORATION		150 KINGS STREET BROOKLYN NY 11231	08/19/1998	08/19/2998
DOL	DOL		LEROY E. NELSON JR		531 THIRD ST ALBANY NY 12206	10/25/2022	10/25/2027
DOL	DOL		LEROY E. NELSON JR		531 THIRD ST ALBANY NY 12206	12/22/2022	12/22/2027
DOL	DOL		LEROY E. NELSON JR		531 THIRD ST ALBANY NY 12206	11/07/2023	11/07/2028
DOL	AG	*****3291	LINTECH ELECTRIC, INC.		3006 TILDEN AVE BROOKLYN NY 11226	02/16/2022	02/16/2027
DOL	DOL		LOUIS A. CALICCHIA		1223 PARK ST. PEEKSKILL NY 10566	05/17/2021	05/17/2026
DOL	NYC		LUBOMIR PETER SVOBODA		27 HOUSMAN AVE STATEN ISLAND NY 10303	12/26/2019	12/26/2024
DOL	NYC		M & L STEEL & ORNAMENTAL IRON CORP.		27 HOUSMAN AVE STATEN ISLAND NY 10303	12/26/2019	12/26/2024
DOL	DOL	*****2196	MAINSTREAM SPECIALTIES, INC.		11 OLD TOWN RD SELKIRK NY 12158	02/02/2021	02/02/2026
DOL	DA		MANUEL P TOBIO		150 KINGS STREET BROOKLYN NY 14444	08/19/1998	08/19/2998
DOL	DA		MANUEL TOBIO		150 KINGS STREET BROOKLYN NY 11231	08/19/1998	08/19/2998
DOL	DOL		MAQSOOD AHMAD		618 OCEAN PKWY BROOKLYN NY 11230	09/17/2020	09/17/2025
DOL	NYC		MARIA NUBILE		84-22 GRAND AVENUE ELMHURST NY 11373	03/10/2020	03/10/2025
DOL	NYC	*****9926	MILLENNIUM FIRE PROTECTION, LLC		325 W. 38TH STREET SUITE 204NEW YORK NY 10018	11/14/2019	11/14/2024
DOL	NYC	*****0627	MILLENNIUM FIRE SERVICES, LLC		14 NEW DROP LNE 2ND FLOORSTATEN ISLAND NY 10306	11/14/2019	11/14/2024
DOL	DOL	*****1320	MJC MASON CONTRACTING, INC.		42 FOWLER AVENUE CORTLAND MANOR NY 10567	10/25/2022	10/25/2027

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DOL	DOL	*****1320	MJC MASON CONTRACTING, INC.		42 FOWLER AVENUE CORTLAND MANOR NY 10567	01/24/2023	01/24/2028
DOL	NYC		MUHAMMED A. HASHEM		524 MCDONALD AVENUE BROOKLYN NY 11218	09/17/2020	09/17/2025
DOL	NYC		NAMOW, INC.		84-22 GRAND AVENUE ELMHURST NY 11373	03/10/2020	03/10/2025
DOL	DOL	*****7790	NATIONAL BUILDING & RESTORATION CORP		1010 TILDEN AVE UTICA NY 13501	07/24/2023	07/24/2028
DOL	DOL	*****1797	NATIONAL CONSTRUCTION SERVICES, INC		1010 TILDEN AVE UTICA NY 13501	07/24/2023	07/24/2028
DOL	NYC		NAVIT SINGH		402 JERICO TURNPIKE NEW HYDE PARK NY 11040	08/10/2022	08/10/2027
DOL	DOL		NELCO CONTRACTING, LLC		1024 BROADWAY ALBANY NY 12204	11/07/2023	11/07/2028
DOL	DA		NICHOLAS T. ANALITIS		505 MANHATTAN AVE WEST BABYLON NY 11704	10/05/2023	10/05/2028
DOL	DOL		NICHOLE E. FRASER A/K/A NICHOLE RACE		3469 STATE RT. 69 PERISH NY 13131	03/01/2022	03/01/2027
DOL	DOL		NICHOLE E. FRASER A/K/A NICHOLE RACE		3469 STATE RT. 69 PERISH NY 13131	11/15/2022	11/15/2027
DOL	DOL		NICHOLE E. FRASER A/K/A NICHOLE RACE		3469 STATE RT. 69 PERISH NY 13131	09/29/2021	09/29/2026
DOL	DOL		NICHOLE E. FRASER A/K/A NICHOLE RACE		3469 STATE RT. 69 PERISH NY 13131	02/09/2022	02/09/2027
DOL	DOL	*****7429	NICOLAE I. BARBIR	BESTUCCO CONSTRUCTION, INC.	444 SCHANTZ ROAD ALLEN TOWN PA 18104	09/17/2020	09/17/2025
DOL	NYC	*****5643	NYC LINE CONTRACTORS, INC.		402 JERICO TURNPIKE NEW HYDE PARK NY 11040	08/10/2022	08/10/2027
DOL	DOL		PATRICK PENNACCHIO		2345 RT. 52 SUITE 2NHOPEWELL JUNCTION NY 12533	12/18/2023	12/18/2028
DOL	DOL		PATRICK PENNACCHIO		2345 RT. 52 SUITE 2NHOPEWELL JUNCTION NY 12533	12/18/2023	12/18/2028
DOL	DOL		PAULINE CHAHALES		935 S LAKE BLVD MAHOPAC NY 10541	03/02/2021	03/02/2026
DOL	DOL		PETER STEVENS		11 OLD TOWN ROAD SELKIRK NY 12158	02/02/2021	02/02/2026
DOL	DOL		PETER STEVENS		8269 21ST ST BELLEROSE NY 11426	12/22/2022	12/22/2027
DOL	DOL	*****4168	PHANTOM CONSTRUCTION CORP.		95-27 116TH STREET QUEENS NY 11419	07/12/2024	07/12/2029
DOL	DOL	*****4168	PHANTOM CONSTRUCTION CORP.		95-27 116TH STREET QUEENS NY 11419	05/28/2024	05/28/2029
DOL	DOL	*****0466	PRECISION BUILT FENCES, INC.		1617 MAIN ST PEEKSKILL NY 10566	03/03/2020	03/03/2025
DOL	NYC		RASHEL CONSTRUCTION CORP		524 MCDONALD AVENUE BROOKLYN NY 11218	09/17/2020	09/17/2025
DOL	DOL	*****1068	RATH MECHANICAL CONTRACTORS, INC.		24 ELDOR AVENUE NEW CITY NY 10956	02/03/2020	02/03/2025
DOL	DOL	*****2633	RAW POWER ELECTRIC CORP.		3 PARK CIRCLE MIDDLETOWN NY 10940	07/11/2022	07/11/2027
DOL	DA	*****7559	REGAL CONTRACTING INC.		24 WOODBINE AVE NORTHPORT NY 11768	10/01/2020	10/01/2025
DOL	DOL		RICHARD REGGIO		1617 MAIN ST PEEKSKILL NY 10566	03/03/2020	03/03/2025
DOL	DOL		ROBBYE BISSEAR		89-51 SPRINGFIELD BLVD QUEENS VILLAGE NY 11427	01/11/2003	01/11/3003
DOL	DOL		ROMEO WARREN		161 ROBYN RD MONROE NY 10950	07/11/2022	07/11/2027
DOL	DOL		RONALD MESSEN		14B COMMERCIAL AVE ALBANY NY 12065	11/14/2019	11/14/2024
DOL	DOL	*****7172	RZ & AL INC.		198 RIDGE AVENUE VALLEY STREAM NY 11581	06/06/2022	06/06/2027
DOL	DOL		SAL FRESINA MASONRY CONTRACTORS, INC.		1935 TEALL AVENUE SYRACUSE NY 13206	07/16/2021	07/16/2026
DOL	DOL		SAL MASONRY CONTRACTORS, INC.		(SEE COMMENTS) SYRACUSE NY 13202	07/16/2021	07/16/2026
DOL	DOL	*****9874	SALFREE ENTERPRISES INC		P.O BOX 14 2821 GARDNER RDPOMPEI NY 13138	07/16/2021	07/16/2026
DOL	DOL		SALVATORE A FRESINA A/K/A SAM FRESINA		107 FACTORY AVE P.O BOX 11070SYRACUSE NY 13218	07/16/2021	07/16/2026

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DOL	DOL		SAM FRESINA		107 FACTORY AVE P.O BOX 11070SYRACUSE NY 13218	07/16/2021	07/16/2026
DOL	NYC	*****0349	SAM WATERPROOFING INC		168-42 88TH AVENUE APT.1 AJAMAICA NY 11432	11/20/2019	11/20/2024
DOL	DA	*****0476	SAMCO ELECTRIC CORP.		3735 9TH ST LONG ISLAND CITY NY 11101	01/05/2023	01/05/2028
DOL	NYC	*****1130	SCANA CONSTRUCTION CORP.		863 WASHINGTON STREET FRANKLIN SQUARE NY 11010	03/10/2020	03/10/2025
DOL	DOL	*****2045	SCOTT DUFFIE	DUFFIE'S ELECTRIC, INC.	P.O BOX 111 CORNWALL NY 12518	03/03/2020	03/03/2025
DOL	DOL		SCOTT DUFFIE		P.O BOX 111 CORNWALL NY 12518	03/03/2020	03/03/2025
DOL	DA		SILVANO TRAVAJA		3735 9TH ST LONG ISLAND CITY NY 11101	01/05/2023	01/05/2028
DOL	DOL	*****0440	SOLAR GUYS INC.		8970 MIKE GARCIA DR MANASSAS VA 20109	07/16/2021	07/16/2026
DOL	NYC		SOMATIE RAMSUNAHAI		115-46 132ND ST SOUTH OZONE PARK NY 11420	09/17/2020	09/17/2025
DOL	DOL	*****2221	SOUTH BUFFALO ELECTRIC, INC.		1250 BROADWAY ST BUFFALO NY 14212	02/03/2020	02/03/2025
DOL	NYC	*****3661	SPANIER BUILDING MAINTENANCE CORP		200 OAK DRIVE SYOSSET NY 11791	03/14/2022	03/14/2027
DOL	DOL		STANADOS KALOGELAS		485 RAFT AVENUE HOLBROOK NY 11741	10/19/2021	10/19/2026
DOL	DOL	*****3496	STAR INTERNATIONAL INC		89-51 SPRINGFIELD BLVD QUEENS VILLAGE NY 11427	08/11/2003	08/11/3003
DOL	DOL	*****6844	STEAM PLANT AND CHX SYSTEMS INC.		14B COMMERCIAL AVENUE ALBANY NY 12065	11/14/2019	11/14/2024
DOL	DOL	*****9528	STEEL-IT, LLC.		17613 SANTE FE LINE ROAD WAYNESFIELD OH 45896	07/16/2021	07/16/2026
DOL	DOL	*****3800	SUBURBAN RESTORATION CO. INC.		5-10 BANTA PLACE FAIR LAWN PLACE NJ 07410	03/29/2021	03/29/2026
DOL	DOL	*****9150	SURGE INC.		8269 21ST STREET BELLEROSE NY 11426	12/22/2022	12/22/2027
DOL	DOL		SYED MUHAMMAD S. JAFRI A/K/A SHARRUKH JAFRI		4307 28TH AVE ASTORIA NY 11103	10/11/2024	10/11/2029
DOL	DOL		SYED RAZA		198 RIDGE AVENUE NY 11581	06/06/2022	06/06/2027
DOL	DOL		TARLOK SINGH		95-27 116TH STREET QUEENS NY 11419	05/28/2024	05/28/2029
DOL	DOL		TARLOK SINGH		95-27 116TH STREET QUEENS NY 11419	07/12/2024	07/12/2029
DOL	DOL		TERRY THOMPSON		11371 RIDGE RD WOLCOTT NY 14590	02/03/2020	02/03/2025
DOL	DOL	*****9733	TERSAL CONSTRUCTION SERVICES INC		107 FACTORY AVE P.O BOX 11070SYRACUSE NY 13208	07/16/2021	07/16/2026
DOL	DOL		TERSAL CONTRACTORS, INC.		221 GARDNER RD P.O BOX 14POMPEI NY 13138	07/16/2021	07/16/2026
DOL	DOL		TERSAL DEVELOPMENT CORP.		1935 TEALL AVENUE SYRACUSE NY 13206	07/16/2021	07/16/2026
DOL	DOL	*****5766	THE COKER CORPORATION	COKER CORPORATIO N	2610 SOUTH SALINA ST SUITE 14SYRACUSE NY 13205	09/17/2020	09/17/2025
DOL	DOL	*****2426	THE MATRUKH GROUP, INC.		4307 28TH AVE PO BOX 9082ASTORIA NY 11103	10/11/2024	10/11/2029
DOL	DOL		TIMOTHY PERCY		29807 ANDREWS ROAD BLACK RIVER NY 13612	10/17/2023	10/17/2028
DOL	DA	*****1050	TRI STATE CONSTRUCTION OF NY CORP.		50-39 175TH PLACE FRESH MEADOWS NY 11365	03/28/2022	03/28/2027
DOL	DA	*****4106	TRIPLE H CONCRETE CORP		2375 RAYNOR STREET RONKONKOMA NY 11779	08/04/2021	08/04/2026
DOL	DOL	*****8210	UPSTATE CONCRETE & MASONRY CONTRACTING CO INC		449 WEST MOMBSHA ROAD MONROE NY 10950	06/06/2022	06/06/2027
DOL	DOL	*****6418	VALHALLA CONSTRUCTION, LLC.		796 PHEPS ROAD FRANKLIN LAKES NJ 07417	12/01/2020	12/01/2025
DOL	NYC	*****2426	VICKRAM MANGRU	VICK CONSTRUCTI ON	21 DAREWOOD LANE VALLEY STREAM NY 11581	09/17/2020	09/17/2025
DOL	NYC		VICKRAM MANGRU		21 DAREWOOD LANE VALLEY STREAM NY 11581	09/17/2020	09/17/2025

NYSDOL Bureau of Public Work Debarment List 11/01/2024

Article 8

DOL	DOL		VIKTORIA RATH		24 ELDOR AVENUE NEW CITY NY 10956	02/03/2020	02/03/2025
DOL	DOL		VINCENT CORRAO		PO BOX 393 NANUET NY 10954	09/17/2024	09/17/2029
DOL	DOL	*****8266	WILLIAM CHRIS MCCLENDON	MCCLENDON ASPHALT PAVING	1646 FALLS STREET NIAGARA FALLS NY 14303	05/01/2023	05/01/2028
DOL	DOL		WILLIAM CHRIS MCCLENDON		1646 FALLS STREET NIAGARA FALLS NY 14303	05/01/2023	05/01/2028
DOL	DOL		WILLIAM G. PROERFRIEDT		85 SPRUCEWOOD ROAD WEST BABYLON NY 11704	01/19/2021	01/19/2026
DOL	DOL	*****5924	WILLIAM G. PROPHY, LLC	WGP CONTRACTIN G, INC.	54 PENTAQUIT AVE BAYSHORE NY 11706	01/19/2021	01/19/2026
DOL	DOL		WILLIAM SCRIVENS		4192 SIR ANDREW CIRCLE DOYELSTOWN PA 18902	07/18/2024	07/18/2029
DOL	DOL		XENOFON EFTHIMIADIS		29-10 38TH AVENUE LONG ISLAND CITY NY 11101	10/11/2023	10/11/2028

General Requirements for Construction

APPENDIX A

Substitution Request Form

Substitution Request Form

Project: _____

Project Number: _____

Substitution Request Number: **SR-**_____

(number sequentially)

Date: _____

Requestor: _____

Specification Title: _____

Section: _____ Page: _____ Article/Paragraph _____

Proposed Substitution: _____

Manufacturer: _____

Address: _____ Phone #: _____

Trade Name: _____ Model #: _____

Installer: _____

Address: _____ Phone #: _____

History: ☐ New Product ☐ 2-5 Years Old ☐ 5-10 Years Old ☐ More than 10 Years Old

Differences between proposed substitution and specified product: _____

☐ Point-by- point comparative data attached – As required Section 016000, Part 2.2-A 2,3 and 4 Comparable Products.

Reason for not providing specified item: _____

Similar Installation:

Project: _____

Architect: _____

Address: _____

Owner: _____

Date Installed: _____

Proposed substitution affects other parts of Work: ☐ No ☐ Yes

If Yes, please explain:

Savings to Owner for accepting substitution: _____ (\$ _____)

Proposed substitution changes to Contract Time: ☐ No ☐ Yes Add/Deduct _____ days

Supporting Data Attached:

☐ Product Data ☐ Drawings ☐ Tests ☐ Report ☐ Samples ☐ Other _____

Information required for LEED Credits. Provide if applicable:

VOC Content: _____ Readily Renewable Material: _____
Recycled Content: _____ Certified Wood: _____
Point of Manufacture, Harvest or Extraction: _____ Other: _____

Undersigned Certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable is available.
- Proposed substitution will not affect or delay Progress Schedule, except as noted above.
- Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including architectural or re-engineering design, detailing and construction costs.
- Coordination, installation, and changes in the Work as necessary for accepted substitutions will be complete in all respects.

Submitted by: _____

Signature: _____

Firm: _____

Address: _____

Date: _____ Telephone: _____

Engineer's Review and Action:

- ☐ Substitution Approved: Submit in accordance with Division 01 Section "Submittal Procedures".
- ☐ Substitution Approved As Noted: Submit in accordance with Division 01 Section "Submittal Procedures".
- ☐ Substitution Rejected: Does not comply with conditions of Substitutions in Division 01 Section Product Requirements. Use specified materials.
- ☐ Substitution Request Received Too Late: Use specified product or material.

Signed by: _____ Date: _____

Additional Comments: _____

General Requirements for Construction

APPENDIX C

INTERIM LIFE SAFETY MEASURES

DORMITORY AUTHORITY - STATE OF NEW YORK CHECKLIST FOR FACILITY SUBJECT TO INTERIM LIFE SAFETY MEASURES

DAILY MONITORING FORM

FACILITY: _____
PROJECT NAME: _____
PROJECT NO: _____
DATE OF SURVEY: _____
AREA SURVEYED: _____
SURVEYED BY: _____ TEL NO: _____
A. Notify Facility of proposed start date: Notification Date: _____
B. Post Job Site with written copy of Interim Life Safety Measures. Date: _____

C. Actual Start Date: _____

D. EXITS:

1. Do exits provide unobstructed egress? Yes No N/A

If No, describe corrective action: _____

2. Did personnel receive training for alternate exits? Yes No N/A

Date: _____

3. Provide personnel with alternate exit floor plan. Signed: _____

E. FIRE SAFETY:

1. Are all fire and ambulance access lanes unobstructed? Yes No N/A

2. Are fire alarms, detection and suppression systems functional? Yes No N/A

3. Are fire alarms, detection and suppression systems impaired? Yes No N/A

4. Have temporary fire alarm, detection and suppression systems been installed? Yes No N/A

If yes, test monthly. Date Tested? _____

5. Have smoke detectors been changed to heat detectors in construction areas? Yes No N/A

If yes, date: _____

6. Have training and additional fire equipment been provided for personnel? Yes No N/A

If yes, date: _____

7. Has the fire containment ability of the structure been compromised? Yes No N/A

If yes, staff informed, date: _____ Restored
date: _____

General Requirements for Construction

APPENDIX D

Supplemental Construction Safety Standards

1.01 – Safety

- 1.1. **GENERAL:** Responsibility: It is recognized that the safety of all personnel is the prime responsibility of all participants involved directly in the construction of this Project. Unsafe conditions, personal hardships and injury cost time and money. It is the contractual responsibility of each Contractor to adhere to all requirements of: Part 1926 – Safety and Health Regulations for Construction, Chapter XVII of Title 29 Code of Federal Regulations, Part 1910 – Occupational Safety and health Standards, Chapter XVII of Title 29 Code of Federal Regulations as applicable, the New York State Department of Labor Division of Health and Safety Act regulations, and all other applicable safety rules and regulations such as NEC, NFPA, ANSI, IBC. Each Contractor shall assure the safety of his/her personnel. Personal Protective Equipment and all safety devices shall be provided by each Contractor as it relates to the safe conduct of his/her Work in accordance with all local, State and Federal regulations. The Contractor shall assure his/her plant, work areas, and equipment meets all applicable safety regulations. Each Contractor is responsible for any safety requirements that are contractually those of any Contractor, contractor, and/or subcontractor.
- 1.2. **ACCIDENTS:** The Contractor shall utilize the contact protocol and immediately notify the Owner and the Owner's Representative of any personal injury that could require medical treatment of any of Contractor's or his/her subcontractor's employees at the Project site; any near-miss, non-injury accident, unexpected, or unusual occurrence; and of any damage to property arising in connection with Contractor's performance, as promptly as possible after the occurrence of such injury or damage. Immediate notification to the Owner's Representative is required for any personal injury, any near-miss, non-injury accident, unexpected, or unusual occurrence; and of any damage to property. The Contractor shall furnish, within twenty-four (24) hours, to Owner and the Owner's Representative a complete written report of such injury or damage. Reports, prepared on DASNY forms, shall include specific actions taken by the Contractor to preclude recurrence of similar incidents.
- 1.3. **EMERGENCY DATA:** Each Contractor shall provide Owner and the Owner's Representative with the following data, as part of their project specific Safety Procedures (to include Drug and Alcohol policy), prior to beginning Work at the Project site. Each Contractor is responsible for providing the same information for their sub-contractors. A meeting with the competent persons will be arranged by the Contractor, DASNY PM, and Jacobs Safety representative to confirm that the roles and responsibilities of a competent person are fully understood and ready to be applied.
 - 1.3.1. Emergency care facility to be utilized, address, telephone number
 - 1.3.2. Insurance Company and local agent/name, address, telephone number
 - 1.3.3. Name and contact information for Company Officers
 - 1.3.4. Name and contact information for Company Safety Manager
 - 1.3.5. Names of Competent Persons (a person who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them) with a copy of their training records for this Project for at least the following tasks:
 - 1.3.5.1. Excavation
 - 1.3.5.2. Scaffolding
 - 1.3.5.3. Fall Protection
 - 1.3.5.4. Electrical
 - 1.3.5.5. Cranes, Lifts and Hoists
 - 1.3.5.6. Confined Spaces
- 1.4. **SAFETY PROGRAM:** Furnish Owner and the Owner's Representative a copy of their Firm's Site Specific Safety Program within 10 days of the Notice to Proceed, in every case prior to the start of any field work. The submitted safety program must contain, at a minimum, how the requirements contained in the OSHA Construction Industry regulations will be established, monitored and controlled. Upon review and acceptance by the Owner of the Site Specific Safety Plan, any proposed changes to the accepted Site Specific Safety Plan must be individually reviewed and accepted by the Owner. Failure to comply with minimum OSHA Construction Industry regulations and the accepted Site Specific Safety Plan may result in expulsions of violating employees and/or supervisors. Such failures may also result in possible monetary penalties (in the

form of credit change orders) as deemed appropriate by the Owner or Owner's representative for damages, including but not limited to, lost time, materials, damage to property or exposure to litigation.

1.4.1. Contractor's Safety Program must include the following:

1.4.1.1. Orientation syllabus and program that will be provide to EVERY worker/subcontractor

1.4.1.2. Violation policy (see section 1.7 below)

1.4.1.3. Incident reporting policy

1.4.1.4. Emergency Procedure and Evacuation

1.4.1.5. Positive Behavioral Safety Program

1.5. **FIRE PROTECTION:** The Contractor shall provide the appropriate and approved type fire extinguishers for emergency use at his/her immediate area of operation including offices, all company vehicles, all pieces of motorized equipment, tool and storage enclosures, and fire watch of hot work.

1.6. **MATERIAL SAFETY DATA SHEETS (MSDS):** The Contractor shall furnish Owner and the Owner's Representative with MSDS's and a Chemical Inventory List for materials used on-site as required by federal and state regulations. The Contractor shall furnish monthly an updated Chemical Inventory list and area of storage of all materials. Three copies of each document are to be provided.

1.7. **ADDITIONAL SAFETY RULES (supplementary or complementary to OSHA regulations):**

1. Cellular Telephones:

a. No personal telephones will be allowed to be used on the construction site. Contractors are required to limit the use of telephones on-site to essential personnel and to limit the use of personal telephones to only during breaks.

2. Concrete Embedded Fall Arresting Systems

a. The NYC Buildings protocols, effective June 13, 2008, for concrete embedded Fall Arresting Systems are mandatory for the BMHR project. In summary as follows (Contractors to review and adhere to the full requirements):

i. For new concrete embedded systems, Contractors must obtain shop drawings, approved by a licensed engineer, for all systems prior to their installation. Shop drawings are to be available on-site at all times.

ii. For use of any existing concrete embedded fall arrest systems the Contractor must obtain a licensed engineer's approval.

3. Containers:

b. Excluding OSHA approved metal containers, such as gasoline cans, no glass or metal containers allowed on site. Only clear non-breakable containers. Soda cans and "Snapple" type bottles, are excluded from the site except in designated break and lunch areas.

4. Cords, Cables, Wires

a. No electrical cords, welding cables, or other wiring shall be placed directly on the ground or inside a building on the floor. Contractor must erect stands for all cables and wires to run on. Tripping hazards from cords and cables are significant and can be easily eliminated.

5. Cranes:

a. All cranes shall be inspected by a competent person to assure compliance with applicable rules and regulations, and to assure all equipment is in safe working order.

i. Daily inspection records and records of inspection after each move of a crane prior to its next lift are to be kept in the Contractors construction trailer and a copy provided to the Construction Manager upon request.

ii. Certification test reports are to be kept in the Contractors construction trailer and a copy is to be provided to the Construction Manager immediately upon receipt by the Contractor from the certifier.

b. All lifts must use tag lines

c. All hooks must have a functioning and correctly sized safety latch.

d. No open hoods used on lifts

e. All lifts shall have a written lift plan

- f. Outriggers shall be sized based upon the standard policy of each outrigger pad area (square feet) is equal to one fifth the capacity of the crane in tons.
 - g. No lift at anytime shall pass over other personnel working on-site.
 - h. Areas around the swing radius of the crane shall be barricaded off and flagged for restricted access.
 - i. **No Christmas treeing of steel will be permitted.¹**
- 6. Equipment:
 - a. Absolutely no riding equipment not equipped with proper seating and safety restraints
 - b. Site speed not to exceed 10 MPH.
 - c. All equipment must be inspected before use. Inspection records are to be kept in the Contractors construction trailer and a copy provided to the Construction Manager upon request.
 - d. All equipment must be equipped with fire extinguishers. This applies to any piece of motorized equipment including but not limited to; ATVs, forklifts, pickup trucks, excavators, dump trucks, pumper trucks, etc.
- 7. Excavations:
 - a. All excavations shall be inspected by a competent person to assure compliance with applicable rules and regulations.
 - b. Particular care shall be taken to limit access to only authorized and necessary personnel.
 - c. No excavation deeper than four (4) feet is permitted without proper sloping, benching, or use of a trench box.
 - d. Proper benching or sloping shall be employed whenever trench boxes are not utilized. It is the primary responsibility of the Contractor to evaluate the soil conditions and to determine the appropriate means of assuring safe excavations (this may require and engineered systems as required by regulations). At no time shall there be the possibility of personnel working on the edge of a trench, with or without a trench box, without proper fall protection being in-place.
 - e. No personnel are ever to stand or sit on top of a trench box. Proper benching around the trench box is required to provide a safe work area alongside the trench box.
- 8. Fall Protection:
 - a. The Contractor shall submit a fall protections plan, per OSHA, which shall include the following requisites:
 - i. All employees, inspectors, supervisors and agents of the Contractor shall be provided protection from falls above 6'-0".
 - ii. **No one is exempt from compliance with the 6'-0" fall protection rule, except for those workers/operations that fall under OSHA Standard (section 1926.760 of Subpart R).²**
 - iii. (Deleted)³

¹ Addendum 5

² Addendum 2

³ Addendum 2

- b. The Site Specific Fall Protection Plan shall include specific sub-plans for the following:
 - i. Structural Steel

- ii. Exterior wall assembly
 - iii. Roofing
 - iv. Scaffolding
- 9. Fire Control:
 - a. No open fires, fire barrels, or hot boxes.
 - b. No smoking is allowed at any location on the project construction site.
 - c. Fire extinguishers in
 - i. trailers/offices - minimum 20 lb. ABC
 - ii. Equipment - minimum 10 lb. ABC
 - iii. Fire Watch - minimum 20 lb. ABC
- 10. Foot Protection:
 - a. Proper foot protection shall be worn at all times within the gates of the construction site or anywhere else on the Bronx Campus where construction activities are taking place.
 - b. Substantial leather boots meeting ANSI Z41.1 rating are required.
 - c. Loafers/slip-ons (including steel or hard toe type), sandals, tennis shoes (including steel or hard toe type) are not allowed.
- 11. Hard Hats:
 - a. Shall be worn at all times within the gates of the construction site or anywhere else on the Bronx Campus where construction activities are taking place.
 - b. All Hard hats must have ANSI Z89.1 rating. All hard hats must be within the manufacturers recommended age limit.
 - c. No metal hard-hats or bump caps authorized or cowboy style safety hats are authorized.
 - d. Hard hats may be worn backwards, although this is not recommended as it eliminates protection for the face from falling objects afforded by the brim, so long as the suspension has been turned around to fit correctly (as designed) on the head and so long as the manufacturer approves of said practice. Written approval is required to be kept on file by the Contractor and a copy shall be provided to Jacobs and the DASNY PM.
- 12. Illumination and Power for Construction:
 - a. All systems for temporary or permanent illumination and power for construction shall be installed and maintained by qualified persons who apply safe working practices in compliance with NEC, NFPA, NECA and OSHA
 - b. Illumination levels shall be a minimum of 5 foot candles (FC) in all general construction areas and 10 FC in mechanical, electrical server, kitchen, and pantry/server rooms. See Section 015000 for further requirements.
 - c. Power provided for construction shall be protected with ground-fault circuit interrupter (GFCI) receptacles or breakers – an Assured Grounding Program is prohibited on this project. All Electrical panels, junction boxes and enclosures shall be maintained closed & secured with all penetrations sealed
- 13. Ladders:
 - a. No metal ladders allowed on site
 - b. Damaged ladders must be immediately removed from site or destroyed. No makeshift or repaired ladders will be allowed on-site.
 - c. All job built ladders are required to conform to all OSHA requirements.
- 14. Music, Radios, etc:
 - a. No radios, televisions or other music devices are allowed on-site
 - b. No personal music players (like MP3's) are allowed on-site.
- 15. Safety Glasses:
 - a. Safety glasses shall be worn at all times within the gates of the construction site or when outside the construction gate when work is being performed on-site.
 - b. Safety glasses must have an ANSI Z87.1 rating
 - c. The wearing of dark tinted safety glasses is not allowed indoors. Only clear or amber

lenses are acceptable to be worn indoors. Personnel wearing dark tinted glasses outdoors are required to change glasses prior to entering an enclosed building as visibility is severely limited immediately upon entering while wearing dark tinted glasses. Personnel are further warned that they should be cautious of this situation as soon as any walls begin to be installed inside or along the perimeter of a building.

16. Scaffolding:

- a. All scaffolding shall be inspected daily by a competent person to assure compliance with applicable rules and regulations.
- b. Full handrails, midrails, toeboards, full decking required on all scaffolds, regardless of height.
- c. All scaffolds must be equipped with appropriate access and egress
- d. Scaffolds must be inspected and tagged by a competent scaffold person on a daily basis. The tag must clearly indicate whether the scaffold is complete and safe to work from, the date of the last inspection and the printed and signed name of the competent inspector. A Red, Yellow, Green tagging system is recommended for ease of recognition.

17. Signage:

- a. Post safety or hazard signs (bilingual if necessary) at all site entrances and at locations around the site as required to assure the maintenance of a site.

18. Motor Vehicles:

- a. No more persons in cab of truck than there are seat belts. Seat belts must be worn at all times.
- b. No riding in back of truck unless truck is equipped with seats and safety belts
- c. All vehicles entering site must have valid insurance certificate and registration certificates
- d. Only Contractor owned vehicles with a specific construction use are allowed on site. Personal vehicles are only allowed to transit from the Waters Place to the parking lot, if available, via the internal loop road.
- e. Functioning back-up alerts on vehicles required to be so equipped.

19. Vests:

- a. 100% ANSI Class 2 compliant vests for all persons working outdoors or traversing an active outdoor construction area is required

20. Violations:

- a. Contractors are required to have safety policies and procedures violations policy. This policy is to clearly define the steps which will be taken when safety violations occur.
- b. For example:
 - i. First violation – verbal warning
 - ii. Second violation – written warning and suspension for the remainder of the day
 - iii. Third violation – Permanent removal from the project site.
 - iv. Serious violations will result in immediate and permanent removal from the project site.

21. Work Clothing:

- a. All shirts must have a minimum four inches sleeve length over shoulders. No dresses, skirts, shorts, cut-offs, tank tops, net shirts, sweat clothing, etc are allowed on-site at anytime. No highly flammable clothing is to be worn at anytime by anyone.

22. Orientation and Safety Training:

- a. Contractor shall provide substantial and understandable (bi-lingual) safety orientation to all employees, subcontractor employees, and visitors who come onto this site, prior to site access or being able to work on this site. This training shall include site-specific hazard communication training, and shall review the safety procedures required by the Contractor's safety program, as well as the additional safety requirements herein listed for this project. Safety Orientation shall include verification, by the employee or visitor that the information presented has been

understood. The Contractor shall provide some badge, sticker, decal or other identifying item, which indicates an individual has participated in and understood this Orientation training. This badge, sticker, decal or other item must be displayed on the person and easily visible at all times while individual is working on site. All Contractor orientation training shall include review and distribution of DASNY's Safety Orientation Booklet. The Owner's Representative reserves the right to audit/attended safety orientations administered by the Contractor to verify compliance with approved the Site Specific Safety Plan.

- b. Contractor shall provide additional safety training to employees, subcontractor employees, Owner and the Owner's Representative and OMH employees, and visitors as may be necessary, arising from and in connection to the Contractor's work, to ensure safe working conditions and hazard communication to all persons on site.
23. Cooperation:
- a. If the work of the Contractor requires access to an area or construction site controlled by another contractor or DASNY/OMH vendor, Contractor shall cooperate with and comply with all safety requirements as requested by the controlling contractor. Contractor is solely responsible for any coordination of, or agreements regarding site use with controlling contractor, however, Contractor must notify Owner and the Owner's Representative of any such coordination or agreements in writing, prior to beginning of the work. Owner and the Owner's Representative reserve the right to comment upon or request revision to any such coordination or agreements.
24. Bi-weekly Safety Walks
- a. Owner's Representative will coordinate with all Contractors to arrange bi-weekly safety walks of their sites with the construction personnel from each craft in each building. Walks with Contractor Safety Representatives will be scheduled separately. The purpose of the walk is to raise safety awareness for everyone and to provide a forum for the construction workers to ask questions about specific field situations or general questions.
25. Bi-Monthly Cross Project Safety Forums
- a. Key personnel from the Prime Contractors of all BMHR projects will meet to share best practices, successful behavioral safety approaches and discuss shared safety concerns.

1.8. Safety Compliance and Observations

1. The Contractor and each subcontractor shall be responsible for adhering to the Site Specific Safety Plan, compliance with all regulatory safety regulation and general protection of persons and property as required by all provisions of this contract including under Article 14 of the General Conditions.
2. The Contractor shall recognize that they are the Controlling Employer/Contractor and are required to initiate, maintain, supervise and enforce safety on the Construction Site, **and all parts of Sub-Part R, OSHA Crane Standard Sub-Part CC, OSHA 1910 and FDNY requirements.**⁴
3. The Owner's Representative safety observation reports (SORs) will record safe and unsafe acts and conditions.
4. Safety Observation Reports (SORs) that identify non-compliant safety acts or conditions will be tracked and assigned a monetary value. These values will be withheld on a per monthly basis from the safety and/or general conditions line item of each monthly invoice. Bi-weekly assessments will be made to track the total monetary value withheld to-date and compare it to any improvements in safety compliance. The result of these assessments may result in a credit change order to irrevocably remove the value from the contract.
5. The table below identifies the monetary values assign to each category of safety tracked by the Owner's Representative's Safety Observation Reports:

A	B*	C*	D*	E*	F	G	H
Housekeeping	Fall Protection	Scaffolds Ladders Stairway	Personal Protective Equipment	Excavation	Hoisting/Lifting Material Handling	Vehicles/Mobile Equipment	Tools & Equipment
<input type="checkbox"/> 50	<input type="checkbox"/> 250	<input type="checkbox"/> 200	<input type="checkbox"/> 100	<input type="checkbox"/> 200	<input type="checkbox"/> 150	<input type="checkbox"/> 100	<input type="checkbox"/> 100
I	J*	K*	L*	M*	N	O*	P
Fire Prevention	Confined Space	Planning/Training Communications	LO/TO and Electrical	Work Practices	Chemical Exposure	Permit/Hazard Evaluations	Other
<input type="checkbox"/> 250	<input type="checkbox"/> 150	<input type="checkbox"/> 50	<input type="checkbox"/> 150	<input type="checkbox"/> 50	<input type="checkbox"/> 100	<input type="checkbox"/> 100	<input type="checkbox"/> 100

6. The noted value(s) will be assessed on a per SOR basis. Although the total value of an SOR can be modified by the following multipliers noted in the table below:

Category	Condition	Multiplier
B,C	if one or more persons is exposed to a fall of 15'-0 or more	2X
E	if one or more persons is exposed to an improper excavation of 8'-0 or more in depth	2X
D	if five or more persons, in an area, are observed in identical PPE non-compliance	2X
J,K,L,M, O	if safety documentation is identified to be fraudulent	4X
J	if two or more persons are improperly exposed to a Permit Required Confined Space	3X

7. Finally, if 'Imminent Danger' is checked on the report the total calculated value, after the above multipliers are applied, is doubled for the SOR.
8. Lost time accidents that are identified to be related to the Contractor's or employee's non-compliance with OSHA regulations or the site specific safety plan may be assessed \$500 per lost day to a maximum of \$2500 per incident/employee.
9. This safety compliance policy does not preclude DASNY from making additional reductions in the payment values for services deemed to be incomplete or not provided per the contract.

⁴ Addendum 5

General Requirements for Construction

APPENDIX F

Hazardous Materials Investigation Report



NYC DEPARTMENT OF ENVIRONMENTAL PROTECTION
Asbestos Control Program
59-17 Junction Boulevard, 8th Floor, Flushing, NY 11373
ASBESTOS ASSESSMENT REPORT



1. NYC DOB Job # (if applicable) _____ **Control Number: 11158391**

2. Premise No. 160 Street Name Convent Avenue Borough Manhattan Zip 10031
CUNY Sophie Davis -

3. AKA Harris Hall Type of Facility School BIN 1084081 Block 01957 Lot 0200

4. Building Owner Dormitory Authority State of New York (DASNY) Address 515 Broadway

5. City Albany State NY Zip 12207 Contact Person Christopher Alonge

6. Tel. # (518) 257-3481 Fax # _____ Email dep-arts@dasny.org

7. Work Type General Construction

Description of the Entire Scope of Work

GENERAL CONSTRUCTION WORK TO THE SECOND AND THIRD FLOOR OF CUNY SOPHIE DAVIS BIOMEDICAL SCHOOL FOR INTERIOR UPGRADES AS PER PLANS FILED HERewith. NO CHANGE TO USE, EGRESS OR OCCUPANCY

8. I, PHILIP PAGE, have conducted an asbestos investigation on
Name of Certified Asbestos Investigator
10/04/2023 8:00AM-12:00PM in accordance
Date(s)

with Sections 1-16 and 1-28 of the NYC DEP Asbestos Control Program Rules and declare that at said facility address, the

- ☒ a. the premises or the portion(s) of the premises, included in the scope of renovations was/were determined that there was no asbestos-containing materials (ACM) present
- ☐ b. premise (or portions thereof) affected by the work contains 10 square feet or less or 25 linear feet or less of ACM.
Specify locations in section 9: Note: This material must be abated as a minor project in accordance with relevant provisions of the DEP Asbestos Rules.
- ☐ c. asbestos is present and will not be disturbed during construction activity. Specify the quantity and area where asbestos is present. Specify amount: _____ sq. ft _____ linear ft.
- ☐ d. entire building is free of asbestos containing material (ACM).

9. RESULTS OF ASBESTOS BUILDING SURVEY:

Floor	Section of Floor(s) Surveyed	Material Assumed to Contain ACM and/or Sampled	Number of Samples Analyzed	Asbestos Present	Assumed ACM	Square Feet	Linear Feet	Abated	Scope of Work Applied
Building Floors-002 to 003	2nd & 3rd Floor, IT Rooms	Ceiling Plaster	3	No					

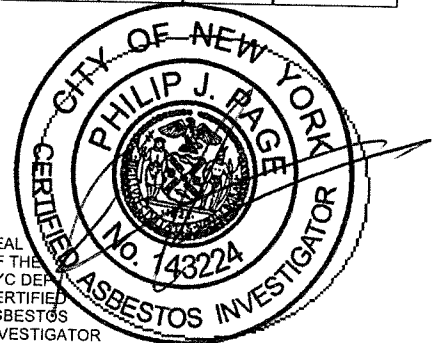
☒ I hereby declare the information provided herein is true and complete. I verify under penalty of perjury under the laws of the United States of America that I was physically present at the premises while conducting the inspection.

PHILIP PAGE 3/8/2024 143224 5/5/2024
DEP Certified Asbestos Investigator's Signature Date Certificate Number Expiration Date

Tel. # (845) 746-6285 Fax # _____

Email ppage@adelaide11c.com

The investigator shall assume that some or all of the areas investigated contain ACM, and for each area that is not assumed to contain ACM, collect and submit for analysis bulk samples in accordance with §§ 1-36, 1-37, and 1-44 of the DEP Asbestos Rules and EPA publications 560/5-85-024 and 560/5-85-030a and 40 CFR 763.86.



Is it a Build-It-Back project? ☐ Yes, App ID # _____ ☒ No



251198295



NYC DEPARTMENT OF ENVIRONMENTAL PROTECTION

Asbestos Control Program
59-17 Junction Boulevard, 8th Floor, Flushing, NY 11373

ASBESTOS ASSESSMENT REPORT

RECEIVED

3/8/2024

DEP
ASBESTOS CONTROL
PROGRAM

FEE PAID

Building Floors-002 to 003	2nd & 3rd Floor, IT Rooms	Ceiling Patch Mortar	3	No					
Building Floors-002 to 003	2nd & 3rd Floor, IT Rooms	Ceiling - Residual Material	3	No					
Building Floors-002 to 003	2nd & 3rd Floor, IT Rooms	Wall Sheetrock, Joint Compound, & Paper Tape	6	No					
Building Floors-002 to 003	2nd & 3rd Floor, IT Rooms	Floor - Residual Mastic	2	No					
Building Floors-002 to 003	2nd & 3rd Floor, IT Rooms	1x1 Floor Tile & Mastic	4	No					
Building Floors-002 to 003	2nd & 3rd Floor, IT Rooms	Floor - Leveling Compound	2	No					
Building Floors-002 to 003	2nd & 3rd Floor, IT Rooms	Concrete	2	No					
Building Floors-002 to 003	2nd & 3rd Floor, IT Rooms	Facade - Stone Mortar	2	No					

10. ANALYTICAL LABORATORY:

NAME	ELAP # (NYS DOH CERTIFICATION)	DATE(S) SAMPLES ANALYZED
EMSL	11469	10/6/2023

11. NYS DOL Asbestos Handling license # 29305 Company Name Adelaide Environmental Health Associates, Inc.

12. Comment

This ACP5 is an amendment to Control #11142238 to revise the building owner information.

☒ I hereby declare the information provided herein is true and complete. I verify under penalty of perjury under the laws of the United States of America that I was physically present at the premises while conducting the inspection.

PHILIP PAGE 3/8/2024 143224 5/5/2024
DEP Certified Asbestos Investigator's Signature Date Certificate Number Expiration Date

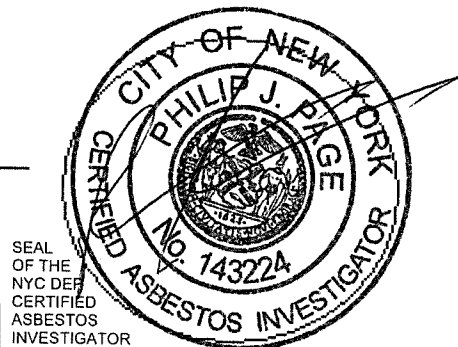
Tel. # (845) 746-6285 Fax # _____

Email ppage@adelaideinc.com

The investigator shall assume that some or all of the areas investigated contain ACM, and for each area that is not assumed to contain ACM, collect and submit for analysis bulk samples in accordance with §§ 1-36, 1-37, and 1-44 of the DEP Asbestos Rules and EPA publications 560/5-85-024 and 560/5-85-030a and 40 CFR 763.86.

Is it a Build-It-Back project? ☐ Yes, App ID # _____ ☒ No

251198295



D A S N Y

DORMITORY AUTHORITY STATE OF NEW YORK

WE FINANCE, BUILD AND DELIVER.

Construction General Requirements

ALBANY (HEADQUARTERS): 515 Broadway, Albany, NY 12207 | 518-257-3000

BUFFALO: 6047 Transit Road, Suite 103, East Amherst, NY 14051 | 716-566-4400

NEW YORK CITY: 28 Liberty Street, Fl 55, New York, NY 10005 | 212-273-5000

ROCHESTER: 3495 Winton Place, Building C, Suite 1, Rochester, NY 14623 | 585-461-8400

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D A S N Y

DORMITORY AUTHORITY STATE OF NEW YORK

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GENERAL REQUIREMENTS for CONSTRUCTION

SECTION 011200 – CONTRACT SUMMARY OF WORK

Section Description: Responsibilities of each contract for the work, coordination for temporary facilities and controls

SECTION 012900 – PAYMENT PROCEDURES

Section Description: Administrative requirements for Contractor's Application for Payment

SECTION 013100 – PROJECT MANAGEMENT AND COORDINATION

Section Description: Administrative requirements for project meetings; preconstruction, construction kick-off, progress; RFIs and Web sites

SECTION 013200 – PROJECT SCHEDULING AND PROGRESS DOCUMENTATION

Section Description: Contractor's responsibility to coordinate and cooperate with Owner to maintain P6 Project Management (scheduling software); Contractor's reports

SECTION 013300 – SUBMITTAL PROCEDURE

Section Description: Procedures for action and informational submittals including product submittals and submittal schedule

SECTION 014000 – QUALITY AND CODE REQUIREMENTS

Section Description: Administrative and regulatory requirements for Work permit, code compliance certificate and certificate of occupancy; NYC Statement of Special Inspections and Tests

SECTION 015000 – TEMPORARY FACILITIES AND CONTROLS

Section Description: Temporary utilities and facilities for construction support, security and facility protection

SECTION 016000 – PRODUCT REQUIREMENTS

Section Description: Administrative and procedural requirements for product, material, and equipment selection and handling, warranties and comparable products

SECTION 017329 – CUTTING AND PATCHING

Section Description: Procedural requirements for cutting and patching

SECTION 017419-CONSTRUCTION WASTE MANAGEMENT

Section Description: Procedural requirements for Construction Waste Management as part of the LEED approach to the project. Edit as required to meet the needs of the project.

SECTION 017700 – CONTRACT CLOSEOUT REQUIREMENTS

Section Description: Administrative contract closeout requirements including closeout conference, Notice of Substantial Completion, final application for payment and final cleaning

SECTION 017823 – OPERATION AND MAINTENANCE MANUALS

Section Description: Maintenance and record keeping requirements of operational and maintenance manuals for products and equipment

SECTION 017839 – AS BUILT DOCUMENTS

Section Description: Maintenance and record keeping requirements of as-built drawings, as-built specifications, as-built schedule and other product record documents

GENERAL REQUIREMENTS for CONSTRUCTION

SECTION 011200 - CONTRACT SUMMARY OF WORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contract Documents, including but not limited to, the Drawings and Individual Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes a summary of each Contract for the Project, including responsibilities for coordination and temporary facilities and controls.
- B. Specific requirements for the work of each Contract are also indicated in individual Specification Sections and on Drawings for each Contract.
- C. Related Sections:
 - 1. Section 013100 - Project Management and Coordination.
 - 2. Section 013200 - Construction Progress Documentation.
 - 3. Section 015000 - Temporary Facilities and Controls.

1.3 CONTRACTOR'S PROJECT MANAGER

- A. Contractor and each Sub-contractor shall identify a project manager who shall be responsible for coordination between and among each and all contractors and subcontractors for the Project and the Owner.

1.4 COORDINATION ACTIVITIES

- A. Coordination activities of Contractor's project manager include, but are not limited to, the following:
 - 1. Provide overall coordination of the Work.
 - 2. Coordinate use of access shared with other contractors to workspaces and workspaces shared with other contractors.
 - 3. Coordinate product selections for compatibility with either product selected under this Contract and under other contracts for the Project. Identify to Owner and Design Professional incompatibilities between products selected under this Contract and products selected under other contracts for the Project.
 - 4. Provide overall coordination of temporary facilities and controls.
 - 5. Coordinate, schedule, and approve interruptions of permanent and temporary utilities, including those necessary to make connections for temporary services.
 - 6. Coordinate construction and operations of the Work with work performed by each other separate Contract for the Project and the Owner's construction forces.

GENERAL REQUIREMENTS for CONSTRUCTION

7. Prepare Coordinated Composite Drawings, in collaboration with each other contractor for the Project, to coordinate the work of the contracts for the Project.
 8. Coordinate sequencing and scheduling of the Work. Include the following:
 - a. Initial Coordination Meeting: At earliest possible date, the Owner will arrange and conduct a meeting with all contractors for the Project for sequencing and coordinating the work of the Project.
 9. Provide quality assurance and quality control services specified in Section 014000 – Quality and Code Requirements.
 10. Coordinate sequence of activities to accommodate tests and inspections, and coordinate schedule of tests and inspections.
 11. Provide information necessary to adjust, move, or relocate existing utility structures affected by construction.
 12. Provide progress cleaning of all Contract work areas and coordinate progress cleaning of areas or pieces of equipment where more than one contractor has worked.
 13. Coordinate cutting and patching. |
 14. Coordinate protection of the Work.
 15. Coordinate firestopping. |
 16. Coordinate completion of punch list items. |
 17. Coordinate preparation of As-built drawings and specifications. |
 18. Print and submit all required project turnover documents. |
 19. Coordinate preparation of operation and maintenance manuals. |
- B. Responsibilities of project manager for construction contract includes coordination for temporary facilities and controls, include, but are not limited to, the following:
1. Provide common-use field office for use by all personnel engaged in construction activities.
 2. Provide telephone service for common-use facilities. |

1.5 GENERAL REQUIREMENTS OF CONTRACTS

- A. Extent of Contract: Requirements indicated on drawings and in specification sections determine which Contract includes a specific element of the Work of the Contract.
1. The work described in this section for each contract shall be complete systems and assemblies, including products, components, accessories, and installation required by the respective contract documents.
 2. Blocking, backing panels, sleeves, and metal fabrication supports for the work of each contract shall be the work of such Contract.
 3. Furnishing of access panels for the work of each contract shall be the work of such Contract. Installation of access panels located in the substrate of ceilings, walls and floors shall be the work of the construction contract. |
 4. Painting for the work of each contract shall be the work of such contract.
 5. Cutting and Patching: Each contract shall perform its own cutting and patching. |
 6. Firestopping for the work of each contract shall be provided by such contract. |

GENERAL REQUIREMENTS for CONSTRUCTION

- B. Redundant with Section 13200 Substitutions: Each contractor's project manager shall cooperate with all other contractor's project managers involved to coordinate approved substitutions with remainder of the work of the Project.
- C. Temporary Facilities and Controls: In addition to specific responsibilities for temporary facilities and controls indicated in this Section and in Section 015000 - Temporary Facilities and Controls, Contractor is responsible for the following:
 - 1. Installation, operation, maintenance, and removal of each temporary facility necessary for its own normal construction activity, and costs and use charges associated with each facility, except as otherwise provided for in this Section 011200.
 - 2. Plug-in electric power cords and extension cords, supplementary plug-in task lighting, and special lighting necessary exclusively for its own activities.
 - 3. Its own field office complete with necessary furniture, utilities, and telephone service.
 - 4. Its own storage and fabrication sheds.
 - 5. Temporary enclosures for its own construction activities.
 - 6. Staging and scaffolding for its own construction activities.
 - 7. General hoisting facilities for its own construction activities.
 - 8. Waste disposal facilities, including collection and legal disposal of its own hazardous, dangerous, unsanitary, or other harmful waste materials.
 - 9. Progress cleaning of work areas affected by its operations on a daily basis.
 - 10. Secure lockup of its own tools, materials, and equipment.
 - 11. Construction aids and miscellaneous services and facilities necessary exclusively for its own construction activities.

1.6 GENERAL CONSTRUCTION WORK

- A. Work in the General Construction Work includes, but is not limited to, the following:
 - 1. Remaining work not identified as work under other contracts.
 - 2. Site preparation, including clearing, building demolition and relocations, and earthwork.
 - 3. Selective demolition.
 - 4. Exterior closure, including walls, and louvers.
 - 5. Interior construction, including rated wall patching.
 - 6. Interior finishes : Patching and painting
- B. Temporary facilities and controls in the General Construction Contract include, but are not limited to, the following:
 - 1. Temporary facilities and controls that are not otherwise specifically assigned to other contracts.

1.7 HVAC WORK

- A. Work in the HVAC Work includes, but is not limited to, the following:
 - 1. HVAC systems and equipment.
 - 2. HVAC instrumentation and controls.
 - 3. HVAC testing, adjusting, and balancing.

GENERAL REQUIREMENTS for CONSTRUCTION

1.8 ELECTRICAL WORK

- A. Work in the Electrical Work includes, but is not limited to, the following:
 - 1. Electrical connections to equipment furnished by all other contracts.
 - 2. Removal and relocation of new disconnect safety switches.
 - 3. Install of empty conduit sleeves for telecommunication wiring

1.9 TELECOMMUNICATIONS WORK

- A. Work in the Telecommunication Work includes, but is not limited to, the following:
 - 1. Relocation of existing telecommunication equipment closets. |

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011200

GENERAL REQUIREMENTS for CONSTRUCTION

SECTION 012900 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contract Documents, including but not limited to, the Drawings and Individual Specification Sections, Schedule of Values, Contractor Pencil Copy and Application for Payment, apply to this Section.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Sections:
 - 1. General Conditions, Article 8 - Payment, for requirements governing provisions for payment.
 - 2. General Conditions, Article 20 – Opportunity Programs, for requirements governing minority participation.
 - 3. Section 017700 – Contract Closeout Requirements, for administrative contract closeout requirements.

1.3 DEFINITIONS

- A. Schedule of Values: A form in the Contract Documents, which establishes minimum level of payment detail to formulate an initial Application for Payment.
- B. Contractor's Pencil Copy: A form provided by the Owner, which estimates a billing request from the Contractor. When approved by the Owner, formulates the Application for Payment.
- C. Application for Payment: A form provided by the Owner, which provides certification by the Contractor for payment.

1.4 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the Schedule of Values with the Owner.
- B. The Contractor shall allocate portions of the Contract Sum to labor, material and major equipment costs to various portions of the Work as indicated on the form.
 - 1. Submit the Schedule of Values to the Owner, for approval at earliest possible date after award of the Contract.
 - 2. The Owner shall not approve any billing request until the Schedule of Values is approved.

GENERAL REQUIREMENTS for CONSTRUCTION

- C. Format and Content: Use model form provided in Contract Documents as a guide to establish line items for the Schedule of Values.
1. Arrange the Schedule of Values with separate columns to indicate the following for each item listed:
 - a. Dollar value of the following, as a percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.
 - 1) Labor.
 - 2) Materials.
 - 3) Major Equipment.
 2. Provide a breakdown of Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Provide multiple line items for principal subcontract amounts in excess of five percent of Contract Sum.
 - a. Include separate line items under Contractor and principal subcontracts for LEED documentation, if applicable and other project closeout requirements in an amount totaling five percent of the Contract Sum and subcontract amount.
 3. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
 4. Allowances: If applicable, provide a separate line item in the schedule of values for each allowance.
 5. Each item in the Schedule of Values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item, except Lump Sum and Quantity of Work Allowances.
 6. Schedule of Values Updating: The Owner may require the Contractor to revise its Schedule of Values. Further, the Owner reserves the right to accept only those cost distributions which, in the Owner's opinion, are reasonable, equitably balanced and correspond to estimated quantities in Contract Documents.

1.5 MONTHLY APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as approved by the Owner and paid for by the Owner.
1. Initial Application for Payment, the Owner shall not approve any billing request until the Schedule of Values and Construction Schedule is approved.
 2. Payment for allowance items and stored materials involve additional requirements.
 3. Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
- B. Payment Application Times: Billing request may be submitted to the Owner once each month.
1. Submit Contractor's Pencil Copy billing request seven days prior to due date for review by the Owner.

GENERAL REQUIREMENTS for CONSTRUCTION

- C. Payment Forms: All forms and documents required for payment shall be provided by the Owner. Template forms and documents may also be available on the Dormitory Authority's web site www.dasny.org.
- D. Preliminary Procedure: The Contractor may request from the Owner a Contractor's Pencil Copy form. Where indicated on the form, the Contractor shall enter a billing request, either dollar amount or percentage complete for each item number requesting payment.
1. If applicable, the Contractor shall obtain from the Owner, an Allowance Notice to Proceed for Allowance items and an Agreement for Materials Stored Off-Site prior to billing.
 2. Submit Contractor's Pencil Copy billing request to the Owner for approval.
 3. The Contractor shall provide updated documentation to the Owner in accordance with General Conditions, Article 20 – Opportunity Programs.
- E. Procedure: Upon the Owner's approval of the Contractor's Pencil Copy billing request, payment documents will be provided to the Contractor. The Contractor shall complete each document and submit two copies of all documents with original signature & notary where indicated on forms, the following:
1. Application for Payment.
 2. Compliance Report.
 3. Contractor and Subcontractor Certifications Form
 4. Contractor's Certified Payroll Form.
 5. Allowance Allocation Form, if applicable
- F. Payroll Forms: The Contractor and all Sub-contractors to the Contractor shall submit original copies of the Contractor and Subcontractor Certifications Form and Contractor's Certified Payroll Form.
- G. Transmittal: Sign and notarize where indicated on each document, submit two original copies to Owner.
1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about payment.
- H. Stored Materials: The Owner will provide an Agreement for Materials Stored Off-Site and specific forms that the Contractor must complete and submit to the Owner, including but not limited to;
1. Include in the Contractor's Pencil Copy billing request amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed.
 2. Differentiate between items stored on-site and items stored off-site.
 3. Provide certificate of insurance, evidence of transfer of title to the Owner, and consent of surety to payment, for stored materials.
 4. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
 5. Provide summary documentation for stored materials indicating the following:
 - a. Materials previously stored and included in previous Applications for Payment.

GENERAL REQUIREMENTS for CONSTRUCTION

- b. Work completed for this Application utilizing previously stored materials.
 - c. Additional materials stored with this Application.
 - d. Total materials remaining stored, including materials with this Application.
- I. Payment: Timely payment by the Owner to the Contractor is governed by Section 2880 of the Public Authorities Law.
- J. Liens: Upon receipt of a lien, the Owner shall deduct a sum of one and one-half (1 ½) times the amount stated to be due in the notice of lien from the application for payment. Upon official receipt of discharge of lien, the Owner shall provide payment as stated above.

1.6 APPLICATION FOR PAYMENT AT SUBSTANTIAL COMPLETION

- A. Preliminary Procedure: After issuance of the executed Notice of Substantial Completion, submit a Contractor's Pencil Copy billing request showing 100 percent completion for portion of the Work claimed as complete at Substantial Completion.
 - 1. Submit Contractor's Pencil Copy billing request to the Owner for approval.
 - 2. The Contractor shall provide final documentation to the Owner in accordance with General Conditions, Article 20 – Opportunity Programs.
- B. Reduction of Retainage: The Contractor may request a reduction of retainage upon Substantial Completion of the Work or when a phase of Work is accepted by the Owner.
 - 1. The Contractor submits to the Owner a written request to have retainage reduced and provides a cost estimate and schedule to complete all remaining Work items indicated on the executed Notice of Substantial Completion.
 - 2. The Owner shall deduct from the sum two times the value of remaining items of Work to be completed or corrected.
 - 3. The Owner will provide the Contractor with General Release and Consent of Surety forms based on the amount of reduction. The Contractor shall complete each document and submit three copies of each document with original signature & notary where indicated on forms.
 - 4. The Owner shall hold payment until receipt of completed General Release and Consent of Surety forms.
- C. Procedures: Upon the Owner approval of Contractor's Pencil Copy billing request, payment documents will be provided to the Contractor. The Contractor shall complete each document and submit two copies of all documents with original signature & notary where indicated on forms, the following:
 - 1. Application for Payment.
 - 2. Compliance Report.
 - 3. Contractor and Subcontractor Certifications Form
 - 4. Contractor's Certified Payroll Form.
- D. Payroll Forms: The Contractor and all Sub-contractors to the Contractor shall submit original copies of the Contractor and Subcontractor Certifications Form and Contractor's Certified Payroll Form.

GENERAL REQUIREMENTS for CONSTRUCTION

- E. Transmittal: Sign and notarize where indicated on each document, submit two original copies to Owner.
- F. Payment: Timely payment by the Owner to the Contractor is governed by Section 2880 of the Public Authorities Law.
- G. Liens: Upon receipt of a lien, the Owner shall deduct a sum of one and one-half (1 ½) times the amount stated to be due in the notice of lien from the application for payment. Upon official receipt of discharge of lien, the Owner shall provide payment as stated above.

1.7 FINAL APPLICATION FOR PAYMENT (same as contract closeout documents)

- A. Contract Compliance: The Contractor shall comply with the Requirements of General Conditions, Section 10.08 – Limitations on Actions.
- B. Preliminary Procedure: All Work and Extra Work of the Contract and all requirements of Section 017700 – Contract Closeout Requirements must be complete and approved prior to commencement of final Application for Payment.
 - 1. The Contractor shall request and submit to the Owner a final Contractor's Pencil Copy that will formulate the final Application for Payment.
 - 2. The Contractor shall provide outstanding documentation to the Owner in accordance with General Conditions, Article 20 – Opportunity Programs.
- C. Procedures: Upon the Owner approval of Contractor's Pencil Copy billing request, final Application for Payment and Contract closeout documents will be provided to the Contractor. The Contractor shall complete each document and submit two copies of all documents with original signature & notary, where indicated on the forms, the following:
 - 1. Final Application for Payment including remaining Retainage.
 - 2. Final Compliance Report.
 - 3. Contractor and Subcontractor Certifications Form
 - 4. Contractor's Certified Payroll Form.
 - 5. Release Form -- Final Payment to Contractor.
 - 6. Consent of Surety -- Final Payment to Contractor, with power of attorney.
- D. Payroll Forms: The Contractor and all Sub-contractors to the Contractor shall submit original copies of the Contractor and Subcontractor Certifications Form and Contractor's Certified Payroll Form.
- E. Transmittal: Sign and notarize where indicated on each document, submit two original copies to the Owner.
- F. Final Payment: Timely payment by the Owner to the Contractor is governed by Section 2880 of the Public Authorities Law.
- G. Liens: Upon receipt of a lien, the Owner shall deduct a sum of one and one-half (1 ½) times the amount stated to be due in the notice of lien from the final application for payment. Upon official receipt of discharge of lien, the Owner shall provide final payment as stated above.

GENERAL REQUIREMENTS for CONSTRUCTION

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012900

Instructions for Schedule of Values Setup and Entry for PMWeb

General Instructions for 'PMWeb Contractor Entry' worksheet

- 1 Enable Macros, if prompted by the workbook
- 2 The file will be protected so that only certain information may be entered into certain worksheets.

Design Professional / DASNY Project Manager Instructions

- 3 Shaded cells cannot be adjusted on the 'PMWeb Contractor Entry' worksheet.
- 4 Complete the project information section on the 'PMWeb Contractor Entry' worksheet.
- 5 The Schedule of Values has been set up with some preset lines. Blank lines are available on the bottom. To add additional blank lines, at the top of the worksheet, enter the number of blank lines needed and click the Add Lines button.
- 6 Enter the CSI codes in the *CSI* column. Select relevant specification sections per the Project Manual
- 7 Enter descriptions in the *Description* column. Use standard abbreviations.
- 8 Select Labor or Material (as applicable) in the *Labor/Material* column. Separate rows are required for Labor and Material.
- 9 Enter the Unit of Measure in the *UM* column. Select relevant unit from 'UM Codes' worksheet. Must be CAPS.
- 10 Enter the Quantity in the *Quantity* column. Use whole numbers, no decimals.
- 11 (Optional) In the *Allowance/Contingency?* column, select the appropriate type if the line represents a general allowance or Design/Construction Contingency
- 12 (Optional) In the *Hazardous?* column, select Yes if the line represents existing or possible hazardous material remediation (e.g. assessments, sampling, cleanups, etc.). Please note that any SOV lines indicated as Hazardous must represent 100% of the expense. Do NOT combine Hazardous/Non-Hazardous expenses on one SOV line.
- 13 Enter *Notes/Grouping* (as applicable). This section can be used later to filter the SOV lines in PMWeb by area/location/etc.
- 14 The *Budget Category* column should have 05 entered for every row.

Contractor Instructions

- 15 Do not enter anything in the shaded cells on the 'PMWeb Contractor Entry' worksheet.
- 16 Review the Proposed SOV line Descriptions, Units of Measure, and Quantities if pre-filled). Update Units of Measure in the UM Column (the full list on the 'UM Codes' worksheet) and any Quantities in the *Quantity* column.
- 17 Enter Unit Cost values in the Unit Cost Column. Unit Costs must be two decimal places only.
- 18 (Optional) In the *Allowance/Contingency?* column, select the appropriate type if the line represents a general allowance or Design/Construction Contingency
- 19 (Optional) In the *Hazardous?* column, select Yes if the line represents hazardous material remediation (e.g. assessments, cleanups, etc.). Please note that any SOV lines indicated as Hazardous must represent 100% of the expense. Do NOT combine Hazardous/Non-Hazardous expenses on one SOV line.
- 20 The Total Scheduled Value will auto-calculate based on the Schedule of Value lines below. The Total Scheduled Value should match the Contract Value field (an error message will appear next to the Total Scheduled Value field if that is not the case).
- 21 Return the completed SOV excel workbook to the DASNY Project Manager.

UM Codes for SOV	
UM	UM Desc
AC	Acres
AE	Actual Expense
BF	Board Feet
CF	Cubic Feet
CI	Cubic Inches
CS	Hundred Square Feet
CY	Cubic Yard
EA	Each
FC	Hundred Feet
FT	Feet
GA	Gallons
HR	Hour
IN	Inches
LB	Pounds
LF	Linear Feet
LS	LumpSum
LY	Linear Yard
MB	Thousand Board Feet
MF	Thousand Feet
MH	Man Hour
MI	Miles
MO	Months
NT	Not to Exceed
PC	Pieces
SF	Square Feet
SI	Square Inch
SQ	Square
SY	Square Yard
TN	Tons
WK	Weeks
YD	Yards

Codes for Labor/Material	
UM	UM Desc
Labor	Labor
Material	Material



Lines to Add: 10

Date: _____
Contract No: _____
CR No: _____
Trade: _____

\$	-	Total Scheduled Value Below
----	---	-----------------------------

[illegible]

Line #	Item	Description	UOM	Quantity
--------	------	-------------	-----	----------

					Total Cost \$0.00		
Unit Cost	Ext. Cost	Adjustment 1	Tax	Adjustment 2	Total Cost	Task	Cost Type

Cost Code	Cost Period	Phase	WBS	Location	Assigned To
-----------	-------------	-------	-----	----------	-------------

Funding Code	Notes	Manufacturer	Mfr. Number	CSI Code	Hazardous
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GENERAL REQUIREMENTS for CONSTRUCTION

SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contract Documents, including but not limited to, the Drawings and individual Specification Sections and Contract Manager, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative provisions for coordinating construction operations on the Project including, but not limited to, the following:
 - 1. General project coordination procedures.
 - 2. Administrative and supervisory personnel.
 - 3. Coordination drawings.
 - 4. Requests for Information (RFIs).
 - 5. Contract Manager software site.
 - 6. Project meetings.
- B. Each contractor shall participate in coordination requirements. Refer to Section 011200 – Contract Summary of Work for certain areas of responsibility that are assigned to a specific contractor.
- C. Related Sections:
 - 1. Section 011200 - Contract Summary of Work, for a description of the division of work among separate contracts and responsibility for coordination activities not in this Section.
 - 2. Section 013200 - Project Scheduling and Progress Documentation, for preparing and submitting Contractor's construction schedule.
 - 3. Section 017700 – Contract Closeout Requirements, for coordinating closeout of the Contract.

1.3 DEFINITIONS

- A. RFI: Request from the Owner, Design Professional, or Contractor seeking information from each other during construction.

1.4 COORDINATION

- A. Coordination for Single Contract Project: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations included in different Sections that depend on each other for proper installation, connection, and operation.

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1. The Contractor shall prepare a CPM schedule in accordance with Section 013200 – Project Scheduling and Progress Documentation. The Contractor shall submit the proposed CPM schedule to the Owner within 45 days of the Notice to Proceed.
 2. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 3. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
 4. Make adequate provisions to accommodate items scheduled for later installation. |
- B. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
1. Coordination of the Owner's P6 Project Management CPM schedule.
 2. Coordination of the commissioning process and activities.
 3. Preparation of the schedule of values.
 4. Entering dates each required submission item listed on the Contractor's Submission Schedule will be submitted, coordinated with the CPM Schedule.
 5. Installation and removal of temporary facilities and controls.
 6. Delivery and processing of submittals.
 7. Progress meetings.
 8. Preinstallation conferences.
 9. Project closeout activities.
 10. Startup and adjustment of systems.
- C. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.

1.5 COORDINATED COMPOSITE DRAWINGS

- A. Coordinated Composite Drawings, General: Prepare coordinated composite drawings in accordance with requirements in individual Sections, where installation is not completely shown on Shop Drawings, where limited space availability necessitates coordination, or if coordination is required to facilitate integration of products and materials fabricated or installed by more than one entity.
1. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordinated composite drawings on standard printed data. Include the following information, as applicable:
 - a. Use applicable Drawings as a basis for preparation of coordinated composite drawings. Prepare sections, elevations, and details as needed to describe relationship of various systems and components.
 - b. Coordinate the addition of trade-specific information to the coordinated composite drawings by multiple contractors in a sequence that best provides for coordination of the information and resolution of conflicts between installed components before submitting for review.

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- c. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems. |
- d. Indicate space requirements for routine maintenance and for anticipated replacement of components during the life of the installation.
- e. Show location and size of access doors required for access to concealed dampers, valves, and other controls, including space required opening the access door. |
- f. Indicate required installation sequences.
- g. Indicate dimensions shown on the Drawings. Specifically note dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to the Design Professional indicating proposed resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.

B. Coordinated Composite Drawing Organization: Organize drawings as follows:

- 1. Floor Plans and Reflected Ceiling Plans: Show architectural and structural elements, and mechanical, plumbing, fire protection, fire alarm, and electrical Work. Show locations of visible ceiling-mounted devices relative to acoustical ceiling grid. Supplement plan drawings with section drawings where required to adequately represent the Work.
- 2. Plenum Space: Indicate subframing for support of ceiling and wall systems, mechanical and electrical equipment, and related Work. Locate components within ceiling plenum to accommodate layout of light fixtures indicated on the Drawings. Indicate areas of conflict between light fixtures and other components.
- 3. Mechanical Rooms: Provide coordinated composite drawings for mechanical rooms showing plans and elevations of mechanical, plumbing, fire protection, fire alarm, and electrical equipment.
- 4. Structural Penetrations: Indicate penetrations and openings required for all disciplines.
- 5. Slab Edge and Embedded Items: Indicate slab edge locations and sizes and locations of embedded items for metal fabrications, sleeves, anchor bolts, bearing plates, angles, door floor closers, slab depressions for floor finishes, curbs and housekeeping pads, and similar items.
- 6. Mechanical and Plumbing Work: Show the following:
 - a. Sizes and bottom elevations of ductwork, piping, and conduit runs, including insulation, bracing, flanges, and support systems.
 - b. Dimensions of major components, such as dampers, valves, diffusers, access doors, cleanouts and electrical distribution equipment.
 - c. Fire-rated enclosures around ductwork.
- 7. Electrical Work: Show the following:
 - a. Runs of vertical and horizontal conduit 1-1/4 inch diameter and larger.
 - b. Light fixture, exit light, emergency battery pack, smoke detector, and other fire alarm locations.
 - c. Panel board, switch board, switchgear, transformer, busway, generator, and motor control center locations.
 - d. Location of pull boxes and junction boxes dimensioned from column center lines.
- 8. Fire Protection System: Show the following:

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- a. Locations of standpipes, mains piping, branch lines, pipe drops, and sprinkler heads.
9. Review: The Design Professional will review coordinated composite drawings to confirm that the Work is being coordinated, but not for the details of the coordination, which are the Contractor's responsibility. If the Design Professional determines that the coordinated composite drawings are not being prepared in sufficient scope or detail, or are otherwise deficient, the Design Professional will so inform the Contractor, who shall make changes as directed and resubmit. |
- C. Coordination Digital Data Files: Prepare coordination digital data files in accordance with the following requirements:
 1. File Preparation Format: The Contractor shall coordinate with the Design Professional and use the same digital data software program, version, and operating system as the original Drawings.

1.6 KEY PERSONNEL

- A. Key Personnel Names: Within 15 days after receipt of the Notice to Proceed, submit a list of key personnel assignments with resume and job qualifications, including project manager, project scheduler, commissioning agent, superintendent and other personnel in attendance at the Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home, office, and cellular telephone numbers, and email addresses. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to the Project.

1.7 REQUESTS FOR INFORMATION (RFIs)

- A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, the Contractor shall prepare and submit an RFI in the form specified.
 1. Coordinate and submit RFIs in a prompt manner so as to avoid delays in the Contractor's work or work of subcontractors.
- B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
 1. Project name.
 2. Project number.
 3. Date.
 4. Name of Contractor.
 5. Name of Design Professional.
 6. RFI number, numbered sequentially.
 7. RFI subject.
 8. Specification Section number and title and related paragraphs, as appropriate.
 9. Drawing number and detail references, as appropriate.
 10. Field dimensions and conditions, as appropriate.

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11. Contractor's suggested resolution. If Contractor's solution(s) impacts the date of Substantial Completion or the Contract Sum, Contractor shall state impact in the RFI.
 12. Contractor's signature.
 13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
 - a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.
- C. RFI Forms: The Owner's Contract Manager-generated form with substantially the same content as indicated above.
- D. Design Professional's Action: The Design Professional will review each RFI, determine action required, and respond. Allow a reasonable amount of working days for the Design Professional's response for each RFI. RFIs received by the Design Professional after 1:00 p.m. will be considered as received the following working day.
1. The following RFIs will be returned without action:
 - a. Requests for approval of submittals.
 - b. Requests for approval of substitutions.
 - c. Requests for coordination information already indicated in the Contract Documents.
 - d. Requests for adjustments in the date for Substantial Completion or the Contract Sum.
 - e. Requests for interpretation of the Design Professional's actions on submittals.
 - f. Incomplete RFIs or inaccurately prepared RFIs.
 2. The Design Professional's action may include a request for additional information, in which case the Design Professional's time for response will date from time of receipt of additional information.
 3. The Design Professional's action on RFIs that may result in a change to the date of Substantial Completion or the Contract Sum may be eligible for the Contractor to submit a Claim in accordance with procedures in General Conditions, Article 10 – Claims and Disputes.
 - a. If the Contractor believes the RFI response warrants change in the date of Substantial Completion or the Contract Sum, notify the Owner in writing within fifteen (15) days of receipt of the RFI response.
- E. On receipt of the Design Professional's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify the Owner and Design Professional within five days if the Contractor disagrees with response.
- F. RFI Log: Coordinate and cooperate with the Owner to prepare, update and maintain the use of the Contract Manager RFI log. The RFI log will include not less than the following:
1. Project name.
 2. Name and address of Contractor.
 3. Name and address of Design Professional.

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4. RFI number including RFIs that were dropped and not submitted.
5. RFI description.
6. Date the RFI was submitted.
7. Date Design Professional's response was received.
8. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
9. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.

1.8 CONTRACT MANAGER SOFTWARE SITE

- A. Coordinate and cooperate with the Owner for managing project communication and documentation until Contract Closeout. The Contract Manager software site may include, but is not limited to, the following functions:
1. Project directory.
 2. Project correspondence.
 3. Meeting minutes.
 4. Contract modifications forms and logs.
 5. RFI forms and logs.
 6. Task and issue management.
 7. Submittals forms and logs.
 8. Payment application forms.
 9. Online document collaboration.
 10. Reminder and tracking functions.
 11. Archiving functions.

1.9 PROJECT MEETINGS

- A. General: The Owner and/or Design Professional will schedule and conduct meetings at the Project site, unless otherwise indicated.
1. Attendees: The Owner and/or Design Professional will inform participants and others involved, and individuals whose presence is required, of date and time of each meeting.
 2. Agenda: The Owner and/or Design Professional will prepare the meeting agenda through the use of the Owner's Contract Manager software and distribute the agenda to all invited attendees.
 3. Minutes: The Owner and/or Design Professional will record significant discussions and agreements achieved in Contract Manager and distribute the meeting minutes to everyone concerned.
- B. Construction Kick-off Meeting: The Owner will schedule and conduct a construction kick-off meeting before starting construction, at a time convenient to the Owner and Design Professional, upon issuance of the Notice to Proceed.
1. The meeting shall review responsibilities and personnel assignments.
 2. Attendees: The Owner, Owner's Commissioning Authority, Design Professional, and their consultants; the Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the meeting shall

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be familiar with the Project and authorized to make binding decisions on matters relating to the Work.

3. Agenda: The meeting agenda will include items of significance that could affect progress, including the following:
 - a. Tentative construction schedule.
 - b. Phasing.
 - c. Critical work sequencing and long-lead items.
 - d. Designation of key personnel and their duties.
 - e. Lines of communications.
 - f. Procedures for processing field decisions and Change Orders.
 - g. Procedures for RFIs.
 - h. Procedures for testing and inspecting.
 - i. Procedures for processing Applications for Payment.
 - j. Distribution of the Contract Documents.
 - k. Submittal procedures.
 - l. Sustainable design requirements.
 - m. Preparation of As-builts and turnover documents.
 - n. Use of the premises.
 - o. Work restrictions.
 - p. Working hours.
 - q. Owner's occupancy requirements.
 - r. Responsibility for temporary facilities and controls.
 - s. Procedures for moisture and mold control.
 - t. Procedures for disruptions and shutdowns.
 - u. Construction waste management and recycling.
 - v. Parking availability.
 - w. Office, work, and storage areas.
 - x. Equipment deliveries and priorities.
 - y. First aid.
 - z. Security.
 - aa. Progress cleaning.
 - bb. Safety.
4. Minutes: The Owner and/or Design Professional will use Contract Manager to record and distribute meeting minutes.

C. Progress Meetings: The Owner will conduct progress meetings at regular intervals.

1. Coordinate dates of meetings with preparation of payment requests.
2. Attendees: The Owner's Commissioning Authority, and Design Professional, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with the Project and authorized to make binding decisions on matters relating to the Work.
3. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of the Project.
 - a. The Project Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to the

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Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

- 1) Review schedule for next scheduled progress meeting period.
- b. Review present and future needs of each entity present, including the following:
 - 1) Interface requirements.
 - 2) Sequence of operations.
 - 3) Status of submittals.
 - 4) Deliveries.
 - 5) Off-site fabrication.
 - 6) Access.
 - 7) Site utilization.
 - 8) Temporary facilities and controls.
 - 9) Progress cleaning.
 - 10) Quality and work standards.
 - 11) Status of correction of deficient items.
 - 12) Field observations.
 - 13) Status of RFIs.
 - 14) Status of proposal requests.
 - 15) Pending changes.
 - 16) Status of Change Orders.
 - 17) Pending claims and disputes.
 - 18) Documentation of information for payment requests.
4. Minutes: The Owner and/or Design Professional entity responsible for conducting the meeting will use Contract Manager to record and distribute the meeting minutes to each party present and to parties requiring information.
 - a. Schedule Updating: Coordinate with the Owner to revise the Project Schedule after each progress meeting where revisions to the schedule have been made or recognized. The Owner will issue revised schedule concurrently with the report of each meeting.
- D. Preinstallation Meetings: The Owner may conduct preinstallation meetings at the Project site before each construction activity that requires coordination with other construction and major assemblies of the Work requiring tight control and coordination.
 1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow shall attend the meeting. The Owner to advise the Contractor, Design Professional and Owner's Commissioning Authority of scheduled meeting dates.
 2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
 - a. Contract Documents.
 - b. Options.

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- c. Related RFIs.
 - d. Related Change Orders.
 - e. Purchases.
 - f. Deliveries.
 - g. Submittals.
 - h. Review of mockups.
 - i. Possible conflicts.
 - j. Compatibility problems.
 - k. Time schedules.
 - l. Weather limitations.
 - m. Manufacturer's written recommendations.
 - n. Warranty requirements.
 - o. Compatibility of materials.
 - p. Acceptability of substrates.
 - q. Temporary facilities and controls.
 - r. Space and access limitations.
 - s. Regulations of authorities having jurisdiction.
 - t. Testing and inspecting requirements.
 - u. Installation procedures.
 - v. Coordination with other work.
 - w. Required performance results.
 - x. Protection of adjacent work.
 - y. Protection of construction and personnel.
- 3. The Owner and/or Design Professional will use Contract Manager to record significant meeting discussions, agreements, and disagreements, including required corrective measures and actions.
 - 4. Reporting: The Owner and/or Design Professional will distribute minutes of the meeting to each party present and to other parties requiring information.
 - 5. Do not proceed with installation if the meeting cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the meeting at earliest feasible date.
- E. Project Closeout Conference: The Owner may schedule and conduct a Project closeout conference, at a time convenient to the Owner and Design Professional, but no later than sixty (60) days prior to the scheduled inspection date for Substantial Completion.
- 1. The Owner will conduct the conference to review requirements and responsibilities related to the Project closeout.
 - 2. Attendees: The Owner, Owner's Commissioning Authority, Design Professional, and their consultants; the Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the meeting. Participants at the meeting shall be familiar with the Project and authorized to make binding decisions on matters relating to the Work.
 - 3. Agenda: Discuss items of significance that could affect or delay the Project closeout, including the following:
 - a. Submission of turnover documents.
 - b. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
 - c. Requirements for demonstration and training.

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- d. Preparation of Contractor's punch list.
 - e. Procedures for processing Applications for Payment at Substantial Completion and for final payment.
 - f. Coordination of separate contracts.
 - g. Owner's partial occupancy requirements.
 - h. Installation of Owner's furniture, fixtures, and equipment.
 - i. Responsibility for removing temporary facilities and controls.
4. Minutes: The Owner and/or Design Professional conducting meeting will use Contract Manager to record and distribute meeting minutes.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100

GENERAL REQUIREMENTS for CONSTRUCTION

SECTION 013200 - PROJECT SCHEDULING AND PROGRESS DOCUMENTATION - SINGLE PRIME CONTRACT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contract Documents, including but not limited to, the Drawings and individual Specification Sections and Bid Milestone Schedule, apply to this Section.

1.2 SUMMARY

- A. This is a single prime contract therefore the Contractor is responsible for the scheduling and documentation requirements as outlined in this section 013200.
- B. Section includes administrative and procedural requirements to plan, schedule and document the progress of construction during the performance of the Work, including the following:
 - 1. Critical Path Method (CPM) schedule and reports.
 - 2. Material location reports.
 - 3. Field condition reports.
 - 4. Special reports.
- C. Related Sections:
 - 1. Section 011200 – Contract Summary of Work, for preparing a combined CPM Schedule.
 - 2. Section 013300 – Submittal Procedure, for submitting schedules and reports.
 - 3. Section 014000 – Quality and Code Requirements, for submitting a schedule of tests and inspections.

1.3 DEFINITIONS

- A. Project: Work at the Site carried out pursuant to one or more Contracts.
- B. Activity: A discrete part of the Contract that can be identified for planning, scheduling, monitoring, and controlling the Project. Activities included in a CPM schedule consume time and resources.
 - 1. Critical Activity: An activity on the critical path that has no total float.
 - 2. Predecessor Activity: An activity that precedes another activity in the network.
 - 3. Successor Activity: An activity that follows another activity in the network.
- C. Baseline Schedule: Initial schedule, prepared by the Contractor, to complete the Work of the Contract in accordance with the Contract duration and starting point to which schedule updates are compared.

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- D. CPM: Critical Path Method is a scheduling method used to plan and schedule construction projects where activities are arranged based on activity relationships creating a time scaled network diagram.
- E. PDM: Precedence Diagram Method follows the standard CPM calculations and allows for special logic relationships creating an interdependent relationship throughout the network.
- F. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no total float.
- G. Data Date: The date when the status of the CPM schedule is determined, showing the calendar start date for the update period.
- H. Float: The measure of leeway in starting and completing an activity.
 - 1. Float time is not for the exclusive use or benefit of either the Owner or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Substantial Completion date.
 - 2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.
 - 3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Substantial Completion date.

1.4 INFORMATIONAL SUBMITTALS

- A. Format for Submittals: Submit required submittals in both electronic (PDF) file format and as electronic backup file in native software format.
- B. CPM Schedule: Schedule, of size required to display entire schedule for entire construction period.
 - 1. Submit a working electronic copy of schedule, using software indicated, and labeled to comply with requirements for submittals. Include type of schedule (baseline or updated) and date on label.
- C. CPM Reports: Concurrent with CPM schedule, submit each of the following reports. Format for each activity in reports shall contain; activity ID number, activity description, original duration, remaining duration, actual duration, early and late start and finish dates and total float in calendar days.
 - 1. Activity Report: List of all activities sorted by early or actual start date in each phase, area and level following the physical divisions of the Work.
 - 2. Short Term Activity Report: Lists all activities occurring from the update data date in a two month forward and one month back window.
 - 3. Logic Report: List of preceding and succeeding activities for all activities, sorted in ascending order by early or actual start date. Include activity ID number and float path(s).
 - 4. Total Float Report: Provide a cumulative list of total float from each update period with comments associated to any and all variances.

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5. Procurement Report: List all procurement activities sorted in order of the item being procured.
 6. Narrative Report: The project scheduler shall describe the nature of the submission, interpretation of calculations, issues affecting progress and a milestone analysis comparing progress against the baseline and update schedules.
- D. Material Location Reports: Submit at monthly intervals.
- E. Field Condition Reports: Submit at time of discovery of differing conditions.
- F. Special Reports: Submit at time of unusual event.
- G. Qualification Data: For project scheduler.

1.5 QUALITY ASSURANCE

- A. Project Scheduler Qualifications: An experienced specialist in CPM scheduling and reporting, with capability of producing CPM reports and diagrams within timeframes requested by the Owner. The project scheduler shall have or be able to obtain certification as a Planning and Scheduling Professional (PSP) or have a minimum of five years of demonstrated experience scheduling large capital projects.
- B. Prescheduling Conference: The Owner may conduct conference at the Project site to comply with requirements in Section 013100 - Project Management and Coordination. Review methods and procedures related to the Baseline Schedule and the CPM schedule, including, but not limited to, the following:
1. Review software limitations and content and format for reports.
 2. Verify availability of qualified personnel needed to develop and update schedule.
 3. Discuss coordination, including phasing, work stages, area separations, interim milestones and Beneficial Occupancy.
 4. Review delivery dates for Owner-furnished products.
 5. Review schedule for work of Owner's separate contracts.
 6. Review time required for review of submittals and resubmittals.
 7. Review requirements for tests and inspections by independent testing and inspecting agencies.
 8. Review time required for completion and startup procedures.
 9. Review and finalize list of construction activities to be included in schedule.
 10. Review submittal requirements and procedures.
 11. Review procedures for updating schedule.

1.6 COORDINATION

- A. Coordinate preparation and processing of CPM schedules and reports with the performance of the Work and with CPM scheduling and reporting of separate Contractors.
1. Coordinate new Baseline Schedules and CPM schedule updates with separate Contractor's when additional Contracts are executed during the entire duration of the Project.

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- B. Coordinate CPM schedule with the Contractor's Submission Schedule, progress reports, and other required schedules and reports.
 - 1. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 - PRODUCTS

2.1 CRITICAL PATH METHOD SCHEDULE, GENERAL

- A. Bid Milestone Schedule: The Owner shall provide a Bid Milestone Schedule, which is attached to this section as a template for the Baseline Schedule. Nothing in the Bid Milestone Schedule, Baseline Schedule or CPM schedule shall preclude the Contractor from advancing the Work of the Contract.
 - 1. Include milestones indicated in the Contract Documents in Baseline Schedule, including, but not limited to, the Notice to Proceed, interim milestones, Substantial Completion, and Contract close-out.
 - 2. Substantial Completion date shall not be changed by submission of a schedule that shows an early completion date, unless approved by the Owner.
 - 3. No time for weather will be apportioned for foreseeable occurrences in a specific regional area. The Contractor shall be responsible to determine reasonable averages and make allowances in the performance of the Work.
- B. Activities: Treat each numbered activity as a consumable resource for each principal element of the Work. Comply with the following:
 - 1. Activity Duration: Define activities so no activity is longer than 15 days, unless specifically allowed by the Owner.
 - 2. Procurement Activities: Include procurement process activities for long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
 - 3. Submittal Review Time: Include review and resubmittal times indicated in Section 013300 - Submittal Procedures in schedule. Coordinate submittal review times in the CPM schedule with dates entered in the Contractor's Submission Schedule.
 - 4. Startup and Testing Time: Include not less than 15 days for startup and testing.
 - 5. Substantial Completion: Indicate completion on the date established for Substantial Completion, and allow time for the Owner's administrative procedures necessary to execute the Notice of Substantial Completion (NOSC).
 - 6. Incomplete Work items and Contract Closeout: Include not more than 60 days for incomplete Work items and Contract Closeout Requirements.
- C. Constraints: Include constraints and work restrictions indicated in the Contract Documents, or approved by the Owner prior to use and show how date constraints affect the sequence of the Work.

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1. Construction Areas: Identify each major area of construction for each major portion of the Work. Indicate where each construction activity within a major area must be sequenced or integrated with other construction activities.
- D. Upcoming Work Summary: Prepare summary report indicating activities scheduled to occur or commence prior to submittal of next schedule update. Summarize the following issues:
1. Unresolved issues.
 2. Unanswered RFIs.
 3. Rejected or unreturned submittals.
 4. Notations on returned submittals.
- E. Recovery CPM Schedule: When periodic update indicates the Work is 15 or more calendar days behind the current approved CPM schedule, submit a separate recovery CPM schedule indicating means by which the Contractor intends to regain compliance with the CPM schedule. Indicate changes to working hours, working days, crew sizes, and equipment required achieving compliance, and dating by which recovery will be accomplished, subject to Owner's approval.
- F. Computer Scheduling Software: Prepare CPM schedules using current version of a program that has been developed specifically to manage CPM schedules and interface with the Owner's electronic file of the Bid Milestone Schedule.
1. Utilize Primavera P6 or P3 Primavera Project Planner operating system.

2.2 CRITICAL PATH METHOD SCHEDULE (CPM SCHEDULE)

- A. Baseline Schedule: Prepare schedule using a time-scaled PDM network diagram representing the Work of the Contract. Total float time shall be equal to or greater than zero in the Baseline Schedule.
1. Submit Baseline Schedule within 15 days of the date established for the Notice to Proceed. Outline significant construction activities for the first 90 days of construction. Include skeleton diagram for the remainder of the Work based on indicated activities.
 2. Develop network diagram in sufficient time to submit Baseline Schedule so it can be accepted for use no later than 30 days after date established for the Notice to Proceed.
 - a. Failure to include any work item required for the performance of the Work shall not excuse the Contractor from completing the Work of the Contract within applicable completion dates, regardless of the Owner's approval of the schedule.
- B. CPM Schedule: Prepare contemporaneous schedules using a time-scaled PDM network for sequencing the Work and showing the progress of the Work.
1. Establish procedures for monitoring and updating the CPM schedule and for reporting progress. Coordinate procedures with the progress meeting and payment request date.
 2. Coordinate the Work occurring concurrently through the integration of other Contractors Baseline Schedules into the CPM schedule.
 3. Conduct educational workshops to train and inform the Contractor's key Project personnel, including subcontractors' personnel, in proper methods of providing data and using CPM schedule information.

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4. Use "one workday" as the unit of time for individual activities. Indicate nonworking days and holidays incorporated into the schedule in order to correlate with Contract durations.
- C. CPM Schedule Preparation: Prepare a list of all activities required to complete the Work of the Contract. At minimum, each individual specification section, including General Requirement sections, as indicated in the Project Manual, shall be listed as an activity.
1. Activities ID: Provide a unique identifier to each activity. No activity ID shall be recycled or reused.
 2. Activities: Indicate the estimated time duration, sequence requirements, and relationship of each activity in relation to other activities. Include estimated time frames for the following activities:
 - a. Preparation and processing of submittals.
 - b. Mobilization and demobilization.
 - c. Purchase of materials.
 - d. Delivery.
 - e. Fabrication.
 - f. Utility interruptions.
 - g. Installation.
 - h. Work by Owner that may affect or be affected by the Contractor's activities.
 - i. Testing and commissioning.
 - j. Incomplete Work items and Contract closeout.
 3. Actual Activity Dates: Once an activity has been assigned an actual date of occurrence, the status of that activity shall not change. Any change to actual dates must be accompanied with supporting data and approved by the Owner. No actual start date shall occur ahead of the data date.
 4. Critical Path Activities: Identify critical path activities, including those for interim completion dates. Scheduled start and completion dates shall be consistent with the Bid Milestone Schedule dates.
 5. Processing: Process data to produce output data status on a computer-drawn, PDM network. Revise data, reorganize activity sequences, and reproduce as often as necessary to produce the CPM schedule within the limitations of the Contract duration.
 6. Calculations: The schedule network shall be calculated allowing activities to retain their original logic. Progress override shall not be used when calculating the network status.
 7. Logic: Leads and lags will not be used when the creation of an activity will perform the same function. Lag durations contained in the schedule shall not have negative value. Lead and lag durations shall not exceed the durations of the activity they are assigned.
 - a. There shall be only two open ended activities; (1) Notice to Proceed, with no predecessor logic, and (2) Final Payment, with no successor logic. All intermediate activity logic shall be connected.
 - b. Out of sequence activities that have progressed before all preceding logic will be allowed only on a case by case basis, as approved by the Owner. The Contractor shall propose logic corrections to eliminate all out of sequence progress and correct out of sequence progress that continues for more than two update cycles by logic revisions, as approved by the Owner.

GENERAL REQUIREMENTS for CONSTRUCTION

8. Float: The Owner shall reject the schedule and schedule updates for the use of float suppression techniques such as preferential sequencing, special lead lags logic constraints, zero total or zero free float constraints, extended activity times, or imposing constraint dates other than what is required by the Contract.
 - a. The use of resource leveling used for the purpose of artificially adjusting activity durations to consume float and influence the critical path is prohibited.
 - b. A schedule showing work completing in less time than the Contract duration and accepted by the Owner, will be considered to have float.
 - c. Any float generated during the performance of the Work, due to efficiencies of the Owner or any Contractor is not for sole use of the party generating the float.
 - d. Negative float will not be a basis for requesting time extensions and will not be construed as a means of acceleration or schedule extension.
 9. Format: Follow the applicable individual specification sections of the Work as the bases for the content of the CPM schedule. Organize the CPM schedule to provide the necessary detail for each area, level, quadrant and section as needed in the performance of the Work.
- D. Changes in the Work: For each proposed change and concurrent with its submission, prepare a time-impact analysis using a network fragment to demonstrate the effect of the proposed change on the overall CPM schedule.
- E. Schedule Updating: Concurrent with making revisions to schedule, prepare tabulated reports showing the following:
1. Identification of activities that have changed, including the reason each adjustment was necessary.
 2. Changes in early and late finish dates.
 3. Changes in activity durations in workdays.
 4. Changes in the critical path.
 5. Changes in total float or slack time.
 6. Changes in the duration for Substantial Completion.

2.3 REPORTS

- A. Material Location Reports: At monthly intervals, prepare and submit a comprehensive list of materials delivered to and stored at Project site. List shall be cumulative, showing materials previously reported plus items recently delivered. Include with list a statement of progress on and delivery dates for materials or items of equipment fabricated or stored away from Project site.
- B. Field Condition Reports: Immediately on discovery of a difference between field conditions and the Contract Documents, prepare and submit a detailed report. Submit with a Request for Information. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

GENERAL REQUIREMENTS for CONSTRUCTION

2.4 SPECIAL REPORTS

- A. General: Submit special reports directly to Owner within one day of an occurrence. Distribute copies of report to parties affected by the occurrence.
- B. Reporting Unusual Events: When an event of an unusual and significant nature occurs at Project site, whether or not related directly to the Work, prepare and submit a special report. List chain of events, persons participating, and response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise the Owner in advance when these events are known or predictable.

PART 3 - EXECUTION

3.1 CPM SCHEDULE

- A. Project Scheduler: Engage a consultant or person skilled in construction planning and scheduling to provide planning, scheduling, evaluation, and reporting services using CPM scheduling.
 - 1. In-House Option: The Owner may waive the requirement to retain a consultant if Contractor employs skilled personnel with experience in CPM scheduling and reporting techniques. Submit qualifications.
 - 2. Meetings: Project scheduler shall attend all meetings related to the Project progress, alleged delays, and time impact.
- B. CPM Schedule and CPM Reports Updating: Prior to each scheduled progress meeting, update schedule to reflect actual construction progress and activities. Issue schedule and reports one week before each regularly scheduled progress meeting.
 - 1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the CPM reports of each such meeting. As a minimum, schedule update submissions shall occur monthly and within 30 days of the schedule Data Date.
 - 2. Include CPM reports with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
 - 3. As the Work progresses, indicate final remaining duration for each activity.
- C. Distribution: Submit one electronic copy, in format specified, to the Owner and distribute copies of approved schedule and reports to the Owner, Design Professional, separate contractors, testing and inspecting agencies, and other parties identified by the Owner with a need-to-know schedule responsibility.
 - 1. Post copies in Project meeting rooms and temporary field offices.
 - 2. When revisions are made, distribute updated schedules and reports to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION 013200

GENERAL REQUIREMENTS for CONSTRUCTION

SECTION 013300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contract Documents, including but not limited to, the Drawings and individual Specification Sections and Contractor's Submission Schedule, apply to this Section.

1.2 SUMMARY

- A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. Related Sections:
 - 1. Section 013200 – Construction Progress Documentation, for submitting schedules and reports, includes Contractor's construction schedule.
 - 2. Section 017700 – Contract Closeout Requirements, for documents required to closeout contract.
 - 3. Section 017823 – Operation and Maintenance Manuals, for submitting operation and maintenance manuals.

1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require the Design Professional's responsive action. Action submittals are those submittals indicated in individual specification sections as action submittals.
- B. Informational Submittals: Written and graphic information and physical samples that do not require the Design Professional's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual specification sections as informational submittals.
- C. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.
- D. Required Submittal List Utility application: Interacts with and to be used with the Owner's Contract Manager system. The Design Professional uses the utility to itemize the list of submission items needed to be submitted by the Contractor in order to insure the design intent will be satisfied and inclusive of all Project turnover documents and/or Contract Closeout Requirements.
- E. Contractor's Submission Schedule: The itemized list of project submission requirements printed as a report from Contract Manager. The Contractor enters the date each item needs to be submitted in order to meet the CPM schedule and returns this document to the Owner.

GENERAL REQUIREMENTS for CONSTRUCTION

1.4 ACTION SUBMITTALS

- A. Submittal Schedule: The Contractor's Submission Schedule is attached to this section, prepared by the Design Professional. The Contractor is to coordinate and cooperate with the Owner and Design Professional to arrange in chronological order by dates required by the construction schedule. Coordinate time required for review, ordering, manufacturing, fabrication, and delivery to establish dates. Coordinate additional time required for making corrections or modifications to submittals noted by the Design Professional and additional time for handling and reviewing submittals required by those corrections.
1. Coordinate the Contractor's Submission Schedule with list of subcontracts, the schedule of values, and coordinated CPM schedule.
 2. Initial Submittal: Submit in accordance with start-up CPM schedule. Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
 3. Final Submittal: Submit concurrently in accordance with the complete CPM schedule.
 - a. Coordinate with the Owner and Design Professional revised Contractor's Submission Schedule to reflect changes in current status and timing for submittals.
- B. Format for Submittals: Submit required submittals in electronic (PDF) file format.

1.5 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. Design Professional's Digital Data Files: Electronic copies of CAD Drawings of the Contract Drawings will not be provided by the Design Professional for the Contractor's use in preparing submittals.

Coordination: Coordinate preparation and processing of submittals with the performance of the Work.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
2. Commissioning Authority will review submittals applicable to systems being commissioned for compliance with commissioning needs, concurrent with the Design Professional review and approval.
3. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
4. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
5. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Submit Operation and Maintenance Manuals concurrent with action submittal.
 - b. The Owner or Design Professional reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

GENERAL REQUIREMENTS for CONSTRUCTION

- B. Processing Time: Allow time for submittal review, including time for re-submittals, as follows. Time for review shall commence on the Design Professional's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including re-submittals.
1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. The Design Professional will advise the Contractor when a submittal being processed must be delayed for coordination.
 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 3. Re-submittal Review: Allow 15 days for review of each re-submittal.
 4. Sequential Review: Where sequential review of submittals by the Design Professional's consultants, the Owner, or other parties is indicated, allow 21 days for initial review of each submittal.
- C. Identification and Information: Place a permanent label or title block on each paper copy submittal item for identification.
1. Indicate name of firm or entity that prepared each submittal on label or title block.
 2. Provide a space approximately 6 by 8 inches on label or beside title block to record Contractor's review and approval markings and action taken by the Design Professional.
 3. Include the following information for processing and recording action taken:
 - a. Project name.
 - b. Date.
 - c. Name of Design Professional.
 - d. Name of Construction Manager (if applicable).
 - e. Name of Contractor.
 - f. Name of subcontractor.
 - g. Name of supplier.
 - h. Name of manufacturer.
 - i. Submittal number including revision identifier.
 - 1) Submittal number shall be the submittal item number and Submittal Package number designated in the Contractor's Submission Schedule.
 - j. Drawing number and detail references, as appropriate.
 - k. Location(s) where product is to be installed, as appropriate.
 - l. Other necessary identification.
- D. Identification and Information: Identify and incorporate information in each electronic submittal file as follows:
1. Assemble complete submittal package into a single indexed file with links enabling navigation to each item.
 2. Name file with submittal number or other unique identifier, including revision identifier.
 3. Provide means for insertion to permanently record the Contractor's review and approval markings and action taken by the Design Professional.
 4. Include the following information on an inserted cover sheet:

GENERAL REQUIREMENTS for CONSTRUCTION

- a. Project name.
 - b. Date.
 - c. Name and address of Design Professional.
 - d. Name of Construction Manager (if applicable).
 - e. Name of Contractor.
 - f. Name of firm or entity that prepared submittal.
 - g. Name of subcontractor.
 - h. Name of supplier.
 - i. Name of manufacturer.
 - j. Number and title of appropriate Specification Section.
 - k. Drawing number and detail references, as appropriate.
 - l. Location(s) where product is to be installed, as appropriate.
 - m. Related physical samples submitted directly.
 - n. Other necessary identification.
5. Include the following information as keywords in the electronic file metadata:
 - a. Project name.
 - b. Number and title of appropriate Specification Section.
 - c. Manufacturer name.
 - d. Product name.
- E. Options: Identify options requiring selection by the Design Professional.
- F. Deviations: Identify deviations from the Contract Documents on submittals.
- G. Additional Copies: Unless the Design Professional observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.
- H. Transmittal: Assemble each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. The Design Professional will return submittals, without review, received from sources other than the Contractor.
 1. Transmittal Form: Use the Contractor's office form.
 2. Transmittal Form: Provide locations on form for the following information:
 - a. Project name.
 - b. Date.
 - c. Destination (To:).
 - d. Source (From:).
 - e. Names of subcontractor, manufacturer, and supplier.
 - f. Category and type of submittal.
 - g. Submittal purpose and description.
 - h. Specification Section number and title.
 - i. Indication of full or partial submittal.
 - j. Drawing number and detail references, as appropriate.
 - k. Transmittal numbered consecutively.
 - l. Submittal and transmittal distribution record.
 - m. Remarks.
 - n. Signature of transmitter.

GENERAL REQUIREMENTS for CONSTRUCTION

3. On an attached separate sheet, prepared on the Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by the Design Professional on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same identification information as related submittal.
- I. Re-submittals: Make re-submittals in same form and format.
 1. Note date and content of previous submittal.
 2. Note date and content of revision in label or title block and clearly indicate extent of revision.
 3. Resubmit submittals until they are marked with approval notation from the Design Professional's action stamp.
 - J. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, and installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
 - K. Use for Construction: Use only final submittals that are marked with approval notation from the Design Professional's action stamp.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

- A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
 1. Submit electronic submittals via email as electronic (PDF) files, to the Design Professional. If applicable, the Design Professional will forward submittals to the Commissioning Authority for systems being commissioned. The Owner may request paper copies of certain submittals for onsite coordination.
 - a. The Design Professional, through the Owner, will return annotated file. Annotate and retain one copy of file as an electronic Project turnover document file.
 - b. The Commissioning Authority through the Design Professional will return annotated file.
 2. Operation and Maintenance Manual Submittals: Submit concurrent with the Action Submittal, as related in individual Specification Sections.
 3. Closeout Submittals: Comply with requirements specified in Section 017700 – Contract Closeout Requirements and as listed in the Contractor's Submission Schedule.
 4. Permits, Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Permits, Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.

GENERAL REQUIREMENTS for CONSTRUCTION

- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
 2. Mark each copy of each submittal to show which products and options are applicable.
 3. Include the following information, as applicable:
 - a. Submittal Package number and Submittal Item number.
 - b. Manufacturer's catalog cuts.
 - c. Manufacturer's product specifications.
 - d. Standard color charts.
 - e. Statement of compliance with specified referenced standards.
 - f. Testing by recognized testing agency.
 - g. Application of testing agency labels and seals.
 - h. Notation of coordination requirements.
 - i. Availability and delivery time information.
 4. For equipment, include the following in addition to the above, as applicable:
 - a. Wiring diagrams showing factory-installed wiring.
 - b. Printed performance curves.
 - c. Operational range diagrams.
 - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
 5. Submit Product Data concurrent with Samples.
 6. Submit Product Data in electronic (PDF) file format.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Submittal Package number and Submittal Item number.
 - b. Identification of products.
 - c. Schedules.
 - d. Compliance with specified standards.
 - e. Notation of coordination requirements.
 - f. Notation of dimensions established by field measurement.
 - g. Relationship and attachment to adjoining construction clearly indicated.
 - h. Seal and signature of professional engineer if specified.
 2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 30 by 42 inches.
- D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.

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1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
 2. Identification: Attach label on unexposed side of Samples that includes the following:
 - a. Submittal Package number and Submittal Item number.
 - b. Generic description of Sample.
 - c. Product name and name of manufacturer.
 - d. Sample source.
 - e. Number and title of applicable Specification Section.
 3. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
 - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
 - b. Samples not incorporated into the Work, or otherwise designated as the Owner's property, are the property of the Contractor.
 4. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
 - a. Number of Samples: For turnover purpose, submit six full sets of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. The Design Professional, through the Owner, will return submittal with options selected.
 5. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
 - a. Number of Samples: Submit six sets of Samples. The Design Professional, through the Owner, will retain two Sample sets; remainder will be returned. Mark up and retain one returned Sample set as a turnover sample.
 - 1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
 - 2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least six sets of paired units that show approximate limits of variations.
- E. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:

GENERAL REQUIREMENTS for CONSTRUCTION

1. Name, address, and telephone number of entity performing subcontract or supplying products.
 2. Number and title of related Specification Section(s) covered by subcontract.
 3. Drawing number and detail references, as appropriate, covered by subcontract.
 4. Submit subcontract list in PDF electronic file, to the Owner.
- F. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.
- G. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on American Welding Society (AWS) forms. Include names of firms and personnel certified.
- H. OSHA Certificates: Upon the Owner's request, submit certificates of the OSHA 10-hour Construction Safety and Health Course – S1537-A, for all laborers, workers and mechanics working on site.
- I. Installer Certificates: Upon the Owner's request, submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- J. Manufacturer Certificates: Upon the Owner's request, submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- K. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- L. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
- M. Field Test Reports: Submit reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to the Design Professional.
- B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date

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of the Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 DESIGN PROFESSIONAL'S ACTION

- A. General: The Design Professional will not review submittals that do not bear the Contractor's approval stamp and will return them without action.
- B. Action Submittals: The Design Professional will review each submittal, make marks to indicate corrections or modifications required, and return it through the Owner. The Design Professional will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action.
- C. Informational Submittals: The Design Professional will review each submittal and will return it if it does not comply with requirements.
- D. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from the Design Professional.
- E. Incomplete submittals are not acceptable, will be considered nonresponsive, and will be returned without review.
- F. Submittals not required by the Contract Documents may not be reviewed and may be discarded.
- G. On projects that have commissioning, the Commissioning Authority will receive copies of the submittals through the Design Professional and will provide comments on the submittals via the Design Professional.

3.3 CONTRACTOR'S SUBMITTAL SCHEDULE

- A. The Contractor's Submission Schedule: The Contractor's Submission Schedule, prepared by the Design Professional is attached following the end of this section. The Contractor shall provide the dates each item needs to be submitted to the Owner no later than 30 days after approval of CPM schedule. The schedule shall include the date of all shop drawings, samples, materials that shall be submitted and the date approval is required. The Contractor shall adhere to the submittal processing time as describe in paragraph 1.5 above when developing the submittal schedule. The Contractor is to coordinate and cooperate with the Owner and Design Professional to complete scheduling in accordance with the approved CPM schedule.

END OF SECTION 013300

GENERAL REQUIREMENTS for CONSTRUCTION

SECTION 014000 - QUALITY AND CODE REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contract Documents, including but not limited to, the Drawings and Individual Specification Sections [and New York City (NYC)] Statement of Special Inspections and Tests, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve the Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specific quality assurance and quality control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 2. Specified tests, inspections, and related actions do not limit the Contractor's other quality assurance and quality control procedures that facilitate compliance with the Contract Document requirements.
 - 3. Requirements for the Contractor to provide quality assurance and quality control services required by the Owner or authorities having jurisdiction are not limited by provisions of this Section.
- C. Related Sections:
 - 1. Section 013200 - Construction Progress Documentation, for developing a schedule of required tests and inspections.
 - 2. Individual Specification Sections, for specific inspections and tests requirements.

1.3 DEFINITIONS

- A. Quality Assurance Services: Activities, actions, and procedures performed during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements.
- C. Mockups: Full size physical assemblies that are constructed on-site. Mockups are constructed to verify selections made under sample submittals; to demonstrate aesthetic effects and, where

GENERAL REQUIREMENTS for CONSTRUCTION

indicated, qualities of materials and execution; to review coordination, testing, or operation; to show interface between dissimilar materials; and to demonstrate compliance with specified installation tolerances. Mockups are not Samples. Approved mockups establish the standard by which the Work will be judged.

- D. Product Testing: Tests and inspections that are performed by a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.
- E. Field Quality Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- F. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- G. Installer/Applicator/Erector: The Contractor or another entity engaged by the Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
- H. Experienced: When used with an entity or individual, "experienced" means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.4 ACTION SUBMITTALS

- A. Shop Drawings: For mockups, provide plans, sections, and elevations, indicating materials and size of mockup construction.
 - 1. Indicate manufacturer and model number of individual components.
 - 2. Provide axonometric drawings for conditions difficult to illustrate in two dimensions.

1.5 INFORMATIONAL SUBMITTALS

- A. Contractor's Quality Control Plan: For quality assurance and quality control activities and responsibilities.
- B. Contractor's Quality Control Manager Qualifications: For supervisory personnel.
- C. Testing Agency Qualifications: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- D. Schedule of Tests and Inspections: Prepare in tabular form and include the following:
 - 1. Specification Section number and title.
 - 2. Entity responsible for performing tests and inspections.
 - 3. Description of test and inspection.
 - 4. Identification of applicable standards.
 - 5. Identification of test and inspection methods.

GENERAL REQUIREMENTS for CONSTRUCTION

6. Number of tests and inspections required.
7. Time schedule or time span for tests and inspections.
8. Requirements for obtaining samples.
9. Unique characteristics of each quality control service.

1.6 CONTRACTOR'S QUALITY CONTROL PLAN

- A. Quality Control Plan, General: Submit quality control plan within 10 days of Notice to Proceed, and not less than five days prior to preconstruction conference. Submit in format acceptable to the Owner. Identify personnel, procedures, controls, instructions, tests, records, and forms to be used to carry out Contractor's quality assurance and quality control responsibilities. Coordinate with Contractor's construction schedule.
- B. Quality Control Personnel Qualifications: Engage qualified full-time personnel trained and experienced in managing and executing quality assurance and quality control procedures similar in nature and extent to those required for Project.
 1. Project quality control manager may also serve as Project superintendent.
- C. Submittal Procedure: Describe procedures for ensuring compliance with requirements through review and management of submittal process. Indicate qualifications of personnel responsible for submittal review.
- D. Testing and Inspection: Include in quality control plan a comprehensive schedule of the Work requiring tests or inspections, including the following:
 1. The Contractor-performed tests and inspections including subcontractor-performed tests and inspections. Include required tests and inspections and the Contractor-elected tests and inspections.
 2. Special inspections required by authorities having jurisdiction and indicated on the "NYS or NYC Statement of Special Inspections and Tests."
- E. Continuous Inspection of Workmanship: Describe process for continuous inspection during construction to identify and correct deficiencies in workmanship in addition to testing and inspection specified. Indicate types of corrective actions to be required to bring work into compliance with standards of workmanship established by Contract requirements and approved mockups.
- F. Monitoring and Documentation: Maintain testing and inspection reports including log of approved and rejected results. Include work the Owner has indicated as nonconforming or defective. Indicate corrective actions taken to bring nonconforming work into compliance with requirements. Comply with requirements of authorities having jurisdiction.

1.7 REPORTS AND DOCUMENTS

- A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:
 1. Date of issue.

GENERAL REQUIREMENTS for CONSTRUCTION

2. Project title and number.
3. Name, address, and telephone number of testing agency.
4. Dates and locations of samples and tests or inspections.
5. Names of individuals making tests and inspections.
6. Description of the Work and test and inspection method.
7. Identification of product and Specification Section.
8. Complete test or inspection data.
9. Test and inspection results and an interpretation of test results.
10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
12. Name and signature of laboratory inspector.
13. Recommendations on retesting and reinspecting.

B. **Manufacturer's Technical Representative's Field Reports:** Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:

1. Name, address, and telephone number of technical representative making report.
2. Statement on condition of substrates and their acceptability for installation of product.
3. Statement that products at Project site comply with requirements.
4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
6. Statement whether conditions, products, and installation will affect warranty.
7. Other required items indicated in individual Specification Sections.

C. **Factory-Authorized Service Representative's Reports:** Prepare written information documenting manufacturer's factory-authorized service representative's tests and inspections specified in other Sections. Include the following:

1. Name, address, and telephone number of factory-authorized service representative making report.
2. Statement that equipment complies with requirements.
3. Results of operational and other tests and a statement of whether observed performance complies with requirements.
4. Statement whether conditions, products, and installation will affect warranty.
5. Other required items indicated in individual Specification Sections.

1.8 PERMITS, LICENSES, AND CERTIFICATES:

- A. The Contractor shall obtain, maintain and pay for all applications, permits, filings, and licenses necessary for the execution of the Work and for the use of such Work when completed as required by any and all authorities having jurisdiction. The Contractor shall comply with and give notices required by laws, ordinances, rules, regulations and lawful orders of authorities having jurisdiction bearing on performance of the Work.

GENERAL REQUIREMENTS for CONSTRUCTION

- B. The Contractor shall promptly assist the Owner in securing all approvals from authorities having jurisdiction. Without limitation, the Contractor shall assist the Owner in making application for Project approval, variances or other approvals, Letters of Completion, Temporary Certificates of Occupancy, and Certificates of Occupancy, including completion of all necessary applications and supporting documentation.
- C. The Contractor shall comply with all regulations governing conduct, access to the premises, operation of equipment and systems and conduct while in or near the premises and shall perform the Work in such a manner as not to unreasonably interrupt or interfere with the conduct of business of the Institution.
- D. For the Owner's records, submit copies of permits, licenses, certifications, inspection reports, material certificates/affidavits, approvals, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.
- E. Dormitory Authority Permits: Prior to commencement of the Work, the Dormitory Authority shall provide the Contractor, at no costs, a Construction Permit for performance of the Work and post a copy at the Project site.
 - 1. The Contractor shall secure and pay for all other work permits, applications, filings, and approvals that are associated with the Work of the Contract and pay all other permits, fees, licenses and inspections necessary for the proper execution and completion of the Contract as required by all other applicable authorities having jurisdiction.
 - 2. Each Electrical Contractor shall, at no additional costs to the Owner, provide for inspection of all electrical Work of the Contract and provide a certificate of compliance from an independent electrical inspection agency acceptable to the Owner.
- F. New York City Permits: The Contractor shall secure and pay for all work permits, applications, filings, and approvals that are associated with the Work of the Contract and pay all other permits, fees, licenses and inspections necessary for the proper execution and completion of the Contract as required by applicable New York City agencies and departments (i.e. Department of Buildings, Bureau of Electrical Control, Fire Department, Department of Environmental Protection, etc.).
 - 1. The Contractor shall secure required work permits and approvals prior to commencement of the Work, provide a copy to the Owner and post a copy of the permit at the Project site.
 - 2. The Contractor shall be responsible to maintain updated work permits and approvals.
 - 3. Upon Substantial Completion of the Work of the Contract, the Contractor shall secure all required approvals from applicable New York City agencies and departments. The Contractor shall provide a copy to the Owner.
- G. Municipal Permits: The Contractor shall secure and pay for a building permit and all work permits, applications, filings, and approvals that are associated with the Work of the Contract and pay all other permits, fees, licenses and inspections necessary for the proper execution and completion of the Contract as required by applicable authorities having jurisdiction.
 - 1. The Contractor shall secure required building permit or work permits and approvals prior to commencement of the Work, provide a copy to the Owner and post a copy of the permit at the Project site.

GENERAL REQUIREMENTS for CONSTRUCTION

2. The Contractor shall be responsible to maintain updated permits and approvals.
3. Upon Substantial Completion of the Work of the Contract, the Contractor shall secure all required approvals from applicable authorities having jurisdiction. The Contractor shall provide a copy to the Owner. |

1.9 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- E. Specialists: Certain Specification Sections require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
- F. Testing Agency Qualifications: An independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 329, and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.
- G. Manufacturer's Technical Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- H. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- I. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
 1. Build mockups in location and of size indicated or, if not indicated, as directed by the Owner.
 2. Notify the Owner seven days in advance of dates and times when mockups will be constructed.

GENERAL REQUIREMENTS for CONSTRUCTION

3. Employ supervisory personnel who will oversee mockup construction. Employ workers that will be employed during the construction at the Project.
4. Demonstrate the proposed range of aesthetic effects and workmanship.
5. Obtain the Owner's approval of mockups before starting work, fabrication, or construction.
 - a. Allow seven days for initial review and each re-review of each mockup.
6. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
7. Demolish and remove mockups when directed by the Owner.

1.10 QUALITY CONTROL

- A. Owner Responsibilities: Where quality control services are indicated as the Owner's responsibility, the Owner will engage a qualified testing agency to perform these services.
 1. The Owner will furnish the Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
- B. Contractor Responsibilities: Tests and inspections not explicitly assigned to the Owner are the Contractor's responsibility. Perform additional quality control activities required to verify that the Work complies with requirements, whether specified or not.
 1. Unless otherwise indicated, provide quality control services specified and those required by authorities having jurisdiction. Perform quality control services required of the Contractor by authorities having jurisdiction, whether specified or not.
 2. Where services are indicated as the Contractor's responsibility, engage a qualified testing agency to perform these quality control services.
 - a. Contractor shall not employ same entity engaged by the Owner, unless agreed to in writing by the Owner.
 3. Notify testing agencies at least 24 hours in advance of time (excluding weekends and holidays) when Work that requires testing or inspecting will be performed.
 4. Where quality control services are indicated as the Contractor's responsibility, submit a written report, in duplicate, of each quality control service.
 5. Testing and inspecting requested by the Contractor and not required by the Contract Documents are the Contractor's responsibility.
 6. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Section 013300 - Submittal Procedures.
- D. Manufacturer's Technical Services: Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's

GENERAL REQUIREMENTS for CONSTRUCTION

services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.

E. Retesting/Reinspecting:

1. Regardless of whether original tests or inspections were the Contractor's responsibility, provide quality control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
2. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents, or costs attributable to the Contractor's lack of coordination in properly scheduling the Work requiring testing and inspection will be charged to Contractor and the Contract Sum will be adjusted by Change Order.

F. Testing Agency Responsibilities: Cooperate with the Owner and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.

1. Notify the Owner and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
4. Submit a written report, in duplicate, of each test, inspection, and similar quality control service through Contractor.
5. Does not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
6. Do not perform any duties of the Contractor.

G. Associated Services: The Contractor shall cooperate with agencies performing required tests, inspections, and similar quality control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. The Contractor shall provide the following:

1. Access to the Work, including equipment required to access the Work.
2. Incidental labor and facilities necessary to facilitate tests and inspections.
3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
4. Facilities for storage and field curing of test samples.
5. Delivery of samples to testing agencies.
6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
7. Security and protection for samples and for testing and inspecting equipment at Project site.

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

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

GENERAL REQUIREMENTS for CONSTRUCTION

- I. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar quality control services required by the Contract Documents. Coordinate and submit concurrently with Contractor's construction schedule. Update as the Work progresses.

1. Distribution: Distribute schedule to the Owner, testing agencies, and each party involved in performance of portions of the Work where tests and inspections are required.

1.11 [NYC] SPECIAL INSPECTIONS AND TESTS

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

1. Notifying Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
2. Submitting a written report of each test, inspection, and similar quality control service to the Owner with copy to the Contractor and to authorities having jurisdiction. Frequency of reporting shall be determined in consultation with the Owner.
3. Submitting a final report of special tests and inspections at Substantial Completion, this includes a list of unresolved deficiencies.
4. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents or code requirements.
5. Retesting and reinspecting corrected work.

- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve a Contractor of responsibility for compliance with the Contract Document requirements.

1. Specified tests, inspections, and related actions do not limit Contractor's quality control procedures that facilitate compliance with the Contract Document requirements.
2. Inspections and tests performed by the testing agency shall in no way relieve the Contractor of the responsibility to construct in accordance with the Contract Documents.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

- A. Prepare a record of tests and inspections. Include the following:

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

GENERAL REQUIREMENTS for CONSTRUCTION

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

3.2 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
- B. Protect construction exposed by or for quality control service activities.
- C. Repair and protection are the Contractor's responsibility, regardless of the assignment of responsibility for quality control services.

END OF SECTION 014000



DASNY

2022 BUILDING CODE OF NYC STATEMENT OF SPECIAL INSPECTIONS

The Registered Design Professional shall complete this table with respect to the project scope and include with the DASNY General Requirements, Section 014000¹

Campus/Facility: City College of New York - Townsend Harris Hall

Project Title: SOPHIE DAVIS BIOMEDICAL SCHOOL INTERIOR UPGRADES - IDF RELOCATIONS

Project Number: 3288909999

DASNY Project Manager: Vadim Raskin

Registered Design Professional (RDP): AHUJA PARTNERSHIP ARCHITECTS

Name of Person Completing Statement: Ajay Ghei, RA

Phone:
212.675.5560

Date: 00.00.2024

Comments:

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	2022 NYCBC REFERENCE	CHECK IF REQUIRED	SPECIFICATION REFERENCE AND CLARIFYING NOTES (by RDP) ²	COMMENTARY/NOTES (by DASNY) ³
A. Steel Construction			1704.2, 1705.2 Table 1705.2			Fabrication of structural members and field assembly.
1. Material verification of high-strength bolts, nuts, and washers:						Includes submittal review and field verification.
a. Identification markings to conform to ASTM standards specified in the approved construction documents.		X	AISC 360, Section A3-3; RCSC Section 2	<input type="checkbox"/>		As specified in the construction documents
b. Manufacturer's certificate of compliance required.		X	RCSC Section 2.1	<input type="checkbox"/>		
2. Inspection of high-strength bolting:			1705.2.3			
a. Snug-tight joints		X		<input type="checkbox"/>		Turn of the nut bolting shall be continuously inspected.
b. Pre-tensioned and slip- critical joints using turn-of-nut with matchmarking, twist-off bolt or direct tension indicator methods of installation		X		<input type="checkbox"/>		AISC 360 Section M2.5 and RCSC Specification for Structural Joints using High Strength Bolts Section 9.
c. Pre-tensioned and slip critical joints using turn-of-nut without matchmarking or calibrated wrench methods of installation.	X			<input type="checkbox"/>		AISC 360 Section M2.5 and RCSC Specification for Structural Joints using High Strength Bolts Section 9.
d. Pre-installation verification testing.	X			<input type="checkbox"/>		Specification for Structural Joints using High-Strength Bolts Section 8.2.
3. Material verification of structural steel and cold formed steel deck:						
a. For structural steel, identification markings to conform to AISC 360		X		<input type="checkbox"/>		AISC 360 Section A3.1, N2.1, N3.2(a) and (k)(1)

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	2022 NYCBC REFERENCE	CHECK IF REQUIRED	SPECIFICATION REFERENCE AND CLARIFYING NOTES (by RDP) ²	COMMENTARY/NOTES (by DASNY) ³
b. For other steel, identification markings to conform to ASTM Standards specified in the approved construction documents.				<input type="checkbox"/>		Applicable ASTM Standards
c. Manufacturers' certified mill test reports.		X		<input type="checkbox"/>		Applicable ASTM material standards
4. Material verification of weld filler materials						Includes (a) review of manufacturer's certificate of compliance and (b) field verification of identification markings to AWS spec.
a. Identification of markings to conform to AWS specification in the approved construction documents.	-	-		<input type="checkbox"/>		AISC 360 Section A3.5 and N3.2(e), and applicable AWS A5 documents; and AWS D1.1 5.3.1 and approved construction documents
b. Manufacturer's certificate of compliance required.	-	-		<input type="checkbox"/>		AISC 360 Section A3.5
5. Inspection of welding:				<input type="checkbox"/>		NDT requirements and frequencies as specified in the Contract Documents.
a. Structural Steel						
1. Complete and partial penetration groove welds.	X		1705.2.1	<input type="checkbox"/>		AWS D1.1
2. Multi-pass fillet welds	X		1705.2.1	<input type="checkbox"/>		AWS D1.1
3. Single pass fillet welds greater than 5/16"	X		1705.2.1	<input type="checkbox"/>		AWS D1.1
4. Plug and slot welds	X		1705.2.1	<input type="checkbox"/>		AWS D1.1
5. Single pass fillet welds less than or equal to 5/16"		X	1705.2.1	<input type="checkbox"/>		AWS D1.1
6. Floor and roof deck welds.		X		<input type="checkbox"/>		AWS D1.3
7. Cold-formed steel welds		X		<input type="checkbox"/>		AWS D1.3
6. Reinforcing Steel			1903.6.2			
a. Pre-welding verification of base metal		X	1903.6.2	<input type="checkbox"/>		AWS D1.4
b. Reinforcing steel-resisting flexural and axial forces in intermediate and special moment frames, and boundary elements of special reinforced concrete shear walls and shear reinforcement.	X		1903.6.2	<input type="checkbox"/>		AWS D1.4

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	2022 NYCBC REFERENCE	CHECK IF REQUIRED	SPECIFICATION REFERENCE AND CLARIFYING NOTES (by RDP) ²	COMMENTARY/NOTES (by DASNY) ³
c. Shear reinforcement	X		1903.6.2	<input type="checkbox"/>		AWS D1.4 A minimum of 10% of shear studs shall be verified for strength of welded connection. If failure is evident in one or more, then the strength of all shear studs shall be verified.
d. Other reinforcing steel		X		<input type="checkbox"/>		Welding of indirect and direct butt joints shall be continuously inspected.
7. Inspection of steel frame joint details for compliance with the approved construction documents:			1705.2.2	<input type="checkbox"/>		
a. Details such as bracing and stiffening.		X	1705.2.2	<input type="checkbox"/>		
b. Member locations		X	1705.2.2	<input type="checkbox"/>		
c. Application of joint details at each connection.		X	1705.2.2	<input type="checkbox"/>		
8. Verification of welder license/certification and welding procedures.	X		2204.1 Section 28-407.1 of the Administrative Code	<input type="checkbox"/>		
9. Required Inspections of Open-Web Steel Joists and Joist Girders			1705.2.7 Table 1705.2.7			
a. Inspection of member sizes and locations.		X	Table 1705.2.7	<input type="checkbox"/>		
b. Inspection of end connections – welded or bolted.		X	Table 1705.2.7 2207.1	<input type="checkbox"/>		SJI Specifications
c. Inspection of standard bridging, horizontal or diagonal.		X	Table 1705.2.7 2207.1	<input type="checkbox"/>		SJI Specifications
d. Inspection of bridging, horizontal or diagonal, that differs from the SJI Specifications listed in Section 2207.1.		X	Table 1705.2.7	<input type="checkbox"/>		SJI Specifications
B. Cold-Formed Steel Construction			1705.2.6 Table 1705.2.6			
1. Material Verification						
a. Verify that identification markings conform to AISI S240 and as specified in the approved construction documents.	X		Table 1705.2.6	<input type="checkbox"/>		AISI S240, Section D6.5

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	2022 NYCBC REFERENCE	CHECK IF REQUIRED	SPECIFICATION REFERENCE AND CLARIFYING NOTES (by RDP) ²	COMMENTARY/NOTES (by DASNY) ³
b. Verify that material is clean, straight and undamaged.		X	Table 1705.2.6	<input type="checkbox"/>		
2. Inspection of General Framing						
a. Verify that member sizes conform to the approved construction documents.		X	Table 1705.2.6	<input type="checkbox"/>		AISI S240 Section C
b. Verify that member layout conforms to the approved construction documents.		X	Table 1705.2.6	<input type="checkbox"/>		
c. Verify that proper bearing lengths are provided in accordance with the approved construction documents.		X	Table 1705.2.6	<input type="checkbox"/>		
d. Verify that punched holes and sheared or flame cut edges of material in members are clean and free from notches and burred edges		X	Table 1705.2.6	<input type="checkbox"/>		
3. Inspection of framing connections and anchorages:						
a. Verify that screws, bolts, and other fasteners conform to approved construction document requirements for diameter, length, quantity, spacing, edge distance and location.		X	Table 1705.2.6	<input type="checkbox"/>		AISI S240 Section D6.7
b. Verify that manufactured connectors, such as joist hangars, caps, straps, clips, ties, hold-downs and anchors conform to approved construction document requirements for manufacturer, type, gauge, and fastener requirements.		X	Table 1705.2.6	<input type="checkbox"/>		AISI S240 Section B1.5 and Section C4
c. Post-installed connections to concrete.	X		Table 1705.2.6	<input type="checkbox"/>		AISI S240 Section D6.9
4. Inspection of Welding						
a. Inspect welds in accordance with S240 Section D6.6.		X	Table 1705.2.6	<input type="checkbox"/>		AWS D1.3, AISI S240 Section D6.6
b. Additional requirements for welds performed as a part of a lateral force-resisting system.	X		Table 1705.2.6	<input type="checkbox"/>		AISI S240 Section D6.9. In accordance with AISI S240 Section D6.9.1, continuous special inspection of weld fit-up in lateral force-resisting systems may be reduced to periodic special inspection upon fulfillment of the conditions of Section D6.9.1.

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	2022 NYCBC REFERENCE	CHECK IF REQUIRED	SPECIFICATION REFERENCE AND CLARIFYING NOTES (by RDP) ²	COMMENTARY/NOTES (by DASNY) ³
5. Bracing						
a. Verify that temporary bracing, shoring, jacks, etc., are installed and not removed until no longer necessary, in accordance with the approved construction documents and approved erection drawings.		X	Table 1705.2.6	<input type="checkbox"/>		AISI S240 Section 6
b. Verify that permanent bracing, web stiffeners, bridging, blocking, wind bracing, etc., are installed in accordance with the approved construction documents and approved erection drawings.		X	Table 1705.2.6	<input type="checkbox"/>		AISI S240 Section 6
c. Where a cold-formed steel truss clear span is 60 feet or greater, the special inspector shall verify that the temporary installation restraint/bracing and the and the permanent individual truss member restraint/bracing are installed in accordance with the approved truss submittal package.		X	2211.1.3.2	<input type="checkbox"/>		AISI S240 Section 6.
6. Pre-Installation Document Submittals		X	Table 1705.2.6	<input type="checkbox"/>		AISI S240, Section D3
7. Lateral Force-Resisting System Additional Requirements		X	Table 1705.2.6	<input type="checkbox"/>		AISI S240, Section D6.9
C. Concrete Construction			1704.2, 1705.3, Table 1705.3			Includes inspection of fabricators (precast) where applicable per BC 1704.2.
1. Inspect reinforcement, including prestressing tendons and verify placement.		X	1903.6.2 1907.1 1907.7 1911.4	<input type="checkbox"/>		ACI 318: Sections 3.5, 7.1-7.7
2. Inspection of reinforcing steel welding in accordance with 1705.2, Item 5b..	-	-	1903.5.2	<input type="checkbox"/>		AWS D1.4; ACI 318 Section 3.5.2
3. Inspect anchors cast in concrete.	X		1901.3	<input type="checkbox"/>		ACI 318 Section 17.8.2

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	2022 NYCBC REFERENCE	CHECK IF REQUIRED	SPECIFICATION REFERENCE AND CLARIFYING NOTES (by RDP) ²	COMMENTARY/NOTES (by DASNY) ³
4. Inspect anchors post-installed in hardened concrete members.			1912.1	<input type="checkbox"/>		ACI 318 Section 17.8; Specific requirements for special inspection shall be included in the research report for the anchor issued by an approved source in accordance with 17.8.2 in ACI 318, or other qualification procedures. Where specific requirements are not provided, special inspection requirements shall be specified by the registered design professional and shall be approved by the commissioner prior to the commencement of work.
a. Adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads.	X	X		<input type="checkbox"/>		ACI 318 Section 17.8
b. Mechanical anchors and adhesive anchors not defined in 4a.	X	X		<input type="checkbox"/>		ACI 318 Section 17.8
5. Verifying use of required design mix.		X	1904, 1905.2-1905.4, 1911.3	<input type="checkbox"/>		ACI 318: Chapter 4, 5.2-5.4. Submittal review. Batch plant inspection as specified in the contract documents.
6. Prior to concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of concrete. Determine water content when requirement.	-	-	1905.6, 1911.10	<input type="checkbox"/>		ASTM C172, ASTM C31, ACI 318: 5.6, 5.8. Standard sampling rate shall be in accordance with Section 1905.6.2. 4" x 8" cylinders may be accepted in lieu of 6" x 12" cylinders at the option of the Engineer of Record.
7. Inspection of concrete and shotcrete placement for proper application techniques.			1905.9, 1905.10, 1911.6, 1911.7, 1911.8			ACI 318: 5.9, 5.10. Also includes precast and shotcrete placement. For precast inspection (in-plant) specify PCI-MNL116
a. Inspect concrete and shotcrete placement for proper application techniques.	X		1905.9, 1905.10, 1911.6, 1911.7, 1911.8	<input type="checkbox"/>		ACI 318: 5.9, 5.10. Also includes precast and shotcrete placement. For precast inspection (in-plant) specify PCI-MNL116

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	2022 NYCBC REFERENCE	CHECK IF REQUIRED	SPECIFICATION REFERENCE AND CLARIFYING NOTES (by RDP) ²	COMMENTARY/NOTES (by DASNY) ³
b. For concrete pumped through a placement boom: Following the lubrication of the concrete placement boom and prior to Contractor's commencement of the concrete pour, observe and document as part of the special inspection of the concrete placement whether the material exiting the hose is concrete exhibiting a uniform matrix of aggregate.	X		1905.9, 1905.10, 1911.6, 1911.7, 1911.8	<input type="checkbox"/>		ACI 318: 5.9, 5.10. Also includes precast and shotcrete placement. For precast inspection (in-plant) specify PCI-MNL116
8. Verify maintenance of specified curing temperature and techniques. Monitoring of in-place temperatures per thermal protection plan when required.		X	1905.11, 1905.13, 1911.9	<input type="checkbox"/>		ACI 318: 5.11-5.13. Field inspection of curing process.
9. Inspect prestressed concrete for:						
a. Application of pre-stressing forces	X			<input type="checkbox"/>		ACI 318: 18.20 ACI 318: 18.18.4
b. Grouting of bonded pre-stressing tendons	X			<input type="checkbox"/>		ACI 318: 18.20 ACI 318: 18.18.4
10. Inspect erection of precast concrete members.		X		<input type="checkbox"/>		ACI 318: Chapter 16. Specify PCI-MNL127.
11. Verify in-situ strength, prior to stressing of tendons in post tensioned concrete and prior to removal of shores and forms from beams and structural slabs.		X	1906.2	<input type="checkbox"/>		ACI 318: 6.2. Review field testing and laboratory reports.
12. Inspect formwork for shape, location and dimensions of the concrete member being formed.	X		1906.2	<input type="checkbox"/>		ACI 318: 6.1.1.
D. Masonry Construction <input type="checkbox"/> LB = Level B Inspection <input type="checkbox"/> LC = Level C Inspection			1705.4 Table 1705.4.1 Table 1705.4.3			
Level B Required Special Inspections and Tests of Masonry Construction						
Minimum Tests						
Verification of slump flow and Visual Stability Index (VSI) as delivered to the project site in accordance with TMS 602 Article 1.5.B.1.b.3 for self-consolidating grout.						
Verification of f'm and f'aac in accordance with TMS 602 Article 1.4B prior to construction, except where specifically exempted by this Code.						
Minimum Special Inspection						
1. Verify compliance with inspection provisions of construction documents and approved submittals.		X	Table 1705.4.1	<input type="checkbox"/>		TMS 602 Art 1.5
2. As masonry construction begins, the following shall be verified to ensure compliance:			Table 1705.4.1			

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	2022 NYCBC REFERENCE	CHECK IF REQUIRED	SPECIFICATION REFERENCE AND CLARIFYING NOTES (by RDP) ²	COMMENTARY/NOTES (by DASNY) ³
a. Proportions of site-prepared mortar		X		<input type="checkbox"/>		TMS 602 Art. 2.6A
b. Construction of mortar joints		X		<input type="checkbox"/>		TMS 602 Art. 3.3B
c. Grade and size of prestressing tendons and anchorages.		X		<input type="checkbox"/>		TMS 602 Art. 2.4B, 2.4H
d. Location of reinforcement, connectors, pre-stressing tendons and anchorages.		X		<input type="checkbox"/>		TMS 602 Art. 3.4, 3.6A
e. Prestressing technique.		X		<input type="checkbox"/>		TMS 602 Art. 3.6B
3. Prior to Grouting, the following shall be verified to ensure compliance:			Table 1705.4.1			
a. Grout space.		X		<input type="checkbox"/>		TMS 602 Art. 3.2D
b. Grade, type and size of reinforcement and anchor bolts, and prestressing tendons and anchorages.		X		<input type="checkbox"/>		
c. Placement of reinforcement, connectors, and prestressing tendons and anchorages.		X		<input type="checkbox"/>		TMS 402 Sec. 1.13, TMS 602 Art. 3.4
d. Proportions of site-prepared grout and prestressing grout for bonded tendons.		X		<input type="checkbox"/>		TMS 602 Art. 2.6B
e. Construction of mortar joints.		X		<input type="checkbox"/>		TMS 602 Art. 3.3B
4. Verify during construction:			Table 1705.4.1			
a. Size and location of structural elements.		X		<input type="checkbox"/>		TMS 602 Art. 3.3F
b. Type, size and location of anchors, including other details of anchorage of masonry to structural members, frames or other construction.		X		<input type="checkbox"/>		TMS 402 Sec. 1.2.1(e), 14.4.3
c. Welding of reinforcement.	X			<input type="checkbox"/>		TMS 402 Section 1.2.1(g), 6.1.6.2, 6.1.7.3, 13.7
d. Preparation, construction, and protection of masonry during cold weather (temperature below 40dF) or hot weather (temperature above 90dF).		X	2104.2, 2104.3	<input type="checkbox"/>		TMS 402 Section 3.1.3 TMS 602 Art. 1.8C, 1.8D
e. Preparation of any required grout specimens, mortar specimens and /or prisms shall be observed.		X		<input type="checkbox"/>		TMS 402 Art. 3.1.3 TMS 602 Art. 1.4
f. Application and measurement of prestressing force.	X			<input type="checkbox"/>		TMS 602 Art. 3.6B

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	2022 NYCBC REFERENCE	CHECK IF REQUIRED	SPECIFICATION REFERENCE AND CLARIFYING NOTES (by RDP) ²	COMMENTARY/NOTES (by DASNY) ³
g. Placement of grout and prestressing grout for bonded tendons is in compliance.	X			<input type="checkbox"/>		TMS 602 Art. 3.5, 3.6C
h. Placement of AAC masonry units and construction of thin-bed mortar joints.	X	X		<input type="checkbox"/>		TMS 602 Art. 3.3 B.9, 3.3 F.1.b Continuous inspection required for the first 5,000 square feet of AAC masonry, Periodic inspection required after the first 5,000 square feet of AAC masonry.
i. Grout space is clean.		X		<input type="checkbox"/>		TMS 602 Art. 3.2D
j. Placement of reinforcement and connections, and prestressing tendons and anchorages.		X		<input type="checkbox"/>		TMS 402 Section 6.1.3 and 10.8 TMS 602 Art. 3.3B
k. Proportions of site-prepared grout and prestressing grout for bonded tendons.		X		<input type="checkbox"/>		TMS 602 Art. 2.6B
l. Construction of mortar joints.		X		<input type="checkbox"/>		TMS 602 Art. 3.3B
5. Observe preparation of grout specimens, mortar specimens, and/or prisms.		X	Table 1705.4.1	<input type="checkbox"/>		TMS 602 Art. 1.4B2a3, 1.4B2b3, 1.4B2c3, 1.4B3, 1.4B4, 2.1A
Level C Required Special Inspections and Tests of Masonry Construction						
Minimum Tests						
Verification of f'm and f'aac in accordance with TMS 602 Article 1.4B prior to construction and every 5,000 square feet during construction.						
Verification of proportions of materials in premixed or preblended mortar, prestressing grout, and grout other than self-consolidating grout, as delivered to the project site in accordance with TMS 602 Article 1.5B.						
Verification of Slump flow and Visual Stability Index (VSI) as delivered to the project site in accordance with TMS 602 Article 1.5.B.1.b.3 for self-consolidating grout.						
Minimum Special Inspection						
1. Verify compliance with inspection provisions of construction documents and approved submittals.		X	Table 1705.4.3	<input type="checkbox"/>		TMS 602 Art 1.5
2. Verify that the following are in compliance:			Table 1705.4.3			
a. Proportions of site-prepared mortar, Grout and prestressing grout for bonded tendons.		X		<input type="checkbox"/>		TMS 602 Art. 2.6A
b. Grade, type, and size of reinforcement and anchor bolts, and prestressing grout for bonded tendons.		X		<input type="checkbox"/>		TMS 402 Section 6.1.2, 10.8 TMS 602 Art. 2.4, 3.4
c. Placement of masonry units and construction of mortar joints.	X	X		<input type="checkbox"/>		TMS 602 Art. 3.3B

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	2022 NYCBC REFERENCE	CHECK IF REQUIRED	SPECIFICATION REFERENCE AND CLARIFYING NOTES (by RDP) ²	COMMENTARY/NOTES (by DASNY) ³
d. Placement of reinforcement, connectors, prestressing tendons and anchorages.		X		<input type="checkbox"/>		TMS 402 Section 6.1.2, 10.8 TMS 602 Art. 3.4, 3.6A
e. Grout space prior to grouting.	X			<input type="checkbox"/>		TMS 602 Art. 3.2D
f. Placement of grout and prestressing grout for bonded tendons.	X			<input type="checkbox"/>		TMS 602 Art. 3.5
g. Placement of prestressing grout.	X			<input type="checkbox"/>		TMS 602 Art. 3.6C
h. Size and location of structural elements.		X		<input type="checkbox"/>		TMS 602 Art. 3.3F
i. Type, size and location of anchors, including other details of masonry to structural members, frames, or other construction.	X			<input type="checkbox"/>		TMS 402 Section 1.2.1(e), 14.4.3
j. Welding of reinforcement.	X			<input type="checkbox"/>		TMS 402 Section 1.2.1(g), 6.1.6.1.2, 6.1.7.3, 13.7
k. Preparation, construction and protection of masonry during cold weather (temperature below 40dF) or hot weather (temperature above 90dF).		X	Sec. 2104.2, 2104.3	<input type="checkbox"/>		TMS 602 Art. 1.8C, 1.8D
l. Application and measurement of prestressing force.	X			<input type="checkbox"/>		TMS 602 Art. 3.6B
m. Placement of AAC masonry units and construction of thin-bed mortar joints.	X			<input type="checkbox"/>		TMS 602 Art. 3.3B.9, 3.3F.1.b
n. Properties of thin-bed mortar for AAC masonry.	X			<input type="checkbox"/>		TMS 602 Art. 2.1 C.1
3. Observe preparation of grout specimens, mortar specimens, and/or prisms.	X		Table 1705.4.3	<input type="checkbox"/>		TMS 402Section 3.1.3 TMS 602 Art. 1.4
E. Wood Construction:			1705.5 1704.6			Fabrication of prefabricated structural elements and site-built assemblies.
1. Installation of high-load diaphragms		X	1705.5.1 1704.1	<input type="checkbox"/>		
2. Metal-plate-connected wood trusses		X	1705.5.2 1704.1	<input type="checkbox"/>		
3. Pre-fabricated wood I-joists		X	1705.5.3 1704.2	<input type="checkbox"/>		
4. Other structural wood construction		X	1705.5.4 110.3.3	<input type="checkbox"/>		Progress inspection per BC 110.3.3.
5. Type IV Construction			1705.5.6 Table 1705.5.6			
a. Inspection of anchorage and connections of mass timber construction to timber deep foundation systems		X	1705.7, 2308.3, 2304.10	<input type="checkbox"/>		

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	2022 NYCBC REFERENCE	CHECK IF REQUIRED	SPECIFICATION REFERENCE AND CLARIFYING NOTES (by RDP) ²	COMMENTARY/NOTES (by DASNY) ³
b. Inspect erection of mass timber, including material verification.		X	2303.1.4, 2303.1.10	<input type="checkbox"/>		PRG-320, ASTM D5456
c. Inspection of connections where installation methods are required to meet design loads.			2304.10, 2304.11.1.1 to 2304.11.4			NDS 11-14 ANSI/ASME Standard B18.2.1, B18.6.1 as per connection manufacturer's installation instructions.
1. Threaded fasteners		X	2304.10, 2304.11.1.1 to 2304.11.4	<input type="checkbox"/>		NDS 11-14 ANSI/ASME Standard B18.2.1, B18.6.1 as per connection manufacturer's installation instructions.
a. Verify use of proper installation equipment		X	2304.10, 2304.11.1.1 to 2304.11.4	<input type="checkbox"/>		NDS 11-14 ANSI/ASME Standard B18.2.1, B18.6.1 as per connection manufacturer's installation instructions.
b. Verify use of pre-drilled holes where required		X	2304.10, 2304.11.1.1 to 2304.11.4	<input type="checkbox"/>		NDS 11-14 ANSI/ASME Standard B18.2.1, B18.6.1 as per connection manufacturer's installation instructions.
c. Inspect screws, including diameter, length, head type, spacing, installation angle, and depth		X	2304.10, 2304.11.1.1 to 2304.11.4	<input type="checkbox"/>		NDS 11-14 ANSI/ASME Standard B18.2.1, B18.6.1 as per connection manufacturer's installation instructions.
2. Adhesive anchors installed in horizontal or upwardly inclined orientation to resist sustained tension loads	X		2304.10, 2304.11.1.1 to 2304.11.4	<input type="checkbox"/>		NDS 11-14 ANSI/ASME Standard B18.2.1, B18.6.1 as per connection manufacturer's installation instructions.
3. Adhesive anchors not defined in 3.2		X	2304.10, 2304.11.1.1 to 2304.11.4	<input type="checkbox"/>		NDS 11-14 ANSI/ASME Standard B18.2.1, B18.6.1 as per connection manufacturer's installation instructions.
4. Bolted connections		X	2304.10, 2304.11.1.1 to 2304.11.4	<input type="checkbox"/>		NDS 11-14 ANSI/ASME Standard B18.2.1, B18.6.1 as per connection manufacturer's installation instructions.
5. Concealed connections		X	2304.10, 2304.11.1.1 to 2304.11.4	<input type="checkbox"/>		NDS 11-14 ANSI/ASME Standard B18.2.1, B18.6.1 as per connection manufacturer's installation instructions.
6. Other fastener types		X		<input type="checkbox"/>		
d. Inspection of connections where installation methods are required to meet the fire resistance design in 2304.10.8		X		<input type="checkbox"/>		NDS 16.3

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	2022 NYCBC REFERENCE	CHECK IF REQUIRED	SPECIFICATION REFERENCE AND CLARIFYING NOTES (by RDP) ²	COMMENTARY/NOTES (by DASNY) ³
F. Subsurface Conditions			1705.6 Table 1705.6			
1. Special Inspection of subsurface investigations, borings and test pits.	X		Table 1705.6 1803	<input type="checkbox"/>		Continuous inspection to verify compliance with Section 1803.
2. During fill placement	X		Table 1705.6 1804.5	<input type="checkbox"/>		Review submittals, field testing and inspection. Verify soil types and lift thickness comply with the approved geotechnical report as specified in Section 1804.5.
3. Evaluation of in-place density	X		Table 1705.6	<input type="checkbox"/>		Determine that the in-place dry density of the compacted fill complies with the approved construction documents.
4. Subgrade inspection		X	Table 1705.6	<input type="checkbox"/>		Field inspection and testing to verify that the site has been prepared and is in accordance with the approved geotechnical report.
G. Deep foundation elements	X		1705.7 Table 1705.7			The approved geotechnical report and construction documents prepared by the registered design professionals shall be used to determine compliance.
1. Required Special Inspections and tests of Deep Foundation Elements			Table 1705.7	<input type="checkbox"/>		
a. Verify the identifying designation of the deep foundation element and record the date of installation including the start and end times.	X		Table 1705.7	<input type="checkbox"/>		
b. Verify the size, material, and allowable capacity as specified in the construction documents.	X		Table 1705.7	<input type="checkbox"/>		
c. Record the elevation of the minimum required depth of penetration and record the final tip elevation and butt elevation.	X		Table 1705.7	<input type="checkbox"/>		
d. Record the elevation of splices and note whether or not the splices were installed and located in compliance with the construction documents.	X		Table 1705.7	<input type="checkbox"/>		

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	2022 NYCBC REFERENCE	CHECK IF REQUIRED	SPECIFICATION REFERENCE AND CLARIFYING NOTES (by RDP) ²	COMMENTARY/NOTES (by DASNY) ³
e. For load test requiring a load or reaction frame, inspect the construction of the load or reaction frame. Record the results of the inspection and note whether or not the frame complies with the construction documents prepared by the registered design professional.		X	Table 1705.7	<input type="checkbox"/>		
f. Record the identifying designation for the element being tested, and the date of the testing, including the start and end time.	X		Table 1705.7	<input type="checkbox"/>		
g. Record the method of performing the test, including the equipment being used, as well as the test results, noting whether or not the method of testing and the test results comply with the requirements of sections 1810, 1811, and 1812 and the construction documents.	X		Table 1705.7	<input type="checkbox"/>		
2. Required special inspections of driven and vibrated deep foundation elements			Table 1705.7.1			
a. For driven deep foundation elements, record the type and size of hammer and record the number of blows per foot of penetration from the start of driving until the final blow count required by the construction documents is reached.	X		Table 1705.7.1	<input type="checkbox"/>		
b. For vibrated deep foundation elements, record the equipment and method used for installation and record the time for each foot of penetration from the start of installation until complete.	X		Table 1705.7.1	<input type="checkbox"/>		
3. Required special inspections of drilled deep foundation elements			Table 1705.7.2			

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	2022 NYCBC REFERENCE	CHECK IF REQUIRED	SPECIFICATION REFERENCE AND CLARIFYING NOTES (by RDP) ²	COMMENTARY/NOTES (by DASNY) ³
a. Record the equipment and method used for installation and record the time for each foot of penetration from the start of installation until completion.	X		Table 1705.7.2	<input type="checkbox"/>		
b. For deep foundation elements requiring a rock socket;	X		Table 1705.7.2	<input type="checkbox"/>		
1. Record the equipment and method of drilling the rock socket. Record the top elevation and bottom elevation of rock socket, as well as the time for each foot of drilling	X		Table 1705.7.2	<input type="checkbox"/>		
2. Inspect the rock socket to verify rock quality as required by Section 1812 and the construction documents. Record the results of the inspection and note whether or not the rock socket complies with the requirements of Section 1812.	X		Table 1705.7.2	<input type="checkbox"/>		
4. Required special inspections of driven or drilled cast in place deep foundation elements			Table 1705.7.3			
a. Prior to placing concrete, inspect the inside of the pile for alignment and damage. Record the results of the inspection, noting whether or not the pile is in compliance with Section 1812 and the construction documents.	X		Table 1705.7.3	<input type="checkbox"/>		

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	2022 NYCBC REFERENCE	CHECK IF REQUIRED	SPECIFICATION REFERENCE AND CLARIFYING NOTES (by RDP) ²	COMMENTARY/NOTES (by DASNY) ³
b. Witness the placement of concrete or grout inside the deep foundation element, and record the volume placed. Note the date and time of placement, and whether or not the concrete or grout was placed in compliance with Section 1812 and the construction documents.	X		Table 1705.7.3	<input type="checkbox"/>		
5. Required special inspections of prestressed soil and rock anchors.			Table 1705.8.1			
a. Special inspection of casing installation.	X		Table 1705.8.1	<input type="checkbox"/>		
b. Special inspection of anchor materials.	X		Table 1705.8.1 1815.13	<input type="checkbox"/>		ASTM A722, ASTM A416, ASTM A882
c. Special inspection of anchor installation.	X		Table 1705.8.1	<input type="checkbox"/>		PTI DC35.1-14 (Sections 8.1-8.9)
d. Special inspection of grout – preparation of 3" diameter grout cylinders.	X		Table 1705.8.1 1812.1.1.2.1	<input type="checkbox"/>		ASTM C31/C31M
e. Special inspection of grout – determination of specific gravity of grout.	X		Table 1705.8.1	<input type="checkbox"/>		American Petroleum Group (API) Recommended Practice 13B-1 ASTM C138
f. Special inspection of grout – compressive strength verification.	X		Table 1705.8.1 1812.1.1.2.2	<input type="checkbox"/>		ASTM C39
g. Special inspection of load test.	X		Table 1705.8.1 1815.5	<input type="checkbox"/>		PTI DC35.1-14 (Sections 8.1-8.9)
H. Helical Pile Foundations	X		1705.9 Section 28-113.2.2 of the Administrative Code	<input type="checkbox"/>		Continuous installation during helical pile installation.
I. Special Inspections for seismic resistance			1705.12			
1. Designated Seismic Systems		X	1705.12.1 Section 13.2.2 of ASCE 7	<input type="checkbox"/>		SDC C or D
2. Access Floors		X	1705.12.2	<input type="checkbox"/>		SDC D
3. Plumbing, mechanical, fuel gas, and electrical components		X	1705.12.3	<input type="checkbox"/>		SDC C or D
4. Storage Racks		X	1705.12.4	<input type="checkbox"/>		SDC C or D
5. Seismic Isolation Systems		X	1705.12.5	<input type="checkbox"/>		SDC B, C, or D during the fabrication and installation of isolator units and energy dissipation devices.
J. Testing for seismic resistance			1705.13			

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	2022 NYCBC REFERENCE	CHECK IF REQUIRED	SPECIFICATION REFERENCE AND CLARIFYING NOTES (by RDP) ²	COMMENTARY/NOTES (by DASNY) ³
1. Nonstructural components		X	1705.13.1	<input type="checkbox"/>		SDC B, C, or D
2. Designated seismic systems		X	1705.13.2	<input type="checkbox"/>		SDC B, C, or D
3. Seismic isolation systems		X	1705.13.3	<input type="checkbox"/>		SDC B, C, or D
K. Sprayed Fire-Resistant Materials (SFRM)			1705.14			Per AWCI 12-A
1. Structural member surface conditions		X	1705.14.2	<input type="checkbox"/>		The prepared surface of structural members to be sprayed shall be inspected before the application of the SFRM.
2. Application		X	1705.14.3	<input type="checkbox"/>		Verify ambient temperature and ventilation requirements before and after application.
3. Thickness		X	1705.14.4	<input type="checkbox"/>		Field test
4. Density		X	1705.14.5	<input type="checkbox"/>		Collect field sample, test in laboratory in accordance with ASTM E605.
5. Bond strength		X	1705.14.6	<input type="checkbox"/>		Field test in accordance with ASTM E736.
6. Inspection of existing SFRM materials during alterations in office spaces and spaces classified in Occupancy Group B		X	1705.14.7	<input type="checkbox"/>		Classified in Occupancy Group B.
L. Mastic and intumescent fire-resistant coatings		X	1705.15	<input type="checkbox"/>		Per AWCI 12-B
M. Combustible Exterior Wall Coverings			1705.16			Applications installed more than 15 feet above grade.
1. Inspection Program		X	1705.16.1	<input type="checkbox"/>		Verification of compliance with approved construction documents.
2. Water-resistive Barrier Coating		X	1705.16.2	<input type="checkbox"/>		ASTM E2570
3. Thermal Barrier		X	1705.16.3	<input type="checkbox"/>		
4. Fireblocking		X	1705.16.4	<input type="checkbox"/>		
N. Fire-resistant penetrations and joints			1705.17	<input checked="" type="checkbox"/>		
O. Testing for Smoke Control		X	1705.18, 909	<input type="checkbox"/>		Inspect during ductwork, erection and system testing.
P. Vertical Masonry Foundation Elements		X	1705.19	<input type="checkbox"/>		
Q. Wall panels, curtain walls and veneers		X	1705.20 1705.4 1705.16	<input type="checkbox"/>		
R. Special Inspection for Mechanical Systems		X	1705.21 Section 28-116.4.1 of the Administrative Code	<input checked="" type="checkbox"/>		Includes interior and exterior mechanical systems and equipment.
S. Special Inspection for Fuel Storage and Fuel Piping Systems		X	1705.22 NYCMC Section 1305	<input type="checkbox"/>		Inspection for conformance with the approved CD's and manufacturers' requirements.

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	2022 NYCBC REFERENCE	CHECK IF REQUIRED	SPECIFICATION REFERENCE AND CLARIFYING NOTES (by RDP) ²	COMMENTARY/NOTES (by DASNY) ³
T. High Pressure Steam piping and High Temperature Hot Water Piping		X	1705.23 1705.12 NYCMC Section 1211	<input type="checkbox"/>		Welder qualifications, welding procedures and operations, hydrostatic testing
U. High-pressure-gas piping		X	1705.24 NYCFG	<input type="checkbox"/>		Welder qualifications, welding procedures and operations, pressure testing
V. Structural Stability			1705.25			
1. Alterations to existing structures		X	1705.25.1	<input type="checkbox"/>		Applicable to structural alterations.
2. Construction operations influencing adjacent structures		X	1705.25.2	<input type="checkbox"/>		
3. Excavations		X	1705.25.3 3304.4.1	<input type="checkbox"/>		Methods employed to protect the sides of excavations.
3. Underpinning and alternate methods of support of buildings and adjacent property.		X	1705.25.4	<input type="checkbox"/>		
4. Demolition		X	1705.25.5	<input type="checkbox"/>		For use of mechanical means and methods of demolition equipment other than handheld devices.
5. Raising and moving of a building		X	1705.25.6	<input type="checkbox"/>		
6. Inspection program		X	1705.25.7	<input type="checkbox"/>		Prior to commencement special inspection agency shall review and confirm all approved documents detail areas requiring structural stability temporary protections and sequence.
7. Design documents		X	1705.25.8	<input type="checkbox"/>		Documents detailing work associated with the structural stability protection methods have been filed with NYCDOB.
8. Inspection during construction operations		X	1705.25.9	<input type="checkbox"/>		
9. Records of special inspections		X	1705.25.10	<input type="checkbox"/>		SIA to maintain a special inspection logbook.
W. Tenant Protection Plan Compliance		X	1705.26	<input type="checkbox"/>		SIA to verify work complies with the approved Tenant Protection Plan.
X. Private on-site storm water disposal systems and detention facilities		X	1705.27	<input type="checkbox"/>		Applies to storm water detention, roof retention and dry well systems.
Y. Individual on-site private sewage disposal systems		X	1705.28	<input type="checkbox"/>		
Z. Sprinkler System Special Inspection		X	1705.29	<input type="checkbox"/>		Applies to new and altered systems.
AA. Standpipe System Special Inspection		X	1705.30	<input type="checkbox"/>		

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	2022 NYCBC REFERENCE	CHECK IF REQUIRED	SPECIFICATION REFERENCE AND CLARIFYING NOTES (by RDP) ²	COMMENTARY/NOTES (by DASNY) ³
BB. Heating Systems		X	1705.31 1705.12 NYCMC Section 1011	<input type="checkbox"/>		
CC. Chimneys and Vents		X	1705.32	<input type="checkbox"/>		
DD. Aluminum construction	X		1705.33	<input type="checkbox"/>		Applies to structural aluminum elements and related welding operations in accordance with AWS D1.2.
EE. Flood zone compliance		X	1705.34 Appendix G BC G107	<input type="checkbox"/>		
FF. Luminous exit path markings		X	1705.35 1704 1025.8	<input type="checkbox"/>		
GG. Emergency and standby power systems (generators)		X	1705.36	<input type="checkbox"/>		Generators
HH. Post-installed anchors		X	1705.37 Table 1705.37 Section 28- 113.2.2 of the Administrative Code			Mechanical, adhesive and screw anchors.
1. Preparation, placement, type, size and location of anchors, including other details of anchors, installed in hardened concrete and to another construction.			Table 1705.37 1901.1	<input type="checkbox"/>		
a. Adhesive anchors installed horizontally or upwardly inclined orientations to resist sustained tension loads.	X		Table 1705.37 1901.1	<input type="checkbox"/>		ACI 318 17.8.2.4, ACI 318-11 D.9.2.4
b. Mechanical anchors and adhesive anchors not defined in 1. a.		X	Table 1705.37 1901.1	<input type="checkbox"/>		ACI 318 17.9.2
2. Preparation, placement, type, size and location of anchors, including details of anchors, installed in masonry, and installed to masonry and to another construction.		X	Table 1705.37 Applicable NYCDOB Procedures	<input type="checkbox"/>		Manufacturer's specifications and installation instructions.
3. Preparation, placement, type, size and location of anchors, including other details of anchors, installed in stone, and installed to stone and to another construction.		X	Table 1705.37	<input type="checkbox"/>		Manufacturer's specifications and installation instructions.
II. Special Inspection for nonpotable water systems		X	1705.38 NYCPC Chapter 13	<input type="checkbox"/>		

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	2022 NYCBC REFERENCE	CHECK IF REQUIRED	SPECIFICATION REFERENCE AND CLARIFYING NOTES (by RDP) ²	COMMENTARY/NOTES (by DASNY) ³
JJ. Special inspection for exhaust and vent systems in plenums and ducts		X	1705.39 NYCMC Section 601.4			
KK. Progress Inspections	-	-				
1. Preliminary	-	-	110.2	<input type="checkbox"/>		
2. Footing & Foundation	-	-	110.3.1	<input type="checkbox"/>		
3. Lowest Floor Elevation	-	-	110.3.2	<input type="checkbox"/>		
4. Structural Wood Frame	-	-	110.3.3	<input type="checkbox"/>		
5. Fire-Resistance Rated Construction	-	-	110.3.4	<input type="checkbox"/>		
6. Energy Code Compliance	-	-	110.3.5	<input type="checkbox"/>		
7. Tenant Protection Plan Compliance Inspections	-	-	110.3.7 Article 120 of Title 28 of the Administrative Code	<input type="checkbox"/>		
8. Final	-	-	110.5	<input checked="" type="checkbox"/>		
GG. Other Chapter 17 Requirements						Indicate if requirements of BC 1711 are applicable.
1.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		
2.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		
3.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		
4.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		
5.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		
6.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		

TABLE LEGEND:

NYCDOB - New York City Department of Buildings
 RDP – Registered Design Professional (A/E – Architect/Engineer)
 SDC – Seismic Design Category
 SIA – Special Inspection Agency
 NYCBC – 2022 New York City Building Code
 NYCMC – 2022 New York City Mechanical Code
 NYCFG – 2022 New York City Fuel Gas Code
 NYCPC – 2022 New York City Plumbing Code
 AISC – American Institute of Steel Construction
 RCSC – Research Council for Structural Connections
 AWS – American Welding Society
 ACI – American Concrete Institute

NOTES:

1. Completion of this form by the Registered Design Professional (RDP) is a DASNY 60% design review submission requirement and is considered separate from the TR1: Technical Report Statement of Responsibility form required to be filed with the New York City Department of Buildings.
2. RDP to provide reference specification section detailing the requirements for inspections and/or tests and other clarifying notes, as necessary.
3. Commentary/Notes by DASNY are provided for information and are not intended to provide complete details of the required tests and inspections. Refer to the 2014 NYCBC for complete and detailed requirements.

GENERAL REQUIREMENTS for CONSTRUCTION

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contract Documents, including but not limited to, the Drawings and Individual Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
- B. Related Sections:
 - 1. Section 011200 – Contract Summary of Work, for work restrictions and limitations on utility interruptions.

1.3 USE CHARGES

- A. Water and Sewer Service from Existing System: Water from the Owner's existing water system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.
- B. Electric Power Service from Existing System: Electric power from the Owner's existing system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.

1.4 INFORMATIONAL SUBMITTALS

- A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.
- B. Moisture-Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage; including delivery, handling, and storage provisions for materials subject to water absorption or water damage, discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and replacing water damaged Work.
- C. Dust-Control and HVAC-Control Plan: Submit coordination drawing and narrative that indicates the dust-control and HVAC-control measures proposed for use, proposed locations, and proposed time frame for their operation. Identify further options if proposed measures are later determined to be inadequate. Include the following:
 - 1. Locations of dust-control partitions at each phase of the work.

GENERAL REQUIREMENTS for CONSTRUCTION

2. HVAC system isolation schematic drawing.
3. Location of proposed air filtration system discharge.
4. Other dust-control measures.
5. Waste management plan.

1.5 QUALITY ASSURANCE

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations and requirements of authority having jurisdiction for temporary electric service. Install service to comply with NFPA 70.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.
- C. Accessible Temporary Egress: Comply with applicable provisions in ADA-ABA Accessibility Guidelines and ANSI A117.1.

1.6 PROJECT CONDITIONS

- A. Temporary Use of Permanent Facilities: Engage installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before the Owner's acceptance, regardless of previously assigned responsibilities. Temporary use of permanent facilities during construction may be allowed at the sole discretion of the Owner.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Polyethylene Sheet: Reinforced, fire-resistive sheet, 10 mils minimum thickness, with flame-spread rating of 15 or less per ASTM E 84.
- B. Dust Control Adhesive-Surface Walk-off Mats: Provide mats minimum 36 by 60 inches.
- C. Insulation: Unfaced mineral-fiber blanket, manufactured from glass, slag wool, or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively. |

2.2 TEMPORARY FACILITIES

- A. Field Offices, General: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading.
- B. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.
 1. Store combustible materials apart from building. |

GENERAL REQUIREMENTS for CONSTRUCTION

2.3 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
- B. HVAC Equipment: Unless the Owner authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.
 - 1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
 - 2. Heating Units: Listed and labeled for type of fuel being consumed, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
 - 3. Permanent HVAC System: If the Owner authorizes use of permanent HVAC system for temporary use during construction, provide filter with MERV of 8 at each return air grille in the system and replace as needed in accordance with the filter manufacturers recommendations. Remove at end of construction. |

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

- A. General: Install temporary service or connect to existing service.
 - 1. Arrange with utility company, the Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
- B. Isolation of Work Areas in Occupied Facilities: Prevent dust, fumes, and odors from entering occupied areas.
 - 1. Prior to commencing work, isolate the HVAC system in area where work is to be performed in accordance with approved coordination drawings.
 - a. Disconnect supply and return ductwork in work area from HVAC systems servicing occupied areas.
 - b. Maintain negative air pressure within work area using HEPA-equipped air filtration units, starting with commencement of temporary partition construction, and continuing until removal of temporary partitions is complete.

GENERAL REQUIREMENTS for CONSTRUCTION

2. Maintain dust partitions during the Work. Use vacuum collection attachments on dust-producing equipment. Isolate limited work within occupied areas using portable dust containment devices.
 3. Perform daily construction cleanup and final cleanup using approved, HEPA-filter-equipped vacuum equipment.
- C. Ventilation and Humidity Control: Provide temporary ventilation required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce ambient condition required and minimize energy consumption.
- D. Electric Power Service: Connect to the Owner's existing electric power service. Maintain equipment in a condition acceptable to the Owner. Obtain all required permits.
1. Connect temporary service to the Owner's existing power source, as directed by the Owner.
- E. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.

3.3 SUPPORT FACILITIES INSTALLATION

- A. General: Comply with the following:
1. Provide construction for temporary offices, shops, and sheds located within construction area or within 30 feet of building lines that is noncombustible according to ASTM E 136. Comply with NFPA 241.
 2. Maintain support facilities until Substantial Completion inspection date is scheduled. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to the Owner.
- B. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.
1. Temporary Signs: Provide other signs as required to inform public and individuals seeking entrance to the Project.
 - a. Provide temporary, directional signs for construction personnel and visitors.
 2. Maintain and touchup signs so they are legible at all times.
- C. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction.
- D. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.
1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.
- E. Temporary Elevator Use: Use of elevators is not permitted.

GENERAL REQUIREMENTS for CONSTRUCTION

- F. Existing Stair Usage: Use of the Owner's existing stairs will be permitted, provided stairs are cleaned and maintained in a condition acceptable to the Owner. At Substantial Completion, restore stairs to condition existing before initial use.
 - 1. Provide protective coverings, barriers, devices, signs, or other procedures to protect stairs and to maintain means of egress. If stairs become damaged, restore damaged areas so no evidence remains of correction work. |

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
- B. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each work day.
- C. Temporary Partitions: Provide floor-to-ceiling dustproof partitions to limit dust and dirt migration and to separate areas occupied by the Owner from fumes and noise.
 - 1. Construct dustproof partitions with fire rated gypsum wallboard with joints taped on occupied side, and fire-retardant plywood on construction operations side.
 - 2. Where fire-resistance-rated temporary partitions are required by authorities having jurisdiction, construct partitions according to the rated assemblies.
 - 3. Insulate partitions to control noise transmission to occupied areas.
 - 4. Seal joints and perimeter. Equip partitions with gasketed dustproof doors and security locks where openings are required.
 - 5. Protect air-handling equipment.
 - 6. Provide walk-off mats at each entrance through temporary partition.
- D. Fire Safety During Construction: Comply with all requirements identified herein as well as the more stringent requirements of the applicable codes (New York State Building and Fire Codes or New York City Building and Fire Codes).
 - 1. No smoking: Smoking shall be prohibited throughout the project/construction site. "No Smoking" signs shall be conspicuously posted at all entrances and throughout the site. |

3.5 MOISTURE AND MOLD CONTROL

- A. Contractor's Moisture-Protection Plan: Avoid trapping water in finished work. Document visible signs of mold that may appear during construction.

3.6 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.

GENERAL REQUIREMENTS for CONSTRUCTION

1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.

C. Termination and Removal:

1. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 017700 – Contract Closeout Requirements.

END OF SECTION 015000

GENERAL REQUIREMENTS for CONSTRUCTION

SECTION 016000 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contract Documents, including but not limited to, the Drawings and Individual Specification Sections and Contractor's Submittal Schedule, apply to this section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for selection of products for use in the Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.
- B. Related Sections:
 - 1. Section 013300 – Submittal Procedure, for product submittals.

1.3 DEFINITIONS

- A. Products: Items obtained for incorporating into the Work of the Contract and purchased new for the Project. The term "product" includes the terms "material," "equipment," and "system."
 - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
 - 2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
 - 3. Comparable Product: Product that is demonstrated and approved through submittal process to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Procurement Exemption Approval Product Specification: A specification in which a specific manufacturer's product is named including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes as a single source or sole source provider.

1.4 ACTION SUBMITTALS

- A. Comparable Product Requests: Submit request for consideration of each comparable product. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

GENERAL REQUIREMENTS for CONSTRUCTION

1. Include data to indicate compliance with the requirements specified in "Comparable Products" from Article 5, Section 5.04 of the General Conditions.
 2. Design Professional's Action: If necessary, the Design Professional will request additional information or documentation for evaluation within one week of receipt of a comparable product request. The Design Professional will notify the Contractor through the Owner of approval or rejection of proposed comparable product request within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
 - a. Form of Approval: As specified in Section 013300 - Submittal Procedure.
 - b. Use product specified if the Design Professional does not issue a decision on use of a comparable product request within time allocated.
- B. Procurement Exemption Approval Product Specification Submittal: Comply with requirements in Section 013300 - Submittal Procedure. Show compliance with requirements.

1.5 QUALITY ASSURANCE

- A. Compatibility of Options: If the Contractor is given option of selecting between two or more products for use on the Project, select product compatible with products previously selected, even if previously selected products were also options.
1. Each contractor is responsible for providing products and construction methods compatible with products and construction methods of other contractors.
 2. If a dispute arises between contractors over concurrently selectable but incompatible products, the Design Professional will determine which products shall be used.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.
- B. Delivery and Handling:
1. Schedule delivery to minimize long-term storage at the Project site and to prevent overcrowding of construction spaces.
 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
 3. Deliver products to the Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 4. Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and properly protected.
- C. Storage:
1. Store products to allow for inspection and measurement of quantity or counting of units.

GENERAL REQUIREMENTS for CONSTRUCTION

2. Store materials in a manner that will not endanger the Project structure.
3. Store products that are subject to damage by the elements under cover in a weather tight enclosure above ground, with ventilation adequate to prevent condensation.
4. Store foam plastic protected from exposure to sunlight, except to extent necessary for period of installation and concealment.
5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
6. Protect stored products from damage and liquids from freezing.

1.7 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of obligations under requirements of the Contract Documents.
 1. Manufacturer's Warranty: Written warranty furnished by individual manufacturer for a particular product and specifically endorsed by manufacturer to the Owner.
 2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for the Owner.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.
 1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
 2. Refer to individual specification sections for specific content requirements and particular requirements for submitting special warranties.
- C. Submittal Time: Comply with requirements in Section 013300 – Submittal Procedure.

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and new at time of installation.
 1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 3. The Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
 4. Where products are accompanied by the term "as selected," the Design Professional will make selection.

GENERAL REQUIREMENTS for CONSTRUCTION

5. Descriptive, performance, and reference standard requirements in the Specifications establish characteristics of products.
6. Or Equal: For products specified by name and accompanied by the term "or equal," or "or approved equal," or "or approved," comply with requirements in "Comparable Products" Article to obtain approval for use of an unnamed product.
7. Provide products that do not contain asbestos.

B. Product Selection Procedures:

1. Product: Where Specifications include a procurement exemption approval and name a single source, sole source, manufacturer and product, provide the named product that complies with requirements. Comparable products or substitutions for the Contractor's convenience will not be considered.
2. Manufacturer/Source: Where Specifications include a procurement exemption approval and name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements. Comparable products or substitutions for the Contractor's convenience will not be considered.
3. Products: Where Specifications include a list of names of both available manufacturers and products, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product.
4. Manufacturers: Where Specifications include a list of available manufacturers, provide a product by one of the manufacturers listed, or a product by an unnamed manufacturer, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed manufacturer's product.

C. Visual Matching Specification: Where Specifications require "match sample", provide a product that complies with requirements and matches sample. The Owner's decision will be final on whether a proposed product matches.

1. If no product available within specified category matches and complies with other specified requirements, comply with requirements in "Comparable Products" Article for consideration of an unnamed manufacturer's product.

D. Visual Selection Specification: Where Specifications include the phrase "as selected from manufacturer's full range", select a product that complies with requirements. The Design Professional will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.2 COMPARABLE PRODUCTS

A. Conditions for Consideration: The Design Professional will consider the Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, the Design Professional may return requests without action, except to record noncompliance with these requirements:

1. Action Submittal shall be provided in accordance with Submittal Procedures within 60 days after Notice to Proceed.

GENERAL REQUIREMENTS for CONSTRUCTION

2. Evidence that the proposed product does not require revisions to the Contract Documents that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
 3. Detailed comparison of qualities of proposed product with those named in the Specifications, including attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
 4. Evidence that proposed product provides specified warranty.
 5. List of similar installations for completed projects with project names and addresses and names and addresses of design professionals and owners, if requested.
 6. Samples, if requested.
- B. Comparable Products Costs: Any costs savings to an approved Comparable Product identified and realized by the Contractor shall be shared equal between the Owner (50%) and Contractor (50%).

PART 3 - EXECUTION (Not Used)

END OF SECTION 016000

GENERAL REQUIREMENTS for CONSTRUCTION

SECTION 017329 - CUTTING AND PATCHING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contract Documents, including but not limited to, the Drawings and Individual Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes procedural requirements for cutting and patching.
- B. Responsibility: Contractor is responsible for the cutting and patching to permit installation or performance of Work of their contract.
- C. Related Sections include the following:
 - 1. Individual Specification Sections.

1.3 DEFINITIONS

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

1.4 SUBMITTALS

- A. Cutting and Patching Proposal: Submit a proposal describing procedures at least 10 days before the time cutting and patching will be performed, requesting approval to proceed. Include the following information:
 - 1. Extent: At each occurrence, describe cutting and patching, show how they will be performed, and indicate why they cannot be avoided.
 - 2. Changes to In-Place Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building's appearance and other significant visual elements.
 - 3. Products: List products to be used and firms or entities that will perform the Work.
 - 4. Dates: Indicate when cutting and patching will be performed.
 - 5. Utility Services and Mechanical/Electrical Systems: List services/systems that cutting and patching procedures will disturb or affect. List services/systems that will be relocated and those that will be temporarily out of service. Indicate how long services/systems will be disrupted.

GENERAL REQUIREMENTS for CONSTRUCTION

6. Structural Elements: Where cutting and patching involve adding reinforcement to structural elements, submit details and engineering calculations showing integration of reinforcement with original structure.
7. Design Professional's Approval: Obtain approval of cutting and patching proposal before cutting and patching. Approval does not waive right to later require removal and replacement of unsatisfactory work.

1.5 QUALITY ASSURANCE

- A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.
- B. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that result in increased maintenance or decreased operational life or safety.
- C. Fire Rated Elements: Do not cut and patch fire rated elements (i.e. floors, walls, roofs, shafts, etc.) in a manner that results in reducing their capacity to perform as intended or that results in decreased fire rating.
- D. Miscellaneous Elements: Do not cut and patch miscellaneous elements or related components in a manner that could change their load-carrying capacity, which results in reducing their capacity to perform as intended, or that result in increased maintenance or decreased operational life or safety.
- E. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in Design Professional's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
- F. Cutting and Patching Conference: Before proceeding, meet at Project site with parties involved in cutting and patching, including other trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

1.6 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.

GENERAL REQUIREMENTS for CONSTRUCTION

- B. In-Place Materials: Use materials identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
 - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of in-place materials, unless specified otherwise in other Sections.
- C. Fire Rated Elements: Provide firestopping products/systems specified in system design listings by approved testing agencies that conform to the construction type, penetrating item, annular space requirements and fire rating involved in each separate assembly. Refer to applicable Individual Specification Sections.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.
 - 1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with in-place finishes or primers.
 - 2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Temporary Support: Provide temporary support of Work to be cut.
- B. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- D. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting or patching to minimize interruption to occupied areas.

3.3 PERFORMANCE

- A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
 - 1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.

GENERAL REQUIREMENTS for CONSTRUCTION

- B. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction.
1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 3. Concrete or Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 4. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
 5. Proceed with patching after construction operations requiring cutting are complete.
- C. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.
1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
 2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
 - a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
 - b. Restore damaged pipe covering to its original condition.
 3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
 - a. Where patching occurs in a painted surface, apply primer and intermediate paint coats over the patch and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.
 4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
 5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.
 6. Fire Rated Elements: Install firestopping systems to comply with applicable Individual Specification Sections and firestopping manufacturer's written installation instructions and published drawings for products and applications.

GENERAL REQUIREMENTS for CONSTRUCTION

- D. Cleaning: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials.

END OF SECTION 017329

GENERAL REQUIREMENTS for CONSTRUCTION

SECTION 017419 – CONSTRUCTION WASTE MANAGEMENT

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes requirements for Construction Waste Management (CWM), with criteria for recycling and/or salvaging demolition and construction waste generated during the project. A Construction Waste Management Plan shall be developed for approval by the Construction Manager and DASNY Project Manager. The Plan shall be implemented throughout the duration of the project, and shall be documented in accordance with the SUBMITTALS Article below.
 - 1. CWM is included as part of the LEED building goals for the project, which are established in alignment with the DASNY Sustainability Policy for Construction, and the project goals of the Owner.
- B. Responsible parties:
 - 1. Locations for removal bins or dumpsters shall be coordinated with DASNY's Project Manager.
 - 2. Each contractor shall supply a CWM plan detailing the means and methods for recycling job site waste. Following the award of contract, the Contractors shall identify a single entity to act as the construction waste manager.
 - 3. All Contractors will receive and sign-off on the CWM plan. They will be responsible for adherence to the plan through management of their work on-site and the waste generated under their contract.
 - a. Sign-off and adherence to the plan applies even when a separate bid package is established for the CWM.
- C. Resources
 - 1. NY CD Resource Center
727 East Washington Street
Syracuse, New York 13210
Bgriffin@syracusecoe.org (315) 443-9747

Initiated with support from Empire State Development, The NY CD Resource Center supports and promotes the growth of C&D recycling and building materials reuse (BMR) in New York State through a variety of market-development and network-building activities. Key among these activities is the provision of C&D materials management training to New York contractors and haulers, many of whom want to increase recycling at construction sites but need help getting started. The program also offers on-site assistance at construction sites.

- 2. ESD Recycling Market Information Database.
<http://appcenter.nylovesbiz.com/esdrecycling/>.

GENERAL REQUIREMENTS for CONSTRUCTION

1.02 PERFORMANCE REQUIREMENTS

- A. Each Contract shall prepare and submit a CWM Plan to the Design Professional for approval. The CWM Plan shall outline the provisions to be implemented to salvage for reuse or to recycle demolition and construction waste generated during the project.
 - 1. The end-of-project recycling rate when possible shall equal, at minimum, 75 percent for 2 LEED credits (by weight) of the total waste from construction, demolition, and land clearing activities.
 - a. Contractors are encouraged to achieve higher levels of diversion from landfill if possible, as this benefits long-term landfill management and the LEED rating system awards additional points if exemplary performance levels are reached.
- B. The approved CWM Plan shall be implemented throughout the duration of the project and documented in accordance with the SUBMITTALS Article below.
- C. The CWM Plan shall include, but not be limited to, the following components:
 - 1. Re-Used materials/equipment: Materials or equipment to be removed from the site or turned over to the State shall be documented.
 - a. Documentation shall include the materials turned over, weight or quantity of materials/equipment and a letter on company letterhead indicating the intended use of items.
 - 2. Listing of Targeted Materials: Develop a list of the waste materials from the Project that will be targeted for reuse, salvage, or recycling. The following materials shall be accounted for (materials that will not be recycled shall be indicated as such):
 - a. Cardboard, paper, packaging
 - b. Acoustical Ceiling Tiles
 - c. Clean dimensional wood, palette wood
 - d. Beverage containers
 - e. Land clearing debris
 - f. Concrete
 - g. Stone
 - h. Concrete Masonry Units (CMU)
 - i. Asphalt
 - j. Metals from banding, stud trim, ductwork, piping, rebar, roofing, windows, other trim, steel, iron, galvanized sheet steel, stainless steel, aluminum, copper, zinc, lead, brass, and bronze
 - k. Gypsum board
 - l. Carpet and pad
 - m. Paint
 - n. Asphalt roofing shingles if applicable for any existing building demolition
 - o. Rigid Foam
 - p. Glass
 - q. Plastics
 - r. Woods

GENERAL REQUIREMENTS for CONSTRUCTION

3. **Sorting Method:** Provide a description of the proposed means of sorting and transporting the recyclable materials (whether materials will be on-site sorted and then hauled to designated centers, or whether mixed materials will be collected by a waste hauler and removed from the site for off-site sorting).
4. **Recycling facilities:** Provide the name of the recycling facilities(s) where materials will be sent for recycling, how it will be recycled, and the applicable fee(s).
5. **Landfill Information:** Provide the name of the landfill(s) where trash will be disposed of and the applicable landfill tipping fee(s).
6. **Additional Information:** Include any additional information deemed relevant to describe the scope and intent of the CWM Plan to the Design Professional.
7. **Subcontractor Requirements:** Construction Waste Management and recycling requirements shall be incorporated into all Subcontractors' contracts.

1.03 SUBMITTALS

A. Submittal Requirements:

1. A copy of the CWM Plan, as defined in the PERFORMANCE REQUIREMENTS Article above.
2. Contractors shall submit a monthly Waste Management submission.
 - a. This submission shall include waste receipts and a completed Waste Management Form. (a sample form is included at the end of this Section identified as Exhibit "A")
3. Calculations and supporting documentation to demonstrate end-of-project recycling rates meeting the requirements of the CWM Plan. Note: These calculations and supporting documentation are required regardless of method of processing (on-site or off-site separations). Use these Solid Waste Conversion Factors only if tipping tickets are not available if the weight in each dumpster or container is not directly measured.

Solid Weight Conversion Factors	
Mixed Waste	350 lbs/cubic yard
Wood	300 lbs/cubic yard
Cardboard	100 lbs/cubic yard
Gypsum Board	500 lbs/cubic yard
Rubble	1,400 lbs/cubic yard
Steel	1,000 lbs/cubic yard

- b. Record and document the total weight (in tons) of all demolition and construction waste materials sent to the landfill, or recycled or salvaged. Monthly Waste Management Reporting Forms shall be used as the basis for determining the total amount of waste recycled or salvaged for the project. The monthly reporting forms shall specify:

GENERAL REQUIREMENTS for CONSTRUCTION

- 1) The number of dumpsters or other containers of recycled or salvaged materials for that month.
 - 2) The volume (in cubic yards) of each dumpster or container of recycled or salvaged materials for that month.
 - 3) The type of recycled or salvaged material contained in each dumpster or container.
 - 4) The weight of the recycled or salvaged material in each dumpster or container. For materials not contained in the Solid Waste Conversion Factors above propose a conversion factor for review by the Design Professional.
 - 5) In addition, provide the name of the receiving facilities/companies that will be purchasing or accepting the recycled or salvaged materials. Receipts or other proof of facility reception of materials is required.
 - 6) For materials separated for recycling off-site, establish a method for tracking the weight of the recycled material. The method shall be included in the CWM Plan for the Design Professional review and approval.
- c. In the case of off-site separation, ensure the transfer station used will provide tickets with required information on delivery weights (or volume with appropriate conversions), and proof of recycling rates for reporting.
 - d. Calculate the end-of-project recycling rate percentage by dividing the recycled and salvaged waste (in tons) by the total waste generated (recycled, salvaged, and landfilled waste – also in tons), and multiplying by 100.
 - e. For materials turned over to others for reuse, provide documentation on company letterhead indicating the material(s), the quantity (either by weight or units), the date and the intended reuse of the product.

PART 3 EXECUTION

3.01 IMPLEMENTATION

The following implementations of the CWM Plan will be the responsibility of either the Contractor for the Construction Work or the CWM Contractor if that work is bid out under separate contract.

- A. Containers: Provide containers and the removal of all waste, non-returned surplus materials, and rubbish from the site in accordance with the Waste Management Plan. Oversee and document the results of the Plan. The Prime Contractors shall be responsible for collecting, sorting, and depositing in designated areas, their waste, non-returned surplus materials, and rubbish, as per the CWM Plan.
- B. Instruction: Provide on-site instruction of appropriate separation, handling and recycling, salvage, reuse and return methods to be used by all parties in appropriate stages of the Project.

GENERAL REQUIREMENTS for CONSTRUCTION

- C. Separation of materials: Recycling and waste bin areas are to be kept neat and clean, and clearly marked.
 - 1 On-site separation: Lay out a specific area(s) to facilitate separation of materials for potential recycling, salvage, reuse and return. Each potential material shall be collected and stored to avoid being mixed with other materials
 - 2. Off-site separation: Lay out an area for collection of mingled recyclable and waste materials, to be picked up and sorted off-site for recycling.

3.02 MEETINGS

- A. Conduct Construction Waste Management meetings. Meetings shall include Subcontractors affected by the CWM Plan. At a minimum, waste management goals and issues shall be discussed at the following meetings:
 - 1. Pre-bid meeting.
 - 2. Pre-construction meeting.
 - 3. Regular job-site meetings.
- B. Any non-compliant practices in the field will be addressed at regular job-site meetings.

3.03 MONTHLY WASTE MANAGEMENT REPORTING FORMS

- A. Monthly Waste Management Reporting Forms, as required in the SUBMITTALS Article above, shall be submitted to the Design Professional for review throughout the duration of the project.

END OF SECTION

(Project Name) (Exhibit “A”)
CONTRACTOR C&D WASTE MANAGEMENT FORM
For Waste Generated On-Site

Company: _____

Contact: _____

Phone: _____

Material Description (Include packaging waste if applicable)	Total Weight	% Reused on-site	% Recycled off-site	% Sent to landfill	Material Recipient

Recycled Material: Material that would otherwise be destined for landfill but is diverted from the waste stream, reintroduced as material feedstock and reprocessed into new end products.

Reused Material: Materials that can be reused in their original form without any reprocessing.

GENERAL REQUIREMENTS for CONSTRUCTION

SECTION 017700 – CONTRACT CLOSEOUT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contract Documents, including but not limited to, the Drawings and Individual Specification Sections and Notice of Substantial Completion (NOSC) Form, apply to this section.

1.2 SUMMARY

- A. Section includes administrative requirements for preparation and submission of final Contract Closeout Documents, including, but not limited to, the following:
 - 1. Contract Closeout Meeting
 - 2. Notice of Substantial Completion (NOSC) Requirements
 - a. List of Incomplete Work Items
 - b. Contract Turnover Documents
 - 1) As-built Drawings
 - 2) As-built Specifications
 - 3) As-built Schedule
 - c. General Guarantee
 - d. Operation and Maintenance Manuals
 - 3. Contract Closeout
 - 4. Final Cleaning
- B. Related Sections:
 - 1. General Conditions, Article 8 – Payment
 - 2. General Conditions, Article 13 – Inspection and Acceptance
 - 3. Section 014000 – Quality and Code Requirements
 - 4. Section 017823 – Operation and Maintenance Manuals
 - 5. Section 017839 – As-built Documents

1.3 CONTRACT CLOSEOUT Meeting

- A. Contract Closeout Meeting: The Owner will schedule and conduct a Contract closeout meeting, at a time convenient to the Owner and Design Professional, but no later than sixty (60) days prior to the scheduled inspection date for Substantial Completion.
 - 1. The Owner will conduct the meeting to review requirements and responsibilities related to Contract closeout.
 - 2. Attendees: Representatives of the Owner, testing agency, commissioning authority, Design Professional, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the meeting.

GENERAL REQUIREMENTS for CONSTRUCTION

Participants at the meeting shall be familiar with Project and authorized to make binding decisions on matters relating to the Work.

3. Agenda: Discuss items of significance that could affect or delay Contract closeout, including the following:
 - a. Status of Contract Turnover Documents.
 - b. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
 - c. Requirements for preparing sustainable documentation.
 - d. Requirements for submitting final operation and maintenance manual.
 - e. Requirements for Permits, Licenses and Certificates.
 - f. Preparation of Contractor's list of incomplete Work items.
 - g. Procedures for processing Application for Payment at Substantial Completion and final payment.
 - h. Submittal procedure.
 - i. Installation of the Owner's furniture, fixtures, and equipment.
 - j. Responsibility for removing temporary facilities and controls.
4. Minutes: The Owner or Design Professional will record and distribute meeting minutes.

1.4 NOTICE OF SUBSTANTIAL COMPLETION (NOSC)

- A. Substantial Completion: After the Work of the Contract is determined by the Owner, to be at Substantial Completion, the Contractor shall submit a written request to the Owner for a date of inspection. The date of Substantial Completion establishes the start of the guarantee period.
- B. Documentation: The Notice of Substantial Completion (NOSC) form shall be executed at the end of inspection documenting incomplete Work items and submission of documents in accordance with this section that includes but is not limited to:
 - a. Preparation of a list of Work to be completed and corrected, the value of Work items on the list, and completion date of each Work item.
 - b. Submittal of contract turnover documents.
 - c. Submittal of operation and maintenance manuals, testing, adjustment and balance records.
 - d. Delivery of tools, spare parts, extra materials, and similar items to location designated by the Owner. Label with manufacturer's name and model number where applicable.
 - e. Termination and removal of temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 - f. Completion of final cleaning requirements.

C. SAMPLE FORM - NOTICE OF SUBSTANTIAL COMPLETION

GENERAL REQUIREMENTS for CONSTRUCTION

DORMITORY AUTHORITY – STATE OF NEW YORK

NOTICE OF SUBSTANTIAL COMPLETION

INSTITUTION: _____ CONTRACTOR: _____
 PROJECT TITLE: _____ CONTRACT NO: _____
 PROJECT NO: 9999 CONTRACT VALUE: _____

With exception of the list of incomplete Work and status of Contract Turnover Documents, the Dormitory Authority accepts the Work of the Contract Documents as Substantial Completion on (date) _____, in accordance with the General Conditions. This date also constitutes start of the guarantee period.

ITEM	LIST OF INCOMPLETE WORK	SCHEDULED COMPLETION DATE
1.		
2.		
3.		
4.		
5.		
6.		
NOTE: Attach additional pages if necessary.		

STATUS of CONTRACT TURNOVER DOCUMENTS:

	PROVIDED YES	DUE DATE	Not Applicable
▪ As-built drawings & specifications transmitted to Design Professional	<input type="checkbox"/>		<input type="checkbox"/>
▪ Certified As-built schedule transmitted to Owner	<input type="checkbox"/>		<input type="checkbox"/>
▪ Sustainable documentation submitted to Owner	<input type="checkbox"/>		<input type="checkbox"/>
▪ Permits, licenses and certificates submitted to Authority having jurisdiction	<input type="checkbox"/>		<input type="checkbox"/>
▪ Hazard waste documentation approved by Owner	<input type="checkbox"/>		<input type="checkbox"/>
▪ Operation and maintenance manual submitted to Owner in final form	<input type="checkbox"/>		<input type="checkbox"/>
▪ Spare products stock stored on site per Owner's direction	<input type="checkbox"/>		<input type="checkbox"/>
▪ Identify any other Contract specific turnover document	<input type="checkbox"/>		<input type="checkbox"/>
▪ Identify any other Contract specific turnover document	<input type="checkbox"/>		<input type="checkbox"/>
▪ Final cleaning	<input type="checkbox"/>		<input type="checkbox"/>

Acknowledged by the Contractor (signature & title)			Email Address	Date
Recommended by the Design Professional (signature & title)			Email Address	Date
Recommended by the Project Manager (signature)				Date
Approved by the Director/Chief (signature)				Date

Distribution by PM:
 Contractor
 Design Professional
 Facility Representative

Distribution by PA:
 Code Compliance Unit
 Risk Management
 Procurement Contract File (original)

NOTICE OF SUBSTANTIAL COMPLETION
 May '10

Page 1

GENERAL REQUIREMENTS for CONSTRUCTION

1.5 LIST OF INCOMPLETE ITEMS

- A. Organization of List: Submit list of incomplete items in *EXCEL* spreadsheet electronic format. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
 - 1. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
 - 2. Include the following information at the top of each page:
 - a. Project name & number.
 - b. Date.
 - c. Name of Contractor & Contract number.
 - d. Page number.
- B. Reinspection: Submit a written request for reinspection. On receipt of request, the Owner will either proceed with inspection or notify the Contractor of unfulfilled requirements. After inspection, the Owner will notify the Contractor of items, either on the Contractor's list or additional items identified, that must be completed or corrected.
 - 1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
 - 2. Results of completed inspection will form the basis to proceed with commencement of Contract Closeout Documents.

1.6 CONTRACT TURNOVER DOCUMENTS

- A. Procedure: Contract turnover documents shall be transmitted to the Owner or if stated to the Design Professional, fifteen (15) days prior to requesting inspection date for Substantial Completion.
- B. As-built Drawings: Transmit one paper copy set of marked-up As-built Drawings to the Design Professional, with copy of transmittal to Owner. Print each Drawing, whether or not changes and additional information were recorded.
- C. As-built Specifications: Transmit one paper copy set of marked-up as-built specifications, including addenda and contract modifications to the Design Professional, with copy of transmittal to Owner.
- D. As-built Schedule: Submit one electronic (PDF) copy, certified by the Contractor, of the schedule that reflects the exact manner in which the project was actually constructed, to the Owner.
- E. Permits, Licenses and Certificates Documents: Submit one copy of original permits, licenses, certifications, inspection reports, material certificates/affidavits, approvals, and related documents required by authorities having jurisdiction to obtain Letter of Completion, Certificate of Occupancy, or Code Compliance Certificate. Coordinate and respond to requirements from the Owner, NYC Department of Buildings and all other authorities having jurisdiction for issuance of approval/documents required for the Owner use and occupancy.

GENERAL REQUIREMENTS for CONSTRUCTION

1. Cooperate and help coordinate with agency testing materials as specified in Section 014000 – Quality and Code Requirements. Testing Agency is required to submit final report of special inspections.
 2. The Contractor to provide one copy of original certification from agency or firm certifying the following and as required by Individual Specification Sections:
 - a. Electrical – Certification Form from;
 - 1) Authority having jurisdiction
 - 2) Independent electrical inspection agency acceptable to the Owner |
- F. Miscellaneous Record Submittals: Refer to Individual Specification Sections for miscellaneous record-keeping requirements and submittals in connection with various construction activities. Submit one electronic (PDF) copy of each submittal.
- G. Reports: Submit written report indicating items incorporated in Contract Documents concurrent with progress of the Work, including modifications, concealed conditions, field changes, product selections, and other notations incorporated.

1.7 GUARANTEE

- A. General Guarantee: Comply with General Conditions, Article 13 – Inspection and Acceptance. The date established on the Notice of Substantial Completion form constitutes commencement of the Guarantee period.

1.8 OPERATION AND MAINTENANCE MANUALS

- A. Final Manuals Submittal: Submit an electronic copy of a compiled set of complete Operation and Maintenance Manuals in final form as indicated in Section 017823 – Operation and Maintenance Manuals, to the Owner fifteen (15) days prior to requesting date of inspection for Substantial Completion.

1.9 CONTRACT CLOSEOUT (same as final application for payment)

- A. Contract Compliance: The Contractor shall comply with the requirements of General Conditions, Section 10.08 – Limitations on Actions.
- B. Preliminary Procedure: All Work and Extra Work of the Contract and requirements of this section must be complete and approved prior to commencement of Contract closeout.
1. The Contractor shall request and submit to the Owner a final Contractor's Pencil Copy billing request that will formulate the final Application for Payment.
 2. The Contractor shall provide outstanding documentation to the Owner in accordance with General Conditions, Article 20 – Opportunity Programs.
- C. Procedures: Upon the Owner's approval of the Contractor's Pencil Copy billing request, Contract closeout documents will be provided to the Contractor. The Contractor shall complete each document and submit all documents with original signature & notary as indicated on forms, the following:

GENERAL REQUIREMENTS for CONSTRUCTION

1. Final Application for Payment that includes remaining Retainage.
 2. Final Compliance Report.
 3. Contractor and Subcontractor Certifications Form.
 4. Contractor's Certified Payroll Form.
 5. Release Form -- Final Payment to Contractor.
 6. Consent of Surety -- Final Payment to Contractor, with power of attorney.
- D. Payroll Forms: The Contractor and all Sub-contractors to the Contractor shall submit original copies of the Contractor and Subcontractor Certifications Form and Contractor's Certified Payroll Form.

PART 2 - PRODUCTS

2.1 CLEANING MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.
1. Use cleaning products that meet Green Seal GS-37, or if GS-37 is not applicable, use products that comply with allowable VOC levels.

PART 3 - EXECUTION

3.1 DEMOBILIZATION

- A. Deliver tools, spare parts, extra materials, and similar items to location designated by the Owner. Label with manufacturer's name and model number where applicable.
- B. Make final changeover of permanent locks and deliver keys to the Owner. Advise the Owner's personnel of changeover.
- C. Terminate and remove temporary facilities from the Project site, along with mockups, construction tools, and similar elements.

3.2 RECORDING AND MAINTENANCE

- A. Recording: Maintain one copy of each submittal during the construction period for contract turnover document purposes. Post changes and modifications to contract turnover documents as they occur; do not wait until the end of the Project.
- B. Maintenance of Turnover Documents and Samples: Store turnover documents and Samples in the field office apart from the Contract Documents used for construction. Contract turnover documents shall not be used for construction purposes. Maintain turnover documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to contract turnover documents for the Owner's reference during normal working hours during performance of Contract.

GENERAL REQUIREMENTS for CONSTRUCTION

3.3 FINAL CLEANING

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
 - 1. Complete the following cleaning operations as applies to Work of the contract.
 - a. Clean Project site in areas disturbed by construction activities, including, waste material, litter, and other foreign substances.
 - b. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - c. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - d. Remove debris and surface dust from limited access spaces, including roofs, plenums, and similar spaces.
 - e. Sweep concrete floors broom clean in unoccupied spaces.
 - f. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
 - g. Remove labels that are not permanent.
 - h. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
 - 1) Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates.
 - i. Wipe surfaces of mechanical and electrical equipment and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
 - j. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.
 - k. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned-out bulbs, and those noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.
 - l. Leave Project clean and ready for occupancy.
- C. Construction Waste Disposal: Comply with waste disposal requirements in all other applicable sections.

END OF SECTION 017800

GENERAL REQUIREMENTS for CONSTRUCTION

SECTION 017823 - OPERATION AND MAINTENANCE MANUALS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contract Documents, including but not limited to, the Drawings and Individual Specification Sections and Contractor's Submission Schedule, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
 - 1. Operation and maintenance manual for systems, subsystems, and equipment.
 - 2. Product maintenance data.
 - 3. Systems and equipment maintenance data.
- B. Related Sections:
 - 1. Section 013300 – Submittal Procedures
 - 2. Section 017700 – Contract Closeout Requirements

1.3 DEFINITIONS

- A. System: An organized collection of parts, equipment, or subsystems united by regular interaction.
- B. Subsystem: A portion of a system with characteristics similar to a system.

1.4 CLOSEOUT SUBMITTALS

- A. Required Manuals: see Section 017700 – Contract Closeout Requirements for additional requirements.
- B. Format: Submit operations and maintenance manuals in the following format:
 - 1. PDF electronic file. Assemble each manual into a composite electronically indexed file. Submit on digital media acceptable to the Design Professional.
 - a. Name each indexed document file in composite electronic index with applicable item name. Include a complete electronically linked operation and maintenance directory.
 - b. Enable inserted reviewer comments on draft submittals.

GENERAL REQUIREMENTS for CONSTRUCTION

C.

PART 2 - PRODUCTS

2.1 REQUIREMENTS FOR OPERATION, AND MAINTENANCE MANUALS

- A. Organization: Organize the manual into separate sections by CSI number based on the table of contents of the project manual, for each system and subsystem, and a separate section for each piece of equipment not part of a system. The manual shall contain the following materials, in the order listed:
1. Title page.
 2. Table of contents.
 3. Manual contents:
 - a. Operation data.
 - b. Product maintenance data.
 - c. Systems and equipment data
- B. Title Page: Include the following information:
1. Subject matter included in manual.
 2. Name and address of Project.
 3. Name and address of Owner.
 4. Date of submittal.
 5. Name and contact information for Contractor.
 6. Name and contact information for Design Professional.
 7. Names and contact information for major consultants to the Design Professional that designed the systems contained in the manuals.
 8. Cross-reference to related systems in other operation and maintenance manuals.
- C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
1. If operation or maintenance documentation requires more than one media volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.
- D. Manual Contents: Organize into sets of manageable size. Arrange contents by CSI Section number and then by system, subsystem, and equipment. .
- E. Manuals, Electronic Copy: Submit electronic (PDF) copy of the manual, to the Design Professional, concurrent with Action Submittal.

2.2 OPERATION DATA

- A. Content: In addition to requirements in this Section, include operation data required in individual Specification Section and the following information:

GENERAL REQUIREMENTS for CONSTRUCTION

1. System, subsystem, and equipment descriptions. Use designations for systems and equipment indicated on Contract Documents.
2. Operating standards.
3. Operating procedures.
4. Operating logs.
5. Wiring diagrams.
6. Control diagrams.
7. Precautions against improper use.
8. License requirements including inspection and renewal dates.

B. Descriptions: Include the following:

1. Product name and model number. Use designations for products indicated on Contract Documents.
2. Manufacturer's name.
3. Equipment identification with serial number of each component.
4. Equipment function.
5. Operating characteristics.
6. Limiting conditions.
7. Performance curves.
8. Engineering data and tests.
9. Complete nomenclature and number of replacement parts.

C. Operating Procedures: Include the following, as applicable:

1. Startup procedures.
2. Equipment or system break-in procedures.
3. Routine and normal operating instructions.
4. Regulation and control procedures.
5. Instructions on stopping.
6. Normal shutdown instructions.
7. Seasonal and weekend operating instructions.
8. Required sequences for electric or electronic systems.
9. Special operating instructions and procedures.

D. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.

2.3 PRODUCT MAINTENANCE DATA

- A. Content: Organize data into a separate section, within the O & M Manual, for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.
- B. Source Information: List each product included in section identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.

GENERAL REQUIREMENTS for CONSTRUCTION

- C. Product Information: Include the following, as applicable:
 - 1. Product name and model number.
 - 2. Manufacturer's name.
 - 3. Color, pattern, and texture.
 - 4. Material and chemical composition.
 - 5. Reordering information for specially manufactured products.
- D. Maintenance Procedures: Include manufacturer's written recommendations and the following:
 - 1. Inspection procedures.
 - 2. Types of cleaning agents to be used and methods of cleaning.
 - 3. List of cleaning agents and methods of cleaning detrimental to product.
 - 4. Schedule for routine cleaning and maintenance.
 - 5. Repair instructions.
- E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
- F. Warranties and Guarantees: Include copies of warranties and guarantees lists of circumstances and conditions that would affect validity of warranties.
 - 1. Include procedures to follow and required notifications for warranty claims.

2.4 SYSTEMS AND EQUIPMENT MAINTENANCE DATA

- A. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.
- B. Source Information: List each system, subsystem, and piece of equipment included in a separate section within the O & M Manual identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.
- C. Manufacturers' Maintenance Documentation: Manufacturers' maintenance documentation including the following information for each component part or piece of equipment:
 - 1. Standard maintenance instructions and bulletins.
 - 2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
 - 3. Identification and nomenclature of parts and components.
 - 4. List of items recommended to be stocked as spare parts.
- D. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:

GENERAL REQUIREMENTS for CONSTRUCTION

1. Test and inspection instructions.
 2. Troubleshooting guide.
 3. Precautions against improper maintenance.
 4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
 5. Aligning, adjusting, and checking instructions.
 6. Demonstration and training video recording, if available.
- E. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
1. Scheduled Maintenance and Service: Tabulate actions for daily, weekly, monthly, quarterly, semiannual, and annual frequencies.
 2. Maintenance and Service Record: Include manufacturers' forms for recording maintenance.
- F. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.
- G. Warranties: Include copies of warranties and lists of circumstances and conditions that would affect validity of warranties.
1. Include procedures to follow and required notifications for warranty claims. |

PART 3 - EXECUTION

3.1 MANUAL PREPARATION

- A. Operation and Maintenance Documentation shall be provided for review, concurrent, with Action Submittal specified in Individual Specification Section.
1. Correct or modify the manual to comply with the Design Professional's and Commissioning Authority's comments. Submit copies of each corrected manual within 15 days of receipt of Design Professional's and Commissioning Authority's comments and prior to commencing demonstration and training.
- B. Product Maintenance Data: Assemble a complete set of maintenance data, in a separate section, within the O & M Manual, indicating care and maintenance of each product, material, and finish incorporated into the Work.
- C. Operation and Maintenance Data: Assemble a complete set of operation and maintenance data, in a separate section, within the O & M Manual, indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.
1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
 2. Prepare a separate section within the O & M Manual, for each system and subsystem, in the form of an instructional manual for use by operating personnel.

GENERAL REQUIREMENTS for CONSTRUCTION

- D. Manufacturers' Data: Where manual contain manufacturers' standard printed data; include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
 - 1. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.
- E. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in As-built Drawings to ensure correct illustration of completed installation.
 - 1. Do not use original project record documents as part of operation and maintenance manuals.

END OF SECTION 017823

GENERAL REQUIREMENTS for CONSTRUCTION

SECTION 017839 – AS BUILT DOCUMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contract Documents, including but not limited to, the Drawings and Individual Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for As-built documents, including the following:
 - 1. As-built Drawings
 - 2. As-built Specifications
 - 3. As-built Schedule
 - 4. Record Product Data
 - 5. Miscellaneous record submittals
- B. Related Sections:
 - 1. Section 013200 – Construction Progress Documentation
 - 2. Section 013300 – Submittal Procedure; Required Submittal List
 - 3. Section 017700 – Contract Closeout Requirements
 - 4. Section 017823 – Operation and Maintenance Manuals

1.3 CLOSEOUT SUBMITTALS

- A. Required Documents: Section 017700 – Contract Closeout Requirements, describes administrative requirements for submission, number and type of copies required for contract closeout requirements.

PART 2 - PRODUCTS

2.1 AS-BUILT DRAWINGS

- A. As-built Drawings: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings onsite. Review As-built Drawings and shop drawings monthly with the Owner, for approval.
 - 1. Preparation: Daily mark As-built Drawings to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up As-built Drawings.

GENERAL REQUIREMENTS for CONSTRUCTION

- a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
 - b. Accurately record information in an acceptable drawing technique.
 - c. Record data as soon as possible after obtaining it.
 - d. Record and check the markup before enclosing concealed installations.
2. Content: Types of items requiring marking include, but are not limited to, the following:
- a. Dimensional changes to Drawings.
 - b. Revisions to details shown on Drawings.
 - c. Revisions to routing of piping and conduits.
 - d. Revisions to electrical circuitry.
 - e. Actual equipment locations.
 - f. Duct size and routing.
 - g. Locations of concealed internal utilities.
 - h. Changes made by Change Order.
 - i. Changes made by Bulletin.
 - j. Changes made following the Owner's written orders.
 - k. Details not on the original Contract Drawings.
 - l. Field records for variable and concealed conditions.
 - m. Record information on the Work that is shown only schematically.
3. Mark the Contract Drawings and Shop Drawings completely and accurately. Utilize personnel proficient at recording graphic information in production of marked-up as-built prints.
 4. Mark as-built sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
 5. Mark important additional information that was either shown schematically or omitted from original Drawings.
 6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.

2.2 AS-BUILT SPECIFICATIONS

- A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
 3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
 4. For each principal product, indicate whether record Product Data has been submitted in operation and maintenance manuals instead of submitted as record Product Data.
 5. Note related Change Orders, record Product Data, and turnover Drawings where applicable.

GENERAL REQUIREMENTS for CONSTRUCTION

2.3 AS-BUILT SCHEDULE

- A. Final Schedule: Submit to the Owner a final schedule update. The As-built Schedule shall reflect the exact manner in which the project was actually constructed including actual start and finish dates, activities, sequences and logic.
 - 1. The Contractor shall certify the final schedule update as being a true reflection of the way the project was actually constructed.

2.4 RECORD PRODUCT DATA

- A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
 - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - 2. Include significant changes in the product delivered to the Project site and changes in manufacturer's written instructions for installation.
 - 3. Note related Change Orders, As-built Specifications, and As-built Drawings where applicable.

2.5 MISCELLANEOUS RECORD SUBMITTALS

- A. Assemble miscellaneous records required by Individual Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.
- B. Format: Submit miscellaneous record submittals.
 - 1. Include miscellaneous record submittals directory organized by specification section number and title, electronically linked to each item of miscellaneous record submittals.

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

- A. Maintain Change Log: Maintain and submit written change log to the Owner, monthly for review indicating items incorporated in contract turnover documents concurrent with progress of the Work, including modifications, concealed conditions, field changes, product selections, and other notations incorporated.
- B. Recording: Maintain one copy of each submittal during the construction period for contract turnover document purposes. Post changes and modifications to contract turnover documents as they occur; do not wait until the end of the Project.
- C. Maintenance of Turnover Documents and Samples: Store turnover documents and Samples in the field office apart from the Contract Documents used for construction. Contract turnover documents are not to be used for construction purposes. Maintain turnover documents in good

GENERAL REQUIREMENTS for CONSTRUCTION

order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to contract turnover documents for the Owner's reference during normal working hours during performance of Contract.

END OF SECTION 017839

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HARRIS HALL IT UPGRADE

THE CITY COLLEGE OF NEW YORK

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SECTION 02 41 00 - SELECTIVE DEMOLITION AND REMOVALS

PART 1 - GENERAL

1.01 SUMMARY

Location of selective removal work is indicated on drawings only in a general manner and it is all-inclusive in the overall scope of removals required for new work and renovated work.

Contractor will be responsible for all related removals and reworking of existing systems, as required for new work in their appropriate sequence. Work includes but is not limited to the following:

1. Based on the approved Construction Schedule, contractor shall mobilize and prepare the site for construction by providing but not limited to erecting temporary barricades, erecting construction signs.

1.02 SUBMITTALS

Submit the following in accordance with Conditions of Contract and Division Specification Sections.

- A. Phasing of Construction and Time: Schedule indicating proposed sequence of operations for selective removal work to Consultant Architect and Owner for review prior to start of work. Include coordination for shutoff, capping, and continuation of utility services as required, together with details for dust and noise control protection.
 1. Provide detail sequence of removal and removal work to ensure uninterrupted progress of Owner's on-site operations to Consultant Architect, and Owner.
 2. Coordinate with Consultant Architect, and Owner of continuing occupation of portions of existing building.
- B. Photographs of existing conditions of structure surfaces, equipment and adjacent improvements that might be misconstrued as damage related to removal operations. File with Consultant Architect and Owner prior to start of work.

1.03 JOB CONDITIONS

- A. Occupancy: Owner will continue to occupy portions of the buildings immediately adjacent to areas of selective removals. Conduct selective removal work in manner that will minimize need for disruption of Owner's normal operations. Provide minimum of 72 hours advance notice to Owner of removal activities that will affect Owner's normal operations.
- B. Conditions of Structures: Consultant Architect and Owner, assumes no responsibility for actual condition of items of structure to be demolished.
 - 1. Condition existing at that time of inspection for bidding purposes will be maintained by Owner insofar as practicable. However, minor variations may occur by lapse of time prior to start of selective removal work.
 - 2. Storage of removed items on site will not be permitted, except as specified and indicated for re-installation.

1.04 CONTRACTOR shall:

- A. Provide temporary barricades, fences, and other forms of protection to protect Owner's personnel and general public from injury due to selective removal work as indicated on drawings and as required.
- B. Construct temporary partitions where required and indicated, and to separate areas where noisy or extensive dirt or dust operation are performed.
- C. Provide temporary weather protection prior to the removal of existing construction on exterior surfaces, and installation of new construction to ensure that no water leakage or damage occurs to structure, electrical facilities and devices, fire alarm equipment or interior areas of existing buildings.
- D. Provide temporary weather protection once mechanical and electrical devices are removed.
- E. Provide protective measures as required to provide free and safe passage of all personnel and general public to occupied portions of building.
- F. Provide interior and exterior shoring, bracing or support to prevent movement, settlement, or collapse of structure of element to be removed and adjacent facilities or work to remain. (See Section 3.01 A and B for specific requirements)
- G. Protect from damage, existing finish work that is to remain in place and becomes exposed during removal operations.
- H. Protect floors, walls and roofs with suitable coverings when necessary.

- I. Remove protection at the completion of work.
- G. Damages: Promptly repair damages caused to adjacent facilities by removal work.
- K. Traffic: Conduct selective removal operations and debris removal to ensure minimum interference with roads, streets, walks and other adjacent occupied or used facilities.
- L. Do not close, block or otherwise obstruct streets, walks, or other occupied or used facilities without written permission from authorities having jurisdiction. Provide alternative routes around closed or obstructed traffic ways if required by governing regulations.
- M. Flame Cutting: Do not use cutting torches for removal until work area is cleared of flammable materials. At concealed spaces, such as interior of ducts and pipe spaces verify condition of hidden space before starting flame-cutting operations. Maintain portable fire suppression devices during flame-cutting operations.
- N. Comply with all OSHA rules and requirements.
- O. Utility Services: Maintain existing utilities indicated to remain in service and protect them against damage during removal operations.
 - 1. Do not interrupt utilities serving occupied or used facilities, except when authorized in writing by authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to governing authorities.
 - 2. Maintain fire protection services during selective removal operations.
- P. Environmental Controls: Use water sprinkling, temporary enclosures, and other methods to limit dust and dirt migration. Comply with governing regulations pertaining to environmental protection.
 - 1. Do not use water when it may create hazardous or objectionable conditions such as ice, flooding and pollution.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 PREPARATION

- A. General: Contractor to provide interior and exterior shoring, bracing, or support to prevent movement, settlement, to enable disconnection and later reconnection of all conduits, or collapse of areas to be removed and adjacent facilities to remain. Such required shoring, bracing shall be designed by a professional engineer licensed in the State of New York and approved by Consultant Architect/Engineer.
 - 1. Cease operations and notify Owner immediately if safety of structure appears to be endangered. Take precautions to support structure until determination is made for continuing operations.
 - 2. Cover and protect furniture, equipment and fixtures from soiling or damage when removal work is performed in areas where such items have not been removed.
- B. CONTRACTOR shall:
 - 1. Erect and maintain dust proof partitions and closures as required to prevent spread of dust or fumes to occupied portions of the building.
 - 2. Provide weatherproof closures for all exterior opening resulting from removals.
 - 3. Provide all necessary temporary protection to sprinkler lines to permit continuous service during construction or stop and re-route service after provision of alternative temporary lines per the requirements of the drawings and other Sections of those specifications.
 - 4. Provide bypass connections as necessary to maintain continuity of all services to occupied areas of buildings. Provide minimum of 72 hours advance notice to owner if shut down of any service is necessary during changeover.

3.02 REMOVAL

- A. General: Perform selective removal work in a systematic manner. Use such methods as required to complete work indicated on Drawings in accordance with removal schedule and governing regulations.
 - 1. Remove slab, brick or wall claddings, concrete and masonry in small sections. Cut concrete and masonry at junctures with construction to remain using power-driven masonry saw or hand tools; Power driven

impact tools are limited to hand-held equipment. No vehicle mounted demolition equipment shall be used.

2. Promptly remove debris to avoid imposing excessive loads on supporting roofs, walls, floors or framing, on a daily basis.
 3. Provide services for effective air and water pollution controls as required by local authorities having jurisdiction.
- B. Of unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure both nature and extent of conflict. Submit report to Consultant Architect and Owner in written, accurate detail. Pending receipt of directive from Owner, re-arrange selective removal schedule as necessary to continue overall job progress without undue delay.

3.03 DISPOSAL OF REMOVED MATERIALS

- A. Remove from building site debris, rubbish and other materials resulting from removal operations. Transfer and legally dispose of off-site.
1. If hazardous materials are encountered during demolition operations, comply with applicable regulations, laws and ordinances concerning removal, handling and protections against exposure or environmental pollution.
- B. Burning of removed materials is not permitted on project site.

3.04 CLEAN-UP AND REPAIR

- A. General: Upon completion of removal work, remove all his tools, equipment, and removed materials from site. Remove protections and leave exterior and interior areas broom clean. Each contractor shall restore all damaged surfaces to its original condition.
1. Repair removal performed in excess of that required.
- B. Return elements of construction and surfaces to remain to condition existing prior to start operations. Repair adjacent construction or surfaces soiled or damaged by selective removal work.

1. Contractor for General “Construction, shall provide rubbish container(s) for all contractors. Each Contractor shall deposit removed material in rubbish containers.

END OF SECTION - 02 41 00

SECTION 02 83 10 - LCP/LBP DISTURBANCES USING OSHA LEAD SAFE WORK PRACTICES

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. The work covered by this Specification shall consist of furnishing all labor, materials, tools, and equipment necessary to control and mitigate potential lead-based paint (LBP) and lead-containing paint (LCP) material hazards during demolition/renovation activities pertaining to the project at City University of New York, Sophie Davis Biomedical School, 1589 Amsterdam Avenue, New York, New York 10031, DASNY Project# 3288909999/CR-163.

This Specification shall be used as a guideline for Contractors who complete the demolition/renovation activities pertaining to this Project, as detailed within Section 1.01, B of this Specification. The intent of this Specification is to remain in conformance with Occupational Safety and Health Administration (OSHA) Regulation 29 CFR 1926.62 “Lead Exposure in Construction” and to maintain an airborne concentration of lead-dust below the Action Level. This Specification is written to outline the worst-case scenario regarding lead safe work practices.

- B. The following is a detailed listing of identified LBP and/or LCP, above the laboratory and/or device detection limit:

Location	Component	Substrate	Concentration	Color	Condition
2 nd Floor, South IT Room 216	Ceiling	Plaster	13.7	White	Fair
2 nd Floor, South IT Room 216	Ceiling	Plaster	17.5	White	Fair
2 nd Floor, North IT Room 205T	Ceiling	Plaster	2.5	White	Fair
2 nd Floor, North IT Room 205T	Ceiling	Plaster	3.6	White	Fair

NOTE: The seven (7) IT Rooms identified for upgrades as part of this project are homogeneous, therefore all plaster ceilings should be treated as positive for lead-based paint.

It should be noted that several components tested did contain minimal lead-concentrations below the EPA threshold level of 1.0 mg/cm² or 0.5% by weight for classification as LBP and are considered lead-containing paints or coatings by 29CFR 1926.62. OSHA does not recognize a minimum limit for lead concentration in paint for the purpose of disturbance. Personal Air monitoring of workers performing demolition/cleaning/disturbance of painted surfaces shall be completed to document personnel occupational exposure and reviewed by the Contractor's Competent Person. Items containing any amount of lead concentration are considered lead-containing paints or coatings per 29 CFR 1926.62. See project environmental survey report for lead paint reports. Lead paint summary information is located within the Appendices of this specification.

For Storage, Transportation and Disposal requirements, refer to the DASNY Standard Specification for the Identification and Disposal of Hazardous Waste 028600.

- C. Manual demolition, scraping and sanding of lead-based paint or lead containing paint coated surfaces, power tool cleaning with dust collection systems shall be performed in conjunction with engineering and work practice controls meeting the requirements of 29 CFR 1926.62(e)(1).
- D. Components with LBP and LCP shall be removed intact to the extent practicable. A 6-mil polyethylene drop cloth shall be placed around and/or beneath the component, prior to its removal, to catch any paint chips that may become dislodged. Intact components shall be wrapped in a layer of clear 6-mil polyethylene prior to movement to the disposal container. The area around the component removal shall be wet wiped and high-efficiency particulate air (HEPA) filter vacuumed, including the tent enclosure (if applicable). The polyethylene sheeting shall be carefully folded in on itself and placed in a 6-mil disposal bag and sealed closed. All debris shall be properly disposed of in accordance with the respective waste stream Resource Conservation Recovery Act (RCRA) Toxicity Characteristic Leaching Procedure (TCLP) testing results.
- E. Chemical stripping may be used for LBP and LCP removal on surfaces that will be subjected to welding, cutting, torch burning or where it is the only acceptable procedure. No chemical strippers containing methylene chloride shall be used by the Contractor on this project. SDS for stripping and neutralizing chemicals must be reviewed and approved by the Consultant prior to use and a copy shall be posted at the site.
- F. The Contractor's use of a subcontractor (must be approved) shall not relieve the Contractor of full responsibility for the work to be performed.
- G. If available and approved by the Competent Person, the Contractor may utilize exposure assessment data that is compliant with OSHA and was obtained within the last twelve (12) months from previous jobs conducted under similar conditions, control methods, work practices and environmental conditions to be used in this contract for LCP disturbances only. Other objective data may be used to demonstrate that work activities in this contract will not result in occupational exposures to airborne lead that exceeds the PEL for LCP disturbances only. The assessment shall include comparable lead concentrations (LCP only) in paint/coating materials, work practices, engineering controls and work schedules.
- H. The Contractor must provide to his workers the following: Respiratory protection in accordance with the Contractor's Respiratory Protection Program, personal protective clothing, lead-free change areas, hand washing/shower facilities, blood lead level monitoring and training per 29 CFR 1926.62. **Respiratory Protection is required for all LBP disturbances.**
- I. The Contractor shall ensure that any HVAC equipment intakes within and around the control areas are protected by shutting down the units. The Contractor shall alter the size and extent of the isolation barriers as necessary due to weather conditions, functional space use and density of building occupants in the vicinity, as required.

1.02 DEFINITIONS, REGULATIONS & REFERENCE STANDARDS

- A. Definitions (excerpted from 29 CFR 1926.62)

1. **Action Level:** Employee exposure, without regard to the use of respirators, to an airborne lead concentration of 30 micrograms per cubic meter (30 ug/m³) calculated as an 8-hour time-weighted average (TWA). Exceedance of the Action Level requires blood lead monitoring implementation.
2. **Competent Person:** One who is capable of identifying existing and predictable lead hazards in the surroundings or working conditions and who has the authorization to take prompt corrective measures to eliminate them. For LBP work, the Competent Person shall also be the on-site Supervisor/Foreman in-charge of the work crew.
3. **Exposure Assessment:** Each employer who has a workplace or operation covered by 29 CFR 1926.62 shall initially determine if any employee may be exposed to lead at or above the Action Level.
4. **Lead:** Metallic lead, all inorganic lead compounds, and organic lead soaps. Excluded from this definition are all other organic lead compounds.
5. **Lead-Based Paint (LBP):** Paint, varnish, shellac or other coatings on surfaces that contain 1.0 milligram per square centimeter (1.0 mg/cm²) or more lead or 0.5% or more lead by weight. The concentration 0.5% is equivalent to:
 - a. 5,000 parts per million (5,000 ppm) and;
 - b. 5,000 milligrams per kilogram (5,000 mg/kg)
6. **Lead-Containing Paint (LCP):** Paint, varnish, shellac or other coatings on surfaces that contain measurable concentrations less than 1.0 milligrams per square centimeter (1.0 mg/cm²) lead or less than 0.5% or more lead by weight including equivalents less than 5,000 ppm and 5,000 mg/kg. This does not include paint, varnish, shellac or other coatings on surfaces where the concentration is below the detection limit of the respective laboratory method / device.
7. **LBP Inspection:** A surface by surface investigation to determine the presence of LBP. A report is then issued that identifies if there is LBP present and where it is located.
8. **Lead Risk Assessor:** EPA trained and certified to conduct LBP inspections and collect samples for the presence of lead in air, dust and soil for the purposes of abatement clearance testing as well as conduct risk assessments.
9. **Permissible Exposure Limit (PEL):** The limit above which the employer shall not expose workers to lead. The current PEL for lead is 50 ug/m³ over an eight-hour time-weighted-average for all employees covered.

B. General Requirements

The Contractor is required to perform all work related to this project in strict accordance with all applicable Federal, State and Local regulations.

Where these requirements vary, the most stringent shall apply.

C. Specific Requirements

1. American National Standards Institute (ANSI)
ANSI Z9.2-79 – Fundamentals Governing the Design and Operation of Local Exhaust Systems.

2. Z88.2-80 – Practice for Respiratory Protection.
3. Code of Federal Regulations (CFR)
4. 29 CFR Part 1910.120 – Hazardous Waste Operations and Emergency Response.
5. 29 CFR Part 1910.134 – Respiratory Protection.
6. 29 CFR Part 1910.146 – Confined Space Entry Program.
7. 29 CFR Part 1910.1025 – Lead (General Industry Standard).
8. 29 CFR Part 1910.1200 – Hazard Communication.
9. 29 CFR Part 1926.55 – Gases, Vapors, Fumes, Dusts and Mists.
10. 29 CFR Part 1926.57 – Ventilation.
11. 29 CFR Part 1926.62 – Lead (Construction Industry Standard).
12. 40 CFR Part 260 – Hazardous Waste Management Systems: General.
13. 40 CFR Part 261 – Identification and Listing of Hazardous Waste.
14. 40 CFR Part 262 – Generators of Hazardous Wastes.
15. 40 CFR Part 263 – Transporters of Hazardous Waste.
16. 40 CFR Part 264 – Owners and Operators of Hazardous Waste Treatment, Storage & Disposal Facilities.
17. 40 CFR Part 265 – Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage & Disposal Facilities.
18. 40 CFR Part 268 – Land Disposal Restrictions.
19. 40 CFR Part 745 – Lead; Requirements for Lead-Based Paint Activities in Child Occupied Facilities
20. 49 CFR Parts 170-178 – Department of Transportation Regulations.
21. New York Codes of Rules and Regulations (NYCRR)
 - a. 6 NYCRR Part 360 – Solid Waste Regulations.
 - b. 6 NYCRR Part 364 – Waste Transporter Permits.
 - c. 6 NYCRR Part 370-373 – Hazardous Waste Regulations.
22. Steel Structures Painting Council (SSPC)
 - a. SSPC-Guide 6 – Guide for Containing Debris Generated During Paint Removal Operations.

- b. SSPC-Guide 7 – Guide for the Disposal of Lead-Contaminated Surface Preparation Debris.

23. Underwriters Laboratories, Inc. (UL)

- a. UL 586 – High Efficiency, Particulate Air Filter Units.

1.03 QUALITY ASSURANCE

The Contractor's Competent Person is required to maintain a copy of the following documents on-site:

A. Qualifications

1. Contractor: Documentation that the Contractor has prior experience on LBP and LCP activity projects similar in nature and extent to ensure the capability to perform the required work procedures in a satisfactory manner.
2. Competent Person: Certification that the Contractor's full-time on-site Competent Person meets the Competent Person requirements of 29 CFR Part 1926.62 and is experienced in administration and supervision of LBP and LCP activity projects, including work practices, protective measures for building and personnel, disposal procedures, etc. The Competent Person shall also be the project Supervisor.
3. Contractor's Testing Laboratory: Documentation that the laboratory performing the OSHA personal sample analysis is an EPA National Lead Laboratory Accreditation Program (NLLAP) accredited laboratory and that it is listed proficient in the NIOSH/EPA Environmental Lead Proficiency Analytical Testing Program (ELPAT), and is a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) certified laboratory. Certification shall include accreditation for heavy metal analysis, and a Quality Assurance and Quality Control Program. Currently, the American Association for Laboratory Accreditation (ASLA) and the American Industrial Hygiene Association (AIHA) are the EPA recognized laboratory accreditors. Documentation shall include the date of accreditation or reaccreditation.
4. Blood Lead Testing Laboratory: Adequate documentation that the laboratory is certified to perform blood lead analysis for the State where the work site is located.

B. Respiratory Protection Devices

Manufacturer's NIOSH certification for respiratory protection devices utilized on the site.

C. Cartridges, Filters, and Vacuum Systems

Manufacturer's NIOSH certification of approval of respirator cartridges (organic vapor, acid gas, mist, dust, high efficiency particulate); High Efficiency Particulate Air (HEPA) filtration capabilities for all cartridges, filters, and HEPA vacuum systems.

D. Medical Examination and Records

1. Certification that employees who are involved in LBP and LCP work have received medical examinations and will receive continued medical surveillance, including blood lead level monitoring, as required by 29 CFR Part 1926.62, 29 CFR Part 910.1200, 29 CFR Part 1910.120 and by the state and local regulations pertaining to such work.

Records shall be retained, at Contractor expense, in accordance with 29 CFR Part 1910.20.

2. Provide medical surveillance to workers until exposure monitoring reveals that workers are not exposed to airborne lead at or above the Action Level of 30 ug/m³. This consists of a blood test measuring the level of lead and zinc protoporphyrin by a licensed physician. Further testing and medical exams may be necessary depending on the results of initial blood tests and/or the initial exposure assessment.

E. Training

Training certification shall be maintained and posted at the site, prior to the start of work involving LBP and LCP work, for all of the Contractors' workers, supervisors and Competent Person. Training shall meet the requirements of 29 CFR Part 1926.62, 29 CFR Part 1926.59, 29 CFR Part 1910.1200 and 49 CFR 172. Training shall be provided prior to the time of job assignment and as required by the regulations thereafter. The project specific training shall, at a minimum, include the following.

1. Lead Paint Awareness Training as per 29 CFR 1926.62.
2. Specific nature of the operation, which could result in exposure to lead.
3. Purpose, proper selection, fitting, use and limitations of respirators.
4. Purpose and description of the medical surveillance program and the medical removal protection program, including information concerning the adverse health effects associated with excessive exposure to lead (with particular attention to the adverse reproductive effects on both males and females, hazards to the fetus and additional precautions for employees who are pregnant).
5. Relevant engineering controls and good work practices.
6. The contents of any compliance plan in effect.
7. Instructions to employees that chelating agents should not routinely be used to remove lead from their bodies and should not be used at all except under the direction of a licensed physician.
8. The employee's right of access to records under 29 CFR part 1910.20.

F. Respiratory Protection Program

1. Furnish each employee required to wear a negative pressure respirator or other appropriate type with a respirator fit test at the time of initial fitting and at least every 12 months thereafter as required by 29 CFR Part 1910.134 and 29 CFR Part 1926.62.
2. Establish and implement a respiratory protection program as required by ANSI Z88.2, 29 CFR Part 1910.134 and 29 CFR Part 1926.62.
3. All workers are required to don respirator(s) with the appropriate level of protection commensurate with the airborne concentrations of lead in which they are working. The level of protection will be determined by the Contractor, based on objective air monitoring data.

1.04 ON-SITE SUBMITTALS

The Contractor's Competent Person is required to maintain a copy of the following documents on-site:

A. Certifications

Prior to the start of work, maintain the on-site, required certifications and licenses listed above in Section 1.03.

B. Equipment List

Maintain a list of equipment items to be used in the work, including brand names, model, capacity, performance characteristics, quantities, and other pertinent information.

C. LBP and LCP Safe Work Practice Compliance Plan

The contractor shall prepare a detailed LBP and LCP Safe Work Practice Compliance Plan that identifies the work procedures, health and safety measures to be used in LBP and LCP work procedures; and that addresses spill prevention, containment, and emergency response procedures. The Plan shall be maintained on-site. The plan shall address the methods to be undertaken during LBP and LCP disturbances to include all requirements of 1926.62(e)(2)(ii) including, but not limited to the following key elements:

1. LBP and LCP containment methods to control employee exposure to lead at or below the permissible exposure limit.
2. Training requirements as required by Federal, State, and Local regulations.
3. Unique problems associated with the LBP and LCP project.
4. Sketch of location and details of LBP and LCP control areas, decontamination procedures. Refer to the DASNY Standard Specification for the Identification and Disposal of Hazardous Waste 028600 for waste storage area requirements.
5. Eating, drinking, smoking, and rest room procedures.
6. Sequencing of LBP and LCP related work.
7. Personal protective equipment and respiratory protection program, including controls.
8. Engineering controls, containment structures and safety measures. Refer to 1.07, D of this Section for HEPA filtered negative air unit requirements, as applicable.
9. Worker exposure assessment procedures.
10. Work Practice controls.
11. Housekeeping.
12. Hygiene facilities and practice.
13. Medical surveillance, including medical removal procedures.
14. Sampling, testing and analytical methods for personal air sampling requirements of 29 CFR Part 1926.62. Procedures must include frequency, locations, sampling, and analytical methods to be used.
15. Contractor to include the segregation and minimization of lead waste streams from construction and demolition waste in their lead-based paint management plan.

16. Visual clearance log for each control area that is maintained by the Contractor's Competent Person.

D. Compliance Program

Contractor's Compliance Program prepared in accordance with 29 CFR Part 1926.62 (e) (2) shall be maintained on-site.

E. Sampling and Laboratory Analysis Reports

Maintain on-site all field sampling logs for all personal air samples taken, including copies of laboratory analysis reports and chain of custody records for all sample analyses.

F. Competent Person certification per Sections 1.02 and 1.03.

1.05 CLOSEOUT SUBMITTALS: At the conclusion of the LBP/LCP project, the Contractor shall provide the following closeout submittals:

1. Refer to DASNY Standard Specification for the Identification and Disposal of Hazardous Waste 02 86 00 for closeout document requirements related to the disposal of hazardous waste, if applicable.
2. Submit copies of all "Visual Clearance Logs" to the DASNY Project Manager for owner's reference.
3. Signed Certification from the Contractor's Competent Person that all required documentation has been provided.

1.06 POSTED WARNINGS & NOTICES

The following regulations, warnings and notices shall be posted at the work site in accordance with 29 CFR Part 1926.62.

A. Regulations

A copy of applicable Federal, State, and Local regulations shall be maintained at the work site.

B. Warning Signs

Warning signs shall be provided at approaches to LBP/LCP control areas. Signs shall be located at a distance from the LBP and LCP control areas that will allow personnel to read the sign and take the necessary protective actions required before entering the LBP/LCP control area. The signs shall comply with the requirements of 29 CFR Part 1926.62.

C. Worker Information

Right-to-know notices shall be placed in clearly visible areas of the work site in compliance with Federal, State and Local regulations.

D. Exposure Air Monitoring Results

Exposure air monitoring results shall be prepared in order to be easily understood by the workers and shall be placed in a clearly visible area of the work site.

E. Emergency Telephone Numbers

A list of telephone numbers shall be posted at the site. The list shall include numbers of the local hospital, emergency squad, police and fire departments, Government and Contractor representatives who can be reached 24 hours per day as well as professional consultants directly involved in the project.

1.07 EQUIPMENT & MATERIALS

Sufficient quantities of health and safety materials required by 29 CFR Part 1926.62, and other materials and equipment needed to complete the project, shall be available and kept on the site.

A. Respirators

Air-purifying respirators shall be approved by NIOSH for use with dust, fumes and mists having permissible exposure limits less than 0.05 milligrams per cubic meter (i.e. have high-efficiency particulate air [HEPA] filters) and for other hazardous airborne contaminants that may be encountered, as determined by the Competent Person. The Contractor shall furnish, at no cost to personnel/employees, respirators to provide protection from airborne concentrations of lead. Respirators shall comply with the requirements of 29 CFR Part 1926.62 and shall be used in accordance with 29 CFR Part 1926.62, 29 CFR Part 1926.103 and 29 CFR Part 1910.134.

B. Respirator Cartridges

A sufficient supply of respirator cartridges shall be maintained at the work site to provide new cartridges to employees and authorized visitors throughout the duration of the project. Cartridges shall be replaced according to the manufacturer's recommendations, when breathing becomes difficult, or if the cartridges become wet.

C. Protective Clothing

1. The Contractor shall furnish, at no cost to personnel/employee, equipment/ clothing for protection from airborne and waterborne LBP and LCP debris. An adequate supply of these items shall be available for worker and authorized visitor use. Workers and visitors shall not take protective clothing and equipment off the work site at any time. Protective clothing includes:

- a. Coveralls (Whole Body Protective Coverings): Full-body coveralls and head covers shall be worn by workers in the control area as necessary. Sleeves shall be secured at the wrist and pants legs at the ankle with tape. Permeable clothing shall be provided in heat-stress conditions. Where non-disposable coveralls are provided, these coveralls shall be cleaned after each wearing and kept within the control area or decon/airlock (bagged). Cleaning of coveralls and other non-disposable clothing shall be in accordance with the provisions for cleaning in 29 CFR Part 1926.62.
- b. Boots: Work boots with nonskid soles or impermeable work boot covers shall be worn by workers. Where required by OSHA, safety boots (steel toe or steel toe

and shank) shall be worn. Paint the uppers of boots red with waterproof enamel. Do not allow boots to be removed from the control area for any reason after being contaminated with LBP or LCP debris. Keep within control area or decon/airlock (bagged).

- c. Gloves: Inner gloves, appropriate for items and hazards encountered, and disposable outer work gloves shall be provided to each worker and shall be worn while the worker is in the control area. Glove material shall be appropriate for the specific chemical exposure. Gloves shall not be removed from the control area and shall be disposed of as LBP or LCP contaminated waste at the end of the work.
- d. Hard Hats: Head protection (hard hats) shall be provided as required by OSHA for workers and authorized visitors. Protective plastic-strap suspension hats shall be used. Hard hats shall be worn at all times when work is in progress. Hard hats shall remain in the control area until the project is completed. Hard hats shall be thoroughly cleaned, decontaminated, dried and bagged before being removed from the control area at the end of the project.
- e. Eye Protection: Fog-proof goggles for personnel engaged in LBP and LCP operations shall be worn when the use of a full-face piece respirator is not required and kept within control area or decon/airlock (bagged) until completion of project.

D. Negative Air Pressure System

When a LBP or LCP control area requires the use of an airtight containment barrier, a negative air pressure system shall be used and pressure differential recordings taken. LBP and LCP shall not be removed from the LBP/LCP control area until the proper engineering controls and HEPA filtration systems are in place.

1. HEPA Filter Requirements

The negative air pressure system shall be equipped with approved HEPA filters per UL 586. Negative air pressure equipment shall be equipped with new HEPA filters, and shall be sufficient to maintain a minimum pressure differential of minus 5 Pascals (Pa), equivalent to 0.02 inch of water column relative to adjacent, unsealed areas. Negative air pressure system minimum requirements are listed below.

- a. The unit shall be capable of delivering its rated volume of air with a clean first stage filter, an intermediate filter and a primary HEPA filter in place. The units shall be clean and sealed (intake & exhaust) at all times when not operating in a control area.
- b. The HEPA filter shall be certified as being capable of removing particles as small as 0.3 micrometers at a minimum efficiency of 99.97 percent. 700 hours is the manufacturer life recommendation of a HEPA filter (approximately 1 month of continuous operating).
- c. The unit shall be capable of continuing to deliver no less than 70 percent of rated capacity when the HEPA filter is 70 percent full or measures 620 Pa (2.5 inches of water) static pressure differential on a magnehelic gauge.

- d. The unit shall be equipped with a manometer-type negative pressure differential monitor with minor scale division of 0.02 inch of water and accuracy within plus or minus 1.0 percent. The manometer shall be calibrated in accordance with the manufacturer's recommendations. Record manually manometer readings of the pressure differential between the LBP control area and adjacent unsealed areas at the beginning and end of each work day.
 - e. The unit shall be equipped with a means for the operator to easily interpret the readings in terms of the volumetric flow rate of air per minute moving through the machine at any given moment.
 - f. The unit shall be equipped with an electronic mechanism that automatically shuts the machine off in the event of a filter breach or absence of a filter.
 - g. The unit shall be equipped with an audible horn that sounds an alarm when the machine has shut itself off.
 - h. The unit shall be equipped with an automatic safety mechanism that prevents a worker from improperly inserting the main HEPA filter.
 - i. The unit shall be ducted through the containment barrier wall to the exterior of the building. The unit shall not be exhausted into any interior areas. If exhausting to the exterior is not feasible, utilize an unoccupied area or room that is large enough to handle the volume of air with two units connected in series. Applicable warning signage shall be posted at this location. DASNY prior approval is required if exhausting into the interior of the building.
2. Number of Units Required
- The air within the containment barrier shall be changed at least once every 15 minutes by a continuously operating negative air pressure system, until the LBP/LCP control area barrier is removed. Filters shall be replaced as necessary to maintain the efficiency of the system. A back-up unit shall be maintained on-site.
3. Auxiliary Generator
- If site conditions can't provide power, an auxiliary generator shall be provided. The generator shall not present a carbon monoxide hazard to workers.
4. Discontinuing Negative Air Pressure System
- The negative air pressure system shall not be shut down during LBP/LCP work unless authorized by the DASNY's third-party environmental consultant. At the completion of the LBP/LCP work procedures and disposal project, units shall be run until removal is completed satisfactorily and full cleanup has been completed and satisfactory clearance has been achieved. Dismantling of the negative air pressure systems shall conform to the written decontamination procedures. Prefilters shall be removed and properly disposed. The intake and exhaust of the machines shall be sealed with polyethylene to prevent environmental contamination.

E. Expendable Materials

1. Polyethylene Sheet and Bags - General

Polyethylene sheet and bags shall be minimum 6-mil thick. Bags shall have pre-printed labels, and 5-inch (minimum) long plastic ties, pointed and looped to secure the filled bags. Polyethylene sheets shall be in roll sizes to minimize seams.

2. Polyethylene Sheet - Flame Resistant

Where a potential for fire exists, flame-resistant polyethylene sheets shall be provided. Polyethylene film shall conform to the requirements of NFPA 701.

3. Polyethylene Sheet - Reinforced

Reinforced polyethylene sheet shall be provided where high skin strength is required such as where it constitutes the only barrier between the LBP control area and the indoor and outdoor environments. The sheet stock shall consist of translucent, nylon-reinforced or woven-polyethylene thread laminated between two layers of polyethylene film. Film shall meet flame resistant standards of NFPA 701.

4. Tape and Adhesive Spray

Tape and adhesive shall be capable of sealing joints between polyethylene sheets and for attachment of polyethylene sheets to adjacent surfaces. After dry application, tape or adhesive shall retain adhesion when exposed to wet conditions, including amended water. Tape shall be minimum 2 inches wide, industrial strength.

5. Containers

DOT approved impermeable containers shall be used to receive and retain LBP and LCP waste and debris and lead contaminated material until disposal. Containers shall be labeled in accordance with EPA, DOT and OSHA standards, as applicable for the type of waste. Waste streams shall be segregated in a manner to reduce the potential volume of hazardous waste generated.

6. Chemicals

Chemicals, including caustics and paint strippers, shall be properly labeled, stored in leak-tight containers and properly/safely secured from the general public.

F. Vacuum Systems

HEPA filtered vacuum systems shall be used during LBP/LCP operations which generate dust. The systems shall be suitably sized for the project, and filters shall be capable of removing particles as small as 0.3 micrometers at a minimum efficiency of 99.97 percent. Vacuum opening, wands and hoses shall be sealed at all times when not in a control area.

G. Chemical Paint Strippers

Chemical paint strippers shall contain no methylene chloride.

H. Chemical Paint Stripper Neutralizer

Neutralizers for paint strippers shall be compatible with the substrate and suitable for use with the chemical stripper that has been applied to the surface.

I. Storage of Materials

Materials shall be stored in an approved enclosed structure, which protects them from damage, rain, wind, etc. and contamination. During periods of cold weather, plastic materials shall be protected from the cold. Regularly inspect materials to identify damaged or deteriorating items. Damaged or deteriorated items shall not be used and shall be removed from the site as soon as they are discovered. Stored materials shall not present a hazard or an inconvenience to workers, visitors, employees and/or other building occupants.

PART 2 – EXECUTION

2.01 WORK PROCEDURES

LBP and LCP work procedures and related work shall be performed in accordance with the accepted Contractor's LBP and LCP Safe Work Practice Compliance Plan, 29 CFR Part 1926.62 and as specified herein. LBP/LCP waste and debris, lead contaminated debris and personal protective clothing and equipment shall be disposed of in compliance with Federal, State, and Local regulations and in accordance with the respective waste stream TCLP testing results.

A. Personal Protection Procedures

Respiratory Protection is required for all LBP disturbances. Personnel shall wear and use protective clothing and equipment as specified and required by 29 CFR Part 1926.62 and 29 CFR Part 1910.120. Eating, smoking, drinking, chewing tobacco, chewing gum, applying makeup and use of non-work-related walkie-talkies/phones shall not be permitted in the LBP and LCP control area. Personnel of trades not engaged in the LBP or LCP work procedures and disposal of LBP and LCP shall not be exposed at any time to airborne concentrations of lead equal to or in excess of 30 micrograms per cubic meter of air (30 ug/m³). Electrical service shall be disconnected when wet removal is performed, and temporary electrical service protected by a ground fault circuit interrupter (GFCI) shall be provided.

B. Safety and Health Procedures

The Competent Person shall be present on the work site throughout the LBP and LCP project to supervise, monitor and document the project's health and safety provisions. A daily log shall be maintained showing the results of air sampling tests throughout the project area. LBP and LCP work being conducted within a LBP or LCP control area where an airtight barrier is required shall be stopped if measured airborne lead concentrations, collected during LBP or LCP work procedures, exceed the Action Level.

C. Safety and Health Responsibilities

The Competent Person shall:

1. Verify that training meets applicable requirements.
2. Review and approve LBP/LCP Safe Work Practice Compliance Plan for conformance to the applicable referenced standards.

3. Inspect LBP and LCP removal work for conformance with the accepted Safe Work Practice Compliance Plan.
4. Ensure that worker exposure air monitoring activities are in accordance with 29 CFR Part 1926.62.
5. Ensure work is performed in strict accordance with specifications.
6. Ensure hazardous exposure to personnel and to the environment are adequately controlled.
7. The Contractor's Competent Person shall be responsible for directing personal air monitoring and shall also perform visual inspections prior to the visual inspection conducted by DASNY's third-Party Environmental Consultant (if applicable), to verify the control areas are free of all visible debris.
8. If required, the Contractor's Competent Person shall coordinate with DASNY and the DASNY's third-party environmental consultant for any control areas requiring final air/wipe testing clearance testing (Action Level/wipe) in accordance with OSHA and/or US Department of Housing and Urban Development (HUD) protocols.

D. Medical Surveillance Procedures

Medical surveillance shall be implemented in accordance with the accepted Contractor's LBP/LCP Safe Work Practice Compliance Plan and shall comply with the requirements of 29 CFR Part 1926.62, including the provisions for blood lead level monitoring, medical removal, protection and a physician's written opinion, signed by the physician performing the employee examination. The Contractor's Competent Person shall maintain on-site, a copy of the written opinion for Contractor's employees prior to each employee's commencement of work.

E. Engineering Controls and Containment Structures

Engineering and work practice controls are the primary means of maintaining exposures to lead below the PEL. Paint removal and surface preparation activities must keep dust levels at a minimum. Power tools must be equipped with manufacturer equipped vacuum shrouds including an attached HEPA filtered vacuum system.

1. LBP/LCP Control Area

The control area is where LBP/LCP work procedures occur and as such shall be considered contaminated. The LBP/LCP control area shall be isolated to prevent LBP/LCP containing dust or debris from passing into adjacent areas. The control area shall be decontaminated at the completion of the LBP/LCP work procedures and disposal work.

2. Boundary Requirements.

Physical boundaries along with Warning Signage shall be provided around exterior LBP/LCP control areas by taping off the area indicated in the Safe Work Practice Compliance Plan.

3. Control Barriers

The LBP/LCP control area shall be designated and separated from other outside areas with control barriers. The polyethylene sheeting shall mask and seal all openings. The LBP/LCP control area shall be erected according to the Contractors LBP/LCP Safe

Work Practice Compliance Plan. Polyethylene sheeting shall be mechanically supported, independent of duct tape or spray adhesive.

4. Exterior Masking and Sealing

Exterior LBP/LCP control area requirements: Where the construction of a contained LBP/LCP control area is impractical or not required based on the method of lead work procedures, a taped-off perimeter shall be installed around the area where the LBP/LCP handling procedures are performed and other requirements for LBP/LCP control areas shall be maintained. Personal monitoring of airborne concentrations is still required and shall be conducted in accordance with 29 CFR Part 1926.62.

5. Hand Wash Station

An operational hand washing station shall be provided to all workers adjacent to each LBP/LCP control area utilizing polyethylene sheeting as a drop cloth. Water shall be hot and cold or warm. Soap dish, continuing supply of soap, and clean towels shall be provided. The hand wash station shall be maintained in a sanitary condition. Waste water shall be collected and placed within 6-mil polyethylene bags and sealed. Bags shall be immediately placed within non-leaking, drums and sealed.

6. Equipment Decontamination

An equipment decontamination area shall be installed at the entrance to each LBP/LCP control area to allow for the cleaning of all equipment utilized on the project. Polyethylene sheeting shall be utilized as a drop cloth, along with a utility tub to clean and capture debris/water during the cleaning process. Water shall be hot and cold or warm. Continuing supply of detergent, and clean towels shall be provided. The equipment decontamination area shall be maintained in a sanitary condition. Waste water shall be collected and placed within 6-mil polyethylene bags and sealed. Bags shall be immediately placed within non-leaking, drums and sealed.

F. Temporary Utilities

1. Temporary equipment as necessary to provide adequate power, light, heat, and water shall be installed, as needed, to accomplish the LBP/LCP operations properly and safely. The Contractor shall maintain the security and maintenance of the utility system in the LBP/LCP control areas. In the event of a failure of any utility system, the Owner will not be responsible for any loss of time or other expense incurred by the Contractor. In addition to any site-specific temporary utility requirements, the Contractor shall provide:
 - a. Back-flow protection on all water connections. Fittings installed by the Contractor shall be removed after completion of work with no damage or alteration to existing water piping and equipment.
 - b. When applicable, heavy-duty abrasion-resistant hoses to provide water to each control area and decontamination area.
 - c. A hot water heater, if necessary, to provide warm water to the decontamination showers, hand wash station and equipment decontamination area.
 - d. Electrical service to control areas. Electrical service shall comply with National Electric Code, State and Local requirements and UL standards. Warning signs shall be posted at power outlets, which are other than 110-120 volt power. Only grounded extension cords connected into a GFCI shall be used. Incandescent lamps and light fixtures shall be of adequate wattage to provide good illumination in LBP/LCP control areas.

- e. Temporary heating units, when needed, that have been tested and labeled by UL, FM, or another recognized trade association related to the fuel being consumed. Forced air or fan type units shall not be utilized inside a control area. Units shall have tip-over protection.

2.02 LEAD-BASED/CONTAINING PAINT WORK PRACTICES (Use methods as applicable)

A. Component Removal:

Components shall be removed intact to the extent practicable. A 6-mil polyethylene drop cloth shall be placed around and/or beneath the component, prior to its removal, to catch any paint chips that may become dislodged. The component shall be wrapped and sealed in a layer of clear 6-mil polyethylene prior to movement to the disposal container. Follow proper disposal requirements. The area around the component removal shall be wet wiped and HEPA vacuumed. The polyethylene sheeting shall be carefully folded in on itself and placed in a 6-mil disposal bag. Containment debris shall be properly stored of in accordance with respective waste stream as per the Contractor's LBP/LCP Safe Work Practice Compliance Plan

B. Chemical Stripping:

Chemical stripping may be used for LBP and LCP removal on surfaces that will be subjected to welding, cutting, torch burning or where it is the only acceptable procedure. No chemical strippers or associated neutralizer chemicals containing methylene chloride shall be used by the Contractor on this project.

1. Horizontal surfaces directly below and in a radial direction from the area where chemical stripping is to be performed shall be covered with 6-mil plastic sheeting and shall also extend ten (10) feet on either side of the control area or to the furthest practical distance to catch any paint chips that may become dislodged.
2. All LBP/LCP on specified surfaces shall be removed to the bare substrate. The job is not considered complete until the substrate is dry, free of paint, debris, and LBP/LCP residue.
3. LBP/LCP stripping agents shall be brushed or troweled on the designated surfaces, or otherwise applied to a minimum thickness in accordance with manufacturer's specifications.
4. The required application/reaction time for stripping will depend upon the ambient temperature, humidity, and thickness of LBP/LCP. If LBP/LCP is not completely removed following the initial application of stripper, additional applications and wet scrapings may be required.
5. Removed LBP/LCP shall not be deposited on the polyethylene containment surfaces but shall be transferred directly into clear 6-mil polyethylene bags from the scraper and sealed. LBP/LCP shall be removed by wet scraping to the maximum extent feasible. If the substrate is to be reused, the removal activities shall not damage the substrate.
6. Any residue not removable by wet scraping shall be washed down to the bare metal substrate with an appropriate, pre-approved solution. LBP/LCP-contaminated

wastewater shall be kept to a minimum using wet scrub brushes or sponges. These residues and disposable cleaning media shall also be directly transferred to 6-mil polyethylene bags and sealed. Bags shall be immediately placed within non-leaking, drums and sealed. Free standing water shall be eliminated by use of a drying agent. Contractor to include the segregation and minimization of lead waste from construction and demolition waste in their LBP/LCP Safe Work Practice Compliance Plan .

C. Manual Demolition/Scraping/Cleaning:

1. Manual demolition, scraping, sanding and power tool cleaning with dust collection systems shall be performed in conjunction with engineering and work practice controls meeting the requirements of 29 CFR 1926.62(e)(1).
2. Seal openings of HVAC ductwork and other penetrations (doors, windows, etc.) within the Control Area with two layers of 6-mil polyethylene sheeting. For work on vertical surfaces, place a layer of 6-mil polyethylene sheeting below the area prior to manual demolition/scraping/sanding/cleaning. The sheeting shall extend ten (10) feet on either side of the control area or to the furthest practical distance to catch any paint chips that may become dislodged.
3. Wet methods shall be used during manual scraping, sanding and power tool cleaning with dust collection systems. Local HEPA ventilation shall be utilized in conjunction with manual scraping, sanding and power tool cleaning with dust collection systems. In the case that local HEPA ventilation is not sufficient to control dust hazards, the Contractor shall be required to install engineering controls to meet requirements of specification section 1.06, D., “Negative Air Pressure System”.
4. Removed LBP/LCP shall not be allowed to accumulate on surfaces within the Control Area but shall be HEPA vacuumed or placed directly into 6-mil polyethylene bags. The Contractor shall maintain all surfaces as free as practicable of accumulated lead dust to prevent the dispersal of lead into the work places that are outside of the lead paint control areas. LBP/LCP shall be removed by manual methods to the maximum extent feasible.
5. Debris shall be bagged in 6-mil polyethylene bags, sealed, and secured in leak proof drums. The area around the surfaces subject to work shall be wet wiped and HEPA vacuumed, including the polyethylene sheeting. Upon a satisfactory clearance inspection by DASNY’s Third-Party Environmental Consultant (if applicable) and the Contractor’s Competent Person, the cleaned polyethylene sheeting shall be carefully folded in on itself and placed in a 6-mil disposal bag. Containment debris shall be properly stored of in accordance with the respective waste stream as indicated in the contractor’s LBP/LCP Safe Work Practice Compliance Plan . The contractor shall coordinate with the DASNY’s third-party environmental consultant to test the waste streams for disposal.

D. Alternative Lead Work Procedures

1. Any work procedure deviating from the outlined procedures above shall be submitted to DASNY Code Compliance and the Owner’s third-party Environmental Consultant for review and approval prior to the start of the project. As there are many different

components in different areas of the building(s), it is impractical to address every potential lead work procedure. The intent of alternative lead work procedures shall be to maintain compliance with 29 CFR 1926.62 and maintain airborne concentrations of lead dust below the Action Level of 30 ug/m³.

2.03 PERSONAL AIR MONITORING, WASTE SAMPLING & CLEARANCE SAMPLING (If Required by DASNY)

During all LBP/LCP removal and disposal operations, the Contractor's OSHA Competent Person shall be on-site inspecting the work to ensure that the health and safety requirements of this contract are satisfied. DASNY may elect to have a Third-Party Environmental Consultant on-site to perform visual clearance inspections and/or clearance sampling.

A. Personal Air Monitoring (Provided by the Contractor, as necessary)

1. Personal air monitoring samples for airborne concentrations of lead shall be collected and analyzed in accordance with 29 CFR Part 1926.62. Results shall be reported in micrograms per cubic meter of air. The Competent Person shall use personal air monitoring results to determine the effectiveness of engineering controls, the adequacy of PPE and to determine if proper work practices are being employed. The DASNY's third-party environmental consultant shall be notified if any personal air monitoring result meets or exceeds 30 ug/m³ of air. The Contractor shall stop work and take steps to reduce the concentration of lead in the air. Such corrective actions shall be documented in the daily log. Personal air sampling results shall be verbally available within 24-hours of sampling with hard copy reports available within five (5) calendar days of sampling.

B. Waste Sampling and Testing (Provided by DASNY's Third Party Environmental Consultant)

1. Sampling and testing of all waste streams, shall be in accordance with 40 CFR Part 261, 6 NYCRR Part 371 and SW-846, Chapter 9, Sampling Plan. See Paragraph 2.05 C. of this specification section for waste sampling and analyses requirements.

C. Dust/Wipe Sampling (If Required by DASNY, will be provided by DASNY's Third Party Environmental Consultant).

1. Dust/wipe samples shall be taken after clean-up activities have been completed and the control areas passed a visual inspection. Refer to Section 2.01 C. 7. for visual inspection requirements.
2. Sampling for clearance criteria shall be performed in compliance with HUD Guidance document.
3. If clearance fails, the recleaning and any additional costs (dust/wipe sample analyses, etc.) to clear the control area shall be the responsibility of the Contractor. The control area shall remain in place until satisfactory clearance has been achieved.
4. Clearance Levels:
 - a. Floors: 10 ug/ft²
 - b. Window Sills: 50 ug/ft²
 - c. Window Wells: 100 ug/ft²

2.04 ADJACENT AREAS

Damage to adjacent areas shall be repaired by the Contractor to the approval of the Owner.

2.05 CLEAN-UP & DISPOSAL

A. Cleanup

1. Daily:
Surfaces in the LBP/LCP control area shall be maintained free of accumulations of paint chips, LBP/LCP debris and dust. Spread of dust and debris shall be restricted; waste shall not be distributed over the control area. Dry sweeping or compressed air shall not be used for cleanup. At the end of each shift, the area shall be cleaned of visible lead paint contamination by vacuuming with a HEPA filtered vacuum cleaner and wet wiping the area. LBP/LCP work procedures shall cease during the cleanup.
2. At completion of LBP/LCP work and a satisfactory visual inspection by DASNY's Third Party Environmental Consultant (if applicable) and OSHA Competent Person, a clean-up shall be performed by the Contractor. This clean-up includes removal of any contaminated material, equipment or debris including polyethylene sheeting from the control area. The polyethylene sheeting shall be sprayed or misted with water for dust control, construction debris removed and polyethylene sheeting wet wiped. Then the sheeting shall be removed by folding it in upon itself.
 - a. Lead-contaminated debris shall be containerized in accordance with the Contractor's LBP/LCP Safe Work Practice Compliance Plan. Waste bags shall not be overloaded and shall be securely sealed and stored in the designated area.
 - b. Removal of surface polyethylene sheeting shall begin from top to bottom. Removal of floor polyethylene sheeting shall begin at the corners and folded in the middle to contain the dust. Polyethylene shall be disposed of as per the Contractor's LBP/LCP Safe Work Practice Compliance Plan. Cleaning Equipment. The Contractor shall decontaminate the lead abatement equipment and equipment used in the control area. The wastewater from cleaning shall be contained, sampled and disposed of as specified within Section 2.01 E. 6. and 2.02 B. 7 and as per contractor's LBP/LCP Safe Work Practice Compliance Plan.

B. Certification

1. The Contractor's Competent Person shall certify and sign within the log that the respiratory protection for the employees was adequate, the work procedures were performed in accordance with 29 CFR Part 1926.62 and that there was no visible accumulations of LBP/LCP paint/coating or dust on the worksite. Do not remove warning signs at the lead control area or roped-off boundary signs prior to the completion of the Competent Person's signed certification. If applicable, the Contractor's Competent Person's certification shall be forwarded to the DASNY Project Manager and the DASNY's Third Party Environmental Consultant's for review prior to removing warning signs at the lead control area or roped-off boundary signs.

- C. Waste Storage and Disposal (Provided by the Contractor) and Sampling/Analysis (Provided by DASNY's Third Party Environmental Consultant).
1. LBP/LCP Wastes and Lead-Contaminated Water. Refer to DASNY Standard Specification for the Identification and Disposal of Hazardous Waste section 02 86 00.

END OF SECTION 02 83 10

SECTION 07 84 00 - FIRESTOPPING

PART 1 – GENERAL

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

1.02 SUMMARY

- A. The Work of this Section includes, but is not limited to the following:
1. Firestopping at openings in floors and fire rated walls and partitions to prevent the passage of fire, smoke or toxic gases.

The following Sections contain requirements that relate to this Section:

Section 07 90 00 – Joint Sealants
Section 09 21 00 – Gypsum Board Systems

1.03 QUALITY ASSURANCE

- A. Qualifications: The work of this Section shall be performed by a qualified and experienced Installer, acceptable to the Architect and the Owner. The term "Installer", as used herein, shall mean a firm of established reputation, which has been trained by the Manufacturer in the proper installation of fire safing materials and which is regularly engaged in, and maintains a regular force of workmen skilled in the installation of fire safing materials of the type specified.
- B. Before proceeding with the work, submit three copies of a list of several comparable projects of similar work that the Installer has completed within the past three years, giving the job locations, names of the owners, their telephone numbers and the date on which the work on each project was started and completed.
- C. Comply with the City of New York Building Code Section 1705.17 for period special inspection prior to concealment to determine compliance with approved construction documents. Listed systems shall be inspected for compliance with their listing.

1.04 REFERENCES

- A. Codes and Regulations: Comply with NFPA and ASTM Codes and applicable

regulations of governmental authorities having jurisdiction.

1.05 SUBMITTALS

A. Shop Drawings

1. Submit shop drawings for all work of this Section; approval shall be obtained before materials are fabricated or delivered to the site. All drawings and details shall be submitted on 8-1/2" by 11" size paper.
2. Shop drawings shall indicate the locations and types of the various fire safing materials to be used throughout the building, and materials and methods of installation of damming for the various floor, wall, and ceiling construction. Details of damming shall be large scale and shall indicate materials and methods of installation.
3. List of Conditions: Submit with the shop drawings a list of all conditions to be expected. Reference the applicable UL Test Numbers for each condition.
4. Contractor shall be responsible to obtain approval and submit engineered special fire stopping designs which do not conform with any UL approved assembly. All special assemblies shall meet or exceed the applicable code requirements.

B. Samples: Submit samples of all materials specified in this Section to be used on the Project.

C. Product Data: Submit manufacturer's technical data and installation instructions.

D. Test Reports: Submit copies of test reports, by an independent testing laboratory, indicating that the fire safing materials comply with the specified requirements.

1.06 FIELD QUALITY CONTROL

A. Tests for thickness and density of applied material will be performed by an independent testing agency selected and paid for by the Owner. Where test results are unsatisfactory in sample areas, additional tests in other areas may be made. Such further testing, if required, shall be by the same testing agency but shall be paid for by the Installer.

PART 2 - PRODUCTS

2.01 FIRE RESISTANT SILICONE FOAM

- A. Foam shall conform to a two-hour fire rating in accordance with the requirements of NFPA Codes and ASTM E 119. Foam shall also conform to UL Standard 1479: "Standards for Fire Tests of Through Penetration Fire Stops".
- B. The foam shall provide a fire resistance equal to the construction into which it is installed; in accordance with "Through Penetration Firestop Systems (XHEZ) "in the Underwriters Laboratories "Fire Resistance Directory"
- C. Acceptable materials are Dow Corning Silicone RTV Foam, Chase-Foam CTC PR-855 by Chase Technology Corp., Pensil RTV 851 by G.E.1 or approved equal.
- D. Dams: Provide dams as recommended by the manufacturer, for proper installation and for required fire rating.

2.02 MINERAL FIBER FIRESAFING INSULATION

- A. Provide 20-gauge minimum metal plate where required for firesafing support to comply with fire ratings.
- B. Do not use fibrous safing insulation unless it is in conjunction with a compatible smoke seal as specified herein.

2.03 MINERAL WOOL

- A. Loose mineral wool, rated noncombustible when tested according to ASTM E 136, free of asbestos and glass fiber, and suitable for stuffing into metal deck flutes to an in-place density of 6 to 12 pcf.

2.04 FIRESTOPPING SEALANTS

- A. Provide a fire stop sealant classified for both flame and temperature ratings under ASTM E 814.
- B. Acceptable materials are USG Interiors Smoke Seal Compound, Dow Corn~ng Fire Stop Sealant, Bio Fireshield "Biotherm", Bio Stop 500 Intumescent Fire Caulk, 3M FireBarrier Caulk, G.E. RTV 7403 or approved equal.

2.05 ACCESSORIES

- A. Provide anchorage assemblies complying with U.L. designs and other components and accessories as needed.

PART 3 - EXECUTION

3.01 DELIVERY AND STORAGE

- A. Deliver materials and products in unopened packages and containers, clearly indicating name of manufacturer and U.L. Labeling. Store and handle in strict compliance with manufacturers' instructions and recommendations. Protect from damage. Protect materials from freezing or overheating in accordance with manufacturers' instructions.

3.02 INSPECTION

- A. Examine all surfaces to which the firestopping materials are to be applied and notify the Architect in writing of any conditions detrimental to the proper and expeditious installation of the work. Starting of work within an area shall be construed as acceptance of the conditions of that area.
- B. Thoroughly clean all surfaces to receive firestopping materials to eliminate mill scale, dirt, grime, oil, grease, dust, loose rust or paint, and all other foreign material.
- C. Cleaning shall be accomplished just prior to application of firestopping materials.

3.03 INSTALLATION/GENERAL

- A. The Contractor shall select the material and UL test assemblies to be used as may be required for each type of material, location, rating and penetration or hole size. Do not proceed with the work until all submittals have been fully approved.
- B. Materials and equipment shall be as approved by the manufacturer. Application procedures shall be in strict accordance with the manufacturer's directions and specifications. Only experienced, skilled mechanics approved by the materials manufacturers shall be allowed to place the materials.
- C. Provide firestopping materials and thicknesses as required to provide indicated ratings. Where not otherwise indicated, comply with U.L. standard designs. In multiple layer work, offset joints by at least 6 inches.
- D. Anchor firestopping using manufacturers' recommended system and in compliance with U.L. standard designs.

- E. Install firestopping without gaps and voids of any kind. Do not use damaged materials. Remove and replace non-fitting or disturbed work. Do not use fire safing materials containing solvents.

3.04 MINERAL SAFING INSULATION

- A. Use mineral safing insulation at the exterior perimeter, at floor slab edges and the curtainwall system to provide the required fire-rated seal. Apply in continuous lengths, using manufacturer standard safing clips. Compress insulation until stable without movement.
- B. Use mineral safing insulation at top of fire-rated partitions at underside of metal deck to provide complete fire-rated seal.
- C. Mineral safing insulation must be used in conjunction with a sealant or foam fire stop to ensure a continuous smoke seal.

3.05 FIRESTOPPING SEALANT

- A. Use firestopping sealants at narrow joints at fire rated floor and wall penetrations, and at penetrations subject to vibration or movement. Typical penetrations requiring sealant are plumbing and HVAC piping, electrical conduit, and ductwork.
- B. Where openings are large enough, use mineral safing insulation in thicknesses required to dam the joint, and apply 1/2-inch minimum depth of sealant, or as required to achieve the rated assembly.

3.06 FOAM-IN-PLACE FIRESTOPPING

- A. Apply foam-in-place firestopping material in depths required to meet the fire ratings indicated or required. Provide clips or other approved means to contain the foam-in-place material, which will enable the foam to solidly fill the areas intended. Mixing and application shall be in strict accordance with the manufacturer's written instructions.
- B. Foam firestopping may be used in lieu of sealant or mortar materials at the Contractor's option, provided details conform to manufacturer's recommendations for maintaining the integrity of the assembly in question, and the manufacturer submits applicable test results of similar configurations.

3.07 FIELD QUALITY CONTROL

- A. Coordinate installation of firestopping work with other work to minimize cutting and removal of installed firestopping. As work of other trades is completed, review firestopping work and repair or replace work, which has been damaged or removed. Inspections will be performed by owner's special inspection representative, to verify compliance with requirements.

3.08 CLEANING AND PROTECTION

- A. Upon completion of the work, remove all unused materials from the site. Clean floors, walls and other adjacent surfaces that are stained, marred or otherwise damaged by this work. Leave all work and the adjacent areas in a clean condition.
- B. Protect all completed work from damage, by methods recommended by the manufacturer of installed materials.

END OF SECTION – 07 84 00

SECTION 07 90 00 - JOINT SEALANTS

PART 1 - GENERAL

RELATED DOCUMENTS

The Contract Documents apply to the work of this section.

1.01 SUMMARY

This Section includes joint sealants for the following locations:

- A. Work included:
 - 1. Making required submittals.
 - 2. Coordination with other trades
 - 3. Inspection of work areas
- B. Exterior joints in vertical surfaces and non-traffic horizontal surfaces such as:
 - 1. All joints as indicated.
- C. Related Section: The following Sections contain requirements that relate to this Section:
 - 1. Section 06 10 00 Rough Carpentry
 - 2. Section 07 84 00 Firestopping
 - 3. Section 09 21 00 Gypsum Board Systems

1.02 SYSTEM PERFORMANCE REQUIREMENTS

- A. Provide elastomeric joint sealers that have been produced and installed to establish watertight, airtight continuous seals without causing staining or deterioration of joint substrates.
- B. Provide joint sealants for interior applications that have been produced and installed to establish and maintain airtight continuous seals that are water resistant and cause no staining or deterioration of joint substrates.

1.03 SUBMITTALS

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections. Product data from manufacturers for each joint sealant product required.
 - 1. Certification by joint sealant manufacturer that sealants plus the primers and cleaners required for sealant installation comply with local regulations controlling use of volatile organic compounds.
- B. Samples for initial selection purposes in form of manufacturer's standard bead samples, consisting of strips of actual products showing full range of colors available for each product exposed to view.
- C. Samples for verification purposes of each type and color of joint sealant required. Install joint sealant samples in 1/2-inch-wide joints formed between two 6-inch-long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.
- D. Certificates from manufacturers of joint sealants attesting that their products comply with specification requirements and are suitable for the use indicated.
- E. Compatibility and adhesion test reports from elastomeric sealant manufacturer indicating that materials forming joint substrates and joint sealant backings have been tested for compatibility and adhesion with joint sealants. Include sealant manufacturer's interpretation of test results relative to sealant performance and recommendations for primers and substrate preparation needed to obtain adhesion.
- F. Pre-construction field test reports indicating which products and joint preparation methods demonstrate acceptable adhesion to joint substrates.

1.04 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced Installer who has completed joint sealant applications similar in material, design, and extent to that indicated for Project that have resulted in construction with a record of successful in-service performance.
- B. Single Source Responsibility for Joint Sealer Materials: Obtain joint sealant materials from a single manufacturer for each different product required.
- C. Pre-construction Compatibility and Adhesion Testing: Submit to joint sealant manufacturers samples of materials that will contact or affect joint sealers for compatibility and adhesion testing as indicated below:

1. Use test methods standard with manufacturer to determine if priming and other specific joint preparation techniques are required to obtain rapid, optimum adhesion of joint sealants to joint substrates.
- D. Pre-construction Field Testing: Prior to installation of joint sealants, field-test their adhesion to joint substrates as follows:
1. Locate test joints where indicated or, if not indicated, as directed by Architect.
 2. Conduct field tests for each application indicated below:
 3. Arrange for tests to take place with joint sealant manufacturer's technical representative present.
 4. Evaluation of Field Test Results: Sealants not evidencing adhesive failure from testing, in absence of other indications of noncompliance with requirements, will be considered satisfactory. Do not use sealants that fail to adhere to joint substrates during testing.
- E. Field-Constructed Mock-Ups: Prior to installation of joint sealants, apply elastomeric sealants as follows to verify selections made under sample submittals and to demonstrate aesthetic effects as well as qualities of materials and execution:
- F. Pre-Installation Conference: Conduct conference at Project site to comply with requirements of the Division 1 Section covering this activity.

1.05 DELIVERY, STORAGE, AND HANDLING

Deliver materials to Project site in original unopened containers or bundles with labels indicating manufacturer, product name and designation, color, expiration period for use, pot life, curing time and mixing instructions for multi-component materials.

Store and handle materials in compliance with manufacturers' recommendations to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.

1.06 PROJECT CONDITIONS

- A. Environmental Conditions: Do not proceed with installation of joint sealants under the following conditions:
1. When ambient and substrate temperature conditions are outside the limits permitted by joint sealer manufacturers.
 2. When ambient and substrate temperature conditions are outside the limits permitted by joint sealant manufacturer or below 40 deg F (4.4 deg C).
 3. When joint substrates are wet.

- B. Joint Width Conditions: Do not proceed with installation of joint sealants where joint widths are less than allowed by joint sealant manufacturer for application indicated.
- C. Joint Substrate Conditions: Do not proceed with installation of joint sealants until contaminants capable of interfering with their adhesion are removed from joint substrates.

PART 2 - PRODUCTS

2.01 MATERIALS, GENERAL

- A. Compatibility: Provide joint sealants, joint fillers, and other related materials that are compatible with one another and with joint substrates under conditions of service and on testing and field experience.
- B. Colors: Provide color of exposed joint sealants to comply with the following:
 - 1. Match colors indicated by reference to manufacturer's standard designations.
 - 2. Provide selections made by Architect from manufacturer's full range of standard colors for products of type indicated.

2.02 ELASTOMERIC JOINT SEALANTS

- A. Elastomeric Sealant Standard: Provide manufacturer's standard chemically curing elastomeric sealants that comply with ASTM C 920 and other requirements indicated on each Elastomeric Joint Sealant Data Sheet at end of this Section, including those requirements referencing ASTM C 920 classifications for Type, Grade Class, and Uses. Use only one-part sealant.
- B. Products: Subject to compliance with requirements, provide one of the products specified in each Elastomeric Joint Sealant Data Sheet.
- C. Silicone for vertical joints at Storefront, Windows & Stonework: Dow 790 for porous to porous substrates, and Dow 795 for non porous and non porous to porous substrates or approved equal.
- D. Sealants at concrete pavements : Tremco "HPL" for low movement +/- 12%. Tremco 901 movement +/- 25% gun grade, 'Picora' Dynatread or Senneboln SL2 Vulkem 200 (Black only) self leveling, pour grade jet fuel resistant polyurethane paving sealant.

2.03 JOINT SEALANT BACKING

- A. General: Provide sealant backings of material and type that are approved for applications indicated by sealant manufacturer based on Field experience and laboratory testing.
 - 1. Both closed and open cell backers should be allowed on basis of manufacturer data for sealant type backer tape may also be necessary depending on conditions.

2.04 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint sealer manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from pre-construction joint sealant-substrate tests and field tests.
- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming in any way joint substrates and adjacent nonporous surfaces, and formulated to promote optimum adhesion of sealants with joint substrates.
- C. Masking Tape: Non staining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.
- D. Lead "T" weather cap as indicated on drawings. Size and type as required by joint widths as recommended by the manufacturer.

PART 3- EXECUTION

3.1 EXAMINATION

Examine joints indicated to receive joint sealants, with installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint sealant performance. Do not proceed with installation of joint sealants until unsatisfactory conditions have been corrected. Follow recommendations of joint sealant manufacturer.

3.2 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with recommendations of joint sealant manufacturer and the following requirements:
1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
 2. Clean concrete, masonry, unglazed surfaces of ceramic tile and similar porous joint substrate surfaces by, brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealers. Remove loose particles remaining from above cleaning operations by vacuuming or blowing out joints with oil-free compressed air.
 3. Remove laitance and form release agents from concrete.
 4. Clean metal, glass, porcelain enamel, glazed surfaces of ceramic tile and other nonporous surfaces by chemical cleaners or other means that do not stain, harm substrates or leave residues capable of interfering with adhesion of joint sealants.
- B. Joint Priming: Prime joint substrates where indicated or where recommended by joint sealant manufacturer based on pre-construction joint sealer-substrate tests or prior experience. Apply primer to comply with joint sealant manufacturer's recommendations. Confine primers to areas of joint sealant bond; do not allow spillage or migration onto adjoining surfaces.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.03 INSTALLATION OF JOINT SEALANTS

- A. General: Comply with joint sealant manufacturer's printed installation instructions applicable to products and applications indicated, except where more stringent requirements apply.
- B. Elastomeric Sealant Installation Standard: Comply with recommendations of ASTM C 962 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. Installation of Sealant Backings: Install sealant backings to comply with the following requirements:

1. Install joint fillers of type indicated to provide support of sealants during application and at position required to produce the cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
 2. Do not leave gaps between ends of joint fillers.
 3. Do not stretch, twist, puncture, or tear joint fillers.
 4. Remove absorbent joint fillers that have become wet prior to sealant application and replace with dry materials.
- D. Installation of Sealants: Install sealants by proven techniques that result in sealants directly contacting and fully wetting joint substrates, completely filling recesses provided for each joint configuration and providing uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability. Install sealants at the same time sealant backings are installed.
- E. Tooling of Non-sag Sealants: Immediately after sealant application and prior to time skinning or curing begins, tool sealants to form smooth, uniform beads of configuration indicated, to eliminate air pockets and to ensure contact and adhesion of sealant with sides of joint. Remove excess sealants from surfaces adjacent to joint. Do not use tooling agents that discolor sealants or adjacent surfaces or are not approved by sealant manufacturer.
1. Provide concave joint configuration per Figure EA in ASTM C1193-91, unless otherwise indicated.
 2. Use masking tape to protect adjacent surfaces of recessed tooled joints.
 3. Provide recessed joint configuration, per Figure 5C in ASTM C 1193-91, of recess depth and at locations indicated.
- F. Installation of Lead "T" weather cap: Install to comply with recommendations of weather cap manufacturer and the following requirements:
1. Joint Preparation - rake out joints to accommodate anchor shaft length plus 1/4" and depth of backer rod. Weather cap shall be of proper width to cover the joint opening to be sealed and caulked plus allowance for percentage of anticipated joint movement plus 1/4".

3.04 CLEANING

Clean off excess sealant (s) smears adjacent to joints as work progresses by methods and with cleaning materials approved by manufacturers of joint sealants and of products in which joints occur.

3.05 PROTECTION

Protect joint sealants during and after curing period from contact with contaminating substances or from damage resulting from construction operations or other causes so that they are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so that installations with repaired areas are indistinguishable from original work.

END OF SECTION 07 90 00

SECTION 08 91 19 – FIXED LOUVERS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Fixed-Blade Extruded-Aluminum Louvers:
 - 1. Horizontal drainable-blade louver.
- B. Blank-Off Panels for Louvers.

1.2 RELATED SECTIONS

- A. Section 07 90 00 – Joint Sealants.
- B. Section 09 90 00 - Painting.

1.3 REFERENCES

- A. Air Movement and Control Association International (AMCA):
 - 1. AMCA 500-L - Laboratory Methods of Testing Louvers for Rating.
 - 2. AMCA 501 - Application Manual for Air Louvers.
 - 3. AMCA 511 - Certified Ratings Program - Product Rating Manual for Air Control Devices.
 - 4. AMCA 512 - AMCA Listing Label Program. Water and Air Certification.
 - 5. AMCA 512 - AMCA Listing Label Program. Water, Air, Wind-Driven Rain Certification.
 - 6. AMCA 512 - AMCA Listing Label Program. Air Certification.
- B. ASTM International (ASTM):
 - 1. ASTM A 653 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
 - 2. ASTM A 666 - Standard Specification for Annealed or Cold Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
 - 3. ASTM A 788 - Standard Specification for Steel Forgings, General Requirements.
 - 4. ASTM B 26 - Standard Specification for Aluminum Alloy Sand Castings.
 - 5. ASTM B 209 - Standard Specification for Aluminum and Aluminum Alloy Sheet and Plate.
 - 6. ASTM B 221 - Standard Specification for Aluminum and Aluminum Alloy Rolled or Cold Finished Bar, Rod, and Wire.
 - 7. ASTM C 578 - Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.
 - 8. ASTM C 612 - Standard Specification for Mineral Fiber Block and Board Thermal Insulation.

9. ASTM D822 - Standard Practice for Filtered Open-Flame Carbon-Arc Exposures of Paint and Related Coatings.
 10. ASTM D 1187 - Standard Specification for Asphalt Base Emulsions for Use as Protective Coatings for Metal.
 11. ASTM D4214 - Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films.
 12. ASTM D2244 - Standard Test Method for Calculation of Color Differences From Instrumentally Measured Color Coordinates.
 13. ASTM E 90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
 14. ASTM E330 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.
 15. ASTM E 413 - Classification for Rating Sound Insulation.
- C. American Architectural Manufacturer's Association (AAMA).
1. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum.
 2. AAMA 2603 - Voluntary Specification. Performance Requirements and Test Procedures For. Pigmented Organic Coatings on Aluminum Extrusions.
 3. AAMA 2604 - High Performance Organic Coatings on Architectural Extrusions and Panels.
 4. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum.
- D. National Association of Architectural Metal Manufacturers (NAAMM): Metal Finishes Manual for Architectural and Metal Products.
- E. Sheet Metal and Air Conditioning Contractors' National Association (SMACNA): Architectural Sheet Metal Manual.
- F. National Electrical Manufacturers Association (NEMA).
- G. Underwriters Laboratories, Inc. (UL).

1.4 DEFINITIONS

- A. Louver Terminology: Definitions of terms for metal louvers contained in AMCA 501 apply to this Section, unless otherwise defined in this Section or in referenced standards.
- B. Standard Free Area: Free area of a louver 48 inches (1220 mm) wide by 48 inches (1220 mm) high, identical to that provided.
- C. Maximum Standard Airflow: Airflow at point of beginning water penetration through a louver 48 inches (1220 mm) wide by 48 inches (1220 mm) high, identical to that provided.
- D. Drainable-Blade Louver: Louver designed to collect and drain water to exterior at

sill by means of gutters in front edges of blades and channels in jambs and mullions.

1.5 SUBMITTALS

- A. Submit under provisions of Section 01 33 00 – Submittal Procedures.
- B. Product Data: Manufacturer's data sheets for each product and assembly specified.
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Cleaning methods.
- C. Shop Drawings: For units and accessories. Include plans; elevations; sections; and details showing profiles, angles, and spacing of elements. Show unit dimensions related to wall openings and adjacent construction; free area for each size indicated for louvers; profiles of frames at jambs, heads, and sills; and anchorage details and locations.
 - 1. Verify openings by field measurements before fabrication and indicate measurements on Shop Drawings.
 - 2. For installed products indicated to comply with design loadings, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
- D. Product Certificates:
 - 1. Air Performance: Certificates signed by Air Movement and Control Association International Inc (AMCA) certifying that the manufacturer's stock units are tested in accordance with AMCA Standard 500 and are licensed to bear the AMCA Certified Ratings Seal in accordance with AMCA Standard 511.
 - 2. Water Penetration: Certificates signed by Air Movement and Control Association International Inc (AMCA) certifying that the manufacturer's stock units are tested in accordance with AMCA Standard 500 and are licensed to bear the AMCA Certified Ratings Seal in accordance with AMCA Standard 511.
 - 3. Weather Louver Effectiveness: Certificates signed by Air Movement and Control Association International Inc (AMCA) certifying that the manufacturer's stock units are tested in accordance with AMCA Standard 500-L99, Section 8.3.2 - Wind Driven Rain Water Penetration Test, and are licensed to bear the AMCA Certified Ratings Seal in accordance with AMCA Standard 511.
 - 4. Provide AMCA Certification - Water, Air for louvers as scheduled.
- E. Qualification Data: For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
- F. Color Selection: Color must be color matched to existing aluminum window frame.

- G. Samples for Color Matching: Provide two samples representing actual finishes specified; prepared on Samples of same thickness and material indicated for final Work.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum 5 years manufacturing similar products. The manufacturer shall have implemented a program for the management of quality objectives, continual improvement, and monitoring of customer satisfaction to assure that customer needs and expectations are met.
- B. Installer Qualifications: Minimum 2 years experience installing similar louvers.
- C. Professional Engineer Qualifications: A professional engineer legally qualified to practice in jurisdiction where Project is located and experienced in providing engineering services of kind indicated. Engineering services are defined as those performed for installations of products that are similar to those indicated for this Project in material, design, and extent.
- D. Source Limitations: Obtain products through one source from a single manufacturer where alike in one or more respects regarding type, design, or factory-applied color finish.
- E. Welding Standards: As follows:
 - 1. Comply with AWS D1.2, "Structural Welding Code - Aluminum."
- F. AMCA Standard 500-L: Air performance, water penetration and air leakage ratings shall be determined in accordance with Air Movement and Control Association International Inc (AMCA) Standard 500, "Laboratory Methods of Testing Louvers for Rating."
- G. AMCA Standard 512: Ratings shall be determined in accordance with Air Movement and Control Association International Inc (AMCA) Standard 512, "AMCA Listing Label Program," latest edition.
- H. SMACNA Standard: Comply with SMACNA's "Architectural Sheet Metal Manual" recommendations for fabrication, construction details, and installation procedures.
- I. UL and NEMA Compliance: Provide motors and related components for motor-operated adjustable louvers that are listed and labeled by UL and comply with applicable NEMA standards.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store and handle materials and products in strict compliance with manufacturer's instructions and recommendations and industry standards.
- B. Store products indoors in manufacturer's or fabricator's original containers and packaging, with labels clearly identifying product name and manufacturer. Protect

from damage.

- C. Handling: Protect materials and finishes during handling and installation to prevent damage.

1.8 SEQUENCING AND SCHEDULING

- A. Field Measurements: Verify openings and adjacent construction by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
 - 1. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish opening dimensions and proceed with fabricating products without field measurements. Coordinate construction to ensure that actual opening dimensions correspond to established dimensions.
 - 2. Coordinate Setting Drawings, diagrams, templates, instructions, and directions for installation of anchorages that are to be embedded in concrete or masonry construction. Coordinate delivery of such items to Project site.

1.9 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.10 WARRANTY

- A. Manufacturer's Warranty: Provide manufacturer's standard limited warranty for louver systems for a period of 1 year from date of installation, no more than 18 months after shipment from manufacturing plant. When notified in writing from the Owner of a manufacturing defect, manufacturer shall promptly correct deficiencies without cost to the Owner.
- B. Manufacturer's Finish Warranty: Provide manufacturer's limited warranty for 70 percent fluoropolymer-based finish on aluminum substrates.
 - 1. Warranty Period: 20 years.
 - 2. Finish coating shall not peel, blister, chip, crack or check.
 - 3. Chalking, fading or erosion of finish when measured by the following tests:
 - a. Finish coating shall not chalk in excess of 8 numerical ratings when measured in accordance with ASTM D4214.
 - b. Finish coating shall not change color or fade in excess of 5 NBS units as determined by ASTM D2244 and ASTM D822.
- C. Manufacturer shall provide 5 year limited warranty for Class I anodized finish.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturers:
 - Airolite Co
 - Ruskin Co.
 - Construction Specialties, Inc.
- B. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 LOUVERS- GENERAL.

- A. Louver shall be of welded construction and furnished with bird screen, supports, installation hardware and finishes as specified or required for a complete installation.
- B. The supporting structure shall be designed to accommodate the point loads transferred by the louvers when subject to the design wind loads.
- C. Performance Requirements:
 - 1. Structural Performance: Provide products capable of withstanding the effects of loads and stresses from wind and normal thermal movement without evidencing permanent deformation of components including blades, frames, and supports; noise or metal fatigue caused by component rattle or flutter; or permanent damage to fasteners and anchors.
 - a. Wind Load: Uniform pressure (velocity pressure) of 25 lbf per sq ft (1200 Pa), acting inward or outward.
 - 2. Air-Performance, Water-Penetration, and Air-Leakage Ratings: Provide louvers complying with performance requirements indicated, as demonstrated by testing manufacturer's stock units 48 inches (1220 mm) wide by 48 inches (1220 mm) high. Test units according to AMCA 500.
 - a. Perform testing on unpainted, cleaned, degreased units.
 - b. Perform water-penetration testing on louvers without screens.
 - 3. Weather Louver Effectiveness: Provide louvers complying with performance requirements indicated, as demonstrated by testing manufacturers stock units in accordance with AMCA Standard 500-L, Section 8.3.2 - Wind Driven Rain Water Penetration Test.
- D. Materials:
 - 1. Aluminum Extrusions: ASTM B 221 (ASTM B 221M), alloy 6063-T5 or T-52.
 - 2. Aluminum Sheet: ASTM B 209 (ASTM B 209M), alloy 3003 or 5052 with temper as required for forming, or as otherwise recommended by metal producer for required finish.

3. Aluminum Castings: ASTM B 26/B 26M, alloy 319.
4. Galvanized Steel Sheet: ASTM A 653/A 653M, G90 (Z275) zinc coating, mill phosphatized.
5. Stainless-Steel Sheet: ASTM A 666, Type 304 or 316 with a No. 2 polish.
6. Fasteners: Of same basic metal and alloy as fastened metal or 300 series stainless steel, unless otherwise indicated. Do not use metals that are incompatible with joined materials.
 - a. Use types and sizes to suit unit installation conditions.
7. Anchors and Inserts: Of type, size, and material required for loading and installation indicated. Use nonferrous metal or hot-dip galvanized anchors and inserts for exterior installations and elsewhere as needed for corrosion resistance. Use toothed steel or expansion bolt devices for drilled-in-place anchors.
8. Bituminous Paint: Cold-applied asphalt mastic complying with SSPC-Paint 12 but containing no asbestos fibers, or cold-applied asphalt emulsion complying with ASTM D 1187.

E. Fabrication:

1. Assemble units in factory to minimize field splicing and assembly. Disassemble units as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation.
2. Maintain equal louver blade spacing to produce uniform appearance.
3. Fabricate frames, including integral sills for louvers, to fit in openings of sizes indicated, with allowances made for fabrication and installation tolerances, adjoining materials' tolerances, and perimeter sealant joints.
4. Include supports, anchorages, and accessories required for complete assembly.
5. Louvers shall be of welded construction.

2.3 FIXED-BLADE EXTRUDED-ALUMINUM LOUVERS

A. Fixed-Blade Extruded-Aluminum Louvers: Horizontal Drainable-Blade Louvers.

1. Product:
 - a. Depth: 6 inches (152 mm) nominal louver depth.
 - b. Mullion Type: Concealed.
 - c. Percent Free Area: 59 percent.
 - d. Beginning Point of Water Penetration: 1,077 fpm (5.47 m per sec).
 - e. Air Volume Flow Rate at Beginning Point of Water Penetration: 10,135 cfm (4.78 cu m per sec).
 - f. Pressure Drop at Beginning Point of Water Penetration: 0.15 inches WC (0.037 kPa).
 - g. Blade Thickness: 0.125 inches (3 mm).
 - h. Frame Thickness: 0.125 inches (3 mm)

2.4 EQUIPMENT SCREENS

- A. General: Provide louvers with screens as manufactured by the louver manufacturer.

at locations indicated on Drawings.

- B. General: Provide exterior louvers with equipment screens.
 - 1. Screening Type: Bird screening, unless otherwise indicated.
- C. Attachment: Secure screens to louver frames with stainless-steel machine screws, spaced 18 inches (458 mm) o.c.
- D. Equipment Screen Frames: As manufactured by louver manufacturer; to sizes indicated on Drawings.
 - 1. Fabrication: Mitered corners.
 - 2. Metal: Roll formed aluminum.
 - 3. Finish: Same finish as louver frames to which louver screens are attached.
 - 4. Type: Non-rewirable, U-shaped frames for permanently securing screen mesh.
- E. Louver Screening for Aluminum Louvers: As manufactured by louver manufacturer.
 - 1. Bird Screening: Aluminum, 1/4 inch (6.35 mm) square mesh, 0.047 inch (1.19 mm) wire.

2.5 BLANK-OFF PANELS

- A. General: Provide blank-off panels as manufactured by Louver manufacturer at locations indicated on Drawings.
 - 1. Attachment: Silicone wet sealed and fastened to the interior face of the louver.
- B. Insulating Blank-off Panels: Metal-faced panels consisting of insulating core as manufactured by louver manufacturer.
 - 1. Metal Facing Sheets: Aluminum sheet, 0.063 inch (1.6 mm) thick, finished to match existing exterior window frame.
 - 2. Thickness: 2 inch (50 mm).
 - 3. Insulating Core: Extruded Polystyrene.
 - a. Rigid cellular thermal insulation will comply with ASTM C578, Minimum R-value of 5.0 per 1 inch of thickness at 75 degree F mean temperature, Minimum Density of 1.5 lbs per cu ft.
 - 4. Seal perimeter joints between panel faces and louver frames.

2.6 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

2.7 ALUMINUM FINISHES

- A. Compliance: Finish designations prefixed by AA comply with system established by the
- B. Baked-Enamel Finish:
 - 1. Apply baked enamel complying with paint manufacturer's specifications for

- cleaning,
- 2. Color: Match Architect's sample.

PART 3 EXECUTION

3.1 EXAMINATION AND PREPARATION

- A. Prepare substrates and openings using methods recommended by manufacturer for achieving best result for substrates under project conditions.
- B. Do not proceed with installation until substrates and nailers have been prepared using the methods recommended by the manufacturer and deviations from manufacturer's recommended tolerances are corrected. Commencement of installation constitutes acceptance of conditions.
- C. If preparation is the responsibility of another installer, notify Architect in writing of deviations from manufacturer's recommended installation tolerances and conditions.

3.2 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
 - 1. Locate and place units level, plumb, and at indicated alignment with adjacent work.
 - 2. Use concealed anchorages where possible. Provide brass or lead washers fitted to screws where required to protect metal surfaces and to make a weathertight connection.
 - 3. Form closely fitted joints with exposed connections accurately located and secured.
 - 4. Provide perimeter reveals and openings of uniform width for sealants and joint fillers as indicated on Drawings.
 - 5. Repair finishes damaged by cutting, welding, soldering, and grinding. Restore finishes so no evidence remains of corrective work. Return items that cannot be refinished in the field to the factory, make required alterations, and refinish entire unit or provide new units.
 - 6. Protect galvanized and nonferrous-metal surfaces from corrosion or galvanic action by applying a heavy coating of bituminous paint on surfaces that will be in contact with concrete, masonry, or dissimilar metals.
- B. Install concealed gaskets, flashings, joint fillers, and insulation, as installation progresses, where weathertight joints are required. Comply with Division 7 Section "Joint Sealants" for sealants applied during installation.

3.3 ADJUSTING, CLEANING AND PROTECTION

- A. Test operation of adjustable louvers and adjust as needed to produce fully functioning units that comply with requirements.
- B. Protect products from damage until completion of project. Use temporary protective

coverings where needed and approved by manufacturer. Remove protective covering at the time of Substantial Completion.

- C. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

SECTION 09 21 00 - GYPSUM BOARD SYSTEMS

PART 1 – GENERAL

1.01 SUMMARY

- A. Work Included: This Section generally includes the following:
 - 1. Gypsum board walls and furring.
 - 2. Gypsum board interior ceilings and soffits.
 - 3. Taping and finishing of gypsum board joints.
 - 4. Bracing and connections.
 - 5. Installing, in gypsum board surfaces, access doors, and rings and frames for grilles, registers and lighting fixtures.
- C. Related Work Specified Elsewhere:
 - 1. 07 92 00 - Joint Sealant
 - 2. 09 90 00 - Painting

1.02 SUBMITTALS

- A. Shop Drawings: Showing sizes and gauges of framing members, gypsum board types, insulation, sealants, methods of assembly and fastening, control joints, corner details, joint finishing, and relationship of gypsum board work to adjacent work.
- B. Manufacturer's technical data and installation instructions.
- C. Samples of gypsum boards, Cement Board, tapes, and accessories.

1.03 QUALITY ASSURANCE

- A. Materials and workmanship: Conform to ANSI Standard A97.2 and GA-202
- B. Tolerances: Not to exceed 1/16" in 8'-0" deviation from plumb or level in any direction.

- C. Fire-rated construction: Conform to Code requirements.
- D. Structural Performance Requirements:
 - 1. Design shaft systems to withstand lateral design loadings of 10 psf. as per NY State Code applied transiently and cyclically for maximum heights of partitions required, within the allowable deflection limit of 1/240 of partition height.
 - 2. Design standard gypsum board assemblies to withstand a lateral load of 5 psf. for the maximum wall height required, with deflection limited to 1/240 of partition height.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in original packaging,
- B. Store and handle to protect from damage.

PART 2 – PRODUCTS

2.01 MATERIALS

Equal to specified products by Dietrich Metal Framing Co..

- A. Partition Framing: ASTM C 645; 25 gauge (minimum), heavier gauge where required to support applied loadings.
 - 1. Studs: Generally, 3 5/8" except where other standard sizes shown.
 - 2. Shaftwall Studs: "C-H" or double "E" type, galvanized steel; gauge and size to meet deflection limits.
 - 3. Runners: To match studs
 - 4. Shaftwall Runners: "J" Type, 20-gauge galvanized steel.
 - 5. Fasteners: Type and size recommended by framing system manufacturer for the application indicated.

6. Furring: Cold-rolled, hat shaped sections of minimum 25-gauge corrosion resistant steel.

B. Ceiling Support Materials and Systems: Size components to comply with NYC Building Code.

1. Main Runners: Steel channels with rust inhibitive paint finish, hot or cold rolled.
2. Furring: Cold-rolled, hat shaped sections of minimum 20 gauge corrosion resistant steel.
3. Hangers: 8 ga. galvanized.
4. Anchors: Sized for 3x calculated hanger loading, ASTM E 488.
5. Casing Beads, Corner Beads, Edge Beads and Fasteners: Manufacturer's standard.

C. Gypsum Board Products

1. Gypsum Board: 5/8" thick unless otherwise, "Sheetrock" or approved equal, 48" wide, in maximum lengths available to minimize end to end butt joints.
2. Water Resistant Gypsum Board: 5/8" thick, "Sheetrock W/R" or "Sheetrock Firecode C W/R" or approved equal, 48" wide, in maximum lengths available to minimize end to end butt joints.
3. Fire Rated Gypsum Board 1/2" thick and 5/8" thick as indicated on drawings, "Sheetrock Firecode C" or approved equal, 48" wide, in maximum lengths available to minimize end to end butt joints.
4. Shaft Wall Liner: 1" thick, "USG Shaft Wall Liner" or approved equal 16" or 24" wide by standard lengths as required, beveled edges.

D. Trim Accessories

1. Corner Beads: For 90 degree external Corners - "Dur-A-Bead" No. 103, 27 U.S. Standard gauge. galvanized steel, 1-1/4" x 1-1/4" or approved equal.

2. Edge Beads: "Metal Trim No. 200-A", 28 U.S. Standard gauge. galvanized steel, channel type, or "Metal Trim No 200- B", L type, where use of channel type (200--A) not possible or approved equal.
3. Control Joints: No. 093 or approved equal.

E. Joint Treatment Materials

1. "Perf-A-Tape" for joint reinforcing, 2" glass fiber tape for tile backer board or approved equal.
2. "Durabond 90 Joint Compound-Multi-Purpose" for taping and topping, water resistant type where required or approved equal.
3. "Ready Mixed Compound-Topping" for finishing and skim coat or approved equal.

F. Cement Board Products

1. The sheets shall be 1/2" thick " Durock" or approved equal and all other components for use at walls and ceilings as shown on architectural drawings and their application shall be per manufacturer's recommendations.

G. Miscellaneous Items

1. Acoustic Insulation: Paperless, non-combustible, semi-rigid mineral fiber mat, 2" thick, in partitions (unless otherwise indicated), 3 pcf density; equal to "Thermafiber" or approved equal.
2. Fasteners for Gypsum Board: Type and size recommended by furring manufacturer for the substrate and application indicated.
3. Laminating Adhesive: "Perf-A-Joint Compound" or approved equal.
4. Water: Clean, fresh and suitable for drinking.
5. Brackets: Provide 20-gauge steel furring brackets unless greater gauge is required to meet loading requirements of grab bars and other items requiring support.
6. Sealant: "Acoustical Sealant" or approved equal.
7. Neoprene Gaskets: Conform to ASTM D1056.

8. Sheet Metal: Provide continuous 16-gauge, 6" wide sheet steel wall plate. Screw wall plate to studs for support of toilet accessories, railings, casework and other items supported on gypsum board.

PART 3 – EXECUTION

3.01 FRAMING

- A. Anchor runner tracks at floors, and position studs vertically, spaced 16" oc. Isolate framing from building structure, and frame both sides of building expansion joints.
- B. Seal studs with continuous neoprene gasket sat abutting construction.
- C. Double-up studs at jambs, and install runners over heads of door frames, and frame and brace for support of toilet accessories, railings, and other construction.

3.02 CEILING FRAMING

- A. Space hangers and runners 4'-0" o.c. and furring members 16" o.c., with supplementary framing at penetrations.

3.03 GYPSUM BOARD APPLICATION

- A. Apply regular, fire-rated and water-resistant gypsum board with long dimension parallel to stud framing members, with abutting edges over stud flanges, and with joints staggered on opposite sides of partition.
- B. All gypsum board walls and ceilings open to view shall receive Level-4 finish
- C. Extend board from floor to structure above, fasten with screws, and cut around penetrations.

3.04 Provide plywood behind the finish gypsum board at locations shown on drawings.

3.05 SHAFT WALL INSTALLATION

- A. Attach runners to floor and ceiling, and install shaft wall liner panels vertically between runners, with studs between panels and at intersections, corners, door jambs and columns. Frame openings in liner panels.

3.06 SEALANT APPLICATION

- A. Install continuous bead at top and bottom edges of gypsum board for sound rating, between metal trim edge beads and abutting construction, in control joints, and around switch boxes and other penetrations.

3.07 METAL TRIM APPLICATION

- A. Install corner beads and casing beads in long lengths in accordance with manufacturer's recommendations. Finish with 3 coats of joint compound, feathered and sanded smooth.

3.08 CONTROL JOINT LOCATIONS

- A. Isolate gypsum board surfaces with control joints at abutting structural elements and where surfaces exceed 50 feet in either dimension.

3.09 METAL DECK/GYPSUM WALL INTERSECTIONS

- A. Fill and patch all voids between steel deck and gypsum board walls where they abut each other.

3.10 FINISHING

- A. At joints, screw heads and other depressions apply compound in 3 coats, feathered and finish surface sanded smooth with adjacent gypsum board surface to achieve Level 4 finish.

END OF SECTION 09 21 00

SECTION 09 90 00 - PAINTING

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

- A. Work Included: The extent of painting is shown on the drawings and schedules. Work of this Section includes but is not limited to the following:
1. Making required submittals.
 2. Coordination with other trades
 3. Preparing & painting all exposed surfaces of gypsum board, concrete, plaster, masonry and hollow metal doors and frames.
 4. Painting of exposed ductwork, hangers and other MEP related exposed items
 5. Painting concealed surfaces, which are exposed to view, such as above, behind or below grilles, gratings, diffusers, louvers, conduits, and lighting fixtures.
 6. Touch-up work after completion of painting
 7. Protecting and cleaning of surfaces.
- B. Related Work Specified Elsewhere:
1. Section 09 21 00 Gypsum Board Systems

1.02 MATERIALS AND EQUIPMENT NOT TO BE PAINTED

- A. Surfaces not to be painted shall be left completely free of droppings and accidentally applied materials. Unless otherwise indicated, the following shall not be painted:
1. Non-ferrous metals.
 2. Concealed surfaces not exposed to view.
 3. Finish hardware.
 4. Items furnished with factory finish.
 5. Moving mechanical equipment parts.
 6. Code-required labels.

1.03 SUBMITTALS

- A. Materials List: Prior to delivery, submit to the Owner a complete list of all materials and applications. Include certificates attesting to compliance with specifications and verifying compatibility of coatings with the substrates to which they will be applied.

- B. Painting Schedule: Within 15 days after award of contract submit to the Owner and Consultant Architect a detailed schedule based on surfaces to be painted, showing types and brand names of materials and number of coats to be applied for Owner and Consultant Architect's approval.
- C. Samples: For review of color, sheen and texture. provide 6" x 6" samples applied to hardboard, gypsum board or plywood.

1.04 QUALITY ASSURANCE

- A. Qualification of Painters: Use only qualified journeyman painters for the mixing and application of paint on exposed surfaces.
- B. Code Compliance: All paint and coating products must comply with V.O.C./V.O.S. requirements of authorities having jurisdiction.
- C. Paint Coordination
 - 1. Provide finish coats which are compatible with the prime paints used. Review other Sections of these specifications in which prime paints are to be provided, to ensure compatibility of the total coatings system for the various substrates.
 - 2. Notify the Owner in writing of any anticipated problems using the coating systems as specified with substrates primed by others.

1.05 PRODUCT HANDLING

- A. Order materials sufficiently in advance and in adequate quantities to avoid delays at the project. Paints shall be ready-mixed, unless otherwise directed by the Architect.
- B. Deliver materials to job site in original, labeled and unopened containers.
- C. Storage and Protection
 - 1. Store approved materials at the job site in a dry, well-ventilated space with a temperature range between 60 and 80 degrees F. Store materials not in use in tightly covered containers.
 - 2. Protect paint materials before, during and after application, and ensure the prompt and safe disposal of related waste products.
 - 3. Protect finished work, and materials of other trades, and in the event of damage, immediately make all repairs and replacements.

1.07 JOB CONDITIONS

- A. Apply paints only to surfaces that are clean, dry and free from frost, in an atmosphere that is free from dust and airborne material that might become embedded on freshly painted surfaces.
- B. Do not apply paint when relative humidity exceeds 85% unless specifically permitted by the manufacturer and approved by the Owner.
- C. Commence painting only after lighting fixtures have been installed and are in use, or after temporary lighting providing 50 average foot candles has been provided.
- D. Protection: Provide and maintain warning signs and coverings and other protection to prevent damage to work of this section and to the work of others.

PART 2 - PRODUCTS

2.01 MATERIALS, GENERAL

- A. Provide best quality and grade painting products listed in the Painting Schedule at the end of this Section, unless otherwise noted. Comply with specified number of coats and required minimum mil thicknesses.
- B. Provide prime paint produced by the same manufacturer as the finish coats. Use only thinners approved by the paint manufacturer and use only to recommend limits.
- C. Paint colors, surface treatment and sheens are indicated on the contract drawings. Certain colors may require paint manufacturer to prepare special factory mixes to match colors selected by the Architect.

2.02 MATERIALS

- A. Provide products specified or equivalent products manufactured by the following:
 - 1. Con-Lux.
 - 2. Tnemec.
 - 3. PPG Industries.
 - 4. Sherwin Williams.
 - 5. Southern Coatings
- B. Pigments: Pure, non-fading, of types to suit paints, substrates and service indicated.

- C. Linseed Oil: Raw or boiled, as required, of approved manufacture, per ASTM D234 and D260, respectively.
- D. Turpentine: Pure distilled gum spirits of turpentine, per ASTM D13.
- E. Driers, Putty, Spackling Compound, Patching Plaster, etc.: Best quality, of approved manufacturer.
- F. Heat Resistant Paint: Where required, use heat resistant paint when applying paint to heating lines and equipment.
- G. Galvanizing Cleaner: Porter Prep No. 99, applied per manufacturer's instructions.
- H. Galvanizing Primer: Porter No. 299 Alkyd Zinc Dust Primer applied per manufacturer's instructions.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Examine the areas and conditions where the painting is to be performed and notify the Owner and Consultant Architect of conditions detrimental to the completion of the work.
- B. Do not proceed with the work until unsatisfactory conditions have been corrected and approved by owner and Consultant Architect.

3.02 PREPARATION

- A. Clean surfaces to be painted before applying paint or treatments. Remove oil and grease with clean cloths and cleaning solvents prior to mechanical cleaning.
- B. Program the cleaning and painting so that dust and other contaminants from the cleaning process will not fall in wet, newly painted surfaces.
- C. Mix and prepare painting materials in strict accordance with the manufacturer's directions to produce a mixture of uniform density. Remove film, and strain if necessary.
- D. Protect adjacent work and materials by covering, masking or other method.

- E. Remove and protect hardware, accessories, plates, lighting fixtures, factory finished work, and similar items, or provide in place protection. Upon completion of each space, carefully replace all removed items.
- F. Remove electrical panel box covers and doors before painting walls. Paint separately and re-install after all paint is dry.
- G. Metal Surfaces: Fill dents, cracks, hollow places, open joints and other irregularities in metal work to be painted with approved metal filler and sand to a smooth, hard finish, flush with adjoining surface.
 - 1. Weld Fluxes: Remove weld fluxes, splatters, and alkali contaminants from metal surfaces in an approved manner and leave surface ready to receive painting.
 - 2. Bare Metal: Thoroughly clean off all foreign matter such as grease, rust, scale and dirt before priming coat is applied. Clean surfaces by flushing with mineral spirits.
 - 3. Shop Primed Metal: Clean off foreign matter as specified for “Bare Metal”. Prime bare, rusted, abraded and marred surfaces with approved primer after proper cleaning of surfaces. Sandpaper all rough surfaces smooth.
 - 4. Galvanized Metal: Wipe down surface as per SSPC Spec. SP-1. Clean with galvanize cleaner, then wash with clear water.
- H. Gypsum Board Surfaces: Scrape off all projections and splatters, spackle all holes or depressions, including taped and spackled joints, sand smooth. Conform to standards of approved Job Mock-Up.
- I. Cementitious Surfaces: Roughen to remove glaze if necessary, and remove efflorescence, chalk, dust and oils.
 - 1. Test for the presence of alkali. If present, treat and allow surface to dry 24 hours before applying paint. Re-coat hot spots, appearing after applying primer, until all suction is sealed.
 - 2. Test for moisture content using an electronic moisture meter. Do not apply paint or sealer to any surface or to latex type filler where the moisture content exceeds 8% as measured by the moisture meter.

3.03 APPLICATION

- A. Apply paint by brush or roller in accordance with the manufacturer’s directions. Use brushes best suited for the type of material being applied. Use rollers of carpet, velvet back, or high pile sheep's wool as recommended by the paint manufacturer for material and texture required.

- B. All materials shall be applied under adequate illumination, evenly spread and flowed on smoothly to avoid runs, sags, holidays, brush marks, air bubbles and excessive roller stipple.
- C. Coverage and hide shall be complete. When color, stain, dirt or undercoats show through final coat of paint, the surface shall be covered by additional coats until the paint film is of uniform finish, color, appearance and coverage, at no additional cost to the Corporation.
- D. Tint each undercoat a lighter shade where multiple coats are applied. All coats shall be dry to manufacturer's recommendations before applying succeeding coats.
- E. Touch up suction spots or "hot spots" after the application of the first coat, before applying subsequent coats.
- F. Ensure that all surfaces, including edges, corners, crevices, welds, and exposed fasteners receive a film thickness equivalent to that of flat surfaces.
- G. Paint surfaces behind movable equipment the same as similar exposed surfaces.
- H. Match colors and textures to approved samples and remove finish and repaint surfaces that do not comply.
- I. Touch-up factory finishes using the factory finish material to repair damaged surfaces.
- J. Paint Thickness: Follow the specified minimum dry film (MDF) thickness requirements in the application of 2 coat and 3 coat work; the MDF for each coat shall not be less than 1.5 mils., or as recommended in paint manufacturer's printed specifications:
 - 1. 3 coat work shall not be less than 5.0 mils total.
 - 2. 2 coat work shall not be less than 3.0 mils total.
- K. Paint steel surfaces in cavity walls and door frames which come in contact with masonry units before they are covered with insulation and grout material respectively
- L. For coatings on concrete and concrete block walls with Thoroseal or approved equal, manufactures instructions shall be followed.
- M. Minimum number of Primer and Paint Coats shall be:

1. Primer – One Coat
2. Paint – 2 Coats

3.04 CLEAN UP

- A. During the progress of the work, remove from the site all discarded paint materials, rubbish, cans and rags at the end of each workday.
- B. Upon completion of painting work, clean glass and other paint spattered surfaces using care not to scratch or damage finished surfaces.
- C. At the completion of work of other trades, touch-up and restore all damaged or defaced painted surfaces.

3.05 PROTECTION

- A. Protect work of other trades, whether to be painted or not, against damage by the painting and finishing work, and correct any damage by cleaning, repairing or replacing, and repainting, as acceptable to the Architect.
- B. Provide “Wet Paint” signs as required to protect newly painted finishes. Remove temporary protective wrappings provided by others for protection of their work after completion of painting operations.

3.06 PAINT SYSTEMS

- A. Concrete ceilings, columns, masonry wall surfaces, plaster walls and gypsum board Systems, mechanical and electrical piping- existing or proposed.
 - a. Prime Coat: Latex Quick Dry Prime Seal (201)
 - b. Second and Third Coats: Alkyd Satin Finish Enamel (250) or Semi-gloss finish - Alkyd Dulamel (207)
- B. Ferrous Metal
 1. Satin Gloss Alkyd Enamel Finish.
 - a. Prime Coat: Iron Clad Retardo Rust Inhibitive Paint (163)
 - b. Second and Third Coats: Alkyd Dulamel (207)
- C. Galvanized Metal and non-galvanized Metals –

1. Semi Gloss

- a. Prime Coat: Series 69 (Tnemec)
- b. Second and Third Coats: Series 75 (Tnemec)

3.07 PAINT COLORS

As selected by architect, see finish schedule.

END OF SECTION 09 90 00

SECTION 23 05 18 - ESCUTCHEONS FOR HVAC PIPING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:

1. Escutcheons.
2. Floor plates.

1.3 DEFINITIONS

- A. Existing Piping to Remain: Existing piping that is not to be removed and that is not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 1. BrassCraft Manufacturing Co.; a Masco company.
 2. Dearborn Brass.
 3. Jones Stephens Corp.
 4. Keeney Manufacturing Company (The).
 5. Mid-America Fittings, LLC; A Midland Industries Company.
 6. ProFlo; a Ferguson Enterprises, Inc. brand.

2.2 ESCUTCHEONS

- A. Split-Plate, Stamped-Steel Type: With polished, chrome-plated finish; concealed hinge; and spring-clip fasteners.

2.3 FLOOR PLATES

- A. Split Floor Plates: Steel with concealed hinge.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install escutcheons for piping penetrations of walls, ceilings, and finished floors.
- B. Install escutcheons with ID to closely fit around pipe, tube, and insulation of piping and with OD that completely covers opening.
 - 1. Escutcheons for New Piping:
 - a. Insulated Piping: One-piece stamped steel or split-plate, stamped steel with concealed hinge with polished, chrome-plated finish.
 - b. Bare Piping at Wall and Floor Penetrations in Finished Spaces: One-piece stamped steel or split-plate, stamped steel with concealed hinge or split-plate, stamped steel with exposed-rivet hinge with polished, chrome-plated finish.
 - c. Bare Piping in Unfinished Service Spaces: One-piece stamped steel or split-plate, stamped steel with concealed hinge with polished, chrome-plated finish.
- C. Install floor plates for piping penetrations of equipment-room floors/roofs.
- D. Install floor plates with ID to closely fit around pipe, tube, and insulation of piping and with OD that completely covers opening.
 - 1. New Piping : Split floor plate.

END OF SECTION 23 05 18

SECTION 23 05 23.12 - BALL VALVES FOR HVAC PIPING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Bronze ball valves.

1.2 DEFINITIONS

- A. CWP: Cold working pressure.
- B. RPTFE: Reinforced polytetrafluoroethylene.
- C. SWP: Steam working pressure.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of valve.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Prepare valves for shipping as follows:
1. Protect internal parts against rust and corrosion.
 2. Protect threads, flange faces, and weld ends.
 3. Set ball valves open to minimize exposure of functional surfaces.
- B. Use the following precautions during storage:
1. Maintain valve end protection.
 2. Store valves indoors and maintain at higher-than-ambient-dew-point temperature. If outdoor storage is necessary, store valves off the ground in watertight enclosures.
- C. Use sling to handle large valves; rig sling to avoid damage to exposed parts. Do not use operating handles or stems as lifting or rigging points.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. ASME Compliance:

1. ASME B16.18 for cast copper solder-joint connections.
2. ASME B16.22 for wrought copper and copper alloy solder-joint connections.
3. ASME B31.9 for building services piping valves.

B. Valve Pressure-Temperature Ratings: Not less than indicated and as required for system pressures and temperatures.

C. Valve Sizes: Same as upstream piping unless otherwise indicated.

D. Valve Actuator Types:

1. Hand Lever: For quarter-turn valves smaller than NPS 4 .

E. Valves in Insulated Piping:

1. Provide 2-inch extended neck stems.
2. Extended operating handles with nonthermal-conductive covering material, and protective sleeves that allow operation of valves without breaking vapor seals or disturbing insulation.
3. Memory stops that are fully adjustable after insulation is applied.

F. Valve Bypass and Drain Connections: MSS SP-45.

2.2 BRONZE BALL VALVES

A. Bronze Ball Valves, Two Piece with Full Port and Bronze or Brass Trim, Threaded or Soldered Ends:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Apollo Valves; a part of Aalberts Integrated Piping Systems.
 - b. Crane Fluid Systems; Crane Co.
 - c. Milwaukee Valve Company.
 - d. NIBCO INC.
 - e. WATTS; A Watts Water Technologies Company.
 - f. Zurn Industries, LLC.
2. Standard: MSS SP-110.
3. SWP Rating: 150 psig.
4. CWP Rating: 600 psig.
5. Body Design: Two piece.
6. Body Material: Bronze.
7. Ends: Soldered.

- 8. Seats: PTFE.
- 9. Stem: Bronze.
- 10. Ball: Chrome-plated brass.
- 11. Port: Full.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine valve interior for cleanliness, freedom from foreign matter, and corrosion. Remove special packing materials, such as blocks, used to prevent disc movement during shipping and handling.
- B. Operate valves in positions from fully open to fully closed. Examine guides and seats made accessible by such operations.
- C. Examine mating flange faces for conditions that might cause leakage. Check bolting for proper size, length, and material. Verify that gasket is of proper size, that its material composition is suitable for service, and that it is free from defects and damage.
- D. Do not attempt to repair defective valves; replace with new valves. Remove defective valves from site.

3.2 INSTALLATION OF VALVES

- A. Install valves with unions or flanges at each piece of equipment arranged to allow space for service, maintenance, and equipment removal without system shutdown.
- B. Provide support of piping adjacent to valves such that no force is imposed upon valves.
- C. Locate valves for easy access.
- D. Install valves in horizontal piping with stem at or above center of pipe.
- E. Install valves in position to allow full valve actuation movement.
- F. Valve Tags: Comply with requirements in Section 23 05 53 "Identification for HVAC Piping and Equipment" for valve tags and schedules.
- G. Adhere to manufacturer's written installation instructions. When soldering or brazing valves, do not heat valves above maximum permitted temperature. Do not use solder with melting point temperature above valve manufacturer's recommended maximum.

3.3 ADJUSTING

- A. Adjust or replace valve packing after piping systems have been tested and put into service, but before final adjusting and balancing. Replace valves exhibiting leakage.

3.4 GENERAL REQUIREMENTS FOR VALVE APPLICATIONS

- A. If valves with specified SWP classes or CWP ratings are unavailable, provide the same types of valves with higher SWP classes or CWP ratings.
- B. Select valves with the following end connections:
 - 1. For Copper Tubing, NPS 2 and Smaller: Soldered ends

3.5 PUMPED CONDENSATE VALVE SCHEDULE

- A. Pipe NPS 2 and Smaller: bronze ball valves, two piece with bronze trim, full port and soldered connection.

END OF SECTION 23 05 23.12

SECTION 23 05 23.14 - CHECK VALVES FOR HVAC PIPING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Bronze swing check valves.

1.2 DEFINITIONS

- A. CWP: Cold working pressure.
- B. EPDM: Ethylene-propylene-diene monomer.
- C. NBR: Nitrile butadiene rubber (also known as "Buna-N").
- D. SWP: Steam working pressure.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of valve.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Prepare valves for shipping as follows:
1. Protect internal parts against rust and corrosion.
 2. Protect threads, flange faces, grooves, press connections, and weld ends.
 3. Block check valves in either closed or open position.
- B. Use the following precautions during storage:
1. Maintain valve end protection.
 2. Store valves indoors and maintain at higher than ambient dew point temperature. If outdoor storage is necessary, store valves off the ground in watertight enclosures.
- C. Use sling to handle large valves; rig sling to avoid damage to exposed parts. Do not use stems or other components as lifting or rigging points unless specifically indicated for this purpose in manufacturer's written instructions.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. ASME Compliance:
 - 1. ASME B16.18 for cast copper solder joint.
 - 2. ASME B16.22 for wrought copper solder joint.
 - 3. ASME B31.9 for building services piping valves.
- B. AWWA Compliance: Comply with AWWA C606 for grooved-end connections.
- C. Provide bronze valves made with dezincification-resistant materials. Bronze valves made with copper alloy (brass) containing more than 15 percent zinc are unacceptable.
- D. Valve Pressure-Temperature Ratings: Not less than indicated and as required for system pressures and temperatures.
- E. Valve Sizes: Same as upstream piping unless otherwise indicated.
- F. Valve Bypass and Drain Connections: MSS SP-45.

2.2 BRONZE SWING CHECK VALVES

- A. Bronze Swing Check Valves with Bronze Disc, Class 125:
 - 1. Manufacturers: Subject to compliance with requirements, undefined:
 - a. Apollo Valves; a part of Aalberts Integrated Piping Systems.
 - b. Crane Fluid Systems; Crane Co.
 - c. Jenkins Valves; a Crane Co. brand.
 - d. Jomar Valve.
 - e. Lance Valves.
 - f. Milwaukee Valve Company.
 - g. Victaulic Company.
 - 2. Description:
 - a. Standard: MSS SP-80, Type 3.
 - b. CWP Rating: 200 psig.
 - c. Body Design: Horizontal flow.
 - d. Body Material: ASTM B62, bronze.
 - e. Ends: Soldered.
 - f. Disc: Bronze.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine valve interior for cleanliness, freedom from foreign matter, and corrosion. Remove special packing materials, such as blocks, used to prevent disc movement during shipping and handling.
- B. Operate valves in positions from fully open to fully closed. Examine guides and seats made accessible by such operations.
- C. Examine mating flange faces for conditions that might cause leakage. Check bolting for proper size, length, and material. Verify that gasket is of proper size, that its material composition is suitable for service, and that it is free from defects and damage.
- D. Do not attempt to repair defective valves; replace with new valves.

3.2 INSTALLATION OF VALVES

- A. Install valves with unions or flanges at each piece of equipment arranged to allow service, maintenance, and equipment removal without system shutdown.
- B. Provide support of piping adjacent to valves such that no force is imposed upon valves.
- C. Locate valves for easy access and where not blocked by equipment, other piping, or building components.
- D. Install valves with stem at or above center of pipe.
- E. Install valves in position that does not project into aisles or block access to other equipment.
- F. Install valves in position to allow full stem and manual operator movement.
- G. Verify that joints of each valve have been properly installed and sealed to ensure that there is no leakage or damage.
- H. Install check valves for proper direction of flow and as follows:
 - 1. Swing Check Valves: In horizontal position with hinge pin level.
- I. Install valve tags. Comply with requirements for valve tags and schedules in Section 23 05 53 "Identification for HVAC Piping and Equipment."
- J. Adhere to manufacturer's written installation instructions. When soldering or brazing valves, do not heat valves above maximum permitted temperature. Do not use solder with melting point temperature above valve of manufacturer's recommended maximum.

3.3 ADJUSTING

- A. Adjust or replace valve packing after piping systems have been tested and put into service, but before final adjusting and balancing. Replace valves if persistent leaking occurs.

3.4 GENERAL REQUIREMENTS FOR VALVE APPLICATIONS

- A. If valve applications are not indicated, use the following:
 - 1. Pump-Discharge Check Valves:
 - a. NPS 2 and Smaller: Bronze swing check valves with bronze disc.
- B. If valves with specified SWP classes or CWP ratings are unavailable, the same types of valves with higher SWP classes or CWP ratings may be substituted.
- C. End Connections:
 - 1. For Copper Tubing, NPS 2 and Smaller: Soldered ends.

3.5 PUMPED-CONDENSATE VALVE SCHEDULE

- A. Pipe NPS 2 and Smaller:
 - 1. Bronze swing check valves with bronze disc, Class 125 .

END OF SECTION 23 05 23.14

SECTION 23 05 29 - HANGERS AND SUPPORTS FOR HVAC PIPING AND EQUIPMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:

- 1. Metal pipe hangers and supports.
 - 2. Trapeze pipe hangers.
 - 3. Fastener systems.

- B. Related Requirements:

- 1. Section 23 05 48 "Vibration and Seismic Controls for HVAC" for vibration isolation devices.
 - 2. Section 23 31 13 "Metal Ducts" for duct hangers and supports.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.

- B. Shop Drawings: Signed and sealed by a qualified professional engineer. Show fabrication and installation details and include calculations for the following; include Product Data for components:

- 1. Trapeze pipe hangers.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

2.2 METAL PIPE HANGERS AND SUPPORTS

- A. Carbon-Steel Pipe Hangers and Supports:

- 1. Description: MSS SP-58, Types 1 through 58, factory-fabricated components.

2. Galvanized Metallic Coatings: Pregalvanized, hot-dip galvanized, or electro-galvanized.
3. Hanger Rods: Continuous-thread rod, nuts, and washer made of carbon steel .

2.3 TRAPEZE PIPE HANGERS

- A. Description: MSS SP-58, Type 59, shop-fabricated pipe-support assembly made from structural carbon-steel shapes with MSS SP-58 carbon-steel hanger rods, nuts, saddles, and U-bolts.

2.4 FASTENER SYSTEMS

- A. Mechanical-Expansion Anchors: Insert-wedge-type anchors for use in hardened portland cement concrete; with pull-out, tension, and shear capacities appropriate for supported loads and building materials where used.
 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Cooper B-line; brand of Eaton, Electrical Sector.
 - b. Hilti, Inc.
 - c. MKT Fastening, LLC.
 2. Indoor Applications: Zinc-coated steel.

2.5 MATERIALS

- A. Carbon Steel: ASTM A1011/A1011M.
- B. Stainless Steel: ASTM A240/A240M.
- C. Threaded Rods: Continuously threaded. Zinc-plated or galvanized steel for indoor applications and stainless steel for outdoor applications. Mating nuts and washers of similar materials as rods.

PART 3 - EXECUTION

3.1 APPLICATION

- A. Strength of Support Assemblies: Where not indicated, select sizes of components so strength will be adequate to carry present and future static loads within specified loading limits. Minimum static design load used for strength determination shall be weight of supported components plus 200 lb .

3.2 HANGER AND SUPPORT INSTALLATION

- A. Metal Pipe-Hanger Installation: Comply with MSS SP-58. Install hangers, supports, clamps, and attachments as required to properly support piping from the building structure.

- B. Framing System Installation: Arrange for grouping of parallel runs of piping, and support together on field-assembled strut systems.
- C. Fastener System Installation:
 - 1. Install mechanical-expansion anchors in concrete after concrete is placed and completely cured. Install fasteners according to manufacturer's written instructions.
- D. Install hangers and supports complete with necessary attachments, inserts, bolts, rods, nuts, washers, and other accessories.
- E. Install hangers and supports to allow controlled thermal and seismic movement of piping systems, to permit freedom of movement between pipe anchors, and to facilitate action of expansion joints, expansion loops, expansion bends, and similar units.
- F. Install lateral bracing with pipe hangers and supports to prevent swaying.
- G. Pipe Slopes: Install hangers and supports to provide indicated pipe slopes and to not exceed maximum pipe deflections allowed by ASME B31.9 for building services piping.
- H. Insulated Piping:
 - 1. Attach clamps and spacers to piping.
 - a. Piping Operating above Ambient Air Temperature: Clamp may project through insulation.
 - b. Piping Operating below Ambient Air Temperature: Use thermal-hanger shield insert with clamp sized to match OD of insert.
 - c. Do not exceed pipe stress limits allowed by ASME B31.9 for building services piping.
 - 2. Install MSS SP-58, Type 39, protection saddles if insulation without vapor barrier is indicated. Fill interior voids with insulation that matches adjoining insulation.
 - a. Option: Thermal-hanger shield inserts may be used. Include steel weight-distribution plate for pipe NPS 4 and larger if pipe is installed on rollers.
 - 3. Shield Dimensions for Pipe: Not less than the following:
 - a. NPS 1/4 to NPS 3: 12 inches long and 0.048 inch thick.

3.3 ADJUSTING

- A. Hanger Adjustments: Adjust hangers to distribute loads equally on attachments and to achieve indicated slope of pipe.
- B. Trim excess length of continuous-thread hanger and support rods to 1-1/2 inches .

3.4 HANGER AND SUPPORT SCHEDULE

- A. Specific hanger and support requirements are in Sections specifying piping systems and equipment.

- B. Comply with MSS SP-58 for pipe-hanger selections and applications that are not specified in piping system Sections.
- C. Use nonmetallic coatings on attachments for electrolytic protection where attachments are in direct contact with copper tubing.
- D. Use copper-plated pipe hangers and copper attachments for copper piping and tubing.
- E. Horizontal-Piping Hangers and Supports: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
 - 1. Adjustable, Steel Clevis Hangers (MSS Type 1): For suspension of noninsulated or insulated, stationary pipes NPS 1/2 to NPS 30.
- F. Vertical-Piping Clamps: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
 - 1. Carbon- or Alloy-Steel Riser Clamps (MSS Type 42): For support of pipe risers NPS 3/4 to NPS 24 if longer ends are required for riser clamps.
- G. Saddles and Shields: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
 - 1. Thermal-Hanger Shield Inserts: For supporting insulated pipe.
- H. Comply with MSS SP-58 for trapeze pipe-hanger selections and applications that are not specified in piping system Sections.
- I. Use mechanical-expansion anchors instead of building attachments where required in concrete construction.

END OF SECTION 23 05 29

SECTION 23 05 48.13 - VIBRATION CONTROLS FOR HVAC

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Spring hangers.

1.2 DEFINITIONS

- A. OSHPD: Office of Statewide Health Planning and Development (for the State of California owned and regulated medical facilities).

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include rated load, rated deflection, and overload capacity for each vibration isolation device.
2. Illustrate and indicate style, material, strength, fastening provision, and finish for each type and size of vibration isolation device component.
3. Annotate to indicate application of each product submitted and compliance with requirements.

B. Shop Drawings:

1. Detail fabrication and assembly of equipment bases.

1.4 INFORMATIONAL SUBMITTALS

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Consequential Damage: Provide additional restraints for suspended HVAC components or anchorage of floor-, roof-, or wall-mounted HVAC components as indicated in ASCE/SEI 7-05 ASCE/SEI 7-10 ASCE/SEI 7-16 so that failure of a non-essential or essential HVAC component will not cause the failure of any other essential architectural, mechanical, or electrical building component.

B. Component Supports:

1. Load ratings, features, and applications of all reinforcement components must be based on testing standards of a nationally recognized testing agency.

2.2 SPRING HANGERS

A. Combination Coil-Spring and Elastomeric-Insert Hanger with Spring and Insert in Compression:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. California Dynamics Corporation.
 - b. Kinetics Noise Control, Inc.
 - c. Mason Industries, Inc.
 - d. Vibration Isolation.
2. Frame: Steel, fabricated for connection to threaded hanger rods and to allow for a maximum of 30 degrees of angular hanger-rod misalignment without binding or reducing isolation efficiency.
3. Outside Spring Diameter: Not less than 80 percent of the compressed height of the spring at rated load.
4. Minimum Additional Travel: 50 percent of the required deflection at rated load.
5. Lateral Stiffness: More than 80 percent of rated vertical stiffness.
6. Minimum deflection as indicated on Drawings.
7. Overload Capacity: Support 200 percent of rated load, fully compressed, without deformation or failure.
8. Elastomeric Element: Molded, oil-resistant rubber or neoprene. Steel-washer-reinforced cup to support spring and bushing projecting through bottom of frame.
9. Adjustable Vertical Stop: Steel washer with neoprene washer "up-stop" on lower threaded rod.
10. Self-centering hanger rod cap to ensure concentricity between hanger rod and support spring coil.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and equipment to receive vibration isolation devices for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Examine roughing-in of reinforcement and cast-in-place anchors to verify actual locations before installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 APPLICATIONS

- A. Multiple Pipe Supports: Secure pipes to trapeze member with clamps approved for application by an agency acceptable to authorities having jurisdiction.
- B. Install spring hangers for all ceiling-hung AC units.
- C. Hanger-Rod Stiffeners: Install hanger-rod stiffeners where indicated or scheduled on Drawings to receive them and where required to prevent buckling of hanger rods due to wind-load forces.

3.3 INSTALLATION OF VIBRATION CONTROL DEVICES

- A. Provide vibration control devices for systems and equipment where indicated in Equipment Schedules or Vibration-Control Device Schedules on Drawings, where Specifications indicate they are to be installed on specific equipment and systems, and where required by applicable codes.
- B. Installation of vibration isolators must not cause any change of position of equipment, piping, or ductwork resulting in stresses or misalignment.

3.4 ADJUSTING

- A. Adjust isolators after system is at operating weight.
- B. Adjust limit stops on restrained-spring isolators to mount equipment at normal operating height. After equipment installation is complete, adjust limit stops so they are out of contact during normal operation.

END OF SECTION 23 05 48.13

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SECTION 23 05 53 - IDENTIFICATION FOR HVAC PIPING AND EQUIPMENT

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Equipment labels.
2. Pipe labels.
3. Duct labels.
4. Valve tags.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Equipment-Label Schedule: Include a listing of all equipment to be labeled with the proposed content for each label.
- C. Valve Schedules: Provide for each piping system. Include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 EQUIPMENT LABELS

A. Metal Labels for Equipment:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Craftmark Pipe Markers.
 - b. LEM Products Inc.
 - c. Pipemarket.com; Brimar Industries, Inc.
 - d. Seton Identification Products; a Brady Corporation company.
2. Material and Thickness: aluminum, 0.032-inch minimum thickness, with predrilled or stamped holes for attachment hardware.
3. Letter and Background Color: As indicated for specific application under Part 3.
4. Minimum Label Size: Length and width vary for required label content, but not less than 2-1/2 by 3/4 inch.
5. Minimum Letter Size: 1/4 inch for name of units if viewing distance is less than 24 inches, 1/2 inch for viewing distances of up to 72 inches, and proportionately larger lettering for greater viewing distances. Include secondary lettering two-thirds to three-fourths the size of principal lettering.

6. Fasteners: Stainless steel rivets or self-tapping screws.
7. Adhesive: Contact-type permanent adhesive, compatible with label and with substrate.

- B. Label Content: Include equipment's Drawing designation or unique equipment number, Drawing numbers where equipment is indicated (plans, details, and schedules), and the Specification Section number and title where equipment is specified.

2.2 PIPE LABELS

- A. Manufacturers: Subject to compliance with requirements, provide products by the following:
1. Craftmark Pipe Markers.
 2. LEM Products Inc.
 3. Pipemarket.com; Brimar Industries, Inc.
 4. Seton Identification Products; a Brady Corporation company.
- B. General Requirements for Manufactured Pipe Labels: Preprinted, color coded, with lettering indicating service and showing flow direction in accordance with ASME A13.1.
- C. Letter and Background Color: As indicated for specific application under Part 3.
- D. Pretensioned Pipe Labels: Precoiled, semirigid plastic formed to circumference of pipe and to attach to pipe without fasteners or adhesive.
- E. Self-Adhesive Pipe Labels: Printed plastic with contact-type, permanent-adhesive backing.
- F. Pipe Label Contents: Include identification of piping service using same designations or abbreviations as used on Drawings. Also include:
1. Pipe size.
 2. Flow-Direction Arrows: Include flow-direction arrows on distribution piping. Arrows may be either integral with label or applied separately.
 3. Lettering Size: Size letters in accordance with ASME A13.1 for piping .

2.3 DUCT LABELS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Craftmark Pipe Markers.
 2. LEM Products Inc.
 3. Pipemarket.com; Brimar Industries, Inc.
 4. Seton Identification Products; a Brady Corporation company.
- B. Letter and Background Color: As indicated for specific application under Part 3.

- C. Maximum Temperature: Able to withstand temperatures up to 160 deg F.
- D. Minimum Label Size: Length and width vary for required label content, but not less than 2-1/2 by 3/4 inch.
- E. Minimum Letter Size: 1/4 inch for name of units if viewing distance is less than 24 inches, 1/2 inch for viewing distances of up to 72 inches, and proportionately larger lettering for greater viewing distances. Include secondary lettering two-thirds to three-fourths the size of principal lettering.
- F. Fasteners: Stainless steel rivets or self-tapping screws.
- G. Adhesive: Contact-type permanent adhesive, compatible with label and with substrate.
- H. Duct Label Contents: Include identification of duct service using same designations or abbreviations as used on Drawings. Also include the following:
 - 1. Duct size.
 - 2. Flow-Direction Arrows: Include flow-direction arrows on distribution ducts. Arrows may be either integral with label or may be applied separately.
 - 3. Lettering Size: Size letters in accordance with ASME A13.1 for piping .

2.4 VALVE TAGS

- A. Manufacturers: Subject to compliance with requirements, provide products by the following:
 - 1. Craftmark Pipe Markers.
 - 2. LEM Products Inc.
 - 3. Pipemarker.com; Brimar Industries, Inc.
 - 4. Seton Identification Products; a Brady Corporation company.
- B. Description: Stamped or engraved with 1/4-inch letters for piping system abbreviation and 1/2-inch numbers.
 - 1. Tag Material: Brass, 0.04-inch , with predrilled or stamped holes for attachment hardware.
 - 2. Fasteners: Brass link chain or S-hook.
- C. Letter and Background Color: As indicated for specific application under Part 3.
- D. Valve Schedules: For each piping system, on 8-1/2-by-11-inch bond paper. Tabulate valve number, piping system, system abbreviation (as shown on valve tag), location of valve (room or space), normal-operating position (open, closed, or modulating), and variations for identification. Mark valves for emergency shutoff and similar special uses.
 - 1. Include valve-tag schedule in operation and maintenance data.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Clean piping and equipment surfaces of incompatible primers, paints, and encapsulants, as well as dirt, oil, grease, release agents, and other substances that could impair bond of identification devices.

3.2 INSTALLATION, GENERAL REQUIREMENTS

- A. Coordinate installation of identifying devices with completion of covering and painting of surfaces where devices are to be applied.
- B. Coordinate installation of identifying devices with locations of access panels and doors.
- C. Install identifying devices before installing acoustical ceilings and similar concealment.
- D. Locate identifying devices so that they are readily visible from the point of normal approach.

3.3 INSTALLATION OF EQUIPMENT LABELS

- A. Permanently fasten labels on each item of mechanical equipment.
- B. Sign and Label Colors:
 - 1. Color to match base-building standard .
- C. Locate equipment labels where accessible and visible.

3.4 INSTALLATION OF PIPE LABELS

- A. Install pipe labels showing service and flow direction with permanent adhesive on pipes.
- B. Pipe-Label Locations: Locate pipe labels where piping is exposed or above accessible ceilings in finished spaces; machine rooms; accessible maintenance spaces such as shafts, tunnels, and plenums; and exterior exposed locations as follows:
 - 1. Within 3 ft. of each valve and control device.
 - 2. At access doors, manholes, and similar access points that permit view of concealed piping.
 - 3. Within 3 ft. of equipment items and other points of origination and termination.
 - 4. Spaced at maximum intervals of 12 ft along each run. Reduce intervals to 10 ft. in areas of congested piping, ductwork, and equipment.

- C. Do not apply plastic pipe labels or plastic tapes directly to bare pipes conveying fluids at temperatures of 125 deg F or higher. Where these pipes are to remain uninsulated, use a short section of insulation or use stenciled labels.
- D. Flow-Direction Arrows: Use arrows to indicate direction of flow in pipes, including pipes where flow is allowed in both directions.
- E. Pipe-Label Color Schedule:
 - 1. Pumped Condensate Piping: Color to match base-building standard .

3.5 INSTALLATION OF DUCT LABELS

- A. Install self-adhesive duct labels showing service and flow direction with permanent adhesive on air ducts.
 - 1. Provide labels in the following color codes:
 - a. For air intake & discharge ducts: Color to match base building standard .
- B. Locate label near each point where ducts enter into and exit from concealed spaces and at maximum intervals of 12 ft where exposed or are concealed by removable ceiling system.

3.6 INSTALLATION OF VALVE TAGS

- A. Install tags on valves and control devices in piping systems, except check valves, valves within factory-fabricated equipment units, shutoff valves, and HVAC terminal devices and similar roughing-in connections of end-use fixtures and units. List tagged valves in a valve schedule in the operating and maintenance manual.
- B. Valve-Tag Application Schedule: Tag valves according to size, shape, and color scheme and with captions similar to those indicated in "Valve-Tag Size and Shape" Subparagraph below.
 - 1. Valve-Tag Size and Shape:
 - a. Pumped Condensate: 2 inches , square .
 - 2. Valve-Tag Colors:
 - a. For each piping system, use the same lettering and background coloring system on valve tags as used for the Pipe Label Schedule text and background.

END OF SECTION 23 05 53

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SECTION 23 05 93 - TESTING, ADJUSTING, AND BALANCING FOR HVAC

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Testing, Adjusting, and Balancing of Air Systems:
 - a. Constant-volume air systems.

1.2 DEFINITIONS

- A. AABC: Associated Air Balance Council.
- B. NEBB: National Environmental Balancing Bureau.
- C. TAB: Testing, adjusting, and balancing.
- D. TABB: Testing, Adjusting, and Balancing Bureau.
- E. TAB Specialist: An independent entity meeting qualifications to perform TAB work.

1.3 INFORMATIONAL SUBMITTALS

- A. Qualification Data: Within 30 days of Contractor's Notice to Proceed, submit documentation that the TAB specialist and this Project's TAB team members meet the qualifications specified in "Quality Assurance" Article.
- B. Certified TAB reports.
- C. Instrument calibration reports, to include the following:
 1. Instrument type and make.
 2. Serial number.
 3. Application.
 4. Dates of use.
 5. Dates of calibration.

1.4 QUALITY ASSURANCE

- A. TAB Specialists Qualifications, Certified by AABC:
 1. TAB Field Supervisor: Employee of the TAB specialist and certified by AABC.

2. TAB Technician: Employee of the TAB specialist and certified by AABC.
 - B. TAB Specialists Qualifications, Certified by NEBB or TABB:
 1. TAB Field Supervisor: Employee of the TAB specialist and certified by NEBB or TABB.
 2. TAB Technician: Employee of the TAB specialist and certified by NEBB or TABB.
 - C. Instrumentation Type, Quantity, Accuracy, and Calibration: Comply with requirements in ASHRAE 111, Section 4, "Instrumentation."
 - D. ASHRAE/IES 90.1 Compliance: Applicable requirements in ASHRAE/IES 90.1, Section 6.7.2.3 - "System Balancing."
 - E. Code and AHJ Compliance: TAB is required to comply with governing codes and requirements of authorities having jurisdiction.
- 1.5 FIELD CONDITIONS
- A. Full Owner Occupancy: Owner will occupy the site and existing building during entire TAB period. Cooperate with Owner during TAB operations to minimize conflicts with Owner's operations.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine the Contract Documents to become familiar with Project requirements and to discover conditions in systems designs that may preclude proper TAB of systems and equipment.
- B. Examine installed systems for balancing devices, such as test ports, gauge cocks, thermometer wells, flow-control devices, balancing valves and fittings, and manual volume dampers. Verify that locations of these balancing devices are applicable for intended purpose and are accessible.
- C. Examine the approved submittals for HVAC systems and equipment.
- D. Examine design data, including HVAC system descriptions, statements of design assumptions for environmental conditions and systems output, and statements of philosophies and assumptions about HVAC system and equipment controls.
- E. Examine equipment performance data, including fan curves.
 1. Relate performance data to Project conditions and requirements, including system effects that can create undesired or unpredicted conditions that cause reduced capacities in all or part of a system.

2. Calculate system-effect factors to reduce performance ratings of HVAC equipment when installed under conditions different from the conditions used to rate equipment performance. To calculate system effects for air systems, use tables and charts found in AMCA 201, "Fans and Systems," or in SMACNA's "HVAC Systems - Duct Design." Compare results with the design data and installed conditions.
- F. Examine system and equipment installations and verify that field quality-control testing, cleaning, and adjusting specified in individual Sections have been performed.
- G. Examine test reports specified in individual system and equipment Sections.
- H. Examine HVAC equipment and verify that bearings are greased, belts are aligned and tight, filters are clean, and equipment with functioning controls is ready for operation.
- I. Examine operating safety interlocks and controls on HVAC equipment.
- J. Examine control dampers for proper installation for their intended function of isolating, throttling, diverting, or mixing air flows.
- K. Report deficiencies discovered before and during performance of TAB procedures. Observe and record system reactions to changes in conditions. Record default set points if different from indicated values.

3.2 PREPARATION

- A. Prepare a TAB plan that includes the following:
 1. Equipment and systems to be tested.
 2. Strategies and step-by-step procedures for balancing the systems.
 3. Instrumentation to be used.
 4. Sample forms with specific identification for all equipment.
- B. Perform system-readiness checks of HVAC systems and equipment to verify system readiness for TAB work. Include, at a minimum, the following:
 1. Airside:
 - a. Verify that leakage and pressure tests on air distribution systems have been satisfactorily completed.
 - b. Duct systems are complete with terminals installed.
 - c. Volume, smoke, and fire dampers are open and functional.
 - d. Clean filters are installed.
 - e. Fans are operating, free of vibration, and rotating in correct direction.
 - f. Variable-frequency controllers' startup is complete and safeties are verified.
 - g. Automatic temperature-control systems are operational.
 - h. Suitable access to balancing devices and equipment is provided.

3.3 GENERAL PROCEDURES FOR TESTING AND BALANCING

- A. Perform testing and balancing procedures on each system in accordance with the procedures contained in NEBB's "Procedural Standards for Testing, Adjusting, and Balancing of Environmental Systems" and in this Section.
- B. Cut insulation, ducts, pipes, and equipment casings for installation of test probes to the minimum extent necessary for TAB procedures.
 - 1. After testing and balancing, patch probe holes in ducts with same material and thickness as used to construct ducts.
 - 2. Where holes for probes are required in piping or hydronic equipment, install pressure and temperature test plugs to seal systems.
 - 3. Install and join new insulation that matches removed materials. Restore insulation, coverings, vapor barrier, and finish in accordance with Section 23 07 13 "Duct Insulation," Section 23 07 16 "HVAC Equipment Insulation," and Section 23 07 19 "HVAC Piping Insulation."
- C. Mark equipment and balancing devices, including damper-control positions, valve position indicators, fan-speed-control levers, and similar controls and devices, with paint or other suitable, permanent identification material to show final settings.
- D. Take and report testing and balancing measurements in inch-pound (IP) units.

3.4 TESTING, ADJUSTING, AND BALANCING OF HVAC EQUIPMENT

- A. Test, adjust, and balance HVAC equipment indicated on Drawings, including, but not limited to, the following:
 - 1. Packaged Air-Cooled AC units.

3.5 GENERAL PROCEDURES FOR BALANCING AIR SYSTEMS

- A. Prepare test reports for both fans and outlets. Obtain manufacturer's outlet factors and recommended testing procedures. Crosscheck the summation of required outlet volumes with required fan volumes.
- B. Prepare schematic diagrams of systems' Record drawings duct layouts.
- C. Determine the best locations in main and branch ducts for accurate duct-airflow measurements.
- D. Check airflow patterns from the outdoor-air louvers and dampers and the return- and exhaust-air dampers through the supply-fan discharge and mixing dampers.
- E. Locate start-stop and disconnect switches, electrical interlocks, and motor starters.
- F. Verify that motor starters are equipped with properly sized thermal protection.

- G. Check dampers for proper position to achieve desired airflow path.
- H. Check for airflow blockages.
- I. Check condensate drains for proper connections and functioning.
- J. Check for proper sealing of air-handling-unit components.

3.6 PROCEDURES FOR CONSTANT-VOLUME AIR SYSTEMS

- A. Adjust fans to deliver total indicated airflows within the maximum allowable fan speed listed by fan manufacturer.
 - 1. Measure total airflow.
 - a. Set outside-air, return-air, and relief-air dampers for proper position that simulates minimum outdoor-air conditions.
 - b. Where duct conditions allow, measure airflow by main Pitot-tube traverse. If necessary, perform multiple Pitot-tube traverses close to the fan and prior to any outlets, to obtain total airflow.
 - c. Where duct conditions are unsuitable for Pitot-tube traverse measurements, a coil traverse may be acceptable.
 - 2. Measure fan static pressures as follows:
 - a. Measure static pressure directly at the fan outlet or through the flexible connection.
 - b. Measure static pressure directly at the fan inlet or through the flexible connection.
 - c. Measure static pressure across each component that makes up the air-handling system.
 - d. Report artificial loading of filters at the time static pressures are measured.
 - 3. Review Contractor-prepared shop drawings and Record drawings to determine variations in design static pressures versus actual static pressures. Calculate actual system-effect factors. Recommend adjustments to accommodate actual conditions.
 - 4. Obtain approval from Construction Manager & Engineer for adjustment of fan speed higher or lower than indicated speed. Comply with requirements in HVAC Sections for air-handling units for adjustment of fans, belts, and pulley sizes to achieve indicated air-handling-unit performance.
 - 5. Do not make fan-speed adjustments that result in motor overload. Consult equipment manufacturers about fan-speed safety factors. Modulate dampers and measure fan-motor amperage to ensure that no overload occurs. Measure amperage in full-cooling, full-heating, economizer, and any other operating mode to determine the maximum required brake horsepower.
- B. Adjust volume dampers for main duct, submain ducts, and major branch ducts to indicated airflows.
 - 1. Measure airflow of submain and branch ducts.
 - 2. Adjust submain and branch duct volume dampers for specified airflow.
 - 3. Re-measure each submain and branch duct after all have been adjusted.
- C. Adjust air inlets and outlets for each space to indicated airflows.

1. Set airflow patterns of adjustable outlets for proper distribution without drafts.
2. Measure inlets and outlets airflow.
3. Adjust each inlet and outlet for specified airflow.
4. Re-measure each inlet and outlet after they have been adjusted.

D. Verify final system conditions.

1. Re-measure and confirm that minimum outdoor, return, and relief airflows are within design. Readjust to design if necessary.
2. Re-measure and confirm that total airflow is within design.
3. Re-measure all final fan operating data, speed, volts, amps, and static profile.
4. Mark all final settings.
5. Test system in economizer mode. Verify proper operation and adjust if necessary.
6. Measure and record all operating data.
7. Record final fan-performance data.

3.7 TOLERANCES

A. Set HVAC system's airflow rates within the following tolerances:

1. Air Outlets and Inlets: Plus or minus 10 percent . If design value is less than 100 cfm, within 10 cfm.

B. Maintaining pressure relationships as designed shall have priority over the tolerances specified above.

3.8 FINAL REPORT

A. General: Prepare a certified written report; tabulate and divide the report into separate sections for tested systems and balanced systems.

1. Include a certification sheet at the front of the report's binder, signed and sealed by the certified testing and balancing engineer.
2. Include a list of instruments used for procedures, along with proof of calibration.
3. Certify validity and accuracy of field data.

B. Final Report Contents: In addition to certified field-report data, include the following:

1. Manufacturers' test data.
2. Field test reports prepared by system and equipment installers.
3. Other information relative to equipment performance; do not include Shop Drawings and Product Data.

C. General Report Data: In addition to form titles and entries, include the following data:

1. Title page.
2. Name and address of the TAB specialist.

3. Project name.
 4. Project location.
 5. Architect's name and address.
 6. Engineer's name and address.
 7. Contractor's name and address.
 8. Report date.
 9. Signature of TAB supervisor who certifies the report.
 10. Table of Contents with the total number of pages defined for each section of the report. Number each page in the report.
 11. Summary of contents, including the following:
 - a. Indicated versus final performance.
 - b. Notable characteristics of systems.
 - c. Description of system operation sequence if it varies from the Contract Documents.
 12. Nomenclature sheets for each item of equipment.
 13. Data for terminal units, including manufacturer's name, type, size, and fittings.
 14. Notes to explain why certain final data in the body of reports vary from indicated values.
- D. System Diagrams: Include schematic layouts of air and hydronic distribution systems. Present each system with single-line diagram and include the following:
1. Quantities of outdoor, supply and exhaust airflows.
 2. Duct, outlet, and inlet sizes.
- E. Instrument Calibration Reports:
1. Report Data:
 - a. Instrument type and make.
 - b. Serial number.
 - c. Application.
 - d. Dates of use.
 - e. Dates of calibration.

3.9 VERIFICATION OF TAB REPORT

- A. The TAB specialist's test and balance engineer shall conduct the inspection in the presence of Construction Manager and Commissioning Authority.
- B. Construction Manager and shall randomly select measurements, documented in the final report, to be rechecked. Rechecking shall be limited to the lesser of either 10 percent of the total measurements recorded or the extent of measurements that can be accomplished in a normal 8-hour business day .
- C. If rechecks yield measurements that differ from the measurements documented in the final report by more than the tolerances allowed, the measurements shall be noted as "FAILED."
- D. If the number of "FAILED" measurements is greater than 10 percent of the total measurements checked during the final inspection, the TAB shall be considered incomplete and shall be rejected.

- E. If recheck measurements find the number of failed measurements noncompliant with requirements indicated, proceed as follows:
 - 1. TAB specialists shall recheck all measurements and make adjustments. Revise the final report and balancing device settings to include all changes; resubmit the final report and request a second final inspection. All changes shall be tracked to show changes made to previous report.
 - 2. If the second final inspection also fails, Owner may pursue others Contract options to complete TAB work.
- F. Prepare test and inspection reports.

3.10 ADDITIONAL TESTS

- A. Within 90 days of completing TAB, perform additional TAB to verify that balanced conditions are being maintained throughout and to correct unusual conditions.
- B. Seasonal Periods: If initial TAB procedures were not performed during near-peak summer and winter conditions, perform additional TAB during near-peak summer and winter conditions.

END OF SECTION 23 05 93

SECTION 23 07 13 - DUCT INSULATION

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes insulating the following duct services:

1. Indoor, exposed outdoor (intake & exhaust) air.

B. Related Requirements:

1. Section 23 07 16 "HVAC Equipment Insulation."
2. Section 23 07 19 "HVAC Piping Insulation."

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product indicated. Include thermal conductivity, water-vapor permeance thickness, and jackets (both factory- and field-applied if any).

B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.

1. Detail application of protective shields, saddles, and inserts at hangers for each type of insulation and hanger.
2. Detail insulation application at elbows, fittings, dampers, specialties and flanges for each type of insulation.
3. Detail application at linkages of control devices.

1.3 DELIVERY, STORAGE, AND HANDLING

A. Packaging: Insulation material containers are to be marked with the manufacturer's name, appropriate ASTM standard designation, type and grade, and maximum use temperature.

1.4 COORDINATION

A. Coordinate sizes and locations of supports, hangers, and insulation shields specified in Section 23 05 29 "Hangers and Supports for HVAC Piping and Equipment."

B. Coordinate clearance requirements with duct Installer for duct insulation application. Before preparing ductwork Shop Drawings, establish and maintain clearance requirements for installation of insulation and field-applied jackets and finishes and for space required for maintenance.

C. Coordinate installation and testing of heat tracing.

1.5 SCHEDULING

- A. Schedule insulation application after pressure testing systems and, where required, after installing and testing heat tracing. Insulation application may begin on segments that have satisfactory test results.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Surface-Burning Characteristics: For insulation and related materials, as determined by testing identical products in accordance with ASTM E84, by a testing agency acceptable to authorities having jurisdiction. Factory label insulation, jacket materials, adhesive, mastic, tapes, and cement material containers with appropriate markings of applicable testing agency.
 - 1. All Insulation Installed Indoors: Flame-spread index of 25 or less, and smoke-developed index of 50 or less.

2.2 INSULATION MATERIALS

- A. Comply with requirements in "Duct Insulation Schedule, General," "Indoor Duct and Plenum Insulation Schedule," and "Aboveground, Outdoor Duct and Plenum Insulation Schedule" articles for where insulating materials are to be applied.
- B. Products do not contain asbestos, lead, mercury, or mercury compounds.
- C. Products that come in contact with stainless steel have a leachable chloride content of less than 50 ppm when tested in accordance with ASTM C871.
- D. Insulation materials for use on austenitic stainless steel are qualified as acceptable in accordance with ASTM C795.
- E. Glass-Fiber Board Insulation: Glass fibers bonded with a thermosetting resin; suitable for maximum use temperature between 35 deg F and 250 deg F for jacketed and between 35 deg F and 450 deg F for unfaced in accordance with ASTM C411. Comply with ASTM C612, Type IA or Type IB. For duct and plenum applications, provide insulation with factory-applied FSK jacket. Factory-applied jacket requirements are specified in "Factory-Applied Jackets" Article.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Johns Manville; a Berkshire Hathaway company.
 - b. Owens Corning.

2.3 ADHESIVES

- A. Materials are compatible with insulation materials, jackets, and substrates and for bonding insulation to itself and to surfaces to be insulated unless otherwise indicated.
- B. Glass-Fiber and Mineral Wool Adhesive: Comply with MIL-A-3316C, Class 2, Grade A.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Childers Brand; H. B. Fuller Construction Products.
 - b. Eagle Bridges - Marathon Industries.
 - c. Foster Brand; H. B. Fuller.
 - d. Mon-Eco Industries, Inc.

2.4 FACTORY-APPLIED JACKETS

- A. Insulation system schedules indicate factory-applied jackets on various applications. When factory-applied jackets are indicated, comply with the following:
 - 1. FSK Jacket: Aluminum-foil, fiberglass-reinforced scrim with kraft-paper backing; complying with ASTM C1136, Type II.

2.5 TAPES

- A. FSK Tape: Foil-face, vapor-retarder tape matching factory-applied jacket with acrylic adhesive; complying with ASTM C1136.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. 3M Industrial Adhesives and Tapes Division.
 - 2. Width: 3 inches .
 - 3. Thickness: 6.5 mils .
 - 4. Adhesion: 90 ounces force/inch in width.
 - 5. Elongation: 2 percent.
 - 6. Tensile Strength: 40 lbf/inch in width.
 - 7. FSK Tape Disks and Squares: Precut disks or squares of FSK tape.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions for compliance with requirements for installation tolerances and other conditions affecting performance of insulation application.
 - 1. Verify that systems to be insulated have been tested and are free of defects.

2. Verify that surfaces to be insulated are clean and dry.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Surface Preparation: Clean and dry surfaces to receive insulation. Remove materials that will adversely affect insulation application.

3.3 GENERAL INSTALLATION REQUIREMENTS

- A. Install insulation materials, accessories, and finishes with smooth, straight, and even surfaces; free of voids throughout the length of ducts and fittings.
- B. Install insulation materials, vapor barriers or retarders, jackets, and thicknesses required for each item of duct system as specified in insulation system schedules.
- C. Install accessories compatible with insulation materials and suitable for the service. Install accessories that do not corrode, compress, or otherwise damage insulation or jacket.
- D. Install insulation with longitudinal seams at top and bottom of horizontal runs.
- E. Install multiple layers of insulation with longitudinal and end seams staggered.
- F. Keep insulation materials dry during application and finishing. Replace insulation materials that get wet during storage or in the installation process before being properly covered and sealed in accordance with Contract Documents.
- G. Install insulation with tight longitudinal seams and end joints. Bond seams and joints with adhesive recommended by insulation material manufacturer.
- H. Install insulation with least number of joints practical.
- I. Where vapor barrier is indicated, seal joints, seams, and penetrations in insulation at hangers, supports, anchors, and other projections with vapor-barrier mastic.
 - 1. Install insulation continuously through hangers and around anchor attachments.
 - 2. For insulation application where vapor barriers are indicated, extend insulation on anchor legs from point of attachment to supported item to point of attachment to structure. Taper and seal ends at attachment to structure with vapor-barrier mastic.
 - 3. Install insert materials and install insulation to tightly join the insert. Seal insulation to insulation inserts with adhesive or sealing compound recommended by insulation material manufacturer.
- J. Apply adhesives, mastics, and sealants at manufacturer's recommended coverage rate and wet and dry film thicknesses.
- K. Install insulation with factory-applied jackets as follows:

1. Draw jacket tight and smooth, but not to the extent of creating wrinkles or areas of compression in the insulation.
 2. Cover circumferential joints with 3-inch- wide strips, of same material as insulation jacket. Secure strips with adhesive and outward clinching staples along both edges of strip, spaced 4 inches o.c.
 3. Overlap jacket longitudinal seams at least 1-1/2 inches. Clean and dry surface to receive self-sealing lap. Staple laps with outward clinching staples along edge at 2 inches o.c.
 - a. For below ambient services, apply vapor-barrier mastic over staples.
 4. Cover joints and seams with tape, according to insulation material manufacturer's written instructions, to maintain vapor seal.
 5. Where vapor barriers are indicated, apply vapor-barrier mastic on seams and joints and at ends adjacent to duct flanges and fittings.
- L. Cut insulation in a manner to avoid compressing insulation.
- M. Finish installation with systems at operating conditions. Repair joint separations and cracking due to thermal movement.
- N. Repair damaged insulation facings by applying same facing material over damaged areas. Extend patches at least 4 inches beyond damaged areas. Adhere, staple, and seal patches similar to butt joints.

3.4 INDOOR DUCT AND PLENUM INSULATION SCHEDULE

- A. Exposed, rectangular, outside-air (intake & exhaust) duct insulation is the following:
1. Glass-Fiber Board: 1-1/2 inches thick and 2 lb/cu. ft. nominal density and minimum of R-6 insulative value.

END OF SECTION 23 07 13

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SECTION 23 07 19 - HVAC PIPING INSULATION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes insulation for HVAC piping systems.
- B. Related Requirements:
 - 1. Section 23 07 13 "Duct Insulation" for duct insulation.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product. Include thermal conductivity, water-vapor permeance thickness, and jackets (both factory and field applied, if any).
- B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.
 - 1. Detail application of protective shields, saddles, and inserts at hangers for each type of insulation and hanger.
 - 2. Detail insulation application at elbows, fittings, flanges, valves, and specialties for each type of insulation.
 - 3. Detail removable insulation at piping specialties.

1.3 DELIVERY, STORAGE, AND HANDLING

- A. Packaging: Insulation system materials are to be delivered to the Project site in unopened containers. The packaging is to include name of manufacturer, fabricator, type, description, and size , as well as ASTM standard designation, and maximum use temperature.

1.4 COORDINATION

- A. Coordinate sizes and locations of supports, hangers, and insulation shields specified in Section 23 05 29 "Hangers and Supports for HVAC Piping and Equipment."
- B. Coordinate clearance requirements with piping Installer for piping insulation application. Before preparing piping Shop Drawings, establish and maintain clearance requirements for installation of insulation and field-applied jackets and finishes and for space required for maintenance.
- C. Coordinate installation and testing of heat tracing.

1.5 SCHEDULING

- A. Schedule insulation application after pressure testing systems and, where required, after installing and testing heat tracing. Insulation application may begin on segments that have satisfactory test results.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Surface-Burning Characteristics: For insulation and related materials, as determined by testing identical products in accordance with ASTM E84 by a testing agency acceptable to authorities having jurisdiction. Factory label insulation, jacket materials, adhesive, mastic, tapes, and cement material containers with appropriate markings of applicable testing agency.
 - 1. All Insulation Installed Indoors: Flame-spread index of 25 or less, and smoke-developed index of 50 or less.

2.2 INSULATION MATERIALS

- A. Comply with requirements in "Indoor Piping Insulation Schedule" articles for where insulating materials are applied.
- B. Products do not contain asbestos, lead, mercury, or mercury compounds.
- C. Products that come into contact with stainless steel have a leachable chloride content of less than 50 ppm when tested in accordance with ASTM C871.
- D. Insulation materials for use on austenitic stainless steel are qualified as acceptable in accordance with ASTM C795.
- E. Glass-Fiber, Preformed Pipe: Glass fibers bonded with a thermosetting resin; suitable for maximum use temperature up to 850 deg F in accordance with ASTM C411. Comply with ASTM C547.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Johns Manville; a Berkshire Hathaway company.
 - b. Knauf Insulation.
 - c. Manson Insulation Inc.
 - d. Owens Corning.
 - 2. Preformed Pipe Insulation: Type I, Grade A with factory-applied ASJ+ jacket .
 - 3. Fabricated shapes in accordance with ASTM C450 and ASTM C585.
 - 4. Factory-applied jacket requirements are specified in "Factory-Applied Jackets" Article.

2.3 FACTORY-APPLIED JACKETS

- A. Insulation system schedules indicate factory-applied jackets on various applications. When factory-applied jackets are indicated, comply with the following:
1. ASJ: White, kraft-paper, fiberglass-reinforced scrim with aluminum-foil backing; complying with ASTM C1136, Type I.

2.4 TAPES

- A. ASJ Tape: White vapor-retarder tape matching factory-applied jacket with acrylic adhesive, complying with ASTM C1136.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. 3M Industrial Adhesives and Tapes Division.
 - b. Avery Dennison Corporation, Specialty Tapes Division.
 - c. Ideal Tape Co., Inc., an American Biltrite Company.
 - d. Knauf Insulation.
 2. Width: 3 inches .
 3. Thickness: 11.5 mils .
 4. Adhesion: 90 ounces force/inch in width.
 5. Elongation: 2 percent.
 6. Tensile Strength: 40 lbf/inch in width.
 7. ASJ Tape Disks and Squares: Precut disks or squares of ASJ tape.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions for compliance with requirements for installation tolerances and other conditions affecting performance of insulation application.
1. Verify that systems to be insulated have been tested and are free of defects.
 2. Verify that surfaces to be insulated are clean and dry.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Clean and dry surfaces to receive insulation. Remove materials that will adversely affect insulation application.
- B. Coordinate insulation installation with the tradesman installing heat tracing. Comply with requirements for heat tracing that apply to insulation.

- C. Mix insulating cements with clean potable water; if insulating cements are to be in contact with stainless steel surfaces, use demineralized water.

3.3 GENERAL INSTALLATION REQUIREMENTS

- A. Install insulation materials, accessories, and finishes with smooth, straight, and even surfaces; free of voids throughout the length of piping, including fittings, valves, and specialties.
- B. Install insulation materials, forms, vapor barriers or retarders, jackets, and of thicknesses required for each item of pipe system, as specified in insulation system schedules.
- C. Install accessories compatible with insulation materials and suitable for the service. Install accessories that do not corrode, compress, or otherwise damage insulation or jacket.
- D. Install insulation with longitudinal seams at top and bottom (12 o'clock and 6 o'clock positions) of horizontal runs.
- E. Install multiple layers of insulation with longitudinal and end seams staggered.
- F. Do not weld brackets, clips, or other attachment devices to piping, fittings, and specialties.
- G. Keep insulation materials dry during storage, application, and finishing. Replace insulation materials that get wet during storage or in the installation process before being properly covered and sealed in accordance with the Contract Documents , unless otherwise approved by the engineer of record.
- H. Install insulation with tight longitudinal seams and end joints. Bond seams and joints with adhesive recommended by insulation material manufacturer.
- I. Install insulation with least number of joints practical.
- J. Where vapor barrier is indicated, seal joints, seams, and penetrations in insulation at hangers, supports, anchors, and other projections with vapor-barrier mastic.
 - 1. Install insulation continuously through hangers and around anchor attachments.
 - 2. For insulation application where vapor barriers are indicated, extend insulation on anchor legs from point of attachment to supported item to point of attachment to structure. Taper and seal ends attached to structure with vapor-barrier mastic.
 - 3. Install insert materials and insulation to tightly join the insert. Seal insulation to insulation inserts with adhesive or sealing compound recommended by insulation material manufacturer.
 - 4. Cover inserts with jacket material matching adjacent pipe insulation. Install shields over jacket, arranged to protect jacket from tear or puncture by hanger, support, and shield.
- K. Apply adhesives, mastics, and sealants at manufacturer's recommended coverage rate and wet and dry film thicknesses.
- L. Install insulation with factory-applied jackets as follows:

1. Draw jacket tight and smooth, but not to the extent of creating wrinkles or areas of compression in the insulation.
2. Cover circumferential joints with 3-inch- wide strips, of same material as insulation jacket. Secure strips with adhesive and outward-clinching staples along both edges of strip, spaced 4 inches o.c.
3. Overlap jacket longitudinal seams at least 1-1/2 inches. Install insulation with longitudinal seams at bottom of pipe. Clean and dry surface to receive self-sealing lap. Staple laps with outward-clinching staples along edge at 2 inches o.c.
4. For below-ambient services, apply vapor-barrier mastic over staples.
5. Cover joints and seams with tape, in accordance with insulation material manufacturer's written instructions, to maintain vapor seal.
6. Where vapor barriers are indicated, apply vapor-barrier mastic on seams and joints and at ends adjacent to pipe flanges and fittings.

M. Cut insulation in a manner to avoid compressing insulation.

N. Finish installation with systems at operating conditions. Repair joint separations and cracking due to thermal movement.

O. Repair damaged insulation facings by applying same facing material over damaged areas. Extend patches at least 4 inches beyond damaged areas. Adhere, staple, and seal patches in similar fashion to butt joints.

P. For above-ambient services, do not install insulation to the following:

1. Vibration-control devices.
2. Testing agency labels and stamps.
3. Nameplates and data plates.

3.4 PENETRATIONS

A. Insulation Installation at Interior Wall and Partition Penetrations (That Are Not Fire Rated): Install insulation continuously through walls and partitions.

B. Insulation Installation at Fire-Rated Wall and Partition Penetrations: Install insulation continuously through penetrations of fire-rated walls and partitions.

1. Comply with requirements in Section 07 84 13 "Penetration Firestopping" for firestopping and fire-resistive joint sealers.

C. Insulation Installation at Floor Penetrations:

1. Pipe: Install insulation continuously through floor penetrations.
2. Seal penetrations through fire-rated assemblies. Comply with requirements in Section 07 84 13 "Penetration Firestopping."

3.5 GENERAL PIPE INSULATION INSTALLATION

- A. Requirements in this article generally apply to all insulation materials, except where more specific requirements are specified in various pipe insulation material installation articles below.
- B. Insulation Installation on Fittings, Valves, Strainers, Flanges, Mechanical Couplings, and Unions:
1. Install insulation over fittings, valves, strainers, flanges, mechanical couplings, unions, and other specialties with continuous thermal and vapor-retarder integrity unless otherwise indicated.
 2. Insulate pipe elbows using prefabricated fitting insulation made from same material and density as that of adjacent pipe insulation. Each piece is butted tightly against adjoining piece and bonded with adhesive. Fill joints, seams, voids, and irregular surfaces with insulating cement finished to a smooth, hard, and uniform contour that is uniform with adjoining pipe insulation.
 3. Insulate tee fittings with prefabricated fitting insulation of same material and thickness as that used for adjacent pipe. Cut sectional pipe insulation to fit. Butt each section closely to the next and hold in place with tie wire. Bond pieces with adhesive.
 4. Insulate valves using prefabricated fitting insulation of same material, density, and thickness as that used for adjacent pipe. Overlap adjoining pipe insulation by not less than 2 times the thickness of pipe insulation, or one pipe diameter, whichever is thicker. For valves, insulate up to and including the bonnets, valve stuffing-box studs, bolts, and nuts. Fill joints, seams, and irregular surfaces with insulating cement.
 5. Insulate strainers using prefabricated fitting insulation of same material, density, and thickness as that used for adjacent pipe. Overlap adjoining pipe insulation by not less than 2 times the thickness of pipe insulation, or one pipe diameter, whichever is thicker. Fill joints, seams, and irregular surfaces with insulating cement. Insulate strainers, so strainer basket flange or plug can be easily removed and replaced without damaging the insulation and jacket. Provide a removable reusable insulation cover. For below-ambient services, provide a design that maintains vapor barrier.
 6. Insulate flanges, mechanical couplings, and unions using a section of oversized preformed pipe insulation to fit. Overlap adjoining pipe insulation by not less than 2 times the thickness of pipe insulation, or one pipe diameter, whichever is thicker. Stencil or label the outside insulation jacket of each union with the word "union" matching size and color of pipe labels.
 7. Cover segmented insulated surfaces with a layer of finishing cement and coat with a mastic. Install vapor-barrier mastic for below-ambient services and a breather mastic for above-ambient services. Reinforce the mastic with reinforcing mesh. Trowel the mastic to a smooth and well-shaped contour.
 8. For services not specified to receive a field-applied jacket, except for flexible elastomeric and polyolefin, install fitted PVC cover over elbows, tees, strainers, valves, flanges, and unions. Terminate ends with PVC end caps. Tape PVC covers to adjoining insulation facing, using PVC tape.
- C. Insulate instrument connections for thermometers, pressure gages, pressure temperature taps, test connections, flow meters, sensors, switches, and transmitters on insulated pipes. Shape insulation at these connections by tapering it to and around the connection with insulating cement and finish with finishing cement, mastic, and flashing sealant.

- D. Install removable insulation covers at equipment/piping that requires access and inspection.. Installation conforms to the following:
1. Make removable flange and union insulation from sectional pipe insulation of same thickness as that on adjoining pipe. Install same insulation jacket as that of adjoining pipe insulation.
 2. When flange and union covers are made from sectional pipe insulation, extend insulation from flanges or union at least 2 times the insulation thickness over adjacent pipe insulation on each side of flange or union. Secure flange cover in place with stainless steel or aluminum bands. Select band material compatible with insulation and jacket.
 3. Construct removable valve insulation covers in same manner as for flanges, except divide the two-part section on the vertical center line of valve body.
 4. When covers are made from block insulation, make two halves, each consisting of mitered blocks wired to stainless steel fabric. Secure this wire frame, with its attached insulation, to flanges with tie wire. Extend insulation at least 2 inches over adjacent pipe insulation on each side of valve. Fill space between flange or union cover and pipe insulation with insulating cement. Finish cover assembly with insulating cement applied in two coats. After first coat is dry, apply and trowel second coat to a smooth finish.
 5. Unless a PVC jacket is indicated in field-applied jacket schedules, finish exposed surfaces with a metal jacket.

3.6 INSTALLATION OF GLASS-FIBER AND MINERAL WOOL INSULATION

A. Insulation Installation on Straight Pipes and Tubes:

1. Secure each layer of preformed pipe insulation to pipe with wire or bands, and tighten bands without deforming insulation materials.
2. Where vapor barriers are indicated, seal longitudinal seams, end joints, and protrusions with vapor-barrier mastic and joint sealant.
3. For insulation with jackets on above-ambient surfaces, secure laps with outward-clinched staples at 6 inches o.c.
4. For insulation with jackets on below-ambient surfaces, do not staple longitudinal tabs. Instead, secure tabs with additional adhesive, as recommended by insulation material manufacturer, and seal with vapor-barrier mastic and flashing sealant.

B. Insulation Installation on Pipe Flanges:

1. Install prefabricated pipe insulation to outer diameter of pipe flange.
2. Make width of insulation section same as overall width of flange and bolts, plus twice the thickness of pipe insulation.
3. Fill voids between inner circumference of flange insulation and outer circumference of adjacent straight pipe segments with glass-fiber or mineral-wool blanket insulation.
4. Install jacket material with manufacturer's recommended adhesive, overlap seams at least 1 inch, and seal joints with flashing sealant.

C. Insulation Installation on Pipe Fittings and Elbows:

1. Install prefabricated sections of same material as that of straight segments of pipe insulation when available.
2. When preformed insulation elbows and fittings are not available, install mitered sections of pipe insulation, to a thickness equal to adjoining pipe insulation. Secure insulation materials with wire or bands.

D. Insulation Installation on Valves and Pipe Specialties:

1. Install prefabricated sections of same material as that of straight segments of pipe insulation when available.
2. When prefabricated sections are not available, install fabricated sections of pipe insulation to valve body.
3. Arrange insulation to permit access to packing and to allow valve operation without disturbing insulation.
4. Install insulation to flanges as specified for flange insulation application.

3.7 INDOOR PIPING INSULATION SCHEDULE

A. Condensate and Equipment Drain Water below 60 Deg F:

1. All Pipe Sizes: Insulation is the following:
 - a. Glass-Fiber, Preformed Pipe Insulation, Type I: 1 inch thick.

END OF SECTION 23 07 19

SECTION 23 09 23 - DIRECT DIGITAL CONTROL (DDC) SYSTEM FOR HVAC

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Direct digital control (DDC) system for HVAC.

1.2 DEFINITIONS

- A. Algorithm: A logical procedure for solving a recurrent mathematical problem. A prescribed set of well-defined rules or processes for solving a problem in a finite number of steps.
- B. Analog: A continuously varying signal value, such as current, flow, pressure, or temperature.
- C. BACnet Specific Definitions:
1. BACnet: Building Automation Control Network Protocol, ASHRAE 135. A communications protocol allowing devices to communicate data and services over a network.
 2. BACnet Interoperability Building Blocks (BIBBs): BIBB defines a small portion of BACnet functionality that is needed to perform a particular task. BIBBs are combined to build the BACnet functional requirements for a device.
 3. BACnet/IP: Defines and allows using a reserved UDP socket to transmit BACnet messages over IP networks. A BACnet/IP network is a collection of one or more IP subnetworks that share the same BACnet network number.
 4. BACnet Testing Laboratories (BTL): Organization responsible for testing products for compliance with ASHRAE 135, operated under direction of BACnet International.
- D. Binary: Two-state signal where a high signal level represents "ON" or "OPEN" condition and a low signal level represents "OFF" or "CLOSED" condition. "Digital" is sometimes used interchangeably with "Binary" to indicate a two-state signal.
- E. Controller: Generic term for any standalone, microprocessor-based, digital controller residing on a network, used for local or global control. Three types of controllers are indicated: network controllers, programmable application controllers, and application-specific controllers.
- F. Control System Integrator: An entity that assists in expansion of existing enterprise system and support of additional operator interfaces to I/O being added to existing enterprise system.
- G. COV: Changes of value.
- H. DDC System Provider: Authorized representative of, and trained by, DDC system manufacturer and responsible for execution of DDC system Work indicated.

- I. Distributed Control: Processing of system data is decentralized and control decisions are made at subsystem level. System operational programs and information are provided to remote subsystems and status is reported back. On loss of communication, subsystems to be capable of operating in a standalone mode using the last best available data.
- J. E/P: Voltage to pneumatic.
- K. Gateway: Bidirectional protocol translator that connects control systems that use different communication protocols.
- L. HLC: Heavy load conditions.
- M. I/O: System through which information is received and transmitted. I/O refers to analog input (AI), binary input (BI), analog output (AO) and binary output (BO). Analog signals are continuous and represent control influences such as flow, level, moisture, pressure, and temperature. Binary signals convert electronic signals to digital pulses (values) and generally represent two-position operating and alarm status. "Digital," (DI) and (DO), is sometimes used interchangeably with "Binary," (BI) and (BO), respectively.
- N. I/P: Current to pneumatic.
- O. LAN: Local area network.
- P. LNS: LonWorks Network Services.
- Q. Low Voltage: As defined in NFPA 70 for circuits and equipment operating at less than 50 V or for remote-control, signaling power-limited circuits.
- R. MS/TP: Master-slave/token-passing, ISO/IEC/IEEE 8802-3. Datalink protocol LAN option that uses twisted-pair wire for low-speed communication.
- S. MTBF: Mean time between failures.
- T. Network Controller: Digital controller, which supports a family of programmable application controllers and application-specific controllers, that communicates on peer-to-peer network for transmission of global data.
- U. Network Repeater: Device that receives data packet from one network and rebroadcasts it to another network. No routing information is added to protocol.
- V. Peer to Peer: Networking architecture that treats all network stations as equal partners.
- W. POT: Portable operator's terminal.
- X. RAM: Random access memory.
- Y. RF: Radio frequency.
- Z. Router: Device connecting two or more networks at network layer.

- AA. Server: Computer used to maintain system configuration, historical and programming database.
- BB. TCP/IP: Transport control protocol/Internet protocol.
- CC. UPS: Uninterruptible power supply.
- DD. USB: Universal Serial Bus.
- EE. User Datagram Protocol (UDP): This protocol assumes that the IP is used as the underlying protocol.
- FF. VAV: Variable air volume.
- GG. WLED: White light emitting diode.

1.3 ACTION SUBMITTALS

A. Multiple Submissions:

1. If multiple submissions are required to execute work within schedule, first submit a coordinated schedule clearly defining intent of multiple submissions. Include a proposed date of each submission with a detailed description of submittal content to be included in each submission.
2. Clearly identify each submittal requirement indicated and in which submission the information will be provided.
3. Include an updated schedule in each subsequent submission with changes highlighted to easily track the changes made to previous submitted schedule.

B. Product Data:

1. Construction details, material descriptions, dimensions of individual components and profiles, and finishes.
2. Operating characteristics, electrical characteristics, and furnished accessories indicating process operating range, accuracy over range, control signal over range, default control signal with loss of power, calibration data specific to each unique application, electrical power requirements, and limitations of ambient operating environment, including temperature and humidity.
3. Product description with complete technical data, performance curves, and product specification sheets.
4. Installation, operation, and maintenance instructions including factors effecting performance.
5. Bill of materials of indicating quantity, manufacturer, and extended model number for each unique product.
 - a. Gateways.
 - b. DDC controllers.
 - c. Accessories.
 - d. Instruments.
 - e. Control dampers and actuators.

6. When manufacturer's product datasheets apply to a product series rather than a specific product model, clearly indicate and highlight only applicable information.
7. Each submitted piece of product literature to clearly cross reference specification and drawings that submittal is to cover.

C. Software Submittal:

1. Cross-referenced listing of software to be loaded on each operator workstation, server, gateway, and DDC controller.
2. Description and technical data of all software provided and cross-referenced to products in which software will be installed.
3. Operating system software, operator interface and programming software, color graphic software, DDC controller software, maintenance management software, and third-party software.
4. Include a flow diagram and an outline of each subroutine that indicates each program variable name and units of measure.
5. Listing and description of each engineering equation used with reference source.
6. Listing and description of each constant used in engineering equations and a reference source to prove origin of each constant.
7. Description of operator interface to alphanumeric and graphic programming.
8. Description of each network communication protocol.
9. Description of system database, including all data included in database, database capacity, and limitations to expand database.
10. Description of each application program and device drivers to be generated, including specific information on data acquisition and control strategies showing their relationship to system timing, speed, processing burden, and system throughout.
11. Controlled Systems: Instrumentation list with element name, type of device, manufacturer, model number, and product data. Include written description of sequence of operation including schematic diagram.

D. Shop Drawings:

1. General Requirements:
 - a. Include cover drawing with Project name, location, Owner, Architect, Contractor, and issue date with each Shop Drawings submission.
 - b. Include a drawing index sheet listing each drawing number and title that matches information in each title block.
2. Include plans, elevations, sections, and mounting details where applicable.
3. Include details of product assemblies. Indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
4. Detail means of vibration isolation and show attachments to rotating equipment.
5. Plan Drawings indicating the following:
 - a. Screened backgrounds of walls, structural grid lines, HVAC equipment, ductwork, and piping.
 - b. Room names and numbers with coordinated placement to avoid interference with control products indicated.

- c. Each desktop workstation network port, server, gateway, router, DDC controller, control panel instrument connecting to DDC controller, and damper and valve connecting to DDC controller, if included in Project.
 - d. Exact placement of products in rooms, ducts, and piping to reflect proposed installed condition.
 - e. Network communication cable and raceway routing.
 - f. Proposed routing of wiring, cabling, conduit, and tubing; coordinated with building services for review before installation.
6. Schematic drawings for each controlled HVAC system indicating the following:
- a. I/O points labeled with point names shown. Indicate instrument range, normal operating set points, and alarm set points. Indicate fail position of each damper and valve, if included in Project.
 - b. I/O listed in table format showing point name, type of device, manufacturer, model number, and cross-reference to product data sheet number.
 - c. A graphic showing location of control I/O in proper relationship to HVAC system.
 - d. Wiring diagram with each I/O point having a unique identification and indicating labels for all wiring terminals.
 - e. Unique identification of each I/O that to be consistently used between different drawings showing same point.
 - f. Elementary wiring diagrams of controls for HVAC equipment motor circuits including interlocks, switches, relays, and interface to DDC controllers.
 - g. Narrative sequence of operation.
 - h. Graphic sequence of operation, showing all inputs and output logical blocks.
7. Control panel drawings indicating the following:
- a. Panel dimensions, materials, size, and location of field cable, raceways, and tubing connections.
 - b. Interior subpanel layout, drawn to scale and showing all internal components, cabling and wiring raceways, nameplates, and allocated spare space.
 - c. Front, rear, and side elevations and nameplate legend.
 - d. Unique drawing for each panel.
8. DDC system network riser diagram indicating the following:
- a. Each device connected to network with unique identification for each.
 - b. Interconnection of each different network in DDC system.
 - c. For each network, indicate communication protocol, speed, and physical means of interconnecting network devices, such as copper cable type, or optical fiber cable type. Indicate raceway type and size for each.
 - d. Each network port for connection of an operator workstation or other type of operator interface with unique identification for each.
9. DDC system electrical power riser diagram indicating the following:
- a. Each point of connection to field power with requirements (volts/phase/hertz/ampere/connection type) listed for each.
 - b. Each control power supply including, as applicable, transformers, power-line conditioners, transient voltage suppression and high filter noise units, DC power supplies, and UPS units with unique identification for each.
 - c. Each product requiring power with requirements (volts/phase/hertz/ampere/connection type) listed for each.
 - d. Power wiring type and size, race type, and size for each.
10. Monitoring and control signal diagrams indicating the following:
- a. Control signal cable and wiring between controllers and I/O.

- b. Point-to-point schematic wiring diagrams for each product.
 - c. Control signal tubing to sensors, switches, and transmitters.
 - d. Process signal tubing to sensors, switches, and transmitters.
11. Color graphics indicating the following:
- a. Itemized list of color graphic displays to be provided.
 - b. For each display screen to be provided, a true color copy showing layout of pictures, graphics, and data displayed.
 - c. Intended operator access between related hierarchical display screens.

E. System Description:

- 1. Full description of DDC system architecture, network configuration, operator interfaces and peripherals, servers, controller types and applications, gateways, routers and other network devices, and power supplies.
- 2. Complete listing and description of each report, log and trend for format and timing, and events that initiate generation.
- 3. System and product operation under each potential failure condition including, but not limited to, the following:
 - a. Loss of power.
 - b. Loss of network communication signal.
 - c. Loss of controller signals to inputs and outpoints.
 - d. Operator workstation failure.
 - e. Server failure.
 - f. Gateway failure.
 - g. Network failure.
 - h. Controller failure.
 - i. Instrument failure.
 - j. Control damper and valve actuator failure.
- 4. Complete bibliography of documentation and media to be delivered to Owner.
- 5. Description of testing plans and procedures.
- 6. Description of Owner training.

F. Delegated Design Submittals: For DDC system products and installation indicated as being delegated.

- 1. Supporting documentation showing DDC system design complies with performance requirements indicated, including calculations and other documentation necessary to prove compliance.
- 2. Schedule and design calculations for control dampers and actuators.
 - a. Flow at Project design and minimum flow conditions.
 - b. Face velocity at Project design and minimum airflow conditions.
 - c. Pressure drop across damper at Project design and minimum airflow conditions.
 - d. AMCA 500-D damper installation arrangement used to calculate and schedule pressure drop, as applicable to installation.
 - e. Maximum close-off pressure.
 - f. Leakage airflow at maximum system pressure differential (fan close-off pressure).
 - g. Torque required at worst case condition for sizing actuator.
 - h. Actuator selection indicating torque provided.
 - i. Actuator signal to control damper (on, close, or modulate).

- j. Actuator position on loss of power.
- k. Actuator position on loss of control signal.
- 3. Schedule and design calculations for selecting flow instruments.
 - a. Instrument flow range.
 - b. Project design and minimum flow conditions with corresponding accuracy, control signal to transmitter, and output signal for remote control.
 - c. Extreme points of extended flow range with corresponding accuracy, control signal to transmitter, and output signal for remote control.
 - d. Pressure-differential loss across instrument at Project design flow conditions.
 - e. Where flow sensors are mated with pressure transmitters, provide information for each instrument separately and as an operating pair.

1.4 INFORMATIONAL SUBMITTALS

A. Coordination Drawings:

- 1. Plan drawings, reflected ceiling plans, or Building Information Model (BIM), and corresponding product installation details, drawn to scale, showing the items described in this Section and coordinated with all building trades.

B. Qualification Statements:

- 1. Systems Provider's Qualification Data:
 - a. Resume of project manager assigned to Project.
 - b. Resumes of application engineering staff assigned to Project.
 - c. Resumes of installation and programming technicians assigned to Project.
 - d. Resumes of service technicians assigned to Project.
 - e. Brief description of past project including physical address, floor area, number of floors, building system cooling and heating capacity, and building's primary function.
 - f. Description of past project DDC system, noting similarities to Project scope and complexity indicated.
 - g. Names of staff assigned to past project that will also be assigned to execute work of this Project.
 - h. Owner contact information for past project including name, phone number, and email address.
 - i. Contractor contact information for past project including name, phone number, and email address.
- 2. Manufacturer's qualification data.
- 3. Testing agency's qualification data.

C. Product Certificates:

- 1. Data Communications Protocol Certificates:
 - a. Certifying that each proposed DDC system component complies with ASHRAE 135.

D. Source Quality-Control Reports: For DDC system equipment and components.

- E. Field Quality-Control Reports: For DDC system equipment and components.
- F. Sample warranty.

1.5 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For DDC system.

1.6 MAINTENANCE MATERIAL SUBMITTALS

- A. Extra Stock Material: Furnish extra materials and parts to Owner that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
- B. Include product manufacturers' recommended parts lists for proper product operation over four - year period following warranty period. Parts list to be indicated for each year.
- C. Furnish quantity indicated of matching product(s) in Project inventory for each unique size and type of following:
 - 1. General-Purpose Relay: Four. .

1.7 QUALITY ASSURANCE

PART 2 - PRODUCTS

2.1 DIRECT DIGITAL CONTROL (DDC) SYSTEM FOR HVAC

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Alerton Inc.
 - 2. Automated Logic Corporation.
 - 3. Delta Controls Inc.
 - 4. Honeywell International Inc.
 - 5. Johnson Controls, Inc.
 - 6. Siemens Industry, Inc., Building Technologies Division.
 - 7. Skyline Automation.

2.2 DDC SYSTEM DESCRIPTION

- A. The packaged air-cooled AC units shall be furnished and installed with a DDC controller with BACnet MS/TP communication protocol.

- B. The control contractor shall connect the AC units into the existing BAS system at the nearest control panel. Coordinate exact location with building owner.
- C. The control contractor shall furnish and install all programming, gateways, switches, etc. as required to connect the AC units into the existing BAS.

2.3 NETWORK COMMUNICATION PROTOCOL

- A. Use network communication protocol(s) that are open to Owner and available to other companies for use in making future modifications to DDC system.
- B. ASHRAE 135 Protocol:
 - 1. Use ASHRAE 135 communication protocol as sole and native protocol used throughout entire DDC system.
 - 2. DDC system to not require use of gateways except to integrate HVAC equipment and other building systems and equipment; not required to use ASHRAE 135 communication protocol.
 - 3. If used, gateways to connect to DDC system using ASHRAE 135 communication protocol and Project object properties and read/write services indicated by interoperability schedule.
 - 4. Use operator workstations, controllers, and other network devices that are tested and listed by BTL.

2.4 CONTROL WIRE AND CABLE

- A. LAN and Communication Cable: Comply with DDC system manufacturer requirements for network being installed.
 - 1. Comply with following requirements for balanced twisted pair cable described in Section 26 05 23 "Control-Voltage Electrical Power Cables."
 - a. Plenum rated and installed in conduit.
 - b. Unique color that is different from other cables used on Project.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
 - 1. Verify compatibility with and suitability of substrates.
- B. Examine roughing-in for instruments installed in piping to verify actual locations of connections before installation.

- C. Examine roughing-in for instruments installed in duct systems to verify actual locations of connections before installation.
- D. Prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.
- E. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 DDC SYSTEM INTERFACE WITH EXISTING SYSTEMS

A. Interface with Existing Systems:

- 1. Interface DDC systems with existing systems to achieve integration indicated.
- 2. Monitoring and Control of DDC System by Existing Control System:
 - a. Satisfy DDC system performance requirements when monitoring and controlling DDC system by existing control system.
 - b. Operator of existing system to upload, download, monitor, trend, control, and program every I/O point in DDC system from existing control system using existing control system software and operator workstations.
 - c. Make interface so operator of existing system is not required to learn new software for remote monitoring and control from existing control system.
 - d. Make interface of DDC system into existing control system transparent to operators of existing control system and allow operators to program, monitor, and control DDC system from any operator workstation connected to existing control system.

3.3 GENERAL INSTALLATION REQUIREMENTS

- A. Install products to satisfy more stringent of all requirements indicated.
- B. Install products level, plumb, parallel, and perpendicular with building construction.
- C. Support products, tubing, piping wiring, and raceways. Brace products to prevent lateral movement and sway or a break in attachment when subjected to force.
- D. If codes and referenced standards are more stringent than requirements indicated, comply with requirements in codes and referenced standards.
- E. Fabricate openings and install sleeves in ceilings, floors, roof, and walls required by installation of products. Before proceeding with drilling, punching, and cutting, check for concealed work to avoid damage. Patch, flash, grout, seal, and refinish openings to match adjacent condition.
- F. Firestop Penetrations Made in Fire-Rated Assemblies: Comply with requirements in Section 07 84 13 "Penetration Firestopping."
- G. Seal penetrations made in acoustically rated assemblies. Comply with requirements in Section 07 92 00 "Joint Sealants."

H. Fastening Hardware:

1. Wrenches, pliers, and other tools that damage surfaces of rods, nuts, and other parts are prohibited for work of assembling and tightening fasteners.
 2. Tighten bolts and nuts firmly and uniformly. Do not overstress threads by excessive force or by oversized wrenches.
 3. Lubricate threads of bolts, nuts, and screws with graphite and oil before assembly.
- I. If product locations are not indicated, install products in locations that are accessible and that will permit service and maintenance from floor, equipment platforms, or catwalks without removal of permanently installed furniture and equipment.

3.4 INSTALLATION OF GATEWAYS

- A. Install gateways if required for DDC system communication interface requirements indicated.
1. Install gateway(s) required to suit indicated requirements.
- B. Test gateways to verify that communication interface functions properly.

3.5 ELECTRIC POWER CONNECTIONS

- A. Connect electrical power to DDC system products requiring electrical power connections.
- B. Design of electrical power to products not indicated with electric power is delegated to DDC system provider and installing trade to provide a fully functioning DDC system. Work is to comply with NFPA 70 and other requirements indicated.
- C. Comply with requirements in Section 26 28 16 "Enclosed Switches and Circuit Breakers" for electrical power circuit breakers.
- D. Comply with requirements in Section 26 05 19 "Low-Voltage Electrical Power Conductors and Cables" for electrical power conductors and cables.
- E. Comply with requirements in Section 26 05 33.13 "Conduits for Electrical Systems," Section 26 05 33.16 "Boxes and Covers for Electrical Systems," and Section 26 05 33.23 "Surface Raceways for Electrical Systems" for electrical power raceways and boxes.

3.6 INSTALLATION OF CONTROL WIRE, CABLE, AND RACEWAY

- A. Comply with NECA 1.
- B. Wire and Cable Installation:
1. Comply with installation requirements in Section 26 05 23 "Control-Voltage Electrical Power Cables."
 2. Terminate wiring in a junction box.

- a. Clamp cable over jacket in a junction box.
- b. Individual conductors in the stripped section of cable is to be slack between the clamping point and terminal block.
3. Terminate field wiring and cable not directly connected to instruments and control devices having integral wiring terminals using terminal blocks.
4. Install signal transmission components in accordance with IEEE C2, REA Form 511a, NFPA 70, and as indicated.
5. Use shielded cable to transmitters.
6. Use shielded cable to temperature sensors.
7. Perform continuity and meager testing on wire and cable after installation.

C. Conduit Installation:

1. Comply with Section 26 05 33.13 "Conduits for Electrical Systems," Section 26 05 33.16 "Boxes and Covers for Electrical Systems," and Section 26 05 33.23 "Surface Raceways for Electrical Systems" for control-voltage conductors.
2. Comply with Section 27 05 28 "Pathways for Communications Systems" for balanced twisted pair cabling and optical fiber installation.

3.7 DDC SYSTEM I/O CHECKOUT PROCEDURES

- A. Check installed products before continuity tests, leak tests, and calibration.
- B. Check instruments for proper location and accessibility.
- C. Check instruments for proper installation on direction of flow, elevation, orientation, insertion depth, or other applicable considerations that will impact performance.
- D. Check instrument tubing for proper isolation, fittings, slope, dirt legs, drains, material, and support.
- E. Control Damper Checkout:
 1. Verify that control dampers are installed correctly for flow direction.
 2. Verify that proper blade alignment, either parallel or opposed, has been provided.
 3. Verify that damper frame attachment is properly secured and sealed.
 4. Verify that damper actuator and linkage attachment are secure.
 5. Verify that actuator wiring is complete, enclosed, and connected to correct power source.
 6. Verify that damper blade travel is unobstructed.

3.8 DDC SYSTEM I/O ADJUSTMENT, CALIBRATION, AND TESTING

- A. Calibrate each instrument installed that is not factory calibrated and provided with calibration documentation.
- B. Provide written description of proposed field procedures and equipment for calibrating each type of instrument. Submit procedures before calibration and adjustment.

- C. For each analog instrument, make three-point test of calibration for both linearity and accuracy.
- D. Equipment and procedures used for calibration to comply with instrument manufacturer's written instructions.
- E. Provide diagnostic and test equipment for calibration and adjustment.
 - 1. Use field testing and diagnostic instruments and equipment with an accuracy at least twice the instrument accuracy of instrument to be calibrated. For example, test and calibrate an installed instrument with accuracy of 1 percent using field testing and diagnostic instrument with accuracy of 0.5 percent or better.
- F. Calibrate each instrument in accordance with instruction manual supplied by instrument manufacturer.
- G. If after calibration the indicated performance cannot be achieved, replace out-of-tolerance instruments.
- H. Comply with field testing requirements and procedures indicated by ASHRAE's Guideline 11, "Field Testing of HVAC Controls Components," in the absence of specific requirements, and to supplement requirements indicated.
- I. Analog Signals:
 - 1. Check analog voltage signals using a precision voltage meter at zero, 50, and 100 percent.
 - 2. Check analog current signals using a precision current meter at zero, 50, and 100 percent.
 - 3. Check resistance signals for temperature sensors at zero, 50, and 100 percent of operating span using a precision-resistant source.
- J. Digital Signals:
 - 1. Check digital signals using a jumper wire.
 - 2. Check digital signals using an ohmmeter to test for contact making or breaking.
- K. Control Dampers:
 - 1. Stroke and adjust control dampers following manufacturer's recommended procedure, from 100 percent open to 100 percent closed and back to 100 percent open.
 - 2. Check and document open and close cycle times for applications with cycle time less than 30 seconds.
 - 3. For control dampers equipped with positive position indication, check feedback signal at multiple positions to confirm proper position indication.

3.9 DDC SYSTEM VALIDATION TESTS

- A. Perform validation tests before requesting final review of system. Before beginning testing, first submit Pretest Checklist and Test Plan.

- B. After review approval of Pretest Checklist and Test Plan, execute all tests and procedures indicated in plan.
- C. After testing is complete, submit completed Pretest Checklist.
- D. Pretest Checklist: Submit the following list with items checked off once verified:
 - 1. Detailed explanation for any items that are not completed or verified.
 - 2. Required mechanical installation work is successfully completed and HVAC equipment is working correctly.
 - 3. HVAC equipment motors operate below full-load amperage ratings.
 - 4. Required DDC system components, wiring, and accessories are installed.
 - 5. Installed DDC system architecture matches approved Drawings.
 - 6. Control electric power circuits operate at proper voltage and are free from faults.
 - 7. Required surge protection is installed.
 - 8. DDC system network communications function properly, including uploading and downloading programming changes.
 - 9. Each controller's programming is backed up.
 - 10. Equipment, products, tubing, wiring cable, and conduits are properly labeled.
 - 11. All I/O points are programmed into controllers.
 - 12. Testing, adjusting, and balancing work affecting controls is complete.
 - 13. Dampers and actuators zero and span adjustments are set properly.
 - 14. Each control damper and actuator goes to failed position on loss of power.
 - 15. Meter, sensor, and transmitter readings are accurate and calibrated.
 - 16. Control loops are tuned for smooth and stable operation.
 - 17. View trend data where applicable.
 - 18. Each controller works properly in standalone mode.
 - 19. Safety controls and devices function properly.
 - 20. Interfaces with fire-alarm system function properly.
 - 21. Electrical interlocks function properly.
 - 22. Operator workstations and other interfaces are delivered, all system and database software is installed, and graphics are created.
 - 23. Record Drawings are completed.
- E. Test Plan:
 - 1. Prepare and submit validation Test Plan including test procedures for performance validation tests.
 - 2. Address all specified functions of DDC system and sequences of operation in Test Plan.
 - 3. Explain detailed actions and expected results to demonstrate compliance with requirements indicated.
 - 4. Explain method for simulating necessary conditions of operation used to demonstrate performance.
 - 5. Include Test Checklist to be used to check and initial that each test has been successfully completed.
 - 6. Submit Test Plan documentation 10 business days before start of tests.
- F. Validation Test:

1. Verify operating performance of each I/O point in DDC system.
 - a. Verify analog I/O points at operating value.
 - b. Make adjustments to out-of-tolerance I/O points.
 - 1) Identify I/O points for future reference.
 - 2) Simulate abnormal conditions to demonstrate proper function of safety devices.
 - 3) Replace instruments and controllers that cannot maintain performance indicated after adjustments.
2. Simulate conditions to demonstrate proper sequence of control.
3. Readjust settings to design values and observe ability of DDC system to establish desired conditions.
4. 24 hours after initial validation test, do as follows:
 - a. Re-check I/O points that required corrections during initial test.
 - b. Identify I/O points that still require additional correction and make corrections necessary to achieve desired results.
5. 24 Hours after second validation test, do as follows:
 - a. Re-check I/O points that required corrections during second test.
 - b. Continue validation testing until I/O point is normal on two consecutive tests.
6. Completely check out, calibrate, and test all connected hardware and software to ensure that DDC system performs according to requirements indicated.
7. After validation testing is complete, prepare and submit report indicating results of testing. For all I/O points that required correction, indicate how many validation re-tests it took to pass. Identify adjustments made for each test and indicate instruments that were replaced.

3.10 MAINTENANCE SERVICE

- A. Beginning at Substantial Completion, verify that maintenance service includes six 12 months' full maintenance by DDC system manufacturer's authorized service representative. Include annual preventive maintenance, repair or replacement of worn or defective components, cleaning, calibration, and adjusting as required for proper operation. Use only manufacturer's authorized replacement parts and supplies.

3.11 DEMONSTRATION

- A. Engage a factory-authorized service representative with complete knowledge of Project-specific system installed to train Owner's maintenance personnel to adjust, operate, and maintain the AC units through the BAS.

END OF SECTION 23 09 23

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SECTION 23 09 23.12 - CONTROL DAMPERS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Rectangular control dampers with airfoil blades.

B. Related Requirements:

1. Section 23 09 23 "Direct Digital Control (DDC) System for HVAC" for control equipment and software, relays, electrical power devices, uninterruptible power supply units, wire, and cable.

1.2 DEFINITIONS

A. DDC: Direct digital control.

B. RMS: Root-mean-square value of alternating voltage, which is the square root of the mean value of the square of the voltage values during a complete cycle.

C. Thermal Efficiency Ratio (E): Comparison of a tested damper's thermal performance against a v-groove blade reference damper. A damper with the same thermal efficiency as the reference damper would have an E value of 0 percent, while a damper that is 4 times as efficient would have an E value of 200 percent.

1.3 ACTION SUBMITTALS

A. Product Data:

1. Rectangular control dampers with airfoil blades.

B. Product Data Submittals: For each damper and actuator.

1. Construction details, material descriptions, dimensions of individual components and profiles, and finishes.
2. Operating characteristics, electrical characteristics, and furnished accessories indicating process operating range, accuracy over range, control signal over range, default control signal with loss of power, calibration data specific to each unique application, electrical power requirements, and limitations of ambient operating environment, including temperature and humidity.
3. Product description with complete technical data, performance curves, and product specification sheets.

4. Installation instructions, including factors affecting performance.

C. Shop Drawings:

1. Include plans, elevations, sections, and mounting details.
2. Include details of product assemblies. Indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
3. Include diagrams for power, signal, and control wiring.

1.4 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For control dampers.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Code Compliance: Comply with governing energy code.
- C. Ground Fault: Properly ground products to prevent failing due to ground fault conditions.
- D. Selection Criteria:
1. Single or Multi-Blade Damper Configuration: As follows unless otherwise indicated on Drawings:
 - a. Two-Position Control: Opposed .
 2. Fail-Safe Positions: As follows unless otherwise indicated on Drawings:
 - a. Intake & Exhaust Air: Close .

2.2 RECTANGULAR CONTROL DAMPERS WITH AIRFOIL BLADES

A. General Requirements:

1. Factory assemble multiple damper sections to provide a single damper assembly of size required by the application.
 - a. Include multisection damper assemblies with intermediate reinforcing where required between individual sections being joined together. Construct reinforcing of same material (aluminum, galvanized steel, stainless steel) as damper frame.
2. Factory install actuator(s) as integral part of damper assembly. Coordinate, with damper manufacturer, field requirements for actuators, such as type, fail-safe position, power supply, location, and mounting requirements.

B. Rectangular Control Dampers with Aluminum Airfoil Blades and Frames:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Greenheck Fan Corporation.
 - b. Ruskin; Air Distribution Technologies, Inc.; Johnson Controls, Inc.
 - c. TAMCO (T. A. Morrison & Co. Inc.).
2. Source Limitations: Obtain rectangular control dampers, with aluminum airfoil blades and frames, from single manufacturer.
3. AMCA Certification: Test, rate, and seal, in accordance with AMCA 511 for air performance and air leakage.
4. Performance:
 - a. Leakage:
 - 1) AMCA 511, Class 1, at 1.0 in. wg Differential Static Pressure: Leakage not to exceed 4 cfm/sq. ft. against 1.0 in. wg differential static pressure when tested in accordance with AMCA 500D.
 - b. Pressure Drop: 0.05 in. wg at 1500 fpm across a 24-by-24-inch damper when tested in accordance with AMCA 500D, figure 5.3 .
 - c. Pressure Rating: Damper close-off pressure equal to fan shutoff pressure with a maximum blade deflection of 1/180 of blade length.
 - d. Temperature: Minus 40 to plus 250 deg F .
 - e. Velocity: Up to 4000 fpm .
5. Construction:
 - a. Frame:
 - 1) Material: ASTM B211/B211M, Alloy 6063 T5 extruded-aluminum profiles, minimum 0.125 inch thick.
 - 2) Arrangement: Hat-shaped channel with integral extended face flange(s) having mating face of minimum 1-1/2 inches for attachment to duct flanges, plenum walls, and equipment.
 - 3) Width: Not less than 5 inches .
 - b. Blades:
 - 1) Configuration: Parallel or opposed blade configuration as required by application.
 - 2) Material: ASTM B211/B211M, Alloy 6063 T5 extruded-aluminum profiles, 0.07 inch thick.
 - 3) Shape: Hollow, airfoil.
 - 4) Length: As required by close-off pressure rating, not to exceed 48 inches .
 - 5) Width: Not to exceed 6 inches .
 - c. Seals:
 - 1) Blades: Replaceable; extruded Santoprene, silicone, or damper manufacturer-offered equivalent, as required by performance requirements. Seals are mechanically attached in extruded blade slots.
 - d. Axles:
 - 1) Diameter: Minimum 0.375 inch .
 - 2) Material: Aluminum, .
 - 3) Mechanically attached to blades.
 - e. Bearings:
 - 1) Material: Molded acetal Celcon/polycarbonate nylon synthetic or stainless steel sleeve, as required by operating conditions, mounted in frame.

- 2) Where blade axles are installed in vertical position, provide thrust bearings.
- f. Linkage:
 - 1) Hardware: Plated or stainless steel.
 - 2) Material: Aluminum, .
 - 3) Mounting: Concealed in frame.

2.3 GENERAL CONTROL-DAMPER ACTUATORS REQUIREMENTS

- A. Select actuators to operate related damper(s) with sufficient reserve power to provide smooth modulating action or two-position action and proper speed of response at velocity and pressure conditions to which the damper is subjected.
- B. Select actuators with sufficient power and torque to close off against the maximum system pressures encountered. Actuators are to be sized to close off against the fan shutoff pressure as a minimum requirement.
- C. The total damper area operated by an actuator is not to exceed 80 percent of manufacturer's maximum area rating.
- D. Provide one actuator for each damper assembly where possible. Operate multiple actuators required to drive a single damper assembly in unison.
- E. Avoid the use of excessively oversized actuators, which could overdrive and cause linkage failure when the damper blade has reached either its full open or closed position.
- F. Use jackshafts and shaft couplings in lieu of blade-to-blade linkages when driving axially aligned damper sections.
- G. Provide mounting hardware and linkages for connecting actuator to damper.
- H. Select actuators to fail-safe in desired position in the event of a power and signal failure.
- I. Actuator Fail-Safe Positions: As indicated below:
 - 1. Intake and Discharge Air: Closed .

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Examine roughing-in for dampers and instruments installed in duct systems to verify actual locations of connections before installation.
- C. Prepare written report, endorsed by Installer, listing conditions detrimental to performance.

- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 CONTROL-DAMPER APPLICATIONS

- A. Select from damper types indicated to achieve performance requirements and characteristics indicated while subjected to full range of system operation encountered.

3.3 INSTALLATION, GENERAL

- A. Furnish and install products required to satisfy most stringent requirements indicated.
- B. Properly support dampers and actuators, tubing, wiring, and conduit to comply with requirements indicated. Brace all products to prevent lateral movement and sway or a break in attachment when subjected to a seismic, wind, or others forces common to the application.
- C. Seal penetrations made in fire-rated and acoustically rated assemblies.
- D. Fastening Hardware:
 - 1. Wrenches, pliers, or other tools that will cause injury to or mar surfaces of rods, nuts, and other parts are prohibited for assembling and tightening nuts.
 - 2. Tighten bolts and nuts firmly and uniformly. Do not overstress threads by excessive force or by oversized wrenches.
 - 3. Lubricate threads of bolts, nuts, and screws with graphite and oil before assembly.
- E. Install products in locations that are accessible and that will permit calibration and maintenance from floor, equipment platforms, or catwalks. Where ladders are required for Owner's access, confirm unrestricted ladder placement is possible under occupied condition.

3.4 CONTROL DAMPERS

- A. Install smooth transitions, not exceeding 15 degrees, to dampers larger or smaller than adjacent duct. Install transitions as close to damper as possible but at distance to avoid interference and impact to performance. Consult manufacturer for recommended clearance.
- B. Clearance:
 - 1. Locate dampers for easy access and provide separate support of dampers that cannot be handled by service personnel without hoisting mechanism.
 - 2. Install dampers with at least 24 inches of clear space on sides of dampers requiring service access unless more space is recommended by manufacturer. Provide code required clearances as applicable.
- C. Service Access:
 - 1. Install dampers and actuators to be accessible for visual inspection and service.

2. Install access door(s) in duct or equipment located upstream of damper to allow service personnel to hand clean any portion of damper, linkage, and actuator. Comply with requirements in Section 23 33 00 "Air Duct Accessories."
- D. Install dampers straight and true, level in all planes, and square in all dimensions.
- E. Install supplementary structural reinforcement for large multiple-section dampers if factory-furnished support alone cannot handle loading.
- F. Attach field-installed actuator(s) to damper drive shaft.
- G. For duct-mounted and equipment-mounted dampers installed outside of equipment, install a visible and accessible indication of damper position from outside.

3.5 IDENTIFICATION

- A. Identify system components, wiring, cabling, and terminals. Each piece of wire, cable, and tubing is to have the same designation at each end for operators to determine continuity at points of connection. Comply with requirements for identification specified in Section 26 05 53 "Identification for Electrical Systems."
- B. Install engraved phenolic nameplate with damper identification on damper.

3.6 ELECTRICAL CONNECTIONS

- A. Install electrical power to field-mounted control devices requiring electrical power.
- B. Connect wiring in accordance with Section 26 05 19 "Low-Voltage Electrical Power Conductors and Cables" and Section 26 05 23 "Control-Voltage Electrical Power Cables."
- C. Install electrical devices furnished by manufacturer, but not factory mounted, in accordance with NFPA 70 and NECA 1.
- D. Install nameplate for each electrical connection, indicating electrical equipment designation and circuit number feeding connection.
 1. Nameplate to be laminated acrylic or melamine plastic signs with a black background and engraved white letters at least 1/2 inch high.

3.7 CONTROL CONNECTIONS

- A. Install control signal wiring to field-mounted control devices.

3.8 CLEANING

- A. Remove grease, mastic, adhesives, dust, dirt, stains, fingerprints, labels, and other foreign materials from exposed surfaces.

3.9 ADJUSTMENT, CALIBRATION, AND TESTING

- A. Stroke and adjust control dampers following manufacturer's recommended procedure, from 100 percent open to 100 percent closed back to 100 percent open.
- B. Stroke control dampers with pilot positioners. Adjust damper and positioner following manufacturer's recommended procedure, so damper is 100 percent closed, 50 percent closed, and 100 percent open at proper air pressure.
- C. Check and document open and close cycle times for applications with a cycle time of less than 30 seconds.
- D. For control dampers equipped with positive position indication, check feedback signal at multiple positions to confirm proper position indication.

END OF SECTION 23 09 23.12

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SECTION 23 09 23.18 - LEAK-DETECTION INSTRUMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes the following types of leak-detection switches:
 - 1. Cable-type, leak-detection switches.
- B. Related Requirements:
 - 1. Section 23 09 23 "Direct-Digital Control System for HVAC" for control equipment and software, relays, electrical power devices, uninterruptible power supply units, wire, and cable.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product, including the following:
 - 1. Operating characteristics, electrical characteristics, and furnished accessories indicating control signal, default control signal with loss of power, and electrical power requirements.
 - 2. Product description with complete technical data and product specification sheets.
 - 3. Installation operation and maintenance instructions including factors affecting performance.
- B. Shop Drawings:
 - 1. Include details of product assemblies. Indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
 - 2. Include diagrams for power, signal, and control wiring.
 - 3. Include number-coded identification system for unique identification of wiring, cable, and tubing ends.

1.3 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: To include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 LEAK-DETECTION SWITCHES

A. Cable-Type, Leak-Detection Switches:

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Veris Industries.
 - b. Vertiv Co.
 - c. W.E. Anderson; a division of Dwyer Instruments, Inc.
2. Control Module Features:
 - a. Power and alarm LEDs.
 - b. Alarm test switch.
 - c. Continuous tape integrity self check.
3. Performance:
 - a. Service: Water, or other conductive liquid.
 - b. Switch Type: DPDT.
 - c. Electric Connection: Screw terminals.
 - d. Conduit Connection: 0.5 inch.
4. Construction:
 - a. Control Module Enclosure: Extruded aluminum.
 - b. Tape: Hydrophobic with connector on each end.
 - c. Tape Length: 60 inches . Field extendable.
5. Field Power: 24-V ac or 24- to 30-V dc.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Prepare written report, endorsed by Installer, listing conditions detrimental to performance.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

- A. Properly support instruments, wiring, and conduit to comply with requirements indicated. Brace all products to prevent lateral movement and sway or a break in attachment when subjected to a force.
- B. Fastening Hardware:

1. Stillson wrenches, pliers, and other tools that cause injury to or mar surfaces of rods, nuts, and other parts are prohibited for work of assembling and tightening nuts.
 2. Tighten bolts and nuts firmly and uniformly. Do not overstress threads by excessive force, or by oversized wrenches.
 3. Lubricate threads of bolts, nuts, and screws with graphite and oil before assembly.
- C. Install products in locations that are accessible and that permit calibration and maintenance from floor, equipment platforms, or catwalks. Where ladders are required for Owner's access, confirm unrestricted ladder placement is possible under occupied condition.

3.3 CONNECTIONS

- A. Comply with requirements in Section 26 05 19 "Low-Voltage Electrical Power Conductors and Cables" for electrical power connections.

3.4 INSTALLATION

- A. Mount switches not required to be mounted within system control panels on walls, floor-supported freestanding pipe stands, or floor-supported structural support frames. Use manufacturer mounting brackets to accommodate field mounting. Securely support and brace products to prevent vibration and movement.

3.5 IDENTIFICATION

- A. Identify system components, wiring, cabling, and terminals. Each piece of wire, cable, and tubing shall have the same designation at each end for operators to determine continuity at points of connection. Comply with requirements for identification specified in Section 26 05 53 "Identification for Electrical Systems."
- B. Install engraved phenolic nameplate with instrument identification.

3.6 CHECKOUT PROCEDURES

- A. Check installed products before continuity tests and calibration.
- B. Check instruments for proper location and accessibility.
- C. Check instruments for proper installation for applicable considerations that impact performance.

3.7 ADJUSTMENT, CALIBRATION, AND TESTING

- A. Description:
1. Calibrate each instrument installed that is not factory calibrated and provided with calibration documentation.

2. Provide a written description of proposed field procedures and equipment for calibrating each type of instrument. Submit procedures before calibration and adjustment.
3. Equipment and procedures used for calibration shall meet instrument manufacturer's written recommendations.
4. Provide diagnostic and test equipment for calibration and adjustment.
5. Calibrate each instrument according to instrument instruction manual supplied by manufacturer.
6. If after calibration indicated performance cannot be achieved, replace out-of-tolerance instruments.
7. Comply with field-testing requirements and procedures indicated by ASHRAE Guideline 11, "Field Testing of HVAC Control Components," in the absence of specific requirements, and to supplement requirements indicated.

B. Digital Signals:

1. Check digital signals using a jumper wire.
2. Check digital signals using an ohmmeter to test for contact.

C. Switches: Calibrate switches to make or break contact at set points indicated.

3.8 MAINTENANCE SERVICE

- A. Maintenance Service: Beginning at Substantial Completion, maintenance service shall include 12 months' full maintenance by manufacturer's authorized service representative. Include annual preventive maintenance, repair, or replacement of worn or defective components, lubrication, cleaning, and adjusting as required for proper operation. Parts and supplies shall be manufacturer's authorized replacement parts and supplies.

END OF SECTION 23 09 23.18

SECTION 23 31 13 - METAL DUCTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Sealants and gaskets.
2. Hangers and supports.

B. Related Requirements:

1. Section 23 05 48 "Vibration and Seismic Controls for HVAC" for seismic restraint devices and installation.
2. Section 23 05 93 "Testing, Adjusting, and Balancing for HVAC" for testing, adjusting, and balancing requirements for metal ducts.
3. Section 23 33 00 "Air Duct Accessories" for dampers, sound-control devices, duct-mounting access doors and panels, turning vanes, and flexible ducts.

1.2 DEFINITIONS

- A. OSHPD: Office of Statewide Health Planning and Development (State of California).

1.3 ACTION SUBMITTALS

A. Product Data: For each type of the following products:

1. Sealants and gaskets.

B. Shop Drawings:

1. Fabrication, assembly, and installation, including plans, elevations, sections, components, and attachments to other work.
2. Factory- and shop-fabricated ducts and fittings.
3. Duct layout indicating sizes, configuration, liner material, and static-pressure classes.
4. Elevation of top and bottom of ducts.
5. Dimensions of all duct runs from building grid lines.
6. Fittings.
7. Reinforcement and spacing.
8. Seam and joint construction.
9. Penetrations through fire-rated and other partitions.
10. Equipment installation based on equipment being used on Project.
11. Locations for duct accessories, including dampers, turning vanes, and access doors and panels.

12. Hangers and supports, including methods for duct and building attachment and vibration isolation.

1.4 QUALITY ASSURANCE

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Airstream Surfaces: Surfaces in contact with airstream comply with requirements in ASHRAE 62.1.
- B. ASHRAE Compliance: Applicable requirements in ASHRAE 62.1, Section 5 - "Systems and Equipment," and Section 7 - "Construction and System Startup."
- C. ASHRAE/IES Compliance: Applicable requirements in ASHRAE/IES 90.1, Section 6.4.4 - "HVAC System Construction and Insulation."
- D. Duct Dimensions: Unless otherwise indicated, all duct dimensions indicated on Drawings are inside clear dimensions and do not include insulation or duct wall thickness.

2.2 SINGLE-WALL RECTANGULAR DUCTS AND FITTINGS

- A. General Fabrication Requirements: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible" based on indicated static-pressure class unless otherwise indicated.
 1. For ducts exposed to weather (intake and discharge ductwork from air-cooled AC units), construct of Type 304 stainless steel or aluminum indicated by manufacturer to be suitable for outdoor installation.
- B. Transverse Joints: Fabricate joints in accordance with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Figure 2-1, "Rectangular Duct/Transverse Joints," for static-pressure class, applicable sealing requirements, materials involved, duct-support intervals, and other provisions in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible."
 1. For ducts with longest side less than 36 inches, select joint types in accordance with Figure 2-1.
 2. For ducts with longest side 36 inches or greater, use flange joint connector Type T-22, T-24, T-24A, T-25a, or T-25b. Factory-fabricated flanged duct connection system may be used if submitted and approved by engineer of record.
- C. Longitudinal Seams: Select seam types and fabricate in accordance with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Figure 2-2, "Rectangular Duct/Longitudinal Seams," for static-pressure class, applicable sealing requirements, materials involved, duct-

support intervals, and other provisions in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible." All longitudinal seams are to be Pittsburgh lock seams unless otherwise specified for specific application.

- D. Elbows, Transitions, Offsets, Branch Connections, and Other Duct Construction: Select types and fabricate in accordance with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Ch. 4, "Fittings and Other Construction," for static-pressure class, applicable sealing requirements, materials involved, duct-support intervals, and other provisions in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible."

2.3 SHEET METAL MATERIALS

- A. General Material Requirements: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible" for acceptable materials, material thicknesses, and duct construction methods unless otherwise indicated. Sheet metal materials are to be free of pitting, seam marks, roller marks, stains, discolorations, and other imperfections.
- B. Stainless Steel Sheets: Comply with ASTM A480/A480M, Type 304, as indicated in "Duct Schedule" Article; cold rolled, annealed, sheet. Exposed surface finish is to be No. 2B, No. 2D, No. 3, or No. 4 as indicated in "Duct Schedule" Article.
- C. Aluminum Sheets: Comply with ASTM B209 Alloy 3003, H14 temper; with mill finish for concealed ducts, and standard, one-side bright finish for duct surfaces exposed to view.
- D. Reinforcement Shapes and Plates: ASTM A36/A36M, steel plates, shapes, and bars; black and galvanized.
 - 1. Where black- and galvanized-steel shapes and plates are used to reinforce aluminum ducts, isolate the different metals with butyl rubber, neoprene, or EPDM gasket materials.
- E. Tie Rods: Galvanized steel, 1/4-inch- minimum diameter for lengths 36 inches or less; 3/8-inch- minimum diameter for lengths longer than 36 inches.

2.4 SEALANT AND GASKETS

- A. General Sealant and Gasket Requirements: Surface-burning characteristics for sealants and gaskets are to be a maximum flame-spread index of 25 and a maximum smoke-developed index of 50 when tested in accordance with UL 723; certified by an NRTL.
- B. Flange Gaskets: Butyl rubber, neoprene, or EPDM polymer with polyisobutylene plasticizer.

2.5 HANGERS AND SUPPORTS

- A. Hanger Rods for Noncorrosive Environments: Galvanized-steel rods and nuts.

- B. Strap and Rod Sizes: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Table 5-1, "Rectangular Duct Hangers Minimum Size," and Table 5-2, "Minimum Hanger Sizes for Round Duct."
- C. Steel Cable End Connections: Galvanized-steel assemblies with brackets, swivel, and bolts designed for duct hanger service; with an automatic-locking and clamping device.
- D. Duct Attachments: Sheet metal screws, blind rivets, or self-tapping metal screws; compatible with duct materials.
- E. Trapeze and Riser Supports:
 - 1. Supports for Stainless Steel Ducts: Stainless steel shapes and plates.
 - 2. Supports for Aluminum Ducts: Aluminum or galvanized steel coated with zinc chromate.

PART 3 - EXECUTION

3.1 DUCT INSTALLATION

- 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 drawings.
- B. Install ducts in accordance with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible" unless otherwise indicated.
- C. Install ducts in maximum practical lengths with fewest possible joints.
- D. Install factory- or shop-fabricated fittings for changes in direction, size, and shape and for branch connections.
- E. Unless otherwise indicated, install ducts vertically and horizontally, and parallel and perpendicular to building lines.
- F. Install ducts close to walls, overhead construction, columns, and other structural and permanent enclosure elements of building.
- G. Install ducts with a clearance of 1 inch, plus allowance for insulation thickness.
- H. Route ducts to avoid passing through transformer vaults and electrical equipment rooms and enclosures.
- I. 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.

- J. Elbows: Use long-radius elbows wherever they fit.
 - 1. Fabricate 90-degree rectangular mitered elbows to include turning vanes.
 - 2. Fabricate 90-degree round elbows with a minimum of three segments for 12 inches and smaller and a minimum of five segments for 14 inches and larger.
- K. Branch Connections: Use lateral or conical branch connections.

3.2 INSTALLATION OF EXPOSED DUCTWORK

- A. Protect ducts exposed in finished spaces from being dented, scratched, or damaged.
- B. Trim duct sealants flush with metal. Create a smooth and uniform exposed bead. Do not use two-part tape sealing system.
- C. Grind welds to provide smooth surface free of burrs, sharp edges, and weld splatter. When welding stainless steel with a No. 3 or 4 finish, grind the welds flush, polish the exposed welds, and treat the welds to remove discoloration caused by welding.
- D. Maintain consistency, symmetry, and uniformity in arrangement and fabrication of fittings, hangers and supports, duct accessories, and air outlets.
- E. Repair or replace damaged sections and finished work that does not comply with these requirements.

3.3 DUCT SEALING

- A. Seal ducts for duct static-pressure, seal classes, and leakage classes specified in "Duct Schedule" Article in accordance with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible."
- B. Seal ducts at a minimum to the following seal classes in accordance with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible":
 - 1. Indoor, Intake and Exhaust-Air Ducts: Seal Class A.

3.4 HANGER AND SUPPORT INSTALLATION

- A. Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Chapter 5, "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. Coordinate with Section 23 05 48 "Vibration and Seismic Controls for HVAC."
- C. Hanger Spacing: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Table 5-1, "Rectangular Duct Hangers Minimum Size," and Table 5-2, "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.
- D. Hangers Exposed to View: Threaded rod and angle or channel supports.
- E. 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.

3.5 DUCTWORK CONNECTIONS

- A. Make connections to equipment with flexible connectors complying with Section 23 33 00 "Air Duct Accessories."
- B. Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible" for branch, outlet and inlet, and terminal unit connections.

3.6 DUCT SCHEDULE

- A. All Packaged Air-Cooled Condenser Air Intake & Discharge Ductwork shall be 304 Stainless Steel or Aluminum.
1. Fabricate all ducts to achieve SMACNA pressure class, seal class, and leakage class as indicated below.
- B. Intake & Discharge Ductwork:
1. Ducts Connected to Packaged Air-Cooled AC Units:
 - a. Pressure Class: Positive 2- inch wg.
 - b. Minimum SMACNA Seal Class: A .
 - c. SMACNA Leakage Class for Rectangular: 4 .
- C. Elbow Configuration:
1. Rectangular Duct - Requirements for All Velocities: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Figure 4-2, "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 Construction Standards - Metal and Flexible," Figure 4-3, "Vanes and Vane Runners," and Figure 4-4, "Vane Support in Elbows."

END OF SECTION 23 31 13

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SECTION 23 33 00 - AIR DUCT ACCESSORIES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Control dampers.
2. Duct-mounted access doors.
3. Flexible connectors.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: For duct accessories. Include plans, elevations, sections, details, and attachments to other work.

1. Detail duct accessories' fabrication and installation in ducts and other construction. Include dimensions, weights, loads, and required clearances; and method of field assembly into duct systems and other construction. Include the following:
 - a. Special fittings.
 - b. Manual volume damper installations.
 - c. Control-damper installations.
 - d. Include diagrams for power, signal, and control wiring.

1.3 INFORMATIONAL SUBMITTALS

1.4 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For air duct accessories to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Comply with NFPA 90A and NFPA 90B.

B. Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible" for acceptable materials, material thicknesses, and duct construction methods unless otherwise

indicated. Sheet metal materials shall be free of pitting, seam marks, roller marks, stains, discolorations, and other imperfections.

2.2 CONTROL DAMPERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Greenheck Fan Corporation.
2. Nailor Industries Inc.
3. Pottorff.
4. Ruskin; Air Distribution Technologies, Inc.; Johnson Controls, Inc.

B. General Requirements:

1. Unless otherwise indicated, use parallel-blade configuration for two-position control, equipment isolation service, and when mixing two airstreams. For other applications, use opposed-blade configuration.
2. Factory or field assemble multiple damper sections to provide a single damper assembly of size required by the application.

C. Performance:

1. AMCA Certification: Test and rate in accordance with AMCA 511.
2. Leakage:
 - a. Class I: Leakage shall not exceed 4 cfm/sq. ft. against 1-inch wg differential static pressure.
3. Pressure Drop: 0.05 inch wg at 1500 fpm across a 24-by-24-inch damper when tested in accordance with AMCA 500-D, Figure 5.3.
4. Velocity: Up to 3000 fpm .
5. Temperature: Minus 25 to plus 180 deg F.
6. Pressure Rating: Damper close-off pressure equal to fan shutoff pressure with a maximum blade deflection of 1/200 of blade length.

D. Construction:

1. Linkage out of airstream.
2. Suitable for horizontal or vertical airflow applications.
3. Frames:
 - a. Hat, U, or angle shaped.
 - b. 0.08-inch- thick extruded aluminum .
 - c. Mitered and welded corners.
 - d. Flanges for attaching to walls and flangeless frames for installing in ducts.
4. Blades:
 - a. Multiple blade with maximum blade width of 6 inches .
 - b. Opposed-blade design.
 - c. Aluminum.
 - d. or 14-gauge- thick air foil dual skin.

5. Blade Edging Seals:
 - a. Replaceable Closed-cell neoprene .
6. Blade Jamb Seal: Flexible stainless steel, compression type.
7. Blade Axles: 1/2-inch diameter; stainless steel.
8. Blade-Linkage Hardware: Zinc-plated steel and brass; ends sealed against blade bearings. Linkage mounted out of air stream.
9. Bearings:
 - a. Oil-impregnated stainless steel sleeve .
 - b. Dampers mounted with vertical blades to have thrust bearings at each end of every blade.

E. Damper Actuator - Electric:

1. Electric - 24 V ac.
2. UL 873, plenum rated.
3. Two position with fail-safe spring return.
 - a. Sufficient motor torque and spring torque to drive damper fully open and fully closed with adequate force to achieve required damper seal.
 - b. Minimum 90-degree drive rotation.
4. Clockwise or counterclockwise drive rotation as required for application.
5. Environmental Operating Range:
 - a. Temperature: Minus 40 to plus 130 deg F.
 - b. Humidity: 5 to 95 percent relative humidity noncondensing.
6. Environmental enclosure: NEMA 2.
7. Actuator to be factory mounted and provided with a single-point wiring connection.

F. Controllers, Electrical Devices, and Wiring:

1. Comply with requirements for electrical devices and connections specified in Section 23 09 23 "Direct Digital Control (DDC) System for HVAC."
2. Electrical Connection: 24 V, 60 Hz .

2.3 DUCT-MOUNTED ACCESS DOORS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Arrow United Industries; Mestek, Inc.
2. Cesco Products; MESTEK, Inc.
3. CL WARD & Family Inc.
4. Ductmate Industries, Inc; a DMI company.
5. Duro Dyne Inc.
6. Elgen Manufacturing.
7. Flexmaster U.S.A., Inc.
8. McGill AirFlow LLC.

- B. Duct-Mounted Access Doors: Fabricate access panels in accordance with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible"; Figure 7-2 (7-2M), "Duct Access Doors and Panels," and Figure 7-3, "Access Doors - Round Duct."
1. Door:
 - a. Double wall, rectangular.
 - b. Galvanized sheet metal with insulation fill and thickness as indicated for duct pressure class.
 - c. 0.032-inch thick aluminum door panel.
 - d. Vision panel.
 - e. Hinges and Latches: 1-by-1-inch butt or piano hinge and cam latches.
 - f. Fabricate doors airtight and suitable for duct pressure class.
 2. Frame: Galvanized sheet steel, with bend-over tabs and foam gaskets.
 - a. 24-gauge- thick galvanized steel or 0.032-inch- thick aluminum frame.
 3. Number of Hinges and Locks:
 - a. Access Doors Less Than 12 Inches Square: No hinges and two sash locks.

2.4 FLEXIBLE CONNECTORS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Ductmate Industries, Inc; a DMI company.
 2. Duro Dyne Inc.
 3. DynAir; a Carlisle Company.
 4. Elgen Manufacturing.
- B. Fire-Performance Characteristics: Adhesives, sealants, fabric materials, and accessory materials shall have flame-spread index not exceeding 25 and smoke-developed index not exceeding 50 when tested in accordance with ASTM E84.
- C. Airstream Surfaces: Surfaces in contact with the airstream shall comply with requirements in ASHRAE 62.1.
- D. Materials: Flame-retardant or noncombustible fabrics.
- E. Coatings and Adhesives: Comply with UL 181, Class 1.

2.5 MATERIALS

- A. Aluminum Sheets: Comply with ASTM B209, Alloy 3003, Temper H14; with mill finish for concealed ducts and standard, one-side bright finish for exposed ducts.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install duct accessories in accordance with applicable details in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible" for metal ducts and in NAIMA AH116 for fibrous-glass ducts.
- B. Install duct accessories of materials suited to duct materials; use galvanized-steel accessories in galvanized-steel and fibrous-glass ducts, stainless steel accessories in stainless steel ducts, and aluminum accessories in aluminum ducts.
- C. Where multiple damper sections are necessary to achieve required dimensions, provide reinforcement to fully support damper assembly when fully closed at full system design static pressure.
- D. Set dampers to fully open position before testing, adjusting, and balancing.
- E. Install duct access doors on sides of ducts to allow for inspecting, adjusting, and maintaining accessories and equipment at the following locations:
 - 1. Control devices requiring inspection.
- F. Install access doors with swing against duct static pressure.
- G. Access Door Sizes:
 - 1. One-Hand or Inspection Access: 12 by 12 inches.
- H. Label access doors according to Section 23 05 53 "Identification for HVAC Piping and Equipment" to indicate the purpose of access door.
- I. Install flexible connectors to connect ducts to equipment.
- J. Install duct test holes where required for testing and balancing purposes.

END OF SECTION 23 33 00

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SECTION 23 81 19 - SELF-CONTAINED AIR-CONDITIONERS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes packaged, air -cooled air-conditioning units with refrigerant compressors and controls intended for indoor installations.

1.3 DEFINITIONS

- A. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.
- B. Low Voltage: As defined in NFPA 70 for circuits and equipment operating at less than 50 V or for remote-control, signaling power-limited circuits.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for self-contained air-conditioners.
 - 2. Include rated capacities, operating characteristics, electrical characteristics, and furnished specialties and accessories.
- B. Shop Drawings:
 - 1. Include plans, elevations, sections, and mounting details.
 - 2. Include details of equipment assemblies. Indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
 - 3. Vibration Isolation Base Details: Detail fabrication including anchorages and attachments to structure and to supported equipment. Include adjustable motor bases, rails, and frames for equipment mounting.
 - 4. Include diagrams for power, signal, and control wiring.

1.5 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For self-contained air-conditioners to include in emergency, operation, and maintenance manuals.

1.6 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Filters: One set(s) of filters for each unit.

1.7 QUALITY ASSURANCE

- A. Testing Agency Qualifications: An NRTL.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Comply with self-contained air-conditioner manufacturer's written instructions for handling.

1.9 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of self-contained air-conditioners that fail in materials or workmanship within specified warranty period.
 - 1. Warranty Period:
 - a. For Compressor: Five year(s) from date of Substantial Completion.
 - b. For Parts: One year(s) from date of Substantial Completion.
 - c. For Labor: One year(s) from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. ASHRAE Compliance:
 - 1. Fabricate and label refrigeration system to comply with ASHRAE 15, "Safety Standard for Refrigeration Systems."
 - 2. ASHRAE Compliance: Applicable requirements in ASHRAE 62.1, Section 4 - "Outdoor Air Quality," Section 5 - "Systems and Equipment," Section 6 - "Ventilation Rate Procedures," and Section 7 - "Construction and Startup."

- C. ASHRAE/IES Compliance: Applicable requirements in ASHRAE/IES 90.1.

2.2 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. AboveAir.
 - 2. Carrier Global Corporation.
 - 3. Daikin Applied.
 - 4. Trane Inc.

2.3 PACKAGED UNITS

- A. Description: Factory assembled, wired, and tested; and fully charged with refrigerant and oil.
- B. Configuration: Horizontal, ceiling mounted.
- C. Disconnect Switch: Factory mounted on cabinet.

2.4 CABINET

- A. Frame and Panels: Structural-steel frame with galvanized-steel panels and access doors or panels.
 - 1. Exterior-Surface Finish: Factory painted in color selected by Architect.
 - 2. Interior-Surface Finish: Surfaces in contact with the airstream shall comply with requirements in ASHRAE 62.1.
- B. Insulation: 1-inch- thick, glass-fiber duct liner complying with ASTM C1091 and having a microbial coating on cabinet interior and control panel. .
- C. Return-Air Opening: Bottom, .
- D. Corrosion-Resistant Treatment: None .

2.5 SUPPLY-AIR FAN

- A. Fan Material: Galvanized steel.
- B. Configuration: Double-width, double-inlet, forward-curved centrifugal fan; statically and dynamically balanced. bottom discharge.
- C. Drive: Direct, with fan and motor resiliently mounted.
- D. Motor Type: Electronically commutated variable speed type with speed controller.

- E. Bearings: Grease lubricated with grease lines extended to exterior of unit with L-50 life at 200,000 hours .
- F. Comply with NEMA designation, temperature rating, service factor, enclosure type, and efficiency requirements for motors specified in Section 23 05 13 "Common Motor Requirements for HVAC Equipment."
 - 1. Special Motor Features: Premium efficiency, as defined in Section 23 05 13 "Common Motor Requirements for HVAC Equipment."

2.6 REFRIGERATION SYSTEM

- A. Compressor: Scroll type, hermetically sealed, 3600 rpm maximum, and resiliently mounted with positive lubrication and internal motor protection.
- B. Refrigerant Coils: Indoor Air-Cooled Unit & Seamless copper tubes expanded into aluminum fins.
 - 1. Refrigerant Circuits: A separate circuit for each compressor, with externally equalized thermal-expansion valve, filter dryer, and charging valves.
 - 2. Mount coil assembly over sloped, stainless-steel drain pan complying with ASHRAE 62.1 .
 - 3. Refrigerant: R-410A.

2.7 CONTROLS

- A. Furnish and install factory controls with DDC controller and space 24/7 programmable space thermostat.
- B. Control Package:
 - 1. Microprocessor Control Panel: Controls unit functions as standalone with full BAS communication via BACnet MS/TP , including refrigeration and safety controls, with unit-mounted display, and the following:
 - a. Supply fan.
 - b. Supply-fan motor speed.
 - c. Compressors.
 - d. Time-of-day control to cycle unit on and off.
 - e. Night-heat, morning warm-up cycle.

2.8 MATERIALS

- A. Galvanized Steel: ASTM A653/A653M.

2.9 SOURCE QUALITY CONTROL

A. AHRI Compliance:

1. AHRI 210/240 Certification: Units and their components shall be factory tested according to AHRI 210/240 and shall be listed and labeled by AHRI.

B. ETL listed.

C. Refrigerant Coils: Factory tested to minimum 450-psig internal pressure and to minimum 300-psig internal pressure while underwater, according to AHRI 410 and ASHRAE 33.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Equipment Mounting:

1. Comply with requirements for vibration isolation and seismic-control devices specified in Section 23 05 48.13 "Vibration Controls for HVAC."

B. Suspended Units: Suspend units from structural-steel support frame using threaded steel rods and spring hangers. Comply with requirements for vibration isolation devices specified in Section 23 05 48.13 "Vibration Controls for HVAC."

C. Arrange installation of units to provide access space around units for service and maintenance.

D. Do not operate fan system until filters (temporary or permanent) are in place. Replace temporary filters used during construction and testing, with new, clean filters.

E. Connect duct to units with flexible connections. Comply with requirements in Section 23 33 00 "Air Duct Accessories."

F. Duct Connections: Duct installation requirements are specified in Section 23 31 13 "Metal Ducts." Drawings indicate the general arrangement of ducts. Connect intake and discharge ducts to self-contained air-conditioners with flexible duct connectors. Flexible duct connectors are specified in Section 23 33 00 "Air Duct Accessories."

3.2 PIPING CONNECTIONS

A. Piping installation requirements are specified in other Sections. Drawings indicate general arrangement of piping, fittings, and specialties.

B. Connect condensate drain pans using NPS 3/4 , ASTM B88, Type M copper tubing. Extend to nearest equipment or floor drain. Construct deep trap at connection to drain pan and install cleanouts at changes in direction.

- C. Where installing piping adjacent to equipment, allow space for service and maintenance.
- D. Connect piping to units mounted on vibration isolators with flexible connectors.

3.3 ELECTRICAL CONNECTIONS

- A. Connect wiring according to Section 26 05 19 "Low-Voltage Electrical Power Conductors and Cables."
- B. Ground equipment according to Section 26 05 26 "Grounding and Bonding for Electrical Systems."
- C. Install electrical devices furnished by manufacturer, but not factory mounted, according to NFPA 70 and NECA 1.
- D. Install nameplate for each electrical connection, indicating electrical equipment designation and circuit number feeding connection.
 - 1. Nameplate shall be laminated acrylic or melamine plastic signs, as specified in Section 26 05 53 "Identification for Electrical Systems."
 - 2. Nameplate shall be laminated acrylic or melamine plastic signs with a black background and engraved white letters at least 1/2 inch high.

3.4 CONTROL CONNECTIONS

- A. Install control and electrical power wiring to field-mounted control devices.

3.5 STARTUP SERVICE

- A. Perform startup service.

3.6 ADJUSTING

- A. Adjust damper linkages for proper damper operation.
- B. Comply with requirements in Section 23 05 93 "Testing, Adjusting, and Balancing for HVAC" for testing, adjusting, and balancing unit.

3.7 CLEANING

- A. After completing system installation and testing, adjusting, and balancing unit and after completing startup service, clean units internally to remove foreign material and construction dirt and dust. Clean fan wheels, cabinets, dampers, coils, and filter housings; install new, clean filters.

3.8 DEMONSTRATION

- A. Train Owner's maintenance personnel to adjust, operate, and maintain units.

END OF SECTION 23 81 19

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SECTION 26 00 10 - SUPPLEMENTAL REQUIREMENTS FOR ELECTRICAL

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section specifies supplemental requirements generally applicable to the Work specified in Division 26. This Section is also referenced by related Work specified in other Divisions.

1.2 REFERENCES

- A. Abbreviations and Acronyms for Electrical Terms and Units of Measure:

1. 8P8C: An 8-position 8-contact modular jack.
2. A: Ampere, unit of electrical current.
3. AC or ac: Alternating current.
4. AFCI: Arc-fault circuit interrupter.
5. AIC: Ampere interrupting capacity.
6. AL, Al, or ALUM: Aluminum.
7. ASD: Adjustable-speed drive; also called "variable-frequency drive" (VFD).
8. ATS: Automatic transfer switch.
9. AWG: American wire gauge; see ASTM B258.
10. BAS: Building automation system.
11. BIL: Basic impulse insulation level.
12. BIM: Building information modeling.
13. CAD: Computer-aided design or drafting.
14. CATV: Community antenna television.
15. CB: Circuit breaker.
16. cd: Candela, the SI fundamental unit of luminous intensity.
17. CO/ALR: Copper-aluminum, revised.
18. COPS: Critical operations power system.
19. CU or Cu: Copper.
20. CU-AL or AL-CU: Copper-aluminum.
21. dB: Decibel, a unitless logarithmic ratio of two electrical, acoustical, or optical power values.
22. dB(A-weighted) or dB(A): Decibel acoustical sound pressure level with A-weighting applied in accordance with IEC 61672-1.
23. dB(adjusted) or dBa: Decibel weighted absolute noise power with respect to 3.16 pW (minus 85 dBm).
24. dBm: Decibel absolute power with respect to 1 mW.
25. DC or dc: Direct current.
26. DCOA: Designated critical operations area.
27. DDC: Direct digital control (HVAC).
28. EGC: Equipment grounding conductor.
29. ELV: Extra-low voltage.

- 30. EMF: Electromotive force.
- 31. EMI: Electromagnetic interference.
- 32. EPM: Electrical preventive maintenance.
- 33. EPS: Emergency power supply.
- 34. EPSS: Emergency power supply system.
- 35. ESS: Energy storage system.
- 36. EV: Electric vehicle.
- 37. EVPE: Electric vehicle power export equipment.
- 38. EVSE: Electric vehicle supply equipment.
- 39. fc: Footcandle, an internationally recognized unit of illuminance equal to one lumen per square foot or 10.76 lx. The simplified conversion 1 fc = 10 lx in the Specifications is common practice and considered adequate precision for building construction activities. When there are conflicts, lux is the primary unit; footcandle is specified for convenience.
- 40. FLC: Full-load current.
- 41. ft: Foot.
- 42. ft-cd: Foot-candle, the antiquated U.S. Standard unit of illuminance, equal to one international candle measured at a distance of one foot, that was superseded in 1948 by the unit "footcandle" after the SI unit candela (cd) replaced the international candle; see "fc."
- 43. GEC: Grounding electrode conductor.
- 44. GFCI: Ground-fault circuit interrupter.
- 45. GFPE: Ground-fault protection of equipment.
- 46. GND: Ground.
- 47. HACR: Heating, air conditioning, and refrigeration.
- 48. HDPE: High-density polyethylene.
- 49. HID: High-intensity discharge.
- 50. HP or hp: Horsepower.
- 51. HVAC: Heating, ventilating, and air conditioning.
- 52. Hz: Hertz.
- 53. IBT: Intersystem bonding termination.
- 54. inch: Inch. To avoid confusion, the abbreviation "in." is not used.
- 55. IP: Ingress protection rating (enclosures); Internet protocol (communications).
- 56. IR: Infrared.
- 57. IS: Intrinsically safe.
- 58. IT&R: Inspecting, testing, and repair.
- 59. ITE: Information technology equipment.
- 60. kAIC: Kiloampere interrupting capacity.
- 61. kcmil or MCM: One thousand circular mils.
- 62. kV: Kilovolt.
- 63. kVA: Kilovolt-ampere.
- 64. kVA_r or kVAR: Kilovolt-ampere reactive.
- 65. kW: Kilowatt.
- 66. kWh: Kilowatt-hour.
- 67. LAN: Local area network.
- 68. lb: Pound (weight).
- 69. lbf: Pound (force).
- 70. LCD: Liquid-crystal display.
- 71. LCDI: Leakage-current detector-interrupter.
- 72. LED: Light-emitting diode.

- 73. Li-ion: Lithium-ion.
- 74. lm: Lumen, the SI derived unit of luminous flux.
- 75. LNG: Liquefied natural gas.
- 76. LP-Gas: Liquefied petroleum gas.
- 77. LRC: Locked-rotor current.
- 78. LV: Low voltage.
- 79. lx: Lux, the SI derived unit of illuminance equal to one lumen per square meter.
- 80. m: Meter.
- 81. MCC: Motor-control center.
- 82. MDC: Modular data center.
- 83. MG set: Motor-generator set.
- 84. MIDI: Musical instrument digital interface.
- 85. MLO: Main lugs only.
- 86. MV: Medium voltage.
- 87. MVA: Megavolt-ampere.
- 88. mW: Milliwatt.
- 89. MW: Megawatt.
- 90. MWh: Megawatt-hour.
- 91. NC: Normally closed.
- 92. Ni-Cd: Nickel-cadmium.
- 93. Ni-MH: Nickel-metal hydride.
- 94. NIU: Network interface unit.
- 95. NO: Normally open.
- 96. NPT: National (American) standard pipe taper.
- 97. OCPD: Overcurrent protective device.
- 98. ONT: Optical network terminal.
- 99. PC: Personal computer.
- 100. PCS: Power conversion system.
- 101. PCU: Power-conditioning unit.
- 102. PF or pf: Power factor.
- 103. PHEV: Plug-in hybrid electric vehicle.
- 104. PLC: Programmable logic controller.
- 105. PLFA: Power-limited fire alarm.
- 106. PoE: Power over Ethernet.
- 107. PV: Photovoltaic.
- 108. PVC: Polyvinyl chloride.
- 109. pW: Picowatt.
- 110. RFI: (electrical) Radio-frequency interference; (contract) Request for interpretation.
- 111. RMS or rms: Root-mean-square.
- 112. RPM or rpm: Revolutions per minute.
- 113. SCADA: Supervisory control and data acquisition.
- 114. SCR: Silicon-controlled rectifier.
- 115. SPD: Surge protective device.
- 116. sq.: Square.
- 117. SWD: Switching duty.
- 118. TCP/IP: Transmission control protocol/Internet protocol.
- 119. TEFC: Totally enclosed fan-cooled.
- 120. TR: Tamper resistant.
- 121. TVSS: Transient voltage surge suppressor.

- 122. UL: (standards) Underwriters Laboratories, Inc.; (product categories) UL, LLC.
- 123. UL CCN: UL Category Control Number.
- 124. UPS: Uninterruptible power supply.
- 125. USB: Universal serial bus.
- 126. UV: Ultraviolet.
- 127. V: Volt, unit of electromotive force.
- 128. V(ac): Volt, alternating current.
- 129. V(dc): Volt, direct current.
- 130. VA: Volt-ampere, unit of complex electrical power.
- 131. VAR: Volt-ampere reactive, unit of reactive electrical power.
- 132. VFC: Variable-frequency controller.
- 133. VOM: Volt-ohm-multimeter.
- 134. VPN: Virtual private network.
- 135. VRLA: Valve regulated lead acid; also called "sealed lead acid (SLA)" or "valve regulated sealed lead acid."
- 136. W: Watt, unit of real electrical power.
- 137. Wh: Watt-hour, unit of electrical energy usage.
- 138. WPT: Wireless power transfer.
- 139. WPTE: Wireless power transfer equipment.
- 140. WR: Weather resistant.

B. Abbreviations and Acronyms for Electrical Raceway Types:

- 1. CR: Communications raceway.
- 2. CR-GP: General-purpose communications raceway.
- 3. CR-P: Plenum communications raceway.
- 4. CR-R: Riser communications raceway.
- 5. EMT: Electrical metallic tubing.
- 6. EMT-A: Aluminum electrical metallic tubing.
- 7. EMT-S: Steel electrical metallic tubing.
- 8. EMT-SS: Stainless steel electrical metallic tubing.
- 9. ENT: Electrical nonmetallic tubing.
- 10. EPEC: Electrical HDPE underground conduit (thin wall).
- 11. EPEC-A: Type A electrical HDPE underground conduit.
- 12. EPEC-B: Type B electrical HDPE underground conduit.
- 13. ERMC: Electrical rigid metal conduit.
- 14. ERMC-A: Aluminum electrical rigid metal conduit.
- 15. ERMC-S: Steel electrical rigid metal conduit.
- 16. ERMC-S-G: Galvanized-steel electrical rigid metal conduit.
- 17. ERMC-S-PVC: PVC-coated-steel electrical rigid metal conduit.
- 18. ERMC-SS: Stainless steel electrical rigid metal conduit.
- 19. FMC: Flexible metal conduit.
- 20. FMC-A: Aluminum flexible metal conduit.
- 21. FMC-S: Steel flexible metal conduit.
- 22. FMT: Steel flexible metallic tubing.
- 23. FNMC: Flexible nonmetallic conduit. See "LFNC."
- 24. HDPE: HDPE underground conduit (thick wall).
- 25. HDPE-40: Schedule 40 HDPE underground conduit.
- 26. HDPE-80: Schedule 80 HDPE underground conduit.

27. IMC: Steel electrical intermediate metal conduit.
28. LFMC: Liquidtight flexible metal conduit.
29. LFMC-A: Aluminum liquidtight flexible metal conduit.
30. LFMC-S: Steel liquidtight flexible metal conduit.
31. LFMC-SS: Stainless steel liquidtight flexible metal conduit.
32. LFNC: Liquidtight flexible nonmetallic conduit.
33. LFNC-A: Layered (Type A) liquidtight flexible nonmetallic conduit.
34. LFNC-B: Integral (Type B) liquidtight flexible nonmetallic conduit.
35. LFNC-C: Corrugated (Type C) liquidtight flexible nonmetallic conduit.
36. OFR: Optical fiber raceway.
37. OFR-GP: General-purpose optical fiber raceway.
38. OFR-P: Plenum optical fiber raceway.
39. OFR-R: Riser optical fiber raceway.
40. PVC: Rigid PVC conduit.
41. PVC-40: Schedule 40 rigid PVC conduit.
42. PVC-80: Schedule 80 rigid PVC Conduit.
43. PVC-A: Type A rigid PVC concrete-encased conduit.
44. PVC-EB: Type EB rigid PVC concrete-encased underground conduit.
45. RGS: See ERM-C-S-G.
46. RMC: See ERM-C.
47. RTRC: Reinforced thermosetting resin conduit.
48. RTRC-AG: Low-halogen, aboveground reinforced thermosetting resin conduit.
49. RTRC-AG-HW: Heavy wall, low-halogen, aboveground reinforced thermosetting resin conduit.
50. RTRC-AG-SW: Standard wall, low-halogen, aboveground reinforced thermosetting resin conduit.
51. RTRC-AG-XW: Extra heavy wall, low-halogen, aboveground reinforced thermosetting resin conduit.
52. RTRC-BG: Low-halogen, belowground reinforced thermosetting resin conduit.

C. Abbreviations and Acronyms for Electrical Single-Conductor and Multiple-Conductor Cable Types:

1. AC: Armored cable.
2. CATV: Coaxial general-purpose cable.
3. CATVP: Coaxial plenum cable.
4. CATVR: Coaxial riser cable.
5. CI: Circuit integrity cable.
6. CL2: Class 2 cable.
7. CL2P: Class 2 plenum cable.
8. CL2R: Class 2 riser cable.
9. CL2X: Class 2 cable, limited use.
10. CL3: Class 3 cable.
11. CL3P: Class 3 plenum cable.
12. CL3R: Class 3 riser cable.
13. CL3X: Class 3 cable, limited use.
14. CM: Communications general-purpose cable.
15. CMG: Communications general-purpose cable.
16. CMP: Communications plenum cable.

- 17. CMR: Communications riser cable.
- 18. CMUC: Under-carpet communications wire and cable.
- 19. CMX: Communications cable, limited use.
- 20. DG: Distributed generation cable.
- 21. FC: Flat cable.
- 22. FCC: Flat conductor cable.
- 23. FPL: Power-limited fire-alarm cable.
- 24. FPLP: Power-limited fire-alarm plenum cable.
- 25. FPLR: Power-limited fire-alarm riser cable.
- 26. IGS: Integrated gas spacer cable.
- 27. ITC: Instrumentation tray cable.
- 28. ITC-ER: Instrumentation tray cable, exposed run.
- 29. MC: Metal-clad cable.
- 30. MC-HL: Metal-clad cable, hazardous location.
- 31. MI: Mineral-insulated, metal-sheathed cable.
- 32. MTW: (machine tool wiring) Moisture-, heat-, and oil-resistant thermoplastic cable.
- 33. MV: Medium-voltage cable.
- 34. NM: Nonmetallic sheathed cable.
- 35. NMC: Nonmetallic sheathed cable with corrosion-resistant nonmetallic jacket.
- 36. NMS: Nonmetallic sheathed cable with signaling, data, and communications conductors, plus power or control conductors.
- 37. NPLF: Non-power-limited fire-alarm circuit cable.
- 38. NPLFP: Non-power-limited fire-alarm circuit cable for environmental air spaces.
- 39. NPLFR: Non-power-limited fire-alarm circuit riser cable.
- 40. NUCC: Nonmetallic underground conduit with conductors.
- 41. OFC: Conductive optical fiber general-purpose cable.
- 42. OFCG: Conductive optical fiber general-purpose cable.
- 43. OFCP: Conductive optical fiber plenum cable.
- 44. OFCR: Conductive optical fiber riser cable.
- 45. OFN: Nonconductive optical fiber general-purpose cable.
- 46. OFNG: Nonconductive optical fiber general-purpose cable.
- 47. OFNP: Nonconductive optical fiber plenum cable.
- 48. OFNR: Nonconductive optical fiber riser cable.
- 49. P: Marine shipboard cable.
- 50. PLTC: Power-limited tray cable.
- 51. PLTC-ER: Power-limited tray cable, exposed run.
- 52. PV: Photovoltaic cable.
- 53. RHH: (high heat) Thermoset rubber, heat-resistant cable.
- 54. RHW: Thermoset rubber, moisture-resistant cable.
- 55. SA: Silicone rubber cable.
- 56. SE: Service-entrance cable.
- 57. SER: Service-entrance cable, round.
- 58. SEU: Service-entrance cable, flat.
- 59. SIS: Thermoset cable for switchboard and switchgear wiring.
- 60. TBS: Thermoplastic cable with outer braid.
- 61. TC: Tray cable.
- 62. TC-ER: Tray cable, exposed run.
- 63. TC-ER-HL: Tray cable, exposed run, hazardous location.
- 64. THW: Thermoplastic, heat- and moisture-resistant cable.

- 65. THHN: Thermoplastic, heat-resistant cable with nylon jacket outer sheath.
- 66. THHW: Thermoplastic, heat- and moisture-resistant cable.
- 67. THWN: Thermoplastic, moisture- and heat-resistant cable with nylon jacket outer sheath.
- 68. TW: Thermoplastic, moisture-resistant cable.
- 69. UF: Underground feeder and branch-circuit cable.
- 70. USE: Underground service-entrance cable.
- 71. XHH: Cross-linked polyethylene, heat-resistant cable.
- 72. XHHW: Cross-linked polyethylene, heat- and moisture-resistant cable.

D. Definitions:

- 1. 8-Position 8-Contact (8P8C) Modular Jack: An unkeyed jack with up to eight contacts commonly used to terminate twisted-pair and multiconductor Ethernet cable. Also called a "TIA-1096 miniature 8-position series jack" (8PSJ), or an "IEC 8877 8-pole jack."
 - a. Be careful when suppliers use "RJ45" generically. Obsolete RJ45 jacks used for analog telephone cables have rejection keys. 8P8C jacks used for digital telephone cables and Ethernet cables do not have rejection keys.
- 2. Basic Impulse Insulation Level (BIL): Reference insulation level expressed in impulse crest voltage with a standard wave not longer than 1.5 times 50 microseconds and 1.5 times 40 microseconds.
- 3. Cable: In accordance with NIST NBS Circular 37 and IEEE standards, in the United States for the purpose of interstate commerce, the definition of "cable" is (1) a conductor with insulation, or a stranded conductor with or without insulation (single-conductor cable); or (2) a combination of conductors insulated from one another (multiple-conductor cable).
- 4. Communications Jack: A fixed connecting device designed for insertion of a communications cable plug.
- 5. Communications Outlet: One or more communications jacks, or cables and plugs, mounted in a box or ring, with a suitable protective cover.
- 6. Conductor: In accordance with NIST NBS Circular 37 and IEEE standards, in the United States for the purpose of interstate commerce, the definition of "conductor" is (1) a wire or combination of wires not insulated from one another, suitable for carrying an electric current; (2) (National Electrical Safety Code) a material, usually in the form of wire, cable, or bar, suitable for carrying an electric current; or (3) (general) a substance or body that allows a current of electricity to pass continuously along it.
- 7. Designated Seismic System: A system component that requires design in accordance with Ch. 13 of ASCE/SEI 7 and for which the Component Importance Factor is greater than 1.0.
- 8. Direct Buried: Installed underground without encasement in concrete or other protective material.
- 9. Enclosure: The case or housing of an apparatus, or the fence or wall(s) surrounding an installation, to prevent personnel from accidentally contacting energized parts or to protect the equipment from physical damage. Types of enclosures and enclosure covers include the following:
 - a. Cabinet: An enclosure that is designed for either surface mounting or flush mounting and is provided with a frame, mat, or trim in which a swinging door or doors are or can be hung.
 - b. Concrete Box: A box intended for use in poured concrete.

- c. Conduit Body: A means for providing access to the interior of a conduit or tubing system through one or more removable covers at a junction or terminal point. In the United States, conduit bodies are listed in accordance with outlet box requirements.
 - d. Conduit Box: A box having threaded openings or knockouts for conduit, EMT, or fittings.
 - e. Cutout Box: An enclosure designed for surface mounting that has swinging doors or covers secured directly to and telescoping with the walls of the enclosure.
 - f. Device Box: A box with provisions for mounting a wiring device directly to the box.
 - g. Extension Ring: A ring intended to extend the sides of an outlet box or device box to increase the box depth, volume, or both.
 - h. Floor Box: A box mounted in the floor intended for use with a floor box cover and other components to complete the floor box enclosure.
 - i. Floor-Mounted Enclosure: A floor box and floor box cover assembly with means to mount in the floor that is sealed against the entrance of scrub water at the floor level.
 - j. Floor Nozzle: An enclosure used on a wiring system, intended primarily as a housing for a receptacle, provided with a means, such as a collar, for surface-mounting on a floor, which may or may not include a stem to support it above the floor level, and is sealed against the entrance of scrub water at the floor level.
 - k. Junction Box: A box with a blank cover that joins different runs of raceway or cable and provides space for connection and branching of the enclosed conductors.
 - l. Outlet Box: A box that provides access to a wiring system having pryout openings, knockouts, threaded entries, or hubs in either the sides or the back, or both, for the entrance of conduit, conduit or cable fittings, or cables, with provisions for mounting an outlet box cover, but without provisions for mounting a wiring device directly to the box.
 - m. Pedestal Floor Box Cover: A floor box cover that, when installed as intended, provides a means for typically vertical or near-vertical mounting of receptacle outlets above the floor's finished surface.
 - n. Pull Box: A box with a blank cover that joins different runs of raceway and provides access for pulling or replacing the enclosed cables or conductors.
 - o. Raised-Floor Box: A floor box intended for use in raised floors.
 - p. Recessed Access Floor Box: A floor box with provisions for mounting wiring devices below the floor surface.
 - q. Recessed Access Floor Box Cover: A floor box cover with provisions for passage of cords to recessed wiring devices mounted within a recessed floor box.
 - r. Ring: A sleeve, which is not necessarily round, used for positioning a recessed wiring device flush with the plaster, concrete, drywall, or other wall surface.
 - s. Ring Cover: A box cover, with raised center portion to accommodate a specific wall or ceiling thickness, for mounting wiring devices or luminaires flush with the surface.
 - t. Termination Box: An enclosure designed for installation of termination base assemblies consisting of bus bars, terminal strips, or terminal blocks with provision for wire connectors to accommodate incoming or outgoing conductors, or both.
10. Emergency Systems: Those systems legally required and classed as emergency by municipal, state, federal, or other codes, or by any governmental agency having jurisdiction that are designed to ensure continuity of lighting, electrical power, or both, to

designated areas and equipment in the event of failure of the normal supply for safety to human life.

11. Essential Electrical Systems: (healthcare facilities) Those systems designed to ensure continuity of electrical power to designated areas and functions of a healthcare facility during disruption of normal power sources, and also to minimize disruption within the internal wiring system.
12. Fault Limited: Providing or being served by a source of electrical power that is limited to not more than 100 W when tested in accordance with UL 62368-1.
 - a. The term "fault limited" is intended to encompass most Class 1, 2, and 3 power-limited sources complying with Article 725 of NFPA 70; Class ES1 and ES2 electrical energy sources that are Class PS1 electrical power sources (e.g., USB); and Class ES3 electrical energy sources that are Class PS1 and PS2 electrical power sources (e.g., PoE). See UL 62368-1 for discussion of classes of electrical energy sources and classes of electrical power sources.
13. High-Performance Building: A building that integrates and optimizes on a life-cycle basis all major high-performance attributes, including energy conservation, environment, safety, security, durability, accessibility, cost-benefit, productivity, sustainability, functionality, and operational considerations.
14. Jacket: A continuous nonmetallic outer covering for conductors or cables.
15. Luminaire: A complete lighting unit consisting of a light source such as a lamp, together with the parts designed to position the light source and connect it to the power supply. It may also include parts to protect the light source or the ballast or to distribute the light.
16. Mode: The terms "Active Mode," "Off Mode," and "Standby Mode" are used as defined in the Energy Independence and Security Act (EISA) of 2007.
17. Multi-Outlet Assembly: A type of surface, flush, or freestanding raceway designed to hold conductors, receptacles, and switches, assembled in the field or at the factory.
18. Plenum: A compartment or chamber to which one or more air ducts are connected and that forms part of the air distribution system.
19. Receptacle: A fixed connecting device arranged for insertion of a power cord plug. Also called a power jack.
20. Receptacle Outlet: One or more receptacles mounted in a box with a suitable protective cover.
21. Sheath: A continuous metallic covering for conductors or cables.
22. UL Category Control Number (CCN): An alphabetic or alphanumeric code used to identify product categories covered by UL's Listing, Classification, and Recognition Services.
23. Voltage Class: For specified circuits and equipment, voltage classes are defined as follows:
 - a. Control Voltage: Having electromotive force between any two conductors, or between a single conductor and ground, that is supplied from a battery or other Class 2 or Class 3 power-limited source.
 - b. Line Voltage: (1) (controls) Designed to operate using the supplied low-voltage power without transformation. (2) (transmission lines, transformers, SPDs) The line-to-line voltage of the supplying power system.
 - c. Extra-Low Voltage (ELV): Not having electromotive force between any two conductors, or between a single conductor and ground, exceeding 30 V(ac rms), 42 V(ac peak), or 60 V(dc).

- d. Low Voltage (LV): Having electromotive force between any two conductors, or between a single conductor and ground, that is rated above 30 V but not exceeding 1000 V.
 - e. Medium Voltage (MV): Having electromotive force between any two conductors, or between a single conductor and ground, that is rated about 1 kV but not exceeding 69 kV.
 - f. High Voltage: (1) (circuits) Having electromotive force between any two conductors, or between a single conductor and ground, that is rated above 69 kV but not exceeding 230 kV. (2) (safety) Having sufficient electromotive force to inflict bodily harm or injury.
24. Wire: In accordance with NIST NBS Circular 37 and IEEE standards, in the United States for the purpose of interstate commerce, the definition of "wire" is a slender rod or filament of drawn metal. A group of small wires used as a single wire is properly called a "stranded wire." A wire or stranded wire covered with insulation is properly called an "insulated wire" or a "single-conductor cable." Nevertheless, when the context indicates that the wire is insulated, the term "wire" will be understood to include the insulation.

1.3 SEQUENCING

- A. Conduct and submit results of power system studies before submitting Product Data and Shop Drawings for electrical equipment.

1.4 CLOSEOUT SUBMITTALS

- A. Operation and maintenance data.

PART 2 - PRODUCTS

2.1 SUBSTITUTION LIMITATIONS FOR ELECTRICAL EQUIPMENT

- A. Substitution requests for electrical equipment will be entertained under the following conditions:
 - 1. Notification of Contractor's intent to request substitutions for convenience must be declared during the Electrical Preconstruction Conference so potential risks to system performance and construction schedule may be identified for Contractor's response in submission of the substitution request. Submission of requests for substitutions for convenience must meet the conditions and deadline specified in Section 01 25 00 "Substitution Procedures" to receive approval.
 - 2. For electrical equipment and systems, substitutions for cause are considered major construction risks. If it is possible that Contractor may need to request substitutions for cause because of equipment unavailability, or inability to meet construction schedule because of lead time, Contractor must declare the possibility during the Electrical Preconstruction Conference to permit establishing a mitigation plan for minimizing risks to system performance and construction schedule.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Electrical Installation Schedule: At preconstruction meeting, and periodically thereafter as dates change, provide schedule for electrical installation Work to Owner and Architect including, but not limited to, milestone dates for the following activities:
1. Submission of power system studies.
 2. Submission of specified coordination drawings.
 3. Submission of action submittals specified in Division 26.
 4. Orders placed for major electrical equipment.
 5. Arrival of major electrical equipment on-site.
 6. Preinstallation meetings specified in Division 26.
 7. Closing of walls and ceilings containing electrical Work.
 8. System startup, testing, and commissioning activities for major electrical equipment.
 9. System startup, testing, and commissioning activities for automation systems (SCADA, BMS, lighting, HVAC, fire alarm, fire pump, etc.).
 10. Requests for special inspections.
 11. Requests for inspections by authorities having jurisdiction.

3.2 INSTALLATION OF ELECTRICAL WORK

- A. Unless more stringent requirements are specified in the Contract Documents or manufacturers' written instructions, comply with NFPA 70 and NECA NEIS 1 for installation of Work specified in Division 26. Consult Architect for resolution of conflicting requirements.

3.3 FIELD QUALITY CONTROL

- A. Administrant for Low-Voltage Electrical Tests and Inspections:
1. Administer and perform tests and inspections.

3.4 CLOSEOUT ACTIVITIES

- A. Operation and Maintenance Data: Prepare and submit the following:
1. Include the following information:
 - a. Manufacturer's operating specifications.
 - b. User's guides for software and hardware.
 - c. Schedule of maintenance material items recommended to be stored at Project site.
 - d. Detailed instructions covering operation under both normal and abnormal conditions.
 - e. Time-current curves for overcurrent protective devices and manufacturer's written instructions for testing and adjusting their settings.

- f. List of load-current and overload-relay heaters with related motor nameplate data.
- g. List of lamp types and photoelectric relays used on Project, with ANSI and manufacturers' codes.
- h. Manufacturer's instructions for setting field-adjustable components.
- i. Manufacturer's instructions for testing, adjusting, and reprogramming microprocessor controls.
- j. EPSS: Manufacturer's system checklists, maintenance schedule, and maintenance log sheets in accordance with NFPA 110.
- k. Exterior pole inspection and repair procedures.
- l. Include copies of demonstration and training videos.

END OF SECTION 26 00 10

SECTION 26 05 19 - LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Copper building wire.
2. Metal-clad cable, Type MC.
3. Connectors and splices.

B. Related Requirements:

1. Section 26 00 10 "Supplemental Requirements for Electrical" for additional abbreviations, definitions, submittals, qualifications, testing agencies, and other Project requirements applicable to Work specified in this Section.
2. Section 27 13 13 "Communications Copper Backbone Cabling" for twisted pair cabling used for data circuits.
3. Section 27 15 13 "Communications Copper Horizontal Cabling" for twisted pair cabling used for data circuits.

1.2 ACTION SUBMITTALS

A. Product Data:

1. Copper building wire.
2. Metal-clad cable, Type MC.
3. Connectors and splices.

PART 2 - PRODUCTS

2.1 COPPER BUILDING WIRE

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Cerro Wire LLC.
2. Encore Wire Corporation.
3. General Cable; Prysmian Group North America.
4. Okonite Company (The).
5. Southwire Company, LLC.
6. WESCO.

- B. Description: Flexible, insulated and uninsulated, drawn copper current-carrying conductor with an overall insulation layer or jacket, or both, rated 600 V or less.
- C. Standards:
 - 1. Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and use.
 - 2. Conductor and Cable Marking: Comply with wire and cable marking according to UL's "Wire and Cable Marking and Application Guide."
- D. Conductors: Copper, complying with ASTM B3 for bare annealed copper and with ASTM B8 for stranded conductors.
- E. Conductor Insulation:
 - 1. Type THHN and Type THWN-2. Comply with UL 83.
 - 2. .

2.2 METAL-CLAD CABLE, TYPE MC

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. AFC Cable Systems; Atkore International.
 - 2. Cerro Wire LLC.
 - 3. General Cable; Prysmian Group North America.
 - 4. Okonite Company (The).
 - 5. Southwire Company, LLC.
- B. Description: A factory assembly of one or more current-carrying insulated conductors in an overall metallic sheath.
- C. Standards:
 - 1. Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and use.
 - 2. Comply with UL 1569.
 - 3. Conductor and Cable Marking: Comply with wire and cable marking according to UL's "Wire and Cable Marking and Application Guide."
- D. Circuits:
 - 1. Single circuit .
- E. Conductors: Copper, complying with ASTM B3 for bare annealed copper and with ASTM B8 for stranded conductors .
- F. Ground Conductor: Insulated .

G. Conductor Insulation:

1. Type TFN/THHN/THWN-2. Comply with UL 83.
2. .

H. Armor: Steel , interlocked.

I. Jacket: PVC applied over armor.

2.3 CONNECTORS AND SPLICES

A. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. AFC Cable Systems; Atkore International.
2. Burndy; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
3. Gardner Bender.
4. Ideal Industries, Inc.
5. ILSCO.
6. O-Z/Gedney; brand of Emerson Electric Co., Automation Solutions, Appleton Group.

B. Description: Factory-fabricated connectors, splices, and lugs of size, ampacity rating, material, type, and class for application and service indicated; listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and use.

C. Jacketed Cable Connectors: For steel and aluminum jacketed cables, zinc die-cast with set screws, designed to connect conductors specified in this Section.

D. Lugs: One piece, seamless, designed to terminate conductors specified in this Section.

1. Material: Copper .
2. Type: One hole with standard barrels.
3. Termination: Compression .

PART 3 - EXECUTION

3.1 CONDUCTOR MATERIAL APPLICATIONS

A. Feeders:

1. Copper; solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.

B. Branch Circuits:

1. Copper:
 - a. Solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.

3.2 CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS

- A. Exposed Branch Circuits, Including in Crawlspace: Type THHN/THWN-2, single conductors in raceway .
- B. Branch Circuits Concealed in Ceilings, Walls, and Partitions: Type THHN/THWN-2, single conductors in raceway Metal-clad cable, Type MC .

3.3 INSTALLATION, GENERAL

- A. Conceal cables in finished walls, ceilings, and floors unless otherwise indicated.
- B. Complete raceway installation between conductor and cable termination points in accordance with Section 26 05 33.13 "Conduits for Electrical Systems" prior to pulling conductors and cables.
- C. Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.
- D. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips, that will not damage cables or raceway.
- E. Install exposed cables parallel and perpendicular to surfaces of exposed structural members, and follow surface contours where possible.
- F. Support cables according to Section 26 05 29 "Hangers and Supports for Electrical Systems."

3.4 CONNECTIONS

- A. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A-486B.
- B. Make splices, terminations, and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than unspliced conductors.
- C. Wiring at Outlets: Install conductor at each outlet, with at least **12 inch** of slack.

3.5 IDENTIFICATION

- A. Identify and color-code conductors and cables according to Section 26 05 53 "Identification for Electrical Systems."

- B. Identify each spare conductor at each end with identity number and location of other end of conductor, and identify as spare conductor.

3.6 SLEEVE AND SLEEVE-SEAL INSTALLATION FOR ELECTRICAL PENETRATIONS

- A. Install sleeves and sleeve seals at penetrations of exterior floor and wall assemblies. Comply with requirements in Section 26 05 44 "Sleeves and Sleeve Seals for Electrical Raceways and Cabling."

3.7 FIRESTOPPING

- A. Apply firestopping to electrical penetrations of fire-rated floor and wall assemblies to restore original fire-resistance rating of assembly according to Section 07 84 13 "Penetration Firestopping."

3.8 FIELD QUALITY CONTROL

- A. Tests and Inspections:
 - 1. After installing conductors and cables and before electrical circuitry has been energized, test conductors feeding the following critical equipment and services for compliance with requirements:
 - a. Receptacles serving telecommunication racks .
 - 2. Perform each of the following visual and electrical tests:
 - a. Inspect exposed sections of conductor and cable for physical damage and correct connection according to the single-line diagram.
 - b. Test bolted connections for high resistance using one of the following:
 - 1) A low-resistance ohmmeter.
 - 2) Calibrated torque wrench.
 - 3) Thermographic survey.
 - c. Inspect compression-applied connectors for correct cable match and indentation.
 - d. Inspect for correct identification.
 - e. Inspect cable jacket and condition.
 - f. Insulation-resistance test on each conductor for ground and adjacent conductors. Apply a potential of 500 V(dc) for 300 V rated cable and 1000 V(dc) for 600 V rated cable for a one-minute duration.
 - g. Continuity test on each conductor and cable.
 - h. Uniform resistance of parallel conductors.
- B. Cables will be considered defective if they do not pass tests and inspections.
- C. Prepare test and inspection reports to record the following:
 - 1. Procedures used.
 - 2. Results that comply with requirements.

3. Results that do not comply with requirements, and corrective action taken to achieve compliance with requirements.

END OF SECTION 26 05 19

SECTION 26 05 26 - GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Grounding and bonding conductors.
2. Grounding and bonding clamps.
3. Grounding and bonding bushings.
4. Grounding and bonding connectors.
5. Intersystem bonding bridge grounding connector.
6. Grounding and bonding busbars.

B. Related Requirements:

1. Section 26 00 10 "Supplemental Requirements for Electrical" specifies additional abbreviations, definitions, submittals, qualifications, testing agencies, and other Project requirements applicable to Work specified in this Section.
2. Section 27 05 28 "Pathways for Communications Systems" specifies additional requirements for grounding and bonding of communications raceways, boxes, and cable trays.
3. Section 27 11 00 "Communications Equipment Room Fittings" specifies additional requirements for grounding and bonding of communications equipment.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

PART 2 - PRODUCTS

2.1 GROUNDING AND BONDING CONDUCTORS

A. Equipment Grounding Conductor:

1. General Characteristics: 600 V, THHN/THWN-2 or THWN-2 , copper or tinned-copper wire or cable, green color, in accordance with Section 26 05 19 "Low-Voltage Electrical Power Conductors and Cables."

B. ASTM - Bare Copper Grounding and Bonding Conductor:

1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. ERICO; brand of nVent Electrical plc.
 - b. Harger Lightning & Grounding; business of Harger, Inc.
2. Referenced Standards: Complying with one or more of the following:
 - a. Soft or Annealed Copper Wire: ASTM B3.
 - b. Concentric-Lay Stranded Copper Conductor: ASTM B8.
 - c. Tin-Coated Soft or Annealed Copper Wire: ASTM B33.
 - d. 19-Wire Combination Unilay-Stranded Copper Conductor: ASTM B787/B787M.

2.2 GROUNDING AND BONDING CLAMPS

- A. Description: Clamps suitable for attachment of grounding and bonding conductors to grounding electrodes, pipes, tubing, and rebar. Grounding and bonding clamps specified in this article are also suitable for use with communications applications.
- B. Performance Criteria:
 1. Regulatory Requirements:
 - a. Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.
 2. Listing Criteria:
 - a. Grounding and Bonding Equipment: UL CCN KDER; including UL 467.
 - b. Grounding and Bonding Equipment for Communications: UL CCN KDSH; including UL 467.
- C. UL KDER - Beam Grounding and Bonding Clamp :
 1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Burndy; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
 - b. Panduit Corp.
 - c. Penn-Union Corp.; subsidiary of Nesco, Inc.
 2. General Characteristics: Mechanical-type, terminal, ground wire access from four directions; with dual, tin-plated or silicon bronze bolts.
- D. UL KDER - Exothermically Welded Connection :
 1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. ALLTEC LLC.
 - b. Burndy; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
 - c. Crouse-Hinds; brand of Eaton, Electrical Sector.
 - d. ERICO; brand of nVent Electrical plc.

- e. Harger Lightning & Grounding; business of Harger, Inc.
- 2. General Characteristics: Exothermic-welding kits of types recommended by kit manufacturer for materials being joined and installation conditions.

2.3 GROUNDING AND BONDING BUSHINGS

- A. Description: Bonding bushings connect conduit fittings, tubing fittings, threaded metal conduit, and unthreaded metal conduit to metal boxes and equipment enclosures, and have one or more bonding screws intended to provide electrical continuity between bushing and enclosure. Grounding bushings have provision for connection of bonding or grounding conductor and may or may not also have bonding screws.
- B. Performance Criteria:
 - 1. Regulatory Requirements:
 - a. Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.
 - 2. Listing Criteria:
 - a. Grounding and Bonding Equipment: UL CCN KDER; including UL 467.
- C. UL KDER - Bonding Bushing :
 - 1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Arlington Industries, Inc.
 - b. Crouse-Hinds; brand of Eaton, Electrical Sector.
 - c. Killark; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
 - d. O-Z/Gedney; brand of Emerson Electric Co., Automation Solutions, Appleton Group.
 - e. Raco Taymac Bell; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
 - 2. General Characteristics: Threaded bushing with insulated throat.
- D. UL KDER - Grounding Bushing :
 - 1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Arlington Industries, Inc.
 - b. Crouse-Hinds; brand of Eaton, Electrical Sector.
 - c. Killark; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
 - d. O-Z/Gedney; brand of Emerson Electric Co., Automation Solutions, Appleton Group.
 - e. Raco Taymac Bell; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
 - 2. General Characteristics: Threaded bushing with insulated throat and mechanical-type wire terminal.

2.4 GROUNDING AND BONDING CONNECTORS

A. Performance Criteria:

1. Regulatory Requirements:
 - a. Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.
2. Listing Criteria:
 - a. Grounding and Bonding Equipment: UL CCN KDER; including UL 467.
 - b. Grounding and Bonding Equipment for Communications: UL CCN KDSH; including UL 467.

B. UL KDER - Pressure-Type Grounding and Bonding Busbar Cable Connector :

1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. ABB, Electrification Business.
 - b. Burndy; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
2. General Characteristics: Copper or copper alloy, for compression bonding of one or more conductor directly to copper busbar. Listed for direct burial.

C. UL KDER - Lay-In Lug Mechanical-Type Grounding and Bonding Busbar Terminal :

1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Burndy; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
 - b. Chatsworth Products, Inc.
 - c. Greaves Corp.; Essex Products Group, Inc.
 - d. ILSCO.
2. General Characteristics: Mechanical-type, copper rated for direct burial terminal with set screw.

D. UL KDER - Crimped Lug Pressure-Type Grounding and Bonding Busbar Terminal :

1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Burndy; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
 - b. Harger Lightning & Grounding; business of Harger, Inc.
 - c. ILSCO.
2. General Characteristics: Cast silicon bronze, solderless compression-type wire terminals; with long barrel and two holes spaced on **5/8 or 1 inch** centers for two-bolt connection to busbar.

E. UL KDER - Split-Bolt Service-Post Pressure-Type Grounding and Bonding Busbar Terminal :

1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Burndy; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
 - b. Panduit Corp.
2. General Characteristics: Bolts that surround cable and bond to cable under compression when nut is tightened after assembly is screwed into busbar opening.

F. UL KDER - Crimped Pressure-Type Grounding and Bonding Cable Connector :

1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. ABB, Electrification Business.
 - b. allG Fabrication (formerly ALT).
 - c. Burndy; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
 - d. ILSCO.
2. General Characteristics: Crimp-and-compress connectors that bond to conductor when connector is compressed around conductor.
 - a. Copper , C and H shaped.

G. UL KDER - Split-Bolt Pressure-Type Grounding and Bonding Cable Connector :

1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. allG Fabrication (formerly ALT).
 - b. Burndy; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
 - c. ERICO; brand of nVent Electrical plc.
 - d. Greaves Corp.; Essex Products Group, Inc.
2. General Characteristics: Bolts that surround cable and bond to cable under compression when nut is tightened.
 - a. Copper .

2.5 INTERSYSTEM BONDING BRIDGE GROUNDING CONNECTORS

- A. Description: Devices that provide means for connecting communications systems grounding and bonding conductors at service equipment or at disconnecting means for buildings or structures.
- B. Performance Criteria:
 1. Regulatory Requirements:
 - a. Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.
 2. Listing Criteria:

- a. Grounding and Bonding Equipment for Communications: UL CCN KDSH; including UL 467.
- C. UL KDSH - One-Piece Intersystem Bonding Bridge Grounding Connector:
 - 1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Galvan Industries, Inc.; Electrical Products Division, LLC.
 - b. Madison Electric Products; business of Southwire Company, LLC.
 - 2. General Characteristics: Zinc-alloy one-piece construction; six terminating points; gangable.
- D. UL KDSH - Two-Piece Intersystem Bonding Bridge Grounding Connector:
 - 1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Burndy; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
 - b. Crouse-Hinds; brand of Eaton, Electrical Sector.
 - c. Raco Taymac Bell; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
 - 2. General Characteristics: Copper body and polycarbonate cover; four terminating points.

2.6 GROUNDING AND BONDING BUSBARS

- A. Description: Miscellaneous grounding and bonding devices that serve as common connection for multiple grounding and bonding conductors.
- B. Performance Criteria:
 - 1. Regulatory Requirements:
 - a. Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.
 - 2. Listing Criteria:
 - a. Grounding and Bonding Equipment: UL CCN KDER; including UL 467.
- C. UL KDER - Equipment Room Grounding and Bonding Busbar :
 - 1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Chatsworth Products, Inc.
 - b. Cooper B-line; brand of Eaton, Electrical Sector.
 - c. ERICO; brand of nVent Electrical plc.
 - d. Harger Lightning & Grounding; business of Harger, Inc.
 - e. Hoffman; brand of nVent Electrical plc.
 - f. ILSCO.

- g. Panduit Corp.
 - 2. General Characteristics:
 - a. Bus: Rectangular bar of annealed copper.
 - b. Mounting Stand-Off Insulators: Lexan or PVC.
 - 1) Comply with UL 891 for use in 600 V switchboards, impulse tested at 5000 V.
 - 3. Options:
 - a. Dimensions: 1/4 by 4 inch <Insert dimensions> in cross section; length as indicated on Drawings.
 - b. Predrilled Hole Pattern: [Complying with BICSI N3 and TIA-607] [9/32 inch holes spaced 1-1/8 inch apart] [Suitable for installing specified grounding and bonding connectors].
 - c. Mounting Hardware: Stand-off brackets that provide 2 inch clearance to access rear of bus. Brackets and bolts must be stainless steel.
- D. UL KDER - Rack and Cabinet Bonding Busbar :
- 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Chatsworth Products, Inc.
 - b. Cooper B-line; brand of Eaton, Electrical Sector.
 - c. Harger Lightning & Grounding; business of Harger, Inc.
 - d. Hoffman; brand of nVent Electrical plc.
 - e. Panduit Corp.
 - 2. General Characteristics:
 - a. Bus: Rectangular bar of hard-drawn solid copper.
 - b. Horizontal Mounting Dimensions: Designed for mounting in 19 inch wide equipment racks or cabinets.
 - c. Vertical Mounting Dimensions: Designed for mounting in 72 inch high equipment racks or cabinets.
 - d. Predrilled Hole Pattern: Accepts connectors for grounding and bonding conductor sizes 14 AWG to 2/0 AWG.
 - e. Mounting Hardware: Stainless steel or copper-plated, for attachment to rack.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine facility's grounding electrode system and equipment grounding for compliance with requirements for maximum ground-resistance level and other conditions affecting performance of grounding and bonding of electrical system.
- B. Inspect test results of grounding system measured at point of electrical service equipment connection.

- C. Prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.
- D. Proceed with connection of electrical service equipment only after unsatisfactory conditions have been corrected.

3.2 SELECTION OF GROUNDING AND BONDING PRODUCTS

A. Grounding and Bonding Conductors:

- 1. Provide solid conductor for 8 AWG and smaller, and stranded conductors for 6 AWG and larger unless otherwise indicated.
- 2. Custom-Length Insulated Equipment Bonding Jumpers: 6 AWG, 19-strand, Type THHN.
- 3. Bonding Cable: 28 kcmil, 14 strands of 17 AWG conductor, **1/4 inch** in diameter.
- 4. Bonding Conductor: 4 AWG or 6 AWG, stranded conductor.
- 5. Bonding Jumper: Copper tape, braided conductors terminated with copper ferrules; **1-5/8 inch** wide and **1/16 inch** thick.
- 6. Tinned Bonding Jumper: Tinned-copper tape, braided conductors terminated with copper ferrules; **1-5/8 inch** wide and **1/16 inch** thick.

B. Grounding and Bonding Connectors:

- 1. Pipe and Equipment Grounding Conductor Terminations: Bolted connectors.
- 2. Underground Connections: Welded connectors except at test wells and as otherwise indicated.
- 3. Connections to Ground Rods at Test Wells: Bolted connectors.
- 4. Connections to Structural Steel: Welded connectors.

C. Grounding and Bonding Busbars: Provide in electrical equipment rooms, in rooms housing service equipment, and elsewhere as indicated on Drawings.

3.3 SELECTION OF GROUNDING AND BONDING PRODUCTS FOR COMMUNICATIONS

- A. Comply with Section 27 05 28 "Pathways for Communications Systems" and Section 27 11 00 "Communications Equipment Room Fittings."

3.4 INSTALLATION OF GROUNDING AND BONDING

A. Comply with manufacturer's published instructions.

B. Reference Standards:

- 1. Ground Bonding Common with Lightning Protection System: Comply with NFPA 780 and UL 96 when interconnecting with lightning protection system. Bond electrical power system ground directly to lightning protection system grounding conductor at closest

point to electrical service grounding electrode. Use bonding conductor sized same as system grounding electrode conductor, and install in conduit.

2. Consult Architect for resolution of conflicting requirements.

C. Special Techniques:

1. Grounding and Bonding Conductors:
 - a. Route along shortest and straightest paths possible unless otherwise indicated or required by Code. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.
2. Grounding and Bonding Connectors: Make connections so possibility of galvanic action or electrolysis is minimized. Select connectors, connection hardware, conductors, and connection methods so metals in direct contact are galvanically compatible.
 - a. Use electroplated or hot-tin-coated materials to ensure high conductivity and to make contact points closer in order of galvanic series.
 - b. Make connections with clean, bare metal at points of contact.
 - c. Make aluminum-to-steel connections with stainless steel separators and mechanical clamps.
 - d. Make aluminum-to-galvanized-steel connections with tin-plated copper jumpers and mechanical clamps.
 - e. Coat and seal connections having dissimilar metals with inert material to prevent future penetration of moisture to contact surfaces.
 - f. Bonding Straps and Jumpers: Install in locations accessible for inspection and maintenance except where routed through short lengths of conduit.
 - 1) Bonding to Structure: Bond straps directly to basic structure, taking care not to penetrate adjacent parts.
 - 2) Bonding to Equipment Mounted on Vibration Isolation Hangers and Supports: Install bonding so vibration is not transmitted to rigidly mounted equipment.
 - 3) Use exothermic-welded connectors for outdoor locations; if disconnect-type connection is required, use bolted clamp.
 - g. Grounding for Steel Building Structure: Install driven ground rod at base of each corner column and at intermediate exterior columns at distances not more than **60 ft** apart.
3. Grounding and Bonding Busbars:
 - a. Install busbar horizontally, on insulated spacers **2 inch** minimum from wall, **6 inch** above finished floor unless otherwise indicated.
 - b. Where busbars are indicated on both sides of doorways, route bonding conductor up to top of door frame, across top of doorway, and down; connect to continuation of horizontal busbar.
4. Grounding at Service:
 - a. Equipment grounding conductors and grounding electrode conductors must be connected to ground busbar. Install main bonding jumper between neutral and ground buses.
5. Equipment Grounding and Bonding:
 - a. Install insulated equipment grounding conductors with feeders and branch circuits.
 - b. Air-Duct Equipment Circuits: Install insulated equipment grounding conductor to duct-mounted electrical devices operating at 120 V and more, including air

cleaners, heaters, dampers, humidifiers, and other duct electrical equipment. Bond conductor to each unit and to air duct and connected metallic piping.

3.5 PROTECTION

- A. After installation, protect grounding and bonding cables and equipment from construction activities. Remove and replace items that are contaminated, defaced, damaged, or otherwise caused to be unfit for use prior to acceptance by Owner.

END OF SECTION 26 05 26

SECTION 26 05 29 - HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Support, anchorage, and attachment components.

B. Related Requirements:

1. Section 26 00 10 "Supplemental Requirements for Electrical" for additional abbreviations, definitions, submittals, qualifications, testing agencies, and other Project requirements applicable to Work specified in this Section.

1.2 ACTION SUBMITTALS

A. Product Data:

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for the following:
 - a. Slotted support systems, hardware, and accessories.
 - b. Clamps.
 - c. Hangers.
 - d. Sockets.
 - e. Eye nuts.
 - f. Fasteners.
 - g. Anchors.
 - h. Saddles.
 - i. Brackets.
2. Include rated capacities and furnished specialties and accessories.

PART 2 - PRODUCTS

2.1 SUPPORT, ANCHORAGE, AND ATTACHMENT COMPONENTS

A. Steel Slotted Support Systems: Preformed steel channels and angles with minimum 13/32 inch diameter holes at a maximum of 8 inch on center in at least one surface.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Allied Tube & Conduit; Atkore International.

- b. Flex-Strut Inc.
 - c. G-Strut.
 - d. Haydon Corporation.
 - e. Unistrut; Atkore International.
 2. Standard: Comply with MFMA-4 factory-fabricated components for field assembly.
 3. Material for Channel, Fittings, and Accessories: Galvanized steel .
 4. Channel Width: Selected for applicable load criteria .
 5. Painted Coatings: Manufacturer's standard painted coating applied according to MFMA-4.
 6. Protect finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- B. Conduit and Cable Support Devices: Steel hangers, clamps, and associated fittings, designed for types and sizes of raceway or cable to be supported.
- C. Support for Conductors in Vertical Conduit: Factory-fabricated assembly consisting of threaded body and insulating wedging plug or plugs for nonarmored electrical conductors or cables in riser conduits. Plugs must have number, size, and shape of conductor gripping pieces as required to suit individual conductors or cables supported. Body must be made of malleable iron.
- D. Mounting, Anchoring, and Attachment Components: Items for fastening electrical items or their supports to building surfaces include the following:
1. Powder-Actuated Fasteners: Threaded-steel stud, for use in hardened portland cement concrete, steel, or wood, with tension, shear, and pullout capacities appropriate for supported loads and building materials where used.
 - a. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1) Hilti, Inc.
 - 2) ITW Ramset/Red Head; Illinois Tool Works, Inc.
 - 3) MKT Fastening, LLC.
 2. Mechanical-Expansion Anchors: Insert-wedge-type, zinc-coated steel, for use in hardened portland cement concrete, with tension, shear, and pullout capacities appropriate for supported loads and building materials where used.
 - a. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1) Empire Industries, Inc.
 - 2) Hilti, Inc.
 - 3) ITW Ramset/Red Head; Illinois Tool Works, Inc.
 - 4) MKT Fastening, LLC.
 3. Concrete Inserts: Steel or malleable-iron, slotted support system units are similar to MSS Type 18 units and comply with MFMA-4 or MSS SP-58.
 4. Clamps for Attachment to Steel Structural Elements: MSS SP-58 units are suitable for attached structural element.
 5. Through Bolts: Structural type, hex head, and high strength. Comply with ASTM F3125/F3125M, **Grade A325**.

6. Toggle Bolts: All steel springhead type.
7. Hanger Rods: Threaded steel.

PART 3 - EXECUTION

3.1 SELECTION

- A. Comply with the following standards for selection and installation of hangers and supports, except where requirements on Drawings or in this Section are stricter:
 1. NECA NEIS 101
- B. Comply with requirements in Section 07 84 13 "Penetration Firestopping" for firestopping materials and installation for penetrations through fire-rated walls, ceilings, and assemblies.
- C. Comply with requirements for raceways specified in Section 26 05 33.13 "Conduits for Electrical Systems."
- D. Comply with requirements for boxes specified in Section 26 05 33.16 "Boxes and Covers for Electrical Systems."
- E. Maximum Support Spacing and Minimum Hanger Rod Size for Raceways: Space supports for EMT, IMC, and ERMC as required by NFPA 70. Minimum rod size must be **1/4 inch** in diameter.
- F. Multiple Raceways or Cables: Install trapeze-type supports fabricated with steel slotted support system, sized so capacity can be increased by at least 25 percent in future without exceeding specified design load limits.
 1. Secure raceways and cables to these supports with two-bolt conduit clamps .

3.2 INSTALLATION OF SUPPORTS

- A. Comply with NECA NEIS 101 for installation requirements except as specified in this article.
- B. Raceway Support Methods: In addition to methods described in NECA NEIS 1, EMT may be supported by openings through structure members, in accordance with NFPA 70.
- C. Strength of Support Assemblies: Where not indicated, select sizes of components so strength will be adequate to carry present and future static loads within specified loading limits. Minimum static design load used for strength determination must be weight of supported components plus **200 lb**.
- D. Mounting and Anchorage of Surface-Mounted Equipment and Components: Anchor and fasten electrical items and their supports to building structural elements by the following methods unless otherwise indicated by code:

1. To Masonry: Approved toggle-type bolts on hollow masonry units and expansion anchor fasteners on solid masonry units.
 2. To Existing Concrete: Expansion anchor fasteners.
 3. Instead of expansion anchors, powder-actuated driven threaded studs provided with lock washers and nuts may be used in existing standard-weight concrete **4 inch** thick or greater. Do not use for anchorage to lightweight-aggregate concrete or for slabs less than **4 inch** thick.
 4. Items Mounted on Hollow Walls and Nonstructural Building Surfaces: Mount cabinets, panelboards, disconnect switches, control enclosures, pull and junction boxes, transformers, and other devices on slotted-channel racks attached to substrate.
- E. Drill holes for expansion anchors in concrete at locations and to depths that avoid the need for reinforcing bars.

3.3 INSTALLATION OF FABRICATED METAL SUPPORTS

- A. Cut, fit, and place miscellaneous metal supports accurately in location, alignment, and elevation to support and anchor electrical materials and equipment.
- B. Field Welding: Comply with AWS D1.1/D1.1M. Submit welding certificates.

3.4 PAINTING

- A. Touchup:
 1. Clean field welds and abraded areas of shop paint. Paint exposed areas immediately after erecting hangers and supports. Use same materials as used for shop painting. Comply with SSPC-PA 1 requirements for touching up field-painted surfaces.
 - a. Apply paint by brush or spray to provide minimum dry film thickness of **2.0 mils**.
- B. Galvanized Surfaces: Clean welds, bolted connections, and abraded areas and apply galvanizing-repair paint to comply with ASTM A780.

END OF SECTION 26 05 29

SECTION 26 05 33.13 - CONDUITS FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Type EMT-S duct raceways and elbows.
2. Type ERMC-S duct raceways, elbows, couplings, and nipples.
3. Type FMC-S and Type FMC-A duct raceways.
4. Type IMC duct raceways.
5. Fittings for conduit, tubing, and cable.
6. Electrically conductive corrosion-resistant compounds for threaded conduit.

B. Products Installed, but Not Furnished, under This Section:

1. See Section 26 05 53 "Identification for Electrical Systems" for electrical equipment labels.

C. Related Requirements:

1. Section 26 00 10 "Supplemental Requirements for Electrical" for additional abbreviations, definitions, submittals, qualifications, testing agencies, and other Project requirements applicable to Work specified in this Section.
2. Section 26 05 19 "Low-Voltage for Electrical Power Conductors and Cables" for nonmetallic underground conduit with conductors (Type NUCC).

1.2 DEFINITIONS

A. Conduit: A structure containing one or more duct raceways.

B. Duct Raceway: A single enclosed raceway for conductors or cable.

1.3 ACTION SUBMITTALS

A. Product Data:

1. Type EMT-S duct raceways and elbows.
2. Type ERMC-S duct raceways, elbows, couplings, and nipples.
3. Type FMC-S and Type FMC-A duct raceways.
4. Type IMC duct raceways.
5. Fittings for conduit, tubing, and cable.
6. Electrically conductive corrosion-resistant compounds for threaded conduit.

PART 2 - PRODUCTS

2.1 TYPE EMT-S DUCT RACEWAYS AND ELBOWS

A. Performance Criteria:

1. Regulatory Requirements: Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.
2. Listing Criteria: UL CCN FJMX; including UL 797.

B. Source Quality Control:

1. Product Data: Prepare and submit catalog cuts, brochures, and performance data illustrating size, physical appearance, and other characteristics of product.
2. Manufacturer's Published Instructions: Prepare and submit installation, testing, and operating instructions for product.

C. UL FJMX - Steel Electrical Metal Tubing (EMT-S) and Elbows:

1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Allied Tube & Conduit; Atkore International.
 - b. Republic Conduit; Nucor Corporation, Nucor Tubular Products.
 - c. Western Tube; Zekelman Industries.
 - d. Wheatland Tube; Zekelman Industries.
2. Material: Steel.
3. Options:
 - a. Exterior Coating: Zinc .
 - b. Interior Coating: Zinc with organic top coating .
 - c. Minimum Trade Size: Metric designator 21 (trade size 3/4).

2.2 TYPE ERM-C-S DUCT RACEWAYS, ELBOWS, COUPLINGS, AND NIPPLES

A. Performance Criteria:

1. Regulatory Requirements: Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.
2. Listing Criteria: UL CCN DYIX; including UL 6.

B. Source Quality Control:

1. Product Data: Prepare and submit catalog cuts, brochures, and performance data illustrating size, physical appearance, and other characteristics of product.

2. Manufacturer's Published Instructions: Prepare and submit installation, testing, and operating instructions for product.
- C. UL DYIX - Galvanized-Steel Electrical Rigid Metal Conduit (ERMC-S-G), Elbows, Couplings, and Nipples:
1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Allied Tube & Conduit; Atkore International.
 - b. Republic Conduit; Nucor Corporation, Nucor Tubular Products.
 - c. Western Tube; Zekelman Industries.
 - d. Wheatland Tube; Zekelman Industries.
 2. Exterior Coating: Zinc.
 3. Options:
 - a. Interior Coating: Zinc with organic top coating .
 - b. Minimum Trade Size: Metric designator 21 (trade size 3/4).

2.3 TYPE FMC-S AND TYPE FMC-A DUCT RACEWAYS

- A. Performance Criteria:
1. Regulatory Requirements: Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.
 2. Listing Criteria: UL CCN DXUZ; including UL 1.
- B. Source Quality Control:
1. Product Data: Prepare and submit catalog cuts, brochures, and performance data illustrating size, physical appearance, and other characteristics of product.
 2. Manufacturer's Published Instructions: Prepare and submit installation, testing, and operating instructions for product.
- C. UL DXUZ - Steel Flexible Metal Conduit (FMC-S):
1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Anaconda Sealtite; Anamet Electrical, Inc.
 - b. Electri-Flex Company.
 - c. International Metal Hose Co.
 - d. Topaz Lighting & Electric.
 2. Material: Steel.
 3. Options:
 - a. Minimum Trade Size: Metric designator 21 (trade size 3/4).

2.4 TYPE IMC DUCT RACEWAYS

A. Performance Criteria:

1. Regulatory Requirements: Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.
2. Listing Criteria: UL CCN DYBY; including UL 1242.

B. Source Quality Control:

1. Product Data: Prepare and submit catalog cuts, brochures, and performance data illustrating size, physical appearance, and other characteristics of product.
2. Manufacturer's Published Instructions: Prepare and submit installation, testing, and operating instructions for product.

C. UL DYBY - Steel Intermediate Metal Conduit (IMC):

1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Allied Tube & Conduit; Atkore International.
 - b. Republic Conduit; Nucor Corporation, Nucor Tubular Products.
 - c. Western Tube; Zekelman Industries.
 - d. Wheatland Tube; Zekelman Industries.
2. Options:
 - a. Exterior Coating: Zinc .
 - b. Interior Coating: Zinc with organic top coating .
 - c. Minimum Trade Size: Metric designator 21 (trade size 3/4).

2.5 FITTINGS FOR CONDUIT, TUBING, AND CABLE

A. Performance Criteria:

1. Regulatory Requirements: Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.

B. Source Quality Control:

1. Product Data: Prepare and submit catalog cuts, brochures, and performance data illustrating size, physical appearance, and other characteristics of product.
2. Manufacturer's Published Instructions: Prepare and submit installation, testing, and operating instructions for product.

C. UL DWTT - Fittings for Type ERM, Type IMC, Type PVC, Type HDPE, Type EPEC, and Type RTRC Duct Raceways:

1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Appleton; Emerson Electric Co., Automation Solutions.
 - b. Crouse-Hinds; brand of Eaton, Electrical Sector.
 - c. Konkore Fittings; Atkore International.
 - d. O-Z/Gedney; brand of Emerson Electric Co., Automation Solutions, Appleton Group.
 - e. Raco Taymac Bell; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
 - f. Southwire Company, LLC.
2. Listing Criteria: UL CCN DWTT; including UL 514B.
3. Options:
 - a. Material: Steel .
 - b. Coupling Method: Compression coupling .
 - c. Expansion and Deflection Fittings: UL 651 with flexible bonding jumper.

D. UL FKAV - Fittings for Type EMT Duct Raceways:

1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Allied Tube & Conduit; Atkore International.
 - b. Appleton; Emerson Electric Co., Automation Solutions.
 - c. Crouse-Hinds; brand of Eaton, Electrical Sector.
 - d. O-Z/Gedney; brand of Emerson Electric Co., Automation Solutions, Appleton Group.
 - e. Raco Taymac Bell; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
 - f. Southwire Company, LLC.
2. Listing Criteria: UL CCN FKAV; including UL 514B.
3. Options:
 - a. Material: Steel .
 - b. Coupling Method: Setscrew coupling. Setscrew couplings with only single screw per conduit are unacceptable.
 - c. Expansion and Deflection Fittings: UL 651 with flexible bonding jumper.

E. UL ILNR - Fittings for Type FMC Duct Raceways:

1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. American Fittings Corp. (AMFICO).
 - b. Liquid Tight Connector Co.
 - c. Southwire Company, LLC.
2. Listing Criteria: UL CCN ILNR; including UL 514B.

2.6 ELECTRICALLY CONDUCTIVE CORROSION-RESISTANT COMPOUNDS FOR
THREADED CONDUIT

A. Performance Criteria:

1. Regulatory Requirements: Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.
2. Listing Criteria: UL CCN FOIZ; including UL Subject 2419.

B. Source Quality Control:

1. Product Data: Prepare and submit catalog cuts, brochures, and performance data illustrating size, physical appearance, and other characteristics of product.
2. Manufacturer's Published Instructions: Prepare and submit installation, testing, and operating instructions for product.

C. UL FOIZ - Electrically Conductive Corrosion-Resistant Compound for Threaded Conduit:

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. ABB, Electrification Business.

PART 3 - EXECUTION

3.1 SELECTION OF CONDUITS FOR ELECTRICAL SYSTEMS

A. Unless more stringent requirements are specified in Contract Documents or manufacturers' published instructions, comply with NFPA 70 for selection of duct raceways. Consult Architect for resolution of conflicting requirements.

B. Indoors:

1. Exposed and Subject to Physical Damage: ERMIC IMC . Locations include the following:
 - a. Locations less than 2.5 m (8 ft) above finished floor.
 - b. Stub-ups to above suspended ceilings.
2. Exposed and Not Subject to Physical Damage: EMT .
3. Concealed in Ceilings and Interior Walls and Partitions: EMT .
4. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): FMC .

C. Duct Fittings: Select fittings in accordance with NEMA FB 2.10 guidelines.

1. ERMIC and IMC: Provide threaded-type fittings unless otherwise indicated.

3.2 INSTALLATION OF CONDUITS FOR ELECTRICAL SYSTEMS

- A. Comply with manufacturer's published instructions.
- B. Reference Standards for Installation: Unless more stringent installation requirements are specified in Contract Documents or manufacturers' published instructions, comply with the following:
 - 1. Type EMT-S: Article 358 of NFPA 70 and NECA NEIS 101.
 - 2. Type ERMC-S: Article 344 of NFPA 70 and NECA NEIS 101.
 - 3. Type FMC-S: Article 348 of NFPA 70 and NECA NEIS 101.
 - 4. Type FMC-A: Article 348 of NFPA 70 and NECA NEIS 102.
 - 5. Type IMC: Article 342 of NFPA 70 and NECA NEIS 101.
 - 6. Type RTRC: Article 355 of NFPA 70 and NECA NEIS 111.
 - 7. Expansion Fittings: NEMA FB 2.40.
 - 8. Consult Architect for resolution of conflicting requirements.
- C. Special Installation Techniques:
 - 1. General Requirements for Installation of Duct Raceways:
 - a. Complete duct raceway installation before starting conductor installation.
 - b. Provide stub-ups through floors with coupling threaded inside for plugs, set flush with finished floor. Plug coupling until conduit is extended above floor to final destination or a minimum of **2 ft** above finished floor.
 - c. Make bends in duct raceway using large-radius preformed ells except for parallel bends. Field bending must be in accordance with NFPA 70 minimum radii requirements. Provide only equipment specifically designed for material and size involved.
 - d. Conceal conduit within finished walls, ceilings, and floors unless otherwise indicated. Install conduits parallel or perpendicular to building lines.
 - e. Support conduit within **12 inch** of enclosures to which attached.
 - f. Install devices to seal duct raceway interiors at accessible locations. Locate seals so no fittings or boxes are between the seal and the following changes of environments. Seal interior of duct raceways at the following points:
 - 1) Where conduits pass from warm to cold locations, such as boundaries of refrigerated spaces.
 - 2) Conduit extending from interior to exterior of building.
 - 3) Conduit extending into pressurized duct raceway and equipment.
 - 4) Conduit extending into pressurized zones that are automatically controlled to maintain different pressure set points.
 - 5) Where otherwise required by NFPA 70.
 - g. Do not install conduits within **2 inch** of the bottom side of a metal deck roof.
 - h. Keep duct raceways at least **6 inch** away from parallel runs of flues and steam or hot-water pipes. Install horizontal duct raceway runs above water and steam piping.
 - i. Cut conduit perpendicular to the length. For conduits metric designator 53 (trade size 2) and larger, use roll cutter or a guide to make cut straight and perpendicular to the length. Ream inside of conduit to remove burrs.

- j. Install pull wires in empty duct raceways. Provide polypropylene or monofilament plastic line with not less than **200 lb** tensile strength. Leave at least **12 inch** of slack at both ends of pull wire. Cap underground duct raceways designated as spare above grade alongside duct raceways in use.
 - k. Install duct raceways square to the enclosure and terminate at enclosures without hubs with locknuts on both sides of enclosure wall. Install locknuts hand tight, plus one-quarter turn more.
 - 1) Termination fittings with shoulders do not require two locknuts.
 - l. Terminate threaded conduits into threaded hubs or with locknuts on inside and outside of boxes or cabinets. Install bushings on conduits up to metric designator 35 (trade size 1-1/4) and insulated throat metal bushings on metric designator 41 (trade size 1-1/2) and larger conduits terminated with locknuts..
 - 2. Types FMC, LFMC, and LFNC:
 - a. Provide a maximum of **36 inch** of flexible conduit for equipment subject to vibration, noise transmission, or movement; and for transformers and motors.
 - 3. Stub-ups to Above Recessed Ceilings:
 - a. Provide EMT, IMC, or ERM for duct raceways.
 - b. Provide a conduit bushing or insulated fitting to terminate stub-ups not terminated in hubs or in an enclosure.
 - 4. Duct Raceway Terminations at Locations Subject to Moisture or Vibration:
 - a. Provide insulating bushings to protect conductors, including conductors smaller than 4 AWG..
 - 5. Duct Fittings: Install fittings in accordance with NEMA FB 2.10 guidelines.
 - a. ERM-S-PVC: Provide only fittings listed for use with this type of conduit. Patch and seal joints, nicks, and scrapes in PVC coating after installing conduits and fittings. Provide sealant recommended by fitting manufacturer and apply in thickness and number of coats recommended by manufacturer.
 - b. EMT: Provide setscrew , steel fittings. Comply with NEMA FB 2.10.
 - c. Flexible Conduit: Provide only fittings listed for use with flexible conduit type. Comply with NEMA FB 2.20.
 - 6. Duct Raceways Penetrating Rooms or Walls with Acoustical Requirements: Seal duct raceway openings on both sides of rooms or walls with acoustically rated putty or firestopping.
 - 7. Identification: Provide labels for conduit assemblies, duct raceways, and associated electrical equipment.
 - a. Provide warning signs.
- D. Interfaces with Other Work:
- 1. Coordinate with Section 07 84 13 "Penetration Firestopping" for installation of firestopping at penetrations of fire-rated floor and wall assemblies.
 - 2. Coordinate with Section 26 05 29 "Hangers and Supports for Electrical Systems" for installation of conduit hangers and supports.

3.3 PROTECTION

- A. Protect coatings, finishes, and cabinets from damage and deterioration.

1. Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.

END OF SECTION 26 05 33.13

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SECTION 26 05 33.16 - BOXES AND COVERS FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Metallic outlet boxes, device boxes, rings, and covers.
2. Junction boxes and pull boxes.
3. Cover plates for device boxes.

B. Products Installed, but Not Furnished, under This Section:

1. See Section 26 05 53 "Identification for Electrical Systems" for electrical equipment labels.

C. Related Requirements:

1. Section 26 00 10 "Supplemental Requirements for Electrical" for additional abbreviations, definitions, submittals, qualifications, testing agencies, and other Project requirements applicable to Work specified in this Section.

1.2 ACTION SUBMITTALS

A. Product Data:

1. Metallic outlet boxes, device boxes, rings, and covers.
2. Junction boxes and pull boxes.
3. Cover plates for device boxes.

PART 2 - PRODUCTS

2.1 METALLIC OUTLET BOXES, DEVICE BOXES, RINGS, AND COVERS

A. Performance Criteria:

1. Regulatory Requirements: Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.

B. UL QCIT - Metallic Outlet Boxes and Covers:

1. Description: Box having pryout openings, knockouts, threaded entries, or hubs in either the sides of the back, or both, for entrance of conduit, conduit or cable fittings, or cables, with provisions for mounting outlet box cover, but without provisions for mounting wiring device directly to box.
2. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Appleton; Emerson Electric Co., Automation Solutions.
 - b. Arlington Industries, Inc.
 - c. Crouse-Hinds; brand of Eaton, Electrical Sector.
 - d. Hubbell Wiring Device-Kellems; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
 - e. Pass & Seymour; Legrand North America, LLC.
 - f. Raco Taymac Bell; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
 - g. Spring City Electrical Manufacturing Company.
3. Options:
 - a. Material: Sheet steel .
 - b. Sheet Metal Depth: Minimum **2 inch** .
 - c. Luminaire Outlet Boxes and Covers: Nonadjustable, listed and labeled for attachment of luminaire weighing up to **50 lb** .

C. UL QCIT - Metallic Conduit Bodies:

1. Description: Means for providing access to interior of conduit or tubing system through one or more removable covers at junction or terminal point. In the United States, conduit bodies are listed in accordance with outlet box requirements.
2. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Appleton; Emerson Electric Co., Automation Solutions.
 - b. Crouse-Hinds; brand of Eaton, Electrical Sector.
 - c. Killark; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
 - d. Pass & Seymour; Legrand North America, LLC.
 - e. Raco Taymac Bell; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
 - f. Topaz Lighting & Electric.

D. UL QCIT - Metallic Device Boxes:

1. Description: Box with provisions for mounting wiring device directly to box.
2. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Appleton; Emerson Electric Co., Automation Solutions.
 - b. Arlington Industries, Inc.
 - c. Crouse-Hinds; brand of Eaton, Electrical Sector.
 - d. Hubbell Wiring Device-Kellems; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
 - e. O-Z/Gedney; brand of Emerson Electric Co., Automation Solutions, Appleton Group.

- f. Raco Taymac Bell; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
- g. Topaz Lighting & Electric.
- 3. Options:
 - a. Material: Sheet steel .
 - b. Sheet Metal Depth: minimum **2 inch** .

E. UL QCIT - Metallic Extension Rings:

- 1. Description: Ring intended to extend sides of outlet box or device box to increase box depth, volume, or both.
- 2. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Appleton; Emerson Electric Co., Automation Solutions.
 - b. Crouse-Hinds; brand of Eaton, Electrical Sector.
 - c. Hubbell Wiring Device-Kellems; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
 - d. O-Z/Gedney; brand of Emerson Electric Co., Automation Solutions, Appleton Group.
 - e. Pass & Seymour; Legrand North America, LLC.
 - f. Raco Taymac Bell; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
 - g. Topaz Lighting & Electric.

2.2 JUNCTION BOXES AND PULL BOXES

A. Performance Criteria:

- 1. Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

B. UL BGUZ - Indoor Sheet Metal Junction and Pull Boxes:

- 1. Description: Box with a blank cover that serves the purpose of joining different runs of raceway or cable.
- 2. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Appleton; Emerson Electric Co., Automation Solutions.
 - b. Cooper B-line; brand of Eaton, Electrical Sector.
 - c. Hoffman; brand of nVent Electrical plc.
 - d. Hubbell Wiring Device-Kellems; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
 - e. Milbank Manufacturing Company.
 - f. O-Z/Gedney; brand of Emerson Electric Co., Automation Solutions, Appleton Group.
 - g. Raco Taymac Bell; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
 - h. Spring City Electrical Manufacturing Company.
- 3. Options:

- a. Degree of Protection: Type 1 .

2.3 COVER PLATES FOR DEVICES BOXES

A. Performance Criteria:

- 1. Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.
- 2. Wallplate-Securing Screws: Metal with head color to match wallplate finish.

B. UL QCIT or QCMZ - Metallic Cover Plates for Device Boxes:

- 1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Appleton; Emerson Electric Co., Automation Solutions.
 - b. Crouse-Hinds; brand of Eaton, Electrical Sector.
 - c. Hubbell Premise Wiring; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
 - d. Hubbell Wiring Device-Kellems; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
 - e. Leviton Manufacturing Co., Inc.
 - f. Panduit Corp.
 - g. Pass & Seymour; Legrand North America, LLC.
- 2. Options:
 - a. Damp and Wet Locations: Listed, labeled, and marked for location and use. Provide gaskets and accessories necessary for compliance with listing.
 - b. Wallplate Material: As indicated on architectural Drawings.

PART 3 - EXECUTION

3.1 SELECTION OF BOXES AND COVERS FOR ELECTRICAL SYSTEMS

- A. Unless more stringent requirements are specified in Contract Documents or manufacturers' published instructions, comply with NFPA 70 for selection of boxes and enclosures. Consult Architect for resolution of conflicting requirements.
- B. Degree of Protection:
 - 1. Indoors:
 - a. Type 1 unless otherwise indicated.
- C. Exposed Boxes Installed Less Than 2.5 m (8 ft) Above Floor:
 - 1. Boxes with knockouts or unprotected openings are prohibited.

2. Provide exposed cover. Flat covers with angled mounting slots or knockouts are prohibited.

3.2 INSTALLATION OF BOXES AND COVERS FOR ELECTRICAL SYSTEMS

- A. Comply with manufacturer's published instructions.
- B. Reference Standards for Installation: Unless more stringent installation requirements are specified in Contract Documents or manufacturers' published instructions, comply with the following:
 1. Outlet, Device, Pull, and Junction Boxes: Article 314 of NFPA 70.
 2. Consult Architect for resolution of conflicting requirements.
- C. Special Installation Techniques:
 1. Provide boxes in wiring and raceway systems wherever required for pulling of wires, making connections, and mounting of devices or fixtures.
 2. Mount boxes at heights indicated on Drawings. If mounting heights of boxes are not individually indicated, give priority to ADA requirements. Install boxes with height measured to center of box unless otherwise indicated.
 3. Recessed Boxes in Masonry Walls: Saw-cut opening for box in center of cell of masonry block, and install box flush with surface of wall. Prepare block surfaces to provide a flat surface for a raintight connection between box and cover plate or supported equipment and box, whether installed indoors or outdoors.
 4. Horizontally separate boxes mounted on opposite sides of walls so they are not in the same vertical channel.
 5. Locate boxes so that cover or plate will not span different building finishes.
 6. Support boxes in recessed ceilings independent of ceiling tiles and ceiling grid.
 7. Support boxes of three gangs or more from more than one side by spanning two framing members or mounting on brackets specifically designed for purpose.
 8. Fasten junction and pull boxes to, or support from, building structure. Do not support boxes by conduits.
 9. Set metal floor boxes level and flush with finished floor surface.
 10. Set nonmetallic floor boxes level. Trim after installation to fit flush with finished floor surface.
 11. Do not install aluminum boxes, enclosures, or fittings in contact with concrete or earth.
 12. Do not rely on locknuts to penetrate nonconductive coatings on enclosures. Remove coatings in the locknut area prior to assembling conduit to enclosure to ensure a continuous ground path.
 13. Boxes and Enclosures in Areas or Walls with Acoustical Requirements:
 - a. Seal openings and knockouts in back and sides of boxes and enclosures with acoustically rated putty.
 - b. Provide gaskets for wallplates and covers.
 14. Identification: Provide labels for boxes and associated electrical equipment.
 - a. Identify field-installed conductors, interconnecting wiring, and components.
 - b. Provide warning signs.
 - c. Label each box with engraved metal or laminated-plastic nameplate.

3.3 CLEANING

- A. Remove construction dust and debris from boxes before installing wallplates, covers, and hoods.

3.4 PROTECTION

- A. After installation, protect boxes from construction activities. Remove and replace items that are contaminated, defaced, damaged, or otherwise caused to be unfit for use prior to acceptance by Owner.

END OF SECTION 26 05 33.16

SECTION 26 05 33.23 - SURFACE RACEWAYS FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Wireways and auxiliary gutters.

B. Products Installed, but Not Furnished, under This Section:

1. See Section 26 05 53 "Identification for Electrical Systems" for electrical equipment labels.

C. Related Requirements:

1. Section 26 00 10 "Supplemental Requirements for Electrical" for additional abbreviations, definitions, submittals, qualifications, testing agencies, and other Project requirements applicable to Work specified in this Section.

1.2 ACTION SUBMITTALS

A. Product Data:

1. Wireways and auxiliary gutters.

PART 2 - PRODUCTS

2.1 WIREWAYS AND AUXILIARY GUTTERS

A. Performance Criteria:

1. Regulatory Requirements: Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.
2. Listing Criteria:
 - a. UL CCN ZOYX; including UL 870.
 - b. UL 94, V-0 requirements for self-extinguishing characteristics.

B. Source Quality Control:

1. Product Data: Prepare and submit catalog cuts, brochures, and performance data illustrating size, physical appearance, and other characteristics of product.

2. Manufacturer's Published Instructions: Prepare and submit installation, testing, and operating instructions for product.
- C. UL ZOYX - Metal Wireways and Auxiliary Gutters:
1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Cooper B-line; brand of Eaton, Electrical Sector.
 - b. Hoffman; brand of nVent Electrical plc.
 - c. Square D; Schneider Electric USA.
 - d. Wiegmann; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
 2. Additional Characteristics:
 - a. Fittings and Accessories: Include covers, couplings, offsets, elbows, expansion joints, adapters, hold-down straps, end caps, and other fittings to match and mate with wireways as required for complete system.
 - b. Finish: Manufacturer's standard enamel finish.
 3. Options:
 - a. Degree of Protection: Type 1 unless otherwise indicated.
 - b. Wireway Covers: Hinged type unless otherwise indicated.

PART 3 - EXECUTION

3.1 INSTALLATION OF SURFACE RACEWAYS FOR ELECTRICAL SYSTEMS

- A. Comply with manufacturer's published instructions.
- B. Reference Standards for Installation: Unless more stringent installation requirements are specified in Contract Documents or manufacturers' published instructions, comply with the following:
1. Auxiliary Gutters: Article 366 of NFPA 70.
 2. Consult Architect for resolution of conflicting requirements.
- C. Special Installation Techniques:
1. Install surface raceways only where indicated on Drawings.
 2. Install surface raceway with a minimum **2 inch** radius control at bend points.
 3. Secure surface raceway with screws or other anchor-type devices at intervals not exceeding **48 inch** and with no less than two supports per straight raceway section. Support surface raceway in accordance with manufacturer's published instructions. Tape and glue are unacceptable support methods.
 4. Identification: Provide labels for surface raceways and associated electrical equipment.
 - a. Identify field-installed conductors, interconnecting wiring, and components.
 - b. Provide warning signs.

3.2 CLEANING

- A. Remove construction dust and debris from surface raceways before installing covers.

3.3 PROTECTION

- A. After installation, protect surface raceways from construction activities. Remove and replace items that are contaminated, defaced, damaged, or otherwise caused to be unfit for use prior to acceptance by Owner.

END OF SECTION 26 05 33.23

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SECTION 26 05 44 - SLEEVES AND SLEEVE SEALS FOR ELECTRICAL RACEWAYS AND CABLING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Round sleeves.
2. Rectangular sleeves.
3. Sleeve-seal systems.
4. Sleeve-seal fittings.
5. Grout.
6. Pourable sealants.
7. Foam sealants.

B. Related Requirements:

1. Section 26 00 10 "Supplemental Requirements for Electrical" for additional abbreviations, definitions, submittals, qualifications, testing agencies, and other Project requirements applicable to Work specified in this Section.
2. Section 07 84 13 "Penetration Firestopping" for penetration firestopping installed in fire-resistance-rated walls, horizontal assemblies, and smoke barriers, with and without penetrating items.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

PART 2 - PRODUCTS

2.1 ROUND SLEEVES

A. Steel Wall Sleeves:

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Advance Products & Systems, LLC.
 - b. CCI Piping Systems.
 - c. Flexicraft Industries.
 - d. GPT; a division of EnPRO Industries.
 - e. Specified Technologies Inc.

2. General Characteristics: ASTM A53/A53M, Type E, Grade B, Schedule 40, zinc coated, plain ends and integral waterstop.

B. Cast-Iron Wall Sleeves:

1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. American Cast Iron Pipe Company.
 - b. Flexicraft Industries.
 - c. McWane Ductile.
2. General Characteristics: Cast or fabricated "wall pipe," equivalent to ductile-iron pressure pipe, with plain ends and integral waterstop.

C. PVC Pipe Sleeves:

1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. CCI Piping Systems.
 - b. GPT; a division of EnPRO Industries.
 - c. Metraflex Company (The).
2. General Characteristics: ASTM D1785, Schedule 40.

D. PVC Molded Sleeves:

1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. American Polywater Corporation.
 - b. Arlington Industries, Inc.
 - c. Reliance Worldwide Corporation.
 - d. Roxtec Inc.
2. General Characteristics: With nailing flange for attaching to wooden forms.

E. PE or PP Molded Sleeves:

1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. American Polywater Corporation.
 - b. Crete-Sleeve.
2. General Characteristics: Removable, tapered-cup shaped, and smooth outer surface with nailing flange for attaching to wooden forms.

F. Round, Galvanized-Steel, Sheet Metal Sleeves:

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Benefast.
 - b. Specified Technologies Inc.
2. General Characteristics: Galvanized-steel sheet; thickness not less than **0.0239 inch**; round tube closed with welded longitudinal joint, with tabs for screw-fastening the sleeve to the board.

2.2 RECTANGULAR SLEEVES

A. Rectangular, Galvanized-Steel, Sheet Metal Sleeves:

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Abesco Fire LLC.
 - b. Specified Technologies Inc.
 - c. Wiremold; Legrand North America, LLC.
2. General Characteristics:
 - a. Material: Galvanized sheet steel.
 - b. Minimum Metal Thickness:
 - 1) For sleeve cross-section rectangle perimeter less than **50 inch** and with no side larger than **16 inch**, thickness must be **0.052 inch**.
 - 2) For sleeve cross-section rectangle perimeter not less than **50 inch** or with one or more sides larger than **16 inch**, thickness must be **0.138 inch**.

2.3 SLEEVE-SEAL SYSTEMS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Advance Products & Systems, LLC.
 2. American Polywater Corporation.
 3. Flexicraft Industries.
 4. Metraflex Company (The).
 5. Roxtec Inc.
- B. General Characteristics: Modular sealing device, designed for field assembly, to fill annular space between sleeve and raceway or cable or between raceway and cable.
- C. Options:
1. Sealing Elements: EPDM Nitrile (Buna N) rubber interlocking links shaped to fit surface of pipe. Include type and number required for pipe material and size of pipe.
 2. Pressure Plates: Carbon steel Fiber-reinforced plastic Stainless steel.

3. Connecting Bolts and Nuts: Carbon steel, with corrosion-resistant coating, Stainless steel of length required to secure pressure plates to sealing elements.

2.4 SLEEVE-SEAL FITTINGS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 1. Holdrite; a division of Reliance Worldwide Corporation.
- B. General Characteristics: Manufactured plastic, sleeve-type, waterstop assembly made for embedding in concrete slab or wall. Unit must have plastic or rubber waterstop collar with center opening to match piping OD.

2.5 GROUT

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 1. Specified Technologies Inc.
 2. W. R. Meadows, Inc.
- B. General Characteristics: Nonshrink; recommended for interior and exterior sealing openings in non-fire-rated walls or floors.
 1. Standard: ASTM C1107/C1107M, Grade B, post-hardening and volume-adjusting, dry, hydraulic-cement grout.
 2. Design Mix: **5000 psi**, 28-day compressive strength.
 3. Packaging: Premixed and factory packaged.

2.6 POURABLE SEALANTS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 1. Carlisle Syntec Systems.
 2. GAF.
 3. Johns Manville; a Berkshire Hathaway company.
 4. Specified Technologies Inc.
- B. Performance Criteria:
 1. General Characteristics: Single-component, neutral-curing elastomeric sealants of grade indicated below.
 - a. Grade: Pourable (self-leveling) formulation for openings in floors and other horizontal surfaces that are not fire rated.

2.7 FOAM SEALANTS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Innovative Chemical Products (Building Solutions Group).
 2. The Dow Chemical Company.
- B. Performance Criteria:
1. General Characteristics: Multicomponent, liquid elastomers that, when mixed, expand and cure in place to produce a flexible, nonshrinking foam. Foam expansion must not damage cables or crack penetrated structure.

PART 3 - EXECUTION

3.1 INSTALLATION OF SLEEVES FOR NON-FIRE-RATED ELECTRICAL PENETRATIONS

- A. Sleeves for Conduits Penetrating Above-Grade, Non-Fire-Rated, Concrete and Masonry-Unit Floors and Walls:
1. Interior Penetrations of Non-Fire-Rated Walls and Floors:
 - a. Seal space outside of sleeves with mortar or grout. Pack sealing material solidly between sleeve and wall or floor so no voids remain. Tool exposed surfaces smooth; protect material while curing.
 - b. Seal annular space between sleeve and raceway or cable, using joint sealant appropriate for size, depth, and location of joint. Comply with requirements in Section 07 92 00 "Joint Sealants."
 2. Use pipe sleeves unless penetration arrangement requires rectangular sleeved opening.
 3. Size pipe sleeves to provide **1/4 inch** annular clear space between sleeve and raceway or cable, unless sleeve-seal system is to be installed.
 4. Install sleeves for wall penetrations unless core-drilled holes or formed openings are used. Install sleeves during erection of walls. Cut sleeves to length for mounting flush with both surfaces of walls. Deburr after cutting.
 5. Install sleeves for floor penetrations. Extend sleeves installed in floors **2 inch** above finished floor level. Install sleeves during erection of floors.
- B. Sleeves for Conduits Penetrating Non-Fire-Rated Wall Assemblies:
1. Use circular metal sleeves unless penetration arrangement requires rectangular sleeved opening.
 2. Seal space outside of sleeves with approved joint compound for wall assemblies.
- C. Roof-Penetration Sleeves: Seal penetration of individual raceways and cables with flexible boot-type flashing units applied in coordination with roofing work.

- D. Aboveground, Exterior-Wall Penetrations: Seal penetrations using steel pipe sleeves and mechanical sleeve-seal systems. Size sleeves to allow for **1 inch** annular clear space between pipe and sleeve for installing mechanical sleeve seals.
- E. Underground, Exterior-Wall and Floor Penetrations:
 - 1. Install steel pipe sleeves with integral waterstops. Size sleeves to allow for **1 inch** annular clear space between raceway or cable and sleeve for installing sleeve-seal system. Install sleeve during construction of floor or wall.
 - 2. Install steel pipe sleeves. Size sleeves to allow for **1 inch** annular clear space between raceway or cable and sleeve for installing sleeve-seal system. Grout sleeve into wall or floor opening.

3.2 INSTALLATION OF RECTANGULAR SLEEVES AND SLEEVE SEALS

- A. Install sleeves in existing walls without compromising structural integrity of walls. Do not cut structural elements without reinforcing the wall to maintain the designed weight bearing and wall stiffness.
- B. Install conduits and cable with no crossings within the sleeve.
- C. Fill opening around conduits and cables with expanding foam without leaving voids.
- D. Provide metal sheet covering at both wall surfaces and finish to match surrounding surfaces. Metal sheet must be same material as sleeve.

3.3 INSTALLATION OF SLEEVE-SEAL SYSTEMS

- A. Install sleeve-seal systems in sleeves in exterior concrete walls and slabs-on-grade at raceway entries into building.
- B. Install type and number of sealing elements recommended by manufacturer for raceway or cable material and size. Position raceway or cable in center of sleeve. Assemble mechanical sleeve seals and install in annular space between raceway or cable and sleeve. Tighten bolts against pressure plates that cause sealing elements to expand and make watertight seal.

END OF SECTION 26 05 44

SECTION 26 05 53 - IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Labels.
2. Bands and tubes.
3. Tapes and stencils.
4. Tags.
5. Signs.
6. Cable ties.
7. Miscellaneous identification products.

B. Related Requirements:

1. Section 26 00 10 "Supplemental Requirements for Electrical" for additional abbreviations, definitions, submittals, qualifications, testing agencies, and other Project requirements applicable to Work specified in this Section.

1.2 ACTION SUBMITTALS

A. Product Data:

1. Labels.
2. Bands and tubes.
3. Tapes and stencils.
4. Tags.
5. Signs.
6. Cable ties.
7. Miscellaneous identification products.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Signs, labels, and tags required for personnel safety must comply with the following standards:

1. Safety Colors: NEMA Z535.1.
2. Facility Safety Signs: NEMA Z535.2.
3. Safety Symbols: NEMA Z535.3.
4. Product Safety Signs and Labels: NEMA Z535.4.

5. Safety Tags and Barricade Tapes for Temporary Hazards: NEMA Z535.5.

B. Comply with NFPA 70E requirements for arc-flash warning labels.

2.2 COLOR AND LEGEND REQUIREMENTS

A. Raceways and Cables Carrying Circuits at 1000 V or Less:

1. Black letters on orange field .
2. Legend: Indicate voltage.

B. Color-Coding for Phase- and Voltage-Level Identification, 1000 V or Less: Use colors listed below for ungrounded feeder and branch-circuit conductors.

1. Color must be factory applied or field applied for sizes larger than 8 AWG if authorities having jurisdiction permit.
2. Colors for 208Y/120 V Circuits:
 - a. Phase A: Black.
 - b. Phase B: Red.
 - c. Phase C: Blue.
3. Colors for 480Y/277 V Circuits:
 - a. Phase A: Brown.
 - b. Phase B: Orange.
 - c. Phase C: Yellow.
4. Color for Neutral: White .
5. Color for Equipment Grounds: Green .

C. Raceways and Cables Carrying Circuits at More Than 1000 V:

1. Black letters on orange field.
2. Legend: "DANGER - CONCEALED HIGH VOLTAGE WIRING."

D. Warning Label Colors:

1. Identify system voltage with black letters on orange background.

E. Warning labels and signs must include, but are not limited to, the following legends:

1. Multiple Power Source Warning: "DANGER - ELECTRICAL SHOCK HAZARD - EQUIPMENT HAS MULTIPLE POWER SOURCES."

F. Equipment Identification Labels:

1. Black letters on white field.

2.3 LABELS

- A. Vinyl Wraparound Labels: Preprinted, flexible labels laminated with clear, weather- and chemical-resistant coating and matching wraparound clear adhesive tape for securing label ends.
1. **Manufacturers:** Subject to compliance with requirements, provide products by one of the following:
 - a. Brady Corporation.
 - b. Champion America.
 - c. emedco.
 - d. Grafoplast Wire Markers.
 - e. HellermannTyton.
 - f. LEM Products Inc.
 - g. Marking Services Inc.
 - h. Panduit Corp.
 - i. Seton Identification Products; a Brady Corporation company.
- B. Snap-Around Labels: Slit, pretensioned, flexible, preprinted, color-coded acrylic sleeves, with diameters sized to suit diameters and that stay in place by gripping action.
1. **Manufacturers:** Subject to compliance with requirements, provide products by one of the following:
 - a. Brady Corporation.
 - b. HellermannTyton.
 - c. Marking Services Inc.
 - d. Panduit Corp.
- C. Self-Adhesive Wraparound Labels: Preprinted Write-on, **3 mil** thick, polyester vinyl flexible label with acrylic pressure-sensitive adhesive.
1. **Manufacturers:** Subject to compliance with requirements, provide products by one of the following:
 - a. Brady Corporation.
 - b. Brother International Corporation.
 - c. emedco.
 - d. Grafoplast Wire Markers.
 - e. Ideal Industries, Inc.
 - f. LEM Products Inc.
 - g. Marking Services Inc.
 - h. Panduit Corp.
 - i. Seton Identification Products; a Brady Corporation company.
 2. Self-Lamination: Clear; UV-, weather- and chemical-resistant; self-laminating, protective shield over legend. Labels sized such that clear shield overlaps entire printed legend.
 3. Marker for Labels:
 - a. Permanent, waterproof, black ink marker recommended by tag manufacturer.
- D. Self-Adhesive Labels: Polyester Vinyl, thermal, transfer-printed, **3 mil** thick, multicolor, weather- and UV-resistant, pressure-sensitive adhesive labels, configured for intended use and location.

1. **Manufacturers:** Subject to compliance with requirements, provide products by one of the following:
 - a. Brady Corporation.
 - b. Brother International Corporation.
 - c. emedco.
 - d. Grafoplast Wire Markers.
 - e. HellermannTyton.
 - f. Ideal Industries, Inc.
 - g. LEM Products Inc.
 - h. Marking Services Inc.
 - i. Panduit Corp.
2. Minimum Nominal Size:
 - a. **1-1/2 by 6 inch** for raceway and conductors.
 - b. **3-1/2 by 5 inch** for equipment.
 - c. As required by authorities having jurisdiction.

2.4 BANDS AND TUBES

- A. Snap-Around, Color-Coding Bands: Slit, pretensioned, flexible, solid-colored acrylic sleeves, **2 inch** long, with diameters sized to suit diameters and that stay in place by gripping action.
 1. **Manufacturers:** Subject to compliance with requirements, provide products by one of the following:
 - a. Brady Corporation.
 - b. HellermannTyton.
 - c. Marking Services Inc.
 - d. Panduit Corp.
- B. Heat-Shrink Preprinted Tubes: Flame-retardant polyolefin tubes with machine-printed identification labels, sized to suit diameter and shrunk to fit firmly. Full shrink recovery occurs at maximum of **200 deg F**. Comply with UL 224.
 1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Brady Corporation.
 - b. Panduit Corp.

2.5 TAPES AND STENCILS

- A. Marker Tapes: Vinyl or vinyl-cloth, self-adhesive wraparound type, with circuit identification legend machine printed by thermal transfer or equivalent process.
 1. **Manufacturers:** Subject to compliance with requirements, provide products by one of the following:
 - a. Brady Corporation.
 - b. Carlton Industries, LP.

- c. Champion America.
 - d. HellermannTyton.
 - e. Ideal Industries, Inc.
 - f. Marking Services Inc.
 - g. Panduit Corp.
- B. Self-Adhesive Vinyl Tape: Colored, heavy duty, waterproof, fade resistant; not less than **3 mil** thick by **1 to 2 inch** wide; compounded for outdoor use.
- 1. **Manufacturers:** Subject to compliance with requirements, provide products by one of the following:
 - a. Brady Corporation.
 - b. Carlton Industries, LP.
 - c. emedco.
 - d. Marking Services Inc.
- C. Tape and Stencil: **4 inch** wide black stripes on **10 inch** centers placed diagonally over orange background and are **12 inch** wide. Stop stripes at legends.
- 1. **Manufacturers:** Subject to compliance with requirements, provide products by one of the following:
 - a. HellermannTyton.
 - b. LEM Products Inc.
 - c. Marking Services Inc.
 - d. Pipemarket.com; Brimar Industries, Inc.
 - e. Seton Identification Products; a Brady Corporation company.

2.6 TAGS

- A. Metal Tags: Brass or aluminum, **2 by 2 by 0.05 inch**, with stamped legend, punched for use with self-locking cable tie fastener.
- 1. **Manufacturers:** Subject to compliance with requirements, provide products by one of the following:
 - a. Brady Corporation.
 - b. Carlton Industries, LP.
 - c. emedco.
 - d. Marking Services Inc.
 - e. Seton Identification Products; a Brady Corporation company.
- B. Nonmetallic Preprinted Tags: Polyethylene tags, **0.015 inch** thick, color-coded for phase and voltage level, with factory printed permanent designations; punched for use with self-locking cable tie fastener.
- 1. **Manufacturers:** Subject to compliance with requirements, provide products by one of the following:
 - a. Brady Corporation.
 - b. Carlton Industries, LP.

- c. emedco.
- d. Grafoplast Wire Markers.
- e. LEM Products Inc.
- f. Marking Services Inc.
- g. Panduit Corp.
- h. Seton Identification Products; a Brady Corporation company.

C. Write-on Tags:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Brady Corporation.
 - b. Carlton Industries, LP.
 - c. LEM Products Inc.
 - d. Pipemarket.com; Brimar Industries, Inc.
 - e. Seton Identification Products; a Brady Corporation company.
2. Marker for Tags:
 - a. Permanent, waterproof, black ink marker recommended by tag manufacturer.

2.7 SIGNS

A. Baked-Enamel Signs:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Brady Corporation.
 - b. Carlton Industries, LP.
 - c. Champion America.
 - d. emedco.
 - e. Marking Services Inc.
2. Preprinted aluminum signs, punched or drilled for fasteners, with colors, legend, and size required for application.
3. **1/4 inch** grommets in corners for mounting.
4. Nominal Size: **7 by 10 inch**.

B. Metal-Backed Butyrate Signs:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Brady Corporation.
 - b. Champion America.
 - c. emedco.
 - d. Marking Services Inc.
2. Weather-resistant, nonfading, preprinted, cellulose-acetate butyrate signs, with **0.0396 inch** galvanized-steel backing, punched and drilled for fasteners, and with colors, legend, and size required for application.
3. **1/4 inch** grommets in corners for mounting.
4. Nominal Size: **10 by 14 inch**.

C. Laminated Acrylic or Melamine Plastic Signs:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Brady Corporation.
 - b. Carlton Industries, LP.
 - c. emedco.
 - d. Marking Services Inc.
2. Engraved legend.
3. Thickness:
 - a. For signs up to **20 sq. inch**, minimum **1/16 inch** thick.
 - b. For signs larger than **20 sq. inch**, **1/8 inch** thick.
 - c. Engraved legend with white letters on dark gray background .
 - d. Self-adhesive.
 - e. Framed with mitered acrylic molding and arranged for attachment at applicable equipment.

2.8 CABLE TIES

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. HellermannTyton.
 2. Ideal Industries, Inc.
 3. Marking Services Inc.
 4. Panduit Corp.
- B. General-Purpose Cable Ties: Fungus inert, self-extinguishing, one piece, self-locking, and Type 6/6 nylon.
1. Minimum Width: **3/16 inch**.
 2. Tensile Strength at **73 deg F** in accordance with ASTM D638: **12,000 psi**.
 3. Temperature Range: **Minus 40 to plus 185 deg F**.
 4. Color: Black, except where used for color-coding.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Self-Adhesive Identification Products: Before applying electrical identification products, clean substrates of substances that could impair bond, using materials and methods recommended by manufacturer of identification product.

3.2 INSTALLATION

- A. Verify and coordinate identification names, abbreviations, colors, and other features with requirements in other Sections requiring identification applications, Drawings, Shop Drawings, manufacturer's wiring diagrams, and operation and maintenance manual. Use consistent designations throughout Project.
- B. Install identifying devices before installing acoustical ceilings and similar concealment.
- C. Verify identity of item before installing identification products.
- D. Coordinate identification with Project Drawings, manufacturer's wiring diagrams, and operation and maintenance manual.
- E. Apply identification devices to surfaces that require finish after completing finish work.
- F. Install signs with approved legend to facilitate proper identification, operation, and maintenance of electrical systems and connected items.
- G. System Identification for Raceways and Cables under 1000 V: Identification must completely encircle cable or conduit. Place identification of two-color markings in contact, side by side.
 - 1. Secure tight to surface of conductor, cable, or raceway.
- H. Auxiliary Electrical Systems Conductor Identification: Identify field-installed alarm, control, and signal connections.
- I. Elevated Components: Increase sizes of labels, signs, and letters to those appropriate for viewing from floor.
- J. Accessible Fittings for Raceways: Identify cover of junction and pull box of the following systems with wiring system legend and system voltage. System legends must be as follows:
 - 1. "EMERGENCY POWER."
 - 2. "POWER."
- K. Vinyl Wraparound Labels:
 - 1. Secure tight to surface of raceway or cable at location with high visibility and accessibility.
 - 2. Attach labels that are not self-adhesive type with clear vinyl tape, with adhesive appropriate to location and substrate.
- L. Snap-Around Labels: Secure tight to surface at location with high visibility and accessibility.
- M. Self-Adhesive Wraparound Labels: Secure tight to surface at location with high visibility and accessibility.
- N. Self-Adhesive Labels:

1. Install unique designation label that is consistent with wiring diagrams, schedules, and operation and maintenance manual.
 2. Unless otherwise indicated, provide single line of text with **1/2 inch** high letters on **1-1/2 inch** high label; where two lines of text are required, use labels **2 inch** high.
- O. Snap-Around Color-Coding Bands: Secure tight to surface at location with high visibility and accessibility.
- P. Heat-Shrink, Preprinted Tubes: Secure tight to surface at location with high visibility and accessibility.
- Q. Marker Tapes: Secure tight to surface at location with high visibility and accessibility.
- R. Self-Adhesive Vinyl Tape: Secure tight to surface at location with high visibility and accessibility.
1. Field-Applied, Color-Coding Conductor Tape: Apply in half-lapped turns for minimum distance of **6 inch** where splices or taps are made. Apply last two turns of tape with no tension to prevent possible unwinding.
- S. Tape and Stencil: Comply with requirements in painting Sections for surface preparation and paint application.
- T. Metal Tags:
1. Place in location with high visibility and accessibility.
 2. Secure using general-purpose cable ties.
- U. Nonmetallic Preprinted Tags:
1. Place in location with high visibility and accessibility.
 2. Secure using general-purpose cable ties.
- V. Write-on Tags:
1. Place in location with high visibility and accessibility.
 2. Secure using general-purpose cable ties.
- W. Baked-Enamel Signs:
1. Attach signs that are not self-adhesive type with mechanical fasteners appropriate to location and substrate.
 2. Unless otherwise indicated, provide single line of text with **1/2 inch** high letters on minimum **1-1/2 inch** high sign; where two lines of text are required, use signs minimum **2 inch** high.
- X. Metal-Backed Butyrate Signs:

1. Attach signs that are not self-adhesive type with mechanical fasteners appropriate to location and substrate.
2. Unless otherwise indicated, provide single line of text with **1/2 inch** high letters on **1-1/2 inch** high sign; where two lines of text are required, use labels **2 inch** high.

Y. Laminated Acrylic or Melamine Plastic Signs:

1. Attach signs that are not self-adhesive type with mechanical fasteners appropriate to location and substrate.
2. Unless otherwise indicated, provide single line of text with **1/2 inch** high letters on **1-1/2 inch** high sign; where two lines of text are required, use labels **2 inch** high.

Z. Cable Ties: General purpose, for attaching tags, except as listed below:

1. In Spaces Handling Environmental Air: Plenum rated.

3.3 IDENTIFICATION SCHEDULE

- A. Install identification materials and devices at locations for most convenient viewing without interference with operation and maintenance of equipment. Install access doors or panels to provide view of identifying devices.
- B. Identify conductors, cables, and terminals in enclosures and at junctions, terminals, pull points, and locations of high visibility. Identify by system and circuit designation.
- C. Accessible Raceways and Metal-Clad Cables, 1000 V or Less, for Service, Feeder, and Branch Circuits, More Than 30 A and 120 V to Ground: Identify with self-adhesive raceway labels .
 1. Locate identification at changes in direction, at penetrations of walls and floors, at **50 ft** maximum intervals in straight runs, and at **25 ft** maximum intervals in congested areas.
- D. Accessible Fittings for Raceways and Cables within Buildings: Identify cover of junction and pull box of the following systems with self-adhesive labels containing wiring system legend and system voltage. System legends must be as follows:
 1. "EMERGENCY POWER."
 2. "POWER."
- E. Warning Labels for Indoor Cabinets, Boxes, and Enclosures for Power and Lighting: Self-adhesive labels Baked-enamel warning signs .
 1. Apply to exterior of door, cover, or other access.
- F. Arc Flash Warning Labeling: Self-adhesive labels.
- G. Equipment Identification Labels:

1. Indoor Equipment: Self-adhesive label Baked-enamel signs Metal-backed butyrate signs Laminated acrylic or melamine plastic sign.
2. Equipment to Be Labeled:
 - a. Panelboards: Typewritten directory of circuits in location provided by panelboard manufacturer. Panelboard identification must be in form of self-adhesive, engraved, laminated acrylic or melamine label.
 - b. Switchboards.
 - c. Motor-control centers.
 - d. Variable-speed controllers.
 - e. .

END OF SECTION 26 05 53

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SECTION 26 08 00 - COMMISSIONING OF ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Electrical equipment connected to Normal electrical systems, including the following:
 - a. Grounding systems.
2. Systems testing and verification, including Normal electrical systems.
3. .

B. Related Requirements:

1. Section 01 91 13 "General Commissioning Requirements" for general Cx process requirements and CxA responsibilities.
2. Section 26 00 10 "Supplemental Requirements for Electrical" for additional abbreviations, definitions, submittals, qualifications, testing agencies, and other Project requirements applicable to Work specified in this Section.

1.2 DEFINITIONS

- A. BoD: Basis-of-Design Document, as defined in Section 01 91 13 "General Commissioning Requirements."
- B. Cx: Commissioning, as defined in Section 01 91 13 "General Commissioning Requirements."
- C. CxA: Commissioning Authority, as defined in Section 01 91 13 "General Commissioning Requirements."
- D. OPR: Owner's Project Requirements, as defined in Section 01 91 13 "General Commissioning Requirements."
- E. "Systems," "Assemblies," "Subsystems," "Equipment," and "Components": Where these terms are used together or separately, they mean "as-built" systems, assemblies, subsystems, equipment, and components.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 CONSTRUCTION CHECKLISTS

- A. Prepare detailed construction checklists for electrical systems, subsystems, equipment, and components. Complete and submit construction checklists.

3.2 GENERAL TESTING REQUIREMENTS

- A. Certify that electrical systems, subsystems, and equipment have been installed, calibrated, and started and that they are operating according to the Contract Documents and approved Shop Drawings and submittals.
- B. Certify that electrical instrumentation and control systems have been completed and calibrated, that they are operating according to the Contract Documents and approved Shop Drawings and submittals, and that pretest set points have been recorded.
- C. Set systems, subsystems, and equipment into operating mode to be tested according to approved test procedures (for example, normal shutdown, normal auto position, normal manual position, unoccupied cycle, emergency power, and alarm conditions).
- D. Measure capacities and effectiveness of systems, assemblies, subsystems, equipment, and components, including operational and control functions to verify compliance with acceptance criteria.
- E. Test systems, assemblies, subsystems, equipment, and components operating modes, interlocks, control responses, and responses to abnormal or emergency conditions, and response according to acceptance criteria.
- F. Construction Checklists: Prepare and submit detailed construction checklists for electrical systems, subsystems, equipment, and components.
 - 1. Contributors to development of construction checklists must include, but are not limited to, the following:
 - a. Electrical systems and equipment installers.
 - b. Electrical instrumentation and controls installers.
- G. Perform tests using design conditions, whenever possible.
 - 1. Simulated conditions may, with approval of Architect, be imposed using an artificial load when it is impractical to test under design conditions. Before simulating conditions, calibrate testing instruments. Provide equipment to simulate loads. Set simulated conditions as directed by CxA, and document simulated conditions and methods of simulation. After tests, return configurations and settings to normal operating conditions.

2. Cx test procedures may direct that set points be altered when simulating conditions is impractical.
 3. Cx test procedures may direct that sensor values be altered with a signal generator when design or simulating conditions and altering set points are impractical.
- H. If tests cannot be completed because of a deficiency outside the scope of the electrical system, document the deficiency and report it to Owner. After deficiencies are resolved, reschedule tests.
- I. If seasonal testing is specified, complete appropriate initial performance tests and documentation and schedule seasonal tests.
- J. Coordinate schedule with, and perform Cx activities at the direction of the CxA.
- K. Comply with Construction Checklist requirements, including material verification, installation checks, startup, and performance tests requirements specified in Sections specifying electrical systems and equipment.
- L. Provide qualified testing and inspecting agency personnel in accordance with Section 26 00 10 "Supplemental Requirements for Electrical," instrumentation, tools, and equipment to complete and document the following:
1. Performance tests.
 2. Demonstration of a sample of performance tests.
 3. Cx tests.
 4. Cx test demonstrations.

3.3 Cx TESTS FOR ELECTRICAL SYSTEMS

- A. Verification of Normal Electrical System Operation:
1. Prerequisites: Acceptance of results for construction checklists for Division 26 electrical components associated with Normal electrical system.
 2. Equipment and Systems to Be Tested: Division 26 electrical equipment.
 3. Test Purpose: Verify operation of Normal electrical system.
 4. Test Conditions: Energize components of Normal electrical system, one at a time.
 5. Acceptance Criteria: Proper operation of Normal electrical system over a 24 **<Insert number>**-hour period.
- B. Verification of Essential Electrical System Operation:
1. Prerequisites:
 - a. Acceptance of results for construction checklists for Division 26 electrical components associated with Essential electrical system.
 - b. Completion of "Verification of Normal Electrical System Operation" tests.
 2. Equipment and Systems to Be Tested: Division 26 electrical equipment.
 3. Test Purpose: Verify operation of Essential electrical system.
 4. Test Conditions:

- a. Energize components of Normal electrical system.
 - b. Simulate a failure of Normal electrical system.
- 5. Acceptance Criteria: Transfer of power from Normal to Essential electrical system within OPR.
- C. Test Purpose: Verify operation of control and monitoring systems for Normal and Essential electrical systems.
- D. Test Conditions:
 - 1. Energize components of Normal electrical system.
 - 2. Test operation of equipment.
- E. Acceptance Criteria: Operation of equipment according to OPR.

END OF SECTION 26 08 00

SECTION 26 27 26 - WIRING DEVICES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Locking receptacles.

B. Related Requirements:

1. Section 26 00 10 "Supplemental Requirements for Electrical" for additional abbreviations, definitions, submittals, qualifications, testing agencies, and other Project requirements applicable to Work specified in this Section.
2. Section 26 27 26.39 "Locking Receptacles" for additional wiring device products.
3. Section 26 27 26.43 "Special-Purpose Power Outlet Assemblies" for additional wiring device products.

1.2 ACTION SUBMITTALS

A. Product Data:

1. Locking receptacles.

PART 2 - PRODUCTS

2.1 LOCKING RECEPTACLES

A. NEMA, 250 V, Locking Receptacle :

1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Hubbell Wiring Device-Kellems; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
 - b. Leviton Manufacturing Co., Inc.
 - c. Pass & Seymour; Legrand North America, LLC.
2. Regulatory Requirements:
 - a. Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.
3. General Characteristics:
 - a. Reference Standards: UL CCN RTRT and UL 498.

4. Options:
 - a. Device Color: Black with blue voltage indication on face.
 - b. Configuration:
 - 1) 2 pole, 3 wire, grounding, NEMA L6-30R.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Receptacles:

1. Verify that receptacles to be procured and installed for Owner-furnished equipment are compatible with mating attachment plugs on equipment.

B. Cord Reels:

1. Examine roughing-in for cord reel mounting and power connections to verify actual locations of mounts and power connections before cord reel installation.
2. Examine walls, floors, and ceilings for suitable conditions where cord reel will be installed.
3. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION OF LOCKING RECEPTACLES

A. Comply with manufacturer's instructions.

B. Reference Standards:

1. Unless more stringent requirements are specified in Contract Documents or manufacturers' instructions, comply with installation instructions in NECA NEIS 130.
2. Mounting Heights: Unless otherwise indicated in Contract Documents, comply with mounting heights recommended in NECA NEIS 1.
3. Receptacle Orientation: Unless otherwise indicated in Contract Documents, orient receptacle to match configuration diagram in NEMA WD 6.
4. Consult Architect for resolution of conflicting requirements.

C. Identification:

1. Identify cover or cover plate for device with panelboard identification and circuit number in accordance with Section 26 05 53 "Identification for Electrical Systems."
 - a. Mark cover or cover plate using hot, stamped, or engraved machine printing with black -filled lettering, and provide durable wire markers or tags inside device box or outlet box.

3.3 PROTECTION

A. Devices:

1. Schedule and sequence installation to minimize risk of contamination of wires and cables, devices, device boxes, outlet boxes, covers, and cover plates by plaster, drywall joint compound, mortar, cement, concrete, dust, paint, and other materials.
2. After installation, protect wires and cables, devices, device boxes, outlet boxes, covers, and cover plates from construction activities. Remove and replace items that are contaminated, defaced, damaged, or otherwise caused to be unfit for use prior to acceptance by Owner.

END OF SECTION 26 27 26

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SECTION 26 27 26.39 - LOCKING RECEPTACLES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Locking receptacles.

B. Related Requirements:

1. Section 26 00 10 "Supplemental Requirements for Electrical" for additional abbreviations, definitions, submittals, qualifications, testing agencies, and other Project requirements applicable to Work specified in this Section.

1.2 ACTION SUBMITTALS

A. Product Data:

1. Locking receptacles.

PART 2 - PRODUCTS

2.1 LOCKING RECEPTACLES

A. Description: Receptacles that require two motions, insertion and rotation, to fully mate attachment plugs.

B. Performance Criteria:

1. Regulatory Requirements:
 - a. Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.
2. General Characteristics:
 - a. Reference Standards: UL CCN RTRT and UL 498.

C. NEMA, 250 V, Locking Receptacle :

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

- a. Hubbell Wiring Device-Kellems; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
 - b. Leviton Manufacturing Co., Inc.
 - c. Pass & Seymour; Legrand North America, LLC.
2. Options:
- a. Device Color: Black with blue voltage indication on face.
 - b. Configuration:
 - 1) 2 pole, 3 wire, grounding, NEMA L6-30R.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that receptacles to be procured and installed for Owner-furnished equipment are compatible with mating attachment plugs on equipment.

3.2 INSTALLATION

- A. Comply with manufacturer's instructions.
- B. Reference Standards:
 - 1. Unless more stringent requirements are specified in Contract Documents or manufacturers' instructions, comply with installation instructions in NECA NEIS 130.
 - 2. Mounting Heights: Unless otherwise indicated in Contract Documents, comply with mounting heights recommended in NECA NEIS 1.
 - 3. Receptacle Orientation: Unless otherwise indicated in Contract Documents, orient receptacle to match configuration diagram in NEMA WD 6.
 - 4. Consult Architect for resolution of conflicting requirements.
- C. Identification:
 - 1. Identify cover or cover plate for device with panelboard identification and circuit number in accordance with Section 26 05 53 "Identification for Electrical Systems."
 - a. Mark cover or cover plate using hot, stamped, or engraved machine printing with black -filled lettering, and provide durable wire markers or tags inside device box or outlet box.

3.3 PROTECTION

- A. Schedule and sequence installation to minimize risk of contamination of wires and cables, devices, device boxes, outlet boxes, covers, and cover plates by plaster, drywall joint compound, mortar, cement, concrete, dust, paint, and other materials.

- B. After installation, protect wires and cables, devices, device boxes, outlet boxes, covers, and cover plates from construction activities. Remove and replace items that are contaminated, defaced, damaged, or otherwise caused to be unfit for use prior to acceptance by Owner.

END OF SECTION 26 27 26.39

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SECTION 26 28 13 - FUSES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Cartridge fuses rated 600 V ac and less for use in the following:
 - a. Control circuits.
 - b. Enclosed controllers.
 - c. Enclosed switches.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for spare-fuse cabinets. Include the following for each fuse type indicated:
 - 1. Ambient Temperature Adjustment Information: If ratings of fuses have been adjusted to accommodate ambient temperatures, provide list of fuses with adjusted ratings.
 - a. For each fuse having adjusted ratings, include location of fuse, original fuse rating, local ambient temperature, and adjusted fuse rating.
 - b. Provide manufacturer's technical data on which ambient temperature adjustment calculations are based.
 - 2. Dimensions and manufacturer's technical data on features, performance, electrical characteristics, and ratings.
 - 3. Current-limitation curves for fuses with current-limiting characteristics.
 - 4. Time-current coordination curves (average melt) and current-limitation curves (instantaneous peak let-through current) for each type and rating of fuse. Submit in electronic format suitable for use in coordination software .
 - 5. Coordination charts and tables and related data.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Bussmann; Eaton, Electrical Sector.
 2. Littelfuse, Inc.
 3. Mersen USA.
- B. Source Limitations: Obtain fuses, for use within a specific product or circuit, from single source from single manufacturer.

2.2 CARTRIDGE FUSES

- A. Characteristics: NEMA FU 1, current-limiting, nonrenewable cartridge fuses with voltage ratings consistent with circuit voltages.
1. Type RK-1: 250 -V, zero- to 600-A rating, 200 kAIC , time delay.
 2. Type RK-5: 250 -V, zero- to 600-A rating, 200 kAIC , time delay.
 3. Type CC: 600-V, zero- to 30-A rating, 200 kAIC , fast acting .
 4. Type J: 600-V, zero- to 600-A rating, 200 kAIC.
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- C. Comply with NEMA FU 1 for cartridge fuses.
- D. Comply with NFPA 70.
- E. Coordinate fuse ratings with utilization equipment nameplate limitations of maximum fuse size and with system short-circuit current levels.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine fuses before installation. Reject fuses that are moisture damaged or physically damaged.
- B. Examine holders to receive fuses for compliance with installation tolerances and other conditions affecting performance, such as rejection features.
- C. Examine utilization equipment nameplates and installation instructions. Install fuses of sizes and with characteristics appropriate for each piece of equipment.

- D. Evaluate ambient temperatures to determine if fuse rating adjustment factors must be applied to fuse ratings.
- E. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 FUSE APPLICATIONS

- A. Cartridge Fuses:
 - 1. Other Branch Circuits: Class RK1, time delay Class J, fast acting Class CC, fast acting.
 - 2. Control Transformer Circuits: Class CC, time delay, control transformer duty.

3.3 INSTALLATION

- A. Install fuses in fusible devices. Arrange fuses so rating information is readable without removing fuse.

3.4 IDENTIFICATION

- A. Install labels complying with requirements for identification specified in Section 26 05 53 "Identification for Electrical Systems" and indicating fuse replacement information inside of door of each fused switch and adjacent to each fuse block, socket, and holder.

END OF SECTION 26 28 13

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SECTION 26 28 16 - ENCLOSED SWITCHES AND CIRCUIT BREAKERS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Nonfusible switches.
2. Enclosures.

B. Related Requirements:

1. Section 26 00 10 "Supplemental Requirements for Electrical" for additional abbreviations, definitions, submittals, qualifications, testing agencies, and other Project requirements applicable to Work specified in this Section.

1.2 DEFINITIONS

- A. GFEP: Ground-fault circuit-interrupter for equipment protection.
- B. GFLS: Ground-fault circuit-interrupter for life safety.
- C. SPDT: Single pole, double throw.

1.3 ACTION SUBMITTALS

A. Product Data:

1. For each type of enclosed switch, circuit breaker, accessory, and component indicated. Include nameplate ratings, dimensioned elevations, sections, weights, and manufacturers' technical data on features, performance, electrical characteristics, ratings, accessories, and finishes.
2. Enclosure types and details for types other than UL 50E, Type 1.
3. Current and voltage ratings.
4. Short-circuit current ratings (interrupting and withstand, as appropriate).
5. Detail features, characteristics, ratings, and factory settings of individual overcurrent protective devices, accessories, and auxiliary components.

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS

- A. Source Limitations: Obtain products from single manufacturer.
- B. Electrical Components, Devices, and Accessories: Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.

2.2 NONFUSIBLE SWITCHES

- A. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. ABB, Electrification Business.
 - 2. Eaton.
 - 3. Siemens Industry, Inc., Energy Management Division.
 - 4. Square D; Schneider Electric USA.
- B. Type GD, General Duty, Three Pole, Single Throw, 240 V(ac), 600 A and Smaller: UL 98 and NEMA KS 1, horsepower rated, lockable handle with capability to accept two padlocks, and interlocked with cover in closed position.
- C. Accessories:
 - 1. Equipment Ground Kit: Internally mounted and labeled for copper and aluminum ground conductors.
 - 2. Lugs: Mechanical type, suitable for number, size, and conductor material.

2.3 ENCLOSURES

- A. Enclosed Switches and Circuit Breakers: UL 489, NEMA KS 1, UL 50E, and UL 50, to comply with environmental conditions at installed location.
- B. Enclosure Finish: Enclosure must be finished with gray baked enamel paint, electrodeposited on cleaned, phosphatized steel (UL 50E Type 1) .
- C. Conduit Entry: UL 50E Types 4, 4X, and 12 enclosures may not contain knockouts. UL 50E Types 7 and 9 enclosures must be provided with threaded conduit openings in both endwalls.
- D. Enclosures designated as UL 50E Type 4, 4X stainless steel, 12, or 12K must have dual cover interlock mechanism to prevent unintentional opening of enclosure cover when circuit breaker is ON and to prevent turning circuit breaker ON when enclosure cover is open.
- E. UL 50E Type 7/9 enclosures must be furnished with breather and drain kit to allow their use in outdoor and wet location applications.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine elements and surfaces to receive enclosed switches and circuit breakers for compliance with installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
 - 1. Commencement of work will indicate Installer's acceptance of areas and conditions as satisfactory.

3.2 SELECTION OF ENCLOSURES

- A. Indoor, Dry and Clean Locations: UL 50E, Type 1 .

3.3 INSTALLATION

- A. Comply with manufacturer's published instructions.
- B. Special Techniques:
 - 1. Coordinate layout and installation of switches, circuit breakers, and components with equipment served and adjacent surfaces. Maintain required workspace clearances and required clearances for equipment access doors and panels.
 - 2. Install individual wall-mounted switches and circuit breakers with tops at uniform height unless otherwise indicated.
 - 3. Temporary Lifting Provisions: Remove temporary lifting of eyes, channels, and brackets and temporary blocking of moving parts from enclosures and components.
 - 4. Install fuses in fusible devices.

3.4 IDENTIFICATION

- A. Comply with requirements in Section 26 05 53 "Identification for Electrical Systems."
 - 1. Identify field-installed conductors, interconnecting wiring, and components; provide warning signs.
 - 2. Label each enclosure with engraved metal or laminated-plastic nameplate.

3.5 ADJUSTING

- A. Adjust moving parts and operable components to function smoothly, and lubricate as recommended by manufacturer.

3.6 PROTECTION

- A. After installation, protect enclosed switches and circuit breakers from construction activities. Remove and replace items that are contaminated, defaced, damaged, or otherwise caused to be unfit for use prior to acceptance by Owner.

END OF SECTION 26 28 16

SECTION 27 05 00 - COMMON WORK ELEMENTS FOR COMMUNICATIONS SYSTEMS

PART 1 - GENERAL

1.01 RELATED WORK

- A. Bridging Documents and general provisions of the Contract, “General Provisions for Construction Contracts” (General Provisions) and Supplementary General Provisions and all documents included within this Contract apply to this Section.
- B. Related Specification Sections:
 - 1. Division 27 – Network Communications Systems
- C. Reference Symbols:
 - 1. All device symbols are defined by the appropriate symbol schedule on the symbols and abbreviations sheet in the telecommunications systems drawing package. Not all device symbols as indicated may be required for the project.
 - 2. Because of the scale of the drawings, symbols are shown on drawings as close as possible to the mounting location. Contractor shall coordinate exact location of all network systems and related components with all related Contract drawings, specifications and affected trades prior to submittal of shop drawings.
- D. Abbreviations:
 - 1. ACG Automatic Gain Control
 - 2. ACR Attenuation to Crosstalk Ratio.
 - 3. ADA Americans with Disabilities Act
 - 4. AHJ: Authority Having Jurisdiction
 - 5. ASTM American Society for Testing Materials
 - 6. ASIS Formerly the American Society for Industrial Security, now known simply as ASIS International
 - 7. ATP: Acceptance Test Plan
 - 8. AUI Attachment Unit Interface.
 - 9. AWS: Advanced Wireless Service
 - 10. A/V Audio Visual Systems – For purposes of this specification section A/V systems shall include all Media Management, Video Broadcasting, Intercommunications (Paging/Public Address, Clock, Auxiliary Sound), Video Intercom, Emergency Communications, Mass Notification, Master Antenna (MATV) and Distance Learning Systems
 - 11. AVI Audio Visual Systems Integrator: Shall be a qualified installer experienced in the installation and certification of A/V systems. The AVI installer shall be responsible for the design, testing, and certification of all audio/visual systems including, but not limited to: Intercommunications, TV Distribution, Audio/Visual, Master Antenna and Bi-Directional Antenna systems as well as all structured cabling systems supporting these technologies.
 - 12. BACnet A communications protocol for building automation and control networks as outlined in ISO 16484-5 and ASHRAE/ANSI Standard 135.
 - 13. BAS Building Automation System
 - 14. BDA: Bi-Direction Amplifier
 - 15. BIC Baggage Input Console Device

- 16. BICSI Building Industry Consultant Services International - International organization whose primary objective is to enhance the reputation and skills of companies and individuals employed in the telecommunications and security industries by ensuring that current and developing standards are maintained.
- 17. BRS: Broadband Radio Service
- 18. BTS: Base Transceiver Station
- 19. CATV Community Antenna Television
- 20. CDMA Code Division Multiple Access
- 21. CEA Consumer Electronics Association
- 22. CFR Code of Federal Regulations
- 23. C/N Carrier-to-Noise Ratio
- 24. CP Consolidation Point - Local Interconnection Point between horizontal cables from the building IDF/MDF rooms and horizontal cables for the furniture drops.
- 25. CPU Central Processing Unit
- 26. CSU Channel Service Unit
- 27. CWDM Dense Wave Division Multiplexing
- 28. dB Decibel
- 29. DAQ Delivered Audio Quality
- 30. DAS Distributed Antenna System
- 31. DDC Direct Digital Controller / Device Display Controller
- 32. DGP Data Gathering Panel – A component of the Physical Access Control System (PACS) located at each door or portal location that communicates, stores and processes information received from readers, reader modules, input modules, and output modules with the Security Management System CPU and software.
- 33. DMZ Demilitarized Zone– A firewall configuration for securing local area networks (LANs).
- 34. DP Demarcation Point - The point of interface between the Communications Networks, MATV, any Auxiliary Systems, and the associated Service Providers or Public Utilities. Also known as Entrance Facility. Shall also serve as the primary termination point for all incoming OSP cabling as well as the primary main grounding bus-bar for all communications systems. Refer to project documents for exact location and termination requirements.
- 35. DSU Data Service Unit.
- 36. DWDM Dense Wave Division Multiplexing
- 37. EBS Educational Broadband Service
- 38. ELFEXT Equal Level Far End Crosstalk.
- 39. EMI Electromagnetic interference.
- 40. EMT Electrical Metallic Tubing – Also known as thin-wall conduit.
- 41. ESMR Enhanced Specialized Mobile Radio
- 42. EVAC UL Listed Emergency Voice Evacuation System. Not to be confused with the building Public Address/Intercom, Intercommunications and/or Mass Notification systems.
- 43. FAAP Remote Fire Alarm Annunciator Panel
- 44. FACP Fire Alarm Control Panel
- 45. FAS Fire Alarm System
- 46. FASI Fire Alarm System Integrator
- 47. FCC Federal Communications Commission
- 48. FEXT Far End Crosstalk.
- 49. GFCI Ground fault circuit interrupter.
- 50. GIW Gate Input Workstation
- 51. GUI Graphic User Interface – A specialized program employing graphical display maps of a facility and/or site which, also provides a manual user interface for all system functions and operations by utilizing control and annunciation icons from dedicated human machine interface terminals.

- 52. HMI Human/Machine Interface – A Computer-operated, video control terminal complying with FCC Part 15 CFR Title 47, Subparts A and B, and shall utilize multiple dynamic GUI based displays for annunciation and control LCD flat panel computer monitor or display screen as defined by related specification sections.
- 53. IBC International Building Code
- 54. ICT Information Communications Technology – For purposes of this specification section ICT shall include all communications systems including but not limited to all Data, Telephone, BAS, Intercommunications (Paging/Public Address), TV Distribution Systems (MATV) and Audio Visual Systems (A/V) Surveillance Systems and IP based Access Control.
- 55. CONTRACTOR Information Communications Technology Integrator – Shall be a qualified installer experienced in the installation and certification of all data, telecommunications. The CONTRACTOR shall be responsible for the design, testing, and certification of Data, Telephone communications systems and all structured cabling systems supporting these technologies.
- 56. IDF Intermediate Distribution Frame – The room/space that shall serve as the local termination point for all horizontal and backbone cabling. Also shall be known as Equipment Room (ER), Horizontal Cross-Connect (HC) or Floor Distributor (FD).
- 57. iEDN Integrated Enhanced Digital Network
- 58. IEEE Institute of Electrical and Electronics Owners
- 59. IO I/O Input/Out – Commonly associated with dry contact relay-based digital integration.
- 60. IP Internet Protocol
- 61. IR Infrared
- 62. ISO International Organization for Standardization
- 63. LAN Local Area Network
- 64. LCD Liquid Crystal Display
- 65. LED Light-Emitting Diode
- 66. LMR Land Mobile Radio
- 67. LTE Long Term Evolution
- 68. LV Low Voltage: As defined in NFPA 70 for circuits and equipment operating at less than 50 V or for remote-control and signaling power-limited circuits.
- 69. MATV Master Antenna Television – Shall include all TV and media management distribution cabling, termination jacks, head-end components, control, equipment racks, amplifiers, projection equipment, and video monitoring devices as defined by the project drawings and related specification sections.
- 70. Mbps Megabits per second.
- 71. MDF Main Distribution Frame – The room/space that shall serve as the primary termination point for all backbone cabling to each IDF locations and horizontal connection point for local communication drops. May also serve as a local IDF location as well as the cross-connection and interconnection of all entrance cables from the DP for all PSTN and WAN connections. Also, shall be known as Main Cross Connect (MC), Telecommunications Room (TR) and/or Campus Distributor (CD)
- 72. M-JPEG Motion – Joint Photographic Experts Group
- 73. MPEG Moving picture experts' group.
- 74. MTBF Mean Time Between Failure
- 75. NEC National Electric Code (NFPA 70)
- 76. NEMA National Electrical Manufacturers Association
- 77. NEXT Near End Crosstalk
- 78. NFPA National Fire Protection Association
- 79. NMM Network Management Module
- 80. NMS Network Management System
- 81. NRTL Nationally Recognized Testing Laboratory
- 82. NTSC National Television System Committee.

- 83. NVR Network Video Recorder
- 84. NVW Network Video Workstation
- 85. OSP Outside Plant – All cabling associated with building services supporting the incoming service connections to Service Providers, Public Utilities, and Wide Area Networks.
- 86. OTDR Optical Time Domain Reflectometer
- 87. PA/PG/ECS Public Address / Paging / Emergency Communications System.
- 88. PCS Personal Communications System
- 89. POTS Plain Old Telephone Service – Analog Telephone Circuit used for the connection of fax machines, BAS and FAS communications devices and shall be wired upstream of the facility's telephone switch.
- 90. PSP Physical Security Professional as registered by the American Society of Industrial Security-International (ASIS)
- 91. PSTN Public Switched Telephone Network – Connection to local telephone utility providing local telephony communications service.
- 92. RCDD BICSI-accredited Registered Communications Distribution Designer
- 93. REO Resident Owner's Office
- 94. PSN Public Safety Network
- 95. RFI Radio-frequency interference / Request for Information
- 96. RGS Rigid Galvanized Steel conduit: Galvanized steel tubing, with a tubing wall that is thick enough to allow it to be threaded.
- 97. RoF Radio-over-Fiber
- 98. RoHS: RestrContractor on of Hazardous Substances
- 99. RSL Received Signal Level
- 100. RSRP Reference Signal Receive Power
- 101. RS-232 A standard for asynchronous serial data communications protocol between terminal devices. This standard defines a 25-pin connector and certain signal characteristics for interfacing computer equipment.
- 102. RS-485 A standard for multipoint communications protocol.
- 103. SCADA Supervisory Control and Data Acquisition – A system used to monitor and control the operation and status of facility systems scattered over wide geographic areas.
- 104. SISO Single-Input, Single-Output
- 105. SMR Specialized Mobile Radio
- 106. SMS Security Management System – A system incorporating security alarms, door controls, emergency intercoms/paging, duress alarms, and surveillance systems all integrated through a single operating platform, providing centralized command and control capability for the various systems via dedicated human machine interface terminals.
- 107. SMS Short Message Service
- 108. SNIR Signal-to-Noise Interference Ratio
- 109. SNMP Simple Network Management Protocol
- 110. SOW Statement of Work
- 111. TCP/IP A standard protocol stack on which the Internet and data communications networks operate
- 112. TGB Telecommunications Grounding Busbar – Located in each IDF
- 113. TIA Telecommunications Industry Association
- 114. TMGB Telecommunications Main Grounding Busbar – Located at the building DP/MDF
- 115. TP Transition Point – A location in the horizontal cabling where flat under carpet cable transitions to a horizontal cabling consolidation point (CP).
- 116. TSA Transportation Security Administration
- 117. TSB Technical Service Bulletin
- 118. TVSS Transient Voltage Surge Suppressor
- 119. UPS Uninterruptible Power Supply
- 120. UTP Unshielded Twisted Pair
- 121. VLAN Virtual Local Area Network

- 122. VoIP Voice Over IP telephone Network
- 123. VPN Virtual Private Network– A technique made possible by switching technologies that permits the logical grouping of any number of network devices into one or more sub- networks.
- 124. VSS Video Surveillance System
- 125. VSWR Voltage Standing Wave Ratio
- 126. WAN Wide Area Network
- 127. WAP Wireless Access Point
- 128. WLAN Wireless Local Area Network
- 129. WSP Wireless Service Provider

1.02 SUMMARY

- A. This Section contains the overall requirements associated with all Division 27 and related Division 28 Specification Sections, and includes the project design intent for all network communication cabling and equipment related to installation of the following systems:
 - 1. Network Communications System
- B. In addition, this section shall address all requirements for submittals, quality assurance, product handling, record documents, project conditions, installation, system performance, demonstrations, testing, and certifications for all scopes of work related to network communication cabling for this project scope of work. Refer to related Division 26, 27 and 28 specification sections and all contract drawings for additional information.
 - 1. The Division 27 integrator (CONTRACTOR) shall be a sub-contractor to the Contractor. This integrator shall have overall responsibility for all designs, equipment and all technical support related to all Division 27 scopes of work and shall ensure full coordination of all work as required to provide fully operational communications infrastructures and systems in accordance with all requirements of the Contract Documents, applicable Codes and Standards.
 - a. The CONTRACTOR shall be responsible for providing all equipment, devices, system components, final cable terminations, commissioning, and testing of all network communications cabling and equipment in accordance with all related Division 27 specification sections.
 - b. All sub-contractors shall meet the minimum technical capabilities, certifications, and licensing requirements as defined by the “Quality Assurance” chapter as specified herein as well as all related specification sections.
- C. It shall be the responsibility of the Contractor to furnish and install all necessary cabling, conduits/raceways, cable terminations, controls, systems, materials, devices, components, electrical power, equipment racks/cabinets and software as well as all appurtenances, programming, commissioning, and testing necessary to deliver a complete and fully operational communications network infrastructures and systems as indicated by the contract documents.
- D. The installation, performance, features, functions, software and programming criteria as specified herein as well as all related drawings and Division 27 specification sections have been designed to offer the maximum system efficiency, ease of operation, occupant safety and the protection of equipment as recommended by the Project Manager.
 - 1. Any deviations from the specified criteria shall be documented, reviewed, and agreed to in writing by the Project Manager prior to submission of bids. Refer to Division 01, and

all related Division 27 specification sections for any substitutions and/or project deviation requests.

- a. The required information shall include but not be limited to: reason for deviation, all differences in performance, operation, and function from the herein specified requirements, all benefits, and added features to CCNY Project Manager as a result of the deviations and any additional incurred costs to CCNY for maintenance and long-term ownership.
 - b. Failure to provide CCNY Project Manager with the required information shall result in any shop drawing submissions being returned for non-conformance with the contract requirements.
 2. The Contractor and all sub-contractors for this work shall have read all of the General Conditions, Special Requirements, General Requirements, and all related specification sections and in the execution of all work shall be bound by all of the conditions and requirements therein.
 - a. Prior to the submission of the Bid any discrepancies or inconsistencies noted within these specifications and/or the project drawings shall be brought to the immediate attention of CCNY Project Manager.
 - b. Where ambiguity exists between the project specifications and the contract drawings, the superior in system performance, shall prevail, and shall be delivered by the Contractor at no additional expense to the project.
- E. All device symbols are defined by the appropriate symbol schedules as indicated by the symbol and abbreviation drawing sheets for each discipline. The Contractor shall coordinate exact locations with all mechanical, electrical, reflected ceiling, furniture drawings and door hardware specifications as well as all affected trades prior to submittal of bids.
1. All symbols are shown on the contract drawings as close as possible to their intended location. Contractor shall coordinate the installation of all equipment, devices, controls, components, cabling conduits/raceways and integration of other systems with all affected trades and specified system integrators. The Contractor shall document all coordination requirements at the time of shop drawing submission.
 2. Drawings for this work are diagrammatic and intended to convey the extent, general arrangement, and locations of the work. Because of the scale of the drawings, certain basic items such as access panels, conduits, cabinet sizes, penetration sleeves, pull boxes, back-boxes and junction boxes may or may not be shown on the contract drawings. Include all items where required by code and related specification sections for proper installation of all work.
- F. Project specifications and drawings may not deal individually with every part, control, device, component, or appurtenance which may be required to produce the equipment performance for the specified system and/or as required for compliance with all specified systems integration.
1. Include such items and components, as required, for complete operational systems as defined by the project documents, whether or not specifically indicated. The Contractor shall be responsible for providing conduits/raceways, cable terminations, controls, systems, equipment, materials, devices, components, electrical power, equipment racks/cabinets, software, programming, commissioning, testing and all appurtenances as

well as the integration of any ancillary systems or CCNY provided equipment/components/systems.

2. Coordinate with other applicable trades in submittal of shop drawings and the installation of all systems. All shop drawings shall detail space conditions in order to accommodate other concerned trades, all equipment locations are subject to final review by CCNY Project Manager and .
- G. All Division 27 scopes of work shall include the necessary labor, software, equipment, materials, devices, cabling, conduits and electrical power as well as the performance of all system programming, testing and commissioning as required to provide fully operational systems in accordance with all requirements of the project documents.
1. The Contractor shall furnish and install all software, and system components as well as all necessary modifications and programming changes to the existing systems severing the network communication systems as required to ensure continuity of operations between any new systems and all existing systems currently deployed.
 - a. Coordinate the installation of all systems, equipment, components, materials, conduits, cabling, devices and all existing system modifications with CCNY Project Manager and prior to the submission of any shop drawings.
 2. All Division 27 systems work shall include the labeling of all wire terminations and enclosure locations. All wiring shall terminate on fixed terminal strips, punch blocks, or patch panels in accordance with all requirements of the project drawings and related specifications.
 - a. No splices shall be permitted in underground maintenance holes and non-accessible junction boxes. All junction boxes containing any system splices shall be uniquely identified.
 - b. All mounting heights and accessibility to all equipment requiring access by individuals with disabilities shall comply with ANSI A117.1 requirement.
 - c. All equipment enclosures located outside or in all areas with high moisture or high humidity shall be NEMA 4X enclosures and rated for that application.
 - d. All devices, components, or equipment installed on the exterior of the facility shall be provided in accordance with all manufacturers' requirements to ensure the proper operation when exposed to the environmental conditions and/or average annual lowest temperature that can be anticipated for the geographic region of the facility.
 - e. All interior devices exposed to the general population shall be installed in secured equipment enclosures and installed in such a manner that resists tampering and/or removal without the use of specialized tools.
 3. All work shall be neat in appearance, free of rough edges, scratches, blemishes, cracks and exposed gaps. All equipment shall be secured to the mounting surface and fastened with hardware approved by the manufacturer and capable of supporting the rated load. All cables within enclosures shall be neatly routed and tie wrapped at 6 inches on center. All wire splices shall be terminated on terminal strips and/or soldered in place. Any splices utilizing wire nuts shall not be acceptable.

H. Use of Premises

1. The Contractor shall have limited use of premises for construction operations only as required to meet the scope of work as delineated by the Contract Documents.
2. The Contractor shall design, prepare, schedule, and coordinate all scopes of work without disruption of any existing system functions or the daily operation of the existing facility. All cabling and equipment shall be installed in such a manner that all new controls, equipment and/or devices shall be installed, programmed and tested prior to modification, switch over and/or disconnecting of any existing systems.
 - a. Include all costs related to any phased construction methodologies having to do with the scope of work defined herein, including, but not limited to, all necessary temporary equipment, devices, components or systems as well as any labor costs associated with any installation, commissioning, testing demolition of any technology systems required to be performed after normal business hours of the facility.
 - b. Prior to the disabling, modifications, switchover and/or demolition of any existing system components and/or cabling, all new system components, equipment, conduits, cabling, shall be in place, tested and fully operational.
 - c. The Contractor shall coordinate all installation activities so as not to disrupt the daily operations of CCNY and shall include any costs related to a phased construction methodology where applicable. Installation activity and costs shall include but are not limited all necessary temporary equipment, devices, components or systems as well as any labor costs associated with any installation, commissioning, testing demolition of any systems required to be performed after normal business hours of the facility.
3. Contractor shall plan, schedule and install all scopes of work in accordance with all requirements of the project construction schedule. Refer to related specification sections for additional information related to project scheduling and facility access.
 - a. The Contractor shall coordinate all installation and demolition activities so as not to disrupt the daily routine of the existing facility or negatively impact the integrity of the facility's security and life safety measures.

I. Coordination

1. The Contractor shall coordinate with all sub-contractors as well as all other applicable trades in the submittal of shop drawings and the installation of all equipment, devices, and systems. All shop drawings shall detail space conditions in order to accommodate other concerned trades, all equipment and device locations are subject to final review by CCNY Project Manager.
 - a. If installation of equipment, raceways, cable trays, and/or conduit is performed prior to coordination with all other trades, which interferes with work of other trades or the performance of the system, the Contractor shall make necessary changes to correct the condition at no additional cost to CCNY.
 - b. The premise distribution infrastructure shall provide for the support and connectivity of the Building Automation System (BAS). The Contractor shall coordinate with all disciplines and trades as required for the connectivity and proper integration of the BAS, all life safety and security system requirements in accordance with the Contract Documents.
 - 1) Provide all cabling, conduits, terminations, and programming to properly interface the BAS, fire alarm and access control systems with all related

mechanical, elevator fire and security systems in accordance with all applicable life safety codes and/or in accordance with all requirements of the project drawings and related specifications.

- c. The Contractor shall coordinate with all applicable systems subcontractors to ensure the proper integration and performance requirements of all Division 28 systems as required by Code, Contract Documents, and the AHJ.
2. Where applicable, Contractor shall coordinate all service, rework, and relocation of existing utilities prior to bid. Bid shall include all work required for any connections/interfaces with existing systems.
 - a. Contractor shall coordinate all work with vendors for rework, relocation, and addition of equipment and devices, including any modification to existing system infrastructure.
3. Coordinate all work involving tenant leased areas or equipment for rework, relocation, and addition of equipment and devices, including any modification to existing system infrastructures with CCNY.

1.03 REFERENCES

- A. References to industry and trade association standards as well as all building codes are minimum installation requirements. The codes, standards, and agencies listed below shall form a part of all related specification sections and all work shall comply with the latest adopted standards.
- B. Where the contract drawings and specifications mandate a greater requirement or performance than those specified by any of the below referenced codes and standards, the Contract Documents shall then be the governing requirements for this project. The minimum codes and standards to be applied for this project shall be the following:
 1. All applicable requirements of NFPA 70 "National Electrical Code" including, but not limited to:
 - a. Article 250, Grounding
 - b. Article 300, Part A. Wiring Method
 - c. Article 310, Conductors for General Wiring
 - d. Article 725, Remote Control, Signaling Circuits
 - e. Article 770, Optical Fiber Cables and Raceways
 - f. Article 800, Communication Systems
 2. National Fire Protection Association:
 - a. NFPA-70: National Electrical Code
 - b. NFPA-72: National Fire Alarm and Signaling Code
 - c. NFPA-75: Standard for the Protection of Electronic Computer/Data Processing Equipment
 - d. NFPA-101: Life Safety Code
 3. ANSI/TIA Compliance: Comply with the following Electronics Industries Association Standards:

- a. ANSI/TIA-568C: "Commercial Building Telecommunication Standard"
 - b. ANSI/TIA-569: "Commercial Building Standard for Telecommunications Pathways and Spaces"
 - c. ANSI/TIA-455: "FOTP-61, Measurement of Fiber or Cable Attenuation Using an OTDR"
 - d. ANSI/TIA-606: "The Administration Standard for the Telecommunications Infrastructure of Commercial Building"
 - e. ANSI/TIA-607A: "Commercial Building Grounding and Bonding Requirements for Telecommunications"
 - f. ANSI/TIA-492A: "Detail Specification for 850-nm Laser Optimized 50-μm Core Diameter/125μm Cladding Diameter Class 1a Graded Index Multi-Mode Optical Fibers"
 - g. ANSI/TIA-492CAAA: Detail Specification for Single-Mode Optical Fiber
4. Underwriters Laboratories, Inc.:
- a. UL 486A: "Wire connectors and soldering lugs for use with copper conductors"
 - b. UL 1449: "Transient voltage surge suppressors"
 - c. UL 1581: "Standard for Electrical Wires, Cables, and Flexible Cords"
 - d. UL 478: "Standard for Electronic Data-Processing Units and Systems"
 - e. UL 83: "Thermoplastic-Insulated Wires and Cables,"
 - f. UL 910: "Test Method for Fire and Smoke Characteristics of Cables Used in Air-Handling Spaces." Provide products which are UL-listed and labeled.
 - g. UL Certified - UL's LAN Cable Certification Program Federal Communications Commission:
5. International Code Council
- a. International Building Code – International Code Council
 - b. International Mechanical Code – International Code Council
 - c. Accessible and Usable Buildings and Facilities (A117.1)
6. NEMA/ICEA Compliance:
- a. WC-5 - "Thermoplastic-Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy,"
 - b. WC30 - "Color Coding of Wires and Cables," pertaining to control and signal transmission media.
7. Building Industry Consulting Service International (BICSI)
- a. BICSI -TDMM
 - b. BICSI -ESSDRM
8. Safety Code for Elevators and Escalators – American Society of Mechanical Owners (ASME 17.1).
9. CCNY: Most Recent edition of all Architectural, Structural, Site, Electronics, Communications, Security, IT, Access Control, and VSS standards.
10. Federal Communications Commission:
- a. FCC Regulations Part 15 Title 47.

1.04 SYSTEMS DESCRIPTIONS

- A. At the minimum, the scopes of work covered by the Division 27 specifications and the contract drawings shall include but are not limited to the following systems. Refer to related drawings and specifications for additional information.

1.05 SUBMITTALS

- A. In addition to all submittal requirements as stipulated by Division 01 and any related specifications sections, the Contractor shall provide all shop drawing submittals in accordance with the following:

1. CCNY Project Manager approvals shall be obtained for all equipment and material before delivery to the job site. Delivery, storage, or installation of equipment or material which has not had prior approval will not be permitted at the job site.
2. All submittals shall include adequate descriptive literature, catalog cuts, shop drawings, and other data necessary for CCNY Project Manager to ascertain that the proposed equipment and materials comply with specification requirements. Catalog cuts submitted for approval shall be legible and clearly identify equipment being submitted.
3. Prior to any submission the Contractor shall be responsible for performing the following quality control items to ensure compliance with all project requirements:
 - a. Review all Shop Drawings and Product Data
 - b. Review all field measurement criteria.
 - c. Review all field construction criteria and methodologies.
 - d. Review all catalog numbers and similar data.
 - e. Review all coordination requirements of affected trades.
 - f. Review conformance to all appropriate specification sections.
4. The CONTRACTOR shall have a registered RCDD professional review and seal shop drawings related to network designs, installations, testing, certifications, and structured cabling layouts for communications systems confirming that the proposed network infrastructure is in conformance with all stipulated standards and requirements as herein specified. Failure to provide RCDD sealed shop drawings shall result in all shop drawings being returned for resubmission without any reviews taking place.
5. CCNY Project Manager and/or 's review of the shop drawings and/or samples does not relieve the Contractor from compliance with the requirements of the Contract documents. Unless the Contractor has informed CCNY Project Manager and/or in writing of such deviation at the time of submission, has noted the deviation on the shop drawings, has given written approval of the specific deviation to the project document, all project requirements shall stand. CCNY Project Manager and/or 's review also does not relieve the Contractor from responsibility for any errors of omission in the submission of shop drawings and/or samples.
 - a. All project requirements shall stand. The review and acceptance of shop drawings does not relieve the Contractor from responsibility for delivering the project in accordance with Contract documents due to errors of omission in the submission of shop drawings and/or samples.
6. Submit all system testing, commissioning and startup procedures to be employed. Include all estimated times for performance of all tests, all test equipment and

- manpower necessary for testing.
7. Submit all integrator qualifications and certifications in accordance with the requirements as specified elsewhere in this specification section.
 8. Submit project schedule outlining the time frames for all equipment with long lead times for equipment deliveries; include all system commissioning, testing, and training time expectations. Project schedule shall be submitted as CPM schedule and shall utilize a software based project management program.
- B. All shop drawings shall be prepared using latest version of AutoCAD or REVIT, drawn accurately, and in accordance with the CCNY's Standards. The Contractor shall not reproduce the Contract Documents or copy standard information as the basis of the technical data, hand drawn mark-ups of the original project drawings shall not be acceptable. Failure to provide a complete set of "contractor prepared" installation drawings at the time of submittal shall result in all submittals being returned for resubmission.
2. Provide a complete set of "contractor prepared" installation drawings. Drawings at the minimum shall consist of all floor plans indicating all passive and active electronic component locations, field devices, device identifications, distribution racks, patch panels, control panels, auxiliary control panels, power supplies, conduits, cable trays, and cabling distribution, as well as all 120-volt electrical circuit locations and designations.
 - a. Drawings shall be made at 1/8" = 1'-0" scale. Drawings shall include at the minimum the following:
 - 1) Detailed equipment layouts for all communications rooms. Coordinate all room layouts with affected trades.
 - 2) Floor plan drawings showing locations of all equipment, devices, equipment cabinets and/or rack locations. Identify type and sizes of all equipment cabinets and/or racks.
 - 3) All cable tray layouts, and conduit routing of all conduits 2 inches in diameter or greater.
 - 4) All equipment rack layouts showing locations of all rack mounted equipment items.
 - 5) System riser diagrams and single line drawings, showing detailed connections for all parts of the system, including wire numbers, terminal block numbers and layouts, and other designations and codings (point-to-point wiring diagrams). System performance measurements shall be documented as specified.
 - 6) Equipment wattage for each location and estimated BTU production.
 - 7) Detailed equipment layouts for all equipment consoles. Indicate all equipment locations, power connections, and installation details.
 - 8) All equipment mounting hardware/brackets and installation details, identify type size, load capacities of all mounting hardware/brackets; include all mounting and installation details, all space requirements.
 - 9) Outline drawings of all equipment cabinets/racks showing the relative position of all major components, all-wiring and grounding terminations. Include all panel, cabinet and/or rack dimensions.
 - 10) Point-to-point wiring diagrams for all cabling. Include all cable drop identification at edge device and at termination equipment. Include complete wiring termination schedules.

- 11) All grounding and bonding termination points
 - 12) All electrical circuit numbers and distribution panel locations.
3. Provide a complete termination schedule of all communications device drop/outlet locations. Indicate on the installation drawings all device drops/outlets' unique identification which shall correspond with schedule and drawings.
 4. All drawings shall be prepared using an AutoCAD- or REVIT-based program; hand drawn mark-ups of the original Contract Drawings shall not be acceptable. Failure to provide a complete set of "contractor-prepared" shop drawings at the time of submittal shall result in all submittals being returned for resubmission.
- C. Equipment Submittals:
1. Sufficient information, clearly presented, shall be included to determine compliance with drawings and specifications.
 - a. Include all equipment data sheets pertinent to equipment provided. All data sheets shall be highlighted and annotated indicating specific equipment and options supplied. Failure to provide the proper annotation of all equipment shall result in submittals being returned for resubmission.
 2. Submit complete technical data necessary to evaluate the material and equipment. Include a complete technical specification for the submitted equipment, noting differences and adherence to this Section. Failure to provide the required data will result in all submittals being returned for resubmission.
 3. Submit performance data, equipment ratings, cable requirements, control sequences, GUI based control panels, programming matrices, logic diagrams and all other descriptive data necessary to describe the installation and operations of the system being provided. Failure to provide the required data will result in all submittals being returned for resubmission.
 4. Parts list, which shall include those replacement parts recommended by the equipment manufacturer, quantity of parts, current price, and availability of each part.
- D. Maintenance and Operation Manuals: Submit in accordance with all requirements of Division 01 specification sections and as herein specified.
1. Maintenance and Operation Manuals: Submit as required for systems and equipment specified in the technical sections. Furnish four copies, bound in hardback binders, (manufacturer's standard binders) or an approved equivalent. Furnish one complete manual as specified in the technical section but in no case later than prior to performance of systems or equipment test and furnish the remaining manuals prior to contract completion.
 2. Inscribe the following identification on the cover: the words "Maintenance and Operations Manual", include the name and location of the system, equipment, building, name of Contractor, and contract number. Include in the manual the names, addresses, and telephone numbers of each subcontractor installing the system or equipment and the local representatives for the system or equipment.
 3. Provide a "Table of Contents" and assemble the manual to conform to the table of contents, with tab sheets placed before instructions covering the subject. The

- instructions shall be legible and easily read, with large sheets of drawings folded in.
4. Furnish (1) copy of all Maintenance and Operation Manuals in PDF format on DVD media or flash drive.
 5. The manuals shall include:
 - a. Internal and interconnecting wiring and control diagrams with data to explain detailed operation and control of the equipment.
 - b. A control sequence describing start-up, operation, and shutdown.
 - c. Description of the function of each principal item of equipment.
 - d. Installation and maintenance instructions.
 - e. Safety precautions.
 - f. Diagrams and illustrations.
 - g. Testing methods.
 - h. Performance data.
 - i. Pictorial "exploded" parts list with part numbers. Emphasis shall be placed on the use of special tools and instruments. The list shall indicate sources of supply, recommended spare parts, and name of servicing organization.
 - j. Appendix; list qualified permanent servicing organizations for support of the equipment, including addresses and certified qualifications.
 6. Approvals will be based on complete submission of manuals together with shop drawings.
 7. After approval and prior to installation, furnish CCNY Project Manager and with one sample of each of the following:

1.06 QUALITY ASSURANCE

- A. Integrator Qualifications: The projects' Information Communications Technology Integrator (ICTI) shall be an accredited and authorized distributor of the appropriate equipment manufacturer and shall be fully certified in the installation, testing and programming of all equipment being provided.
 1. The CONTRACTOR integrator shall be capable of providing documented successful work experience of at least three (3) facilities of equivalent size and technical requirements utilizing the proposed equipment being provided. The system integrator shall have on staff a minimum of one full time individual that holds a current RCDD registration.
 - a. All information technology system work shall be certified in writing to CCNY Project Manager and by the on staff RCDD professional asserting that all communications network system shop drawings and structured cabling is in conformance with all appropriate NEC requirements, TIA standards, and all related specification sections.
 2. Cable Installer Qualifications: The cable installer shall demonstrate not less than three (3) years' experience in the installation of structured cabling systems and shall have on staff a minimum of one full time member that holds a current BICSI level II installer credential.
 - a. NOTE: The installation of all communications cabling shall be under the direct supervision of a current BICSI level II installer who shall be knowledgeable in the following technical applications:

- 1) The Routing and installation of shielded, unshielded, twisted pair, coaxial and fiber optic cables.
 - 2) Bonding and grounding of cable tray and equipment racks.
 - 3) Fusion splicing of fiber optic cabling.
 - 4) Testing copper conductors for electrical continuity.
 - 5) Testing and Certifying of UTP structured cabling for attenuation and worst case near end cross talk.
 - 6) Testing and Certifying of ALL fiber optic cabling employing an Optical Time Domain Reflectometer (OTDR) in accordance with TIA protocols.
 - 7) Testing and Certifying of coaxial cable networks for RF leakage
 - 8) Termination, connection, and testing of shielded and un- shielded twisted pair cable, coaxial cabling, and fiber optic cabling on all specified connectors, electrical protection blocks, termination blocks, and patch panels.
 - 9) Generally accepted industry standards, as well as manufacturers written installation instructions, will be used for in-process quality control and final acceptance of the work installation.
3. CCNY Project Manager reserves the right to require the Contractor to submit a list of installations where the products have been in operation before approval
 - a. Experience shall be defined as the completion of the specific system being provided, with that system being successfully operated by CCNY Project Manager for its intended purpose for at least three (3) years.
 - b. In addition to the above “Experience” shall also be defined as the completion of modifications and renovations to any associated system being provided in any existing occupied facility of this size and magnitude.
 - c. For each facility submit the following:
 - 1) Name and location of facility
 - 2) Date of Occupancy or beneficial use by CCNY
 - 3) CCNY’s representative contact and telephone number
 - 4) Contractor contact and telephone number
 - 5) Provide information on the installed locations with operational equipment
 - 6) Registration number and expiration date of RCDD professional
 - 7) Registration number and expiration date of Level II installer.
4. Service Qualifications: The ITS integrator shall be a permanent service organization maintained and/or trained by the product manufacturer on the products being provided for this project.
 - a. The integrator shall be (where required) properly licensed by the governing municipality to provide the services and work for the specific system being installed. In addition, all integrators shall be capable of providing full service for the entire warranty period within an 8-hour response time upon notification of a service emergency.
- B. Manufacturer’s Qualifications: The manufacturer shall regularly and presently produce, as one of the manufacturer's principal products, the equipment and materials specified for this project, and shall have manufactured the items for at least three years.
 1. Product Qualification: The Manufacturer's product shall have been in satisfactory operation, on three installations of similar size and type as this project, for approximately three years. CCNY reserves the right to require the Contractor to submit a list of installations where the products have been in operation for the specified period

of time prior to approval of shop drawings.

- a. The manufacturers shall submit the appropriate documentation certifying that the project integrator is a qualified service provider of all manufacturers' products being provided for this project.

1.07 DELIVERY, STORAGE AND HANDLING

- A. Refer to specific related specification sections for additional information.

1.08 RECORD DOCUMENTS

- A. In addition to all general provisions of the Contract, including but not limited to all; General and Supplementary Conditions, Division 01 Specification Sections include the following project requirements;
 - 1. Provide complete set of finalized copies of record documents prior to final acceptance of the project by CCNY and in accordance with all requirements of Division 01 specification sections. At the minimum, the record documents shall contain all information, data, and drawings as described in Chapter 1.4 "Submittals" of this specification section as well as all shop drawing requirements of related specification sections.
 - a. As-built documents shall be submitted in both paper and electronic media formats in the quantities as specified by Division 01 specification requirements.
 - 1) All electronic record drawings shall be prepared and submitted utilizing an AutoCAD- or REVIT-based program as manufactured by Autodesk. Where electronic documents are prepared using other than an AutoCAD or REVIT program manufactured by Autodesk, the Contractor shall provide to CCNY Project Manager the necessary software to electronically view the submitted documents.
 - 2) All electronic data sheets, control sequences, programming matrices and other descriptive data shall be provided in PDF formatted documents.
 - 3) Copies of all current system programming and associated software shall be provided on downloadable media formatted for the use in restoration all system operations and functionality in the event of a catastrophic failure.

1.09 OPERATION AND MAINTENANCE

- A. Refer to specific related specification sections for additional information.

1.10 SOFTWARE AGREEMENT

- A. Included as part of the scope of work for this project to CCNY shall retain the ownership and access rights of ALL system programs and software associated with all systems installed and/or modified as part of this project.
 - 1. The Contractor shall provide CCNY Project Manager complete copies of all current software programming and software licenses related to the operation of each system

prior to final acceptance of the related Contract scopes of work.

- a. All programming shall include but not be limited to all device identifications, device descriptions, Programming Logic Matrices, all program access level passwords as well as all function and sub-function routines.
 2. Programming and software copies shall be provided to CCNY Project Manager and on DVD digital formatted media or flash drive. In addition, the Contractor shall provide a complete hard copy printout of all system programming and shall be included as part of closeout documentation for review by CCNY Project Manager.
- B. Software and firmware upgrade provisions shall be included as part of this specification requirement and shall include the automatic upgrades as required to maintain all software and firmware to the manufacturers most current revision on all system components installed and or modified as part of this project for duration of the warranty period. This upgrade policy shall require the Contractor to install, test, and certify all software and firmware upgrades that become available from manufacturer for a period of one year from date of final acceptance to the expiration of the warranty.
1. Upgrading of software shall include all revised/new software, labor, testing certification as well as all licenses, software and all programming copies as described in Chapter 1.7 of this section associated with the installation of all revised software.
 2. These updates shall be accomplished in a timely manner, fully coordinated with the system operators, and incorporated into the operations/maintenance and software documentation manuals.
 - a. One (1) scheduled final update shall be provided near the end of the warranty period, at which time the Contractor shall install and validate the latest released version of the Manufacturer's software and firmware for all systems installed and/or modified for this project.
 - b. All software changes shall be recorded in a log maintained in the unit control. An electronic copy of the most current software update shall be maintained within the log.
 - 1) At a minimum, the Contractor shall provide a description of the modification, when the modification occurred, and name and contact information of the individual performing the modification. The log shall be maintained in a white 3 ring binder and the cover marked "Software Change Log."
 3. Provide not less than thirty days' notice to CCNY Project Manager and to allow scheduling and access to system and to allow CCNY and to upgrade computer equipment if necessary.

1.11 EXTRA MATERIAL

- A. In addition to all general provisions of the Contract, including but not limited to all; General and Supplementary Conditions, Division 01 Specification Sections refer to related specification sections "Extra Material" for specific requirements.

- B. All Extra materials shall be provided at the time of final acceptance of the project and a signed packing list shall be obtained at the time of delivery. At no time is the Contractor to use the extra materials provided for this project to replace malfunctioning or damaged equipment and or components.

PART 2 – PRODUCTS

2.01 MANUFACTURED PRODUCTS

- A. Materials and equipment furnished shall be of current production by manufacturers regularly engaged in the manufacture of such items, that meet and/or exceed the specified performance and features of the equipment and/or systems and for which replacement parts shall be readily available to the system integrator and/or using agency.
1. When more than one unit, device, or component of the same class of equipment is required, such units, devices, or components shall be the product of a single manufacturer.
 2. Acceptable manufacturers for each system shall be as specified and shall be provided in full compliance with the requirements of this and all related specification sections and contract drawings.
 - a. Manufacturers listed as acceptable shall not negate the Contractors' responsibility for providing all equipment, devices, components, and/or systems, in accordance with all functions and performance requirements of the Contract Documents.
 - b. Where manufacturer and/or manufacturer model numbers reference specific system components in the related specification sections, it is to establish the performance requirements and quality of the systems and components only.
 - 1) It is in no way an inference that the referenced model numbers are the manufacturer's current product and are the only acceptable components for this project unless specifically referenced as "no substitutions."
 - c. The Contractor shall provide the manufacturers' most current product that shall meet and/or exceed the specified performance and features of the equipment and/or systems.
 - d. Equivalent UL- listed equipment may be substituted for the approved manufacturers unless stipulated by other specification sections as "No Substitutions." All substitutions shall be submitted for approval by CCNY Project Manager and in accordance with all requirements of Division 01 specification sections and Chapter 1.4 "Submittals" chapter of this specification section.
 - 1) Where systems and/or components are referenced as "no substitutions" the specific system and/or components shall be provided.
 - 2) All substitutions shall comply with all requirements as specified above and all system performance standards shall be maintained.
 - 3) The Contractor shall stipulate the following information impacted by such a substitution.
 - a) Any and all extensions in time impacted by the substitution.
 - b) Any changes to the structural elements to the project

- c) Differences in operation and/or performance from intended system criteria.
- 4) Failure to provide the required substitution information shall result in “without consideration” the immediate rejection of the substituted equipment and/or systems.

B. Equipment Assemblies and Components:

- 1. Components of an assembled unit need not be products of the same manufacturer.
 - a. Manufacturers of equipment assemblies, which include components made by others, shall assume complete responsibility for the final assembled unit.
 - b. Components shall be compatible with each other and with the total assembly for the intended service.
 - c. Constituent parts which are similar shall be the product of a single manufacturer.
 - d. Factory wiring shall be identified on the equipment being furnished and on all wiring diagrams.

C. Compatibility and Interoperability of System Components and Devices

- 1. Where multiple components, devices, and/or systems are intended to be interconnected and components of a complete system in accordance with any related specification sections, it shall be the Contractor’s responsibility to verify interoperability and compatibility of said components, devices, and/or systems in full conformance to the specified performance criteria prior to the submission of shop drawings.
- 2. Where specified devices are found to be incompatible or incapable of performing as specified in a seamless manner, the Contractor shall notify CCNY Project Manager and in writing prior to submission of shop drawings. Failure to properly identify such functional discrepancies shall not relieve the Contractor from providing a complete and fully functional system in accordance with the requirements of all related specification sections.

D. Where Factory or Off-Premises Testing of any equipment, product or assembly is recommended by the product manufacturer or where specified as part of this section and/or any related specification section:

- 1. CCNY Project Manager, shall have the option of witnessing all factory tests. The Contractor shall notify CCNY Project Manager at a minimum of thirty (30) working days prior to the performance of any factory or off-premises tests.
 - a. Where the factory or assembly point for all off-premises testing is not within two (2) hours driving time from the project location, the system integrator shall include as part of this project all per diem costs (travel, meals and lodging) for a minimum of two representatives from CCNY and to witness all testing.
- 2. Provide four (4) copies of certified test reports containing all preliminary test data and testing procedures shall be furnished to CCNY Project Manager prior to any final testing and not more than ninety (90) days after completion of any tests.
- 3. When equipment, product, or assembly fails to meet any factory or off-premises tests, retesting of equipment, product, or assembly shall be mandated, the manufacturer/integrator shall be liable for all additional expenses, including all expenses incurred by CCNY for witnessing the retesting of any equipment, product, or assembly.

PART 3 – EXECUTION

3.1 COORDINATION

- A. Coordinate with all trades at the time of shop drawing submission detailing all space and/or room conditions. The Contractor shall coordinate with the appropriate trade all conditions impacting the installation of any system including but not limited to all equipment locations, ceilings, lighting fixtures, fire protection piping, and ductwork layouts to the satisfaction of all concerned trades, subject to final review by CCNY Project Manager.
1. Coordinate exact location of all desktop/counter mounted equipment with CCNY Project Manager, as well as all affected trades and tenants prior to the installation of any equipment and/or cabling.
 2. Coordinate exact location(s) of all ceiling mounted cable, conduits, equipment, and/or devices with all Owner plans, reflected ceiling plans and affected trades prior to installation.
 3. Equipment installations requiring coordination with other trades the Contractor shall provide all templates, backboxes and equipment anchor bolts for mounting or flush mounting preparation, (e.g. pedestals or other devices requiring mounting on walls, concrete pads or other materials). Coordinate delivery of templates and equipment anchor bolts to preclude any delay in the construction schedule or the work of the affected trade.
 4. If installation of equipment, raceways, cable trays, J-hooks and/or conduit is performed prior to coordination with other trades, which interferes with work of other trades or operation and maintenance of the facility, make necessary changes to correct the condition at no additional cost to CCNY.
- B. Prior to final programming of all systems review with CCNY Project Manager and all system features, functions, system operations and related operational programming for all systems provided.
- C. Provide coordination with all system integrators and trades for the proper installation of all equipment, components, and all integration requirements in order to provide fully operational systems in accordance with all applicable specification sections.
- D. Contractor shall maintain a complete set of current and up to date shop drawings and equipment submissions at the job site at all times. Shop drawings and all other submissions shall be made available to CCNY Project Manager upon request.

3.2 EQUIPMENT PROTECTION

- A. Protect all materials, equipment, devices, or components permanently installed and/or stored on the job site. Protect all materials, equipment, cabling, devices, or components during construction and after installation. Provide appropriate protection of all materials, equipment, components, and/or devices until time of substantial completion. All materials, equipment, components and/or devices shall be protected during shipment and storage against any physical damage, dirt, moisture, cold, snow, wind or rain:
1. During installation, enclosures, racks/cabinets, equipment, controls, controllers, circuit protective devices, and other like items, shall be protected against entry of any foreign matter; and shall be vacuum cleaned both inside and outside before testing and operating

- and repainting if required.
- 2. Any materials, equipment, components and/or devices, stored on site, which have been deemed by CCNY Project Manager to exhibit any indications of damage or exposure dust or moisture shall not be installed and shall returned to the source of supply for immediate replacement.
 - a. The use of spare parts or the return of defective equipment for repair to mitigate the damage of defective materials, equipment, components, and/or devices shall not be acceptable. All materials, equipment, components, and/or devices shall be new and unused until final acceptance by the Design Professional.
- 3. Provide and apply protective material immediately upon receiving the products and maintain throughout the construction process.
 - a. Painted surfaces shall be protected with factory installed removable heavy kraft paper, sheet vinyl or equal.
 - b. Any damaged paint on equipment and materials shall be refinished with the same quality of paint and workmanship as used by the manufacturer so repaired area is not obvious or detectable.
- 4. Failure to properly protect all materials, equipment, components and/or devices prior to final acceptance shall constitute sufficient cause for rejection of materials, equipment, components and/or devices should any defects, damage or degradation in performance is observed.
- B. Seismic Performance: The Contractor shall furnish and install all equipment bracing, and anchoring rated for the seismic zone of the geographical area in which the project resides, and shall withstand the effects of earthquake motion and wind forces in accordance with the current editions of the IBC and ASCE/SEI 7. Refer to Division 01 and Division 26 – Hangers and Supports for additional seismic information and requirements.
 - 1. Equipment shall include, but not be limited to, racks/cabinets, video monitors, TV's, cable trays, conduits, junction boxes, and all associated appurtenances.
- C. Immediately replace all malfunctioning materials, equipment, components, and/or devices with new unused products up until the time CCNY issues final acceptance of the system. The returning of any malfunctioning equipment, devices, and/or components to the manufacturer for repair and then reinstallation at the project site shall not be acceptable.
 - 1. All replacement materials, equipment, components, and/or devices shall be factory new and not obtained from the Project's spare parts inventory or use factory recycled products unless expressly identified by Contractor prior to replacement and approved beforehand by CCNY Project Manager .

3.3 WORK PERFORMANCE

- A. Installation, final termination, testing, start-up and commissioning of all systems, system components and cabling infrastructures shall be under the direct supervision of the appropriate system integrator. The integrator shall be an accredited and authorized distributor of the appropriate equipment manufacturer and shall be fully certified in the installation, testing,

commissioning, and programming of all equipment, devices, components, and/or systems being provided as part of this project.

- B. Job site safety and worker safety is the responsibility of the Contractor. Ensure that safe access and egress from all work areas is maintained during movement and installation of materials. Clean up all debris generated by installation activities. Keep all communications equipment rooms free of debris at all times.
- C. Pre-installation Conferences: Include provisions to attend all pre- installation conferences at Project site in compliance with all requirements in Division 01 specification section and as herein specified. Review methods and procedures related to installation and operations of all communications systems, including, but not limited to, the following:
 - 1. Inspect and discuss electrical and equipment roughing-in related to all communications systems as well as other preparatory work required to be performed by other trades.
 - 2. Review and discuss all work, equipment deliveries, installation procedures, and related scopes as required to conform to the phased construction schedule.
 - 3. Review sequence of operations for each type of system, control, cabling and/or integration to any systems and/or equipment provided by other trades
 - 4. Review and finalize construction schedule and verify availability of materials, installation personnel, equipment, and any preparatory work by other trades needed to make progress and avoid delays.
 - 5. Review required start-up, testing, commissioning, and certifying procedures to be employed for each system and any impacts to other trades.
- D. For work on existing facilities, arrange, phase, and perform work to assure the operation of all communications systems for other buildings and contiguous spaces at all times. Refer to Division 01 specification section for additional information.
- E. All new work shall be installed and connected to existing work neatly and carefully. Disturbed or damaged work shall be replaced or repaired to its prior conditions, as required by Division 01 specification sections.
- F. Coordinate the installation of all cabling, conduits/raceways and cable trays and equipment with applicable trades to ensure proper operation and function of all integrated systems in accordance with all related specification sections. Refer to Division 01 specification section for additional project coordination requirements.
 - 1. Coordinate with all trades at the time of shop drawing submission detailing all space and/or room conditions. The Contractor shall coordinate with the appropriate trade all conditions impacting the installation of any system, conduit, or cable tray including but not limited to all equipment locations, site conditions, ceilings, lighting fixtures, fire protection piping, and ductwork layouts to the satisfaction of all concerned trades, subject to final review by CCNY Project Manager and .
 - a. Coordinate exact location of all desktop/counter/wall mounted equipment with CCNY Project Manager and all affected trades prior to the installation of any equipment and/or cabling.
 - b. Coordinate exact location(s) of all cable, conduits, equipment and/or devices installations with all Ownerural plans, site plans, reflected ceiling plans and affected trades prior to installation.

- 1) Equipment installations requiring coordination with other trades the Contractor shall provide all templates, back- boxes and equipment anchor bolts for mounting or flush mounting preparation, (e.g. pedestals or other devices requiring mounting on walls, concrete pads or other materials). Coordinate delivery of templates and equipment anchor bolts to preclude any delay in the construction schedule or the work of the affected trade.
 - c. If installation of equipment, devices, cabling, raceways, cable trays and/or conduit is performed prior to coordination with other trades, which interferes with work of other trades or operation and maintenance of the facility, make necessary changes to correct the condition at no additional cost to CCNY .
 - d. Prior to the final programming of any systems review with CCNY Project Manager all system features, functions, system operations, network mapping, system integrated responses and all related programming as required for the proper operation of the respective communications systems.
- G. The Contractor shall maintain a complete set of current and up to date set of shop drawings and equipment submissions at the job site at all times. The Shop drawings and all other submissions shall be marked up to reflect all as-built conditions and shall be made available for review by CCNY Project Manager and upon request.

3.4 EQUIPMENT INSTALLATION

- A. All system equipment installations shall be in accordance with good Ownering practices, NEC, local building codes, and all manufacturer's requirements. Cable terminations at all equipment locations shall comply with all state and local electrical codes. All wiring shall test free from all grounds, shorts, stray voltages, and EMI.
- B. Follow manufacturers' instructions for installing, components and adjusting all equipment and cabling. Submit two (2) copies of such instructions to CCNY Project Manager and before installing any equipment. Provide an additional copy of such instructions at the equipment during any work on the equipment. Where no instructions are included with the equipment, follow accepted industry practices and workmanlike installation standards.
- C. Equipment location shall be as close as practical to locations as indicated on the contract drawings.
1. Provide all equipment clearances in accordance with NEC requirements. Arrange equipment to facilitate unrestricted access for maintenance and service around all equipment, components, and/or cable terminations.
- D. Inaccessible Equipment:
1. Where CCNY Project Manager and determines that the Contractor has installed equipment not conveniently accessible for operation and maintenance, the equipment shall be removed and reinstalled as directed at no additional cost to the project.
 - a. "Conveniently accessible" is defined as being capable of being reached without the use of ladders, or without climbing or crawling under or over obstacles such as, but not limited to, motors, pumps, belt guards, transformers, piping, ductwork,

conduit and raceways.

3.5 COMMUNICATIONS CABLING REQUIREMENTS

A. Cabling shall be sized to support the appropriate communication system. All communications cable installations shall be in accordance with good Owner practices as established by the TIA, IEEE and the NEC. All cabling shall meet all state and local electrical codes. All cabling shall test free from all grounds, shorts, and EMI.

1. Contractor shall have the option to combine all cable home runs and conductors of same type and voltage “class” in accordance with NEC requirements unless specified elsewhere. Size all conduits and cable trays to meet the required fill ratios and install all conductors in accordance with NEC requirements and manufacturers recommendations.
 - a. All communications cabling located above accessible suspended ceilings shall be installed in conduit and routed to nearest communication space cable tray.
 - b. Cabling shall be installed in dedicated conduits per discipline.
 - c. No exposed cabling will be acceptable in finished or occupied spaces of the facility without approval by CCNY Project Manager and .
 - d. Any communications system cabling installed exterior to the building and/or all cabling being routed from the facility to any remote location external to the project location shall utilize OSP rated fiber optic cable installed in conduit system.
2. Do not install bruised, kinked, scored, deformed, abraded, or otherwise damaged cable. Do not splice cable between indicated terminations, taps, or junction points. Remove and discard cable where damaged during installation and replace it with new cable.
3. Ensure that all communications cabling supports (conduits, support grips, cable trays, and cable termination panels) are fully installed before proceeding with cable installation.
4. At no time shall any cables be installed and left unsupported, nor shall cables be tie-wrapped to any other supporting structure in lieu of specified cable supports. Do not tie-wrap or permanently affix cable bundles to approved cable supports.
 - a. NOTE: Cable bundles shall not be cinched too tightly; all cable ties shall be hook-and-loop (“Velcro”) tie-wraps only.
5. The Contractor shall not permit any communications cabling to lie unprotected on the floor at any time. If cables must be left on any floor, protect the cables so that they may not be walked on or have any material or equipment placed or rolled on top. Replace all damaged cables from demarcation to termination point; no splicing of damaged cables shall be permitted.
6. Maintain manufacturers recommended minimum bend radiuses of all cabling. Do not stretch, stress, tightly coil, bend, or crimp cables. The Contractor shall keep all cabling out of the way of other trades during staging of any work. The Contractor at the Contractor’s expense will replace all severely stressed or damaged cables, equipment, and materials as determined by CCNY Project Manager .

B. Unshielded Twisted Pair (UTP) Cable

1. All TCP/IP-based copper network cabling shall be Category-6 rated and concealed above suspended ceilings, installed in dedicated conduits supported to the building structure. All cabling conduits shall not contain any AC carrying conductors or non-associated communications network cables.
2. Refer to related specification sections for additional information related to Category 6 cabling types, and testing requirements.
 - a. All horizontal data drops shall be terminated on Category-6 patch panels installed on the 19" equipment racks/cabinets.
 - b. All data drops and backbone cabling installed above inaccessible ceiling spaces or areas containing no ceiling shall be installed in dedicated conduits. In no case shall cable be supported on ceiling tiles, T-bars, or tie- wrapped to any conduit or pipes.
 - 1) Category-6 cables shall not be cinched too tightly; all cable bundles at patch panel locations and in the field, shall be VELCRO type tie-wraps only. Plastic wire ties shall not be accepted on any Category-6 cabling.
 - 2) Each network drop shall be a dedicated Category-6 cable and shall not exceed a maximum distance of 295 feet from the associated communications room termination panel to the furthestmost data port for that network drop.
 - 3) Cable Support: Mechanically secure to the permanent building structure where not installed in raceway. Provide "J" hooks at regular intervals no greater than 5' apart depending appropriate to the cable bundle and size.
 - 4) Communications drops installed inside walls shall be installed in dedicated conduit terminating in a junction box at the jack location or at cable tray.
 - 5) Cable and wiring shall not lay loose on ceiling tiles or grids. Cable must be supported in all areas. Bridle rings or tie-wrapped supporting methods are not acceptable. Independent dedicated support must be used between conduit stub-ups and cable trays.
 - 6) Install all cabling parallel and perpendicular to building lines and follow building structure. Use cable support equipment/hardware recommended by the manufacturer and/or as herein specified.
 - 7) Provide all terminations, cross-connects, wire management, surge protectors, etc. for a complete and operational system.
 - 8) Any data communications system cabling installed exterior to the building and/or being routed from the facility to any remote location external to the project location shall be outside rated (OSP) category-6 or fiber optic cable as required.
 - c. Ensure that all communications systems cabling supports (conduits, support grips, cable trays, and termination patch panels) are fully installed before proceeding with cable installation.

C. Fiber Optic Cabling

1. All fiber optic cabling shall be provided to meet the communications requirements for all network communications systems, at the minimum all fiber optic cabling shall be sized in accordance with the project documents. All fiber optic cabling shall be a minimum of 8.3/125µm OS2 type cabling. Multi-mode fiber optic cabling shall not be acceptable, regardless of length or application.
 - a. All fiber optic cabling shall be a continuous segment from demarcation to termination point and shall be installed above accessible ceilings wherever possible.

All fiber optic cabling shall be plenum rated armored type cabling installed in cable trays, or plenum rated non-armored type fiber optic cabling installed in dedicated conduits in accordance with all requirements of the Contract Documents.

- 1) Installation of all fiber optic cabling shall be in accordance with all guidelines established by the product manufacturer and all referenced industry standards.
 - 2) Special care shall be taken to avoid damage to the cable. While under pulling tension, the cable shall not be bent into a curve with a radius of less than twenty (20) times the cable diameter, or no less than manufacturers minimum.
 - 3) Pulling tension shall not exceed manufacturer's recommended maximum tensile load. Contractor shall utilize a winch with tension control or a "break-away" link designed to break away at or below the recommended maximum pulling tension.
 - 4) Use methods and lubricating compounds on cables and wires to prevent damage to material and products during roughing-in. Provide compounds that are not injurious to the cable and wire jackets that do not harden or become adhesive.
2. All exterior fiber optic cabling shall be rated for exterior outside plant (OSP) applications and installed in dedicated inner-duct conduit system and routed in the exterior conduit ducts in accordance with the requirements of the contract documents. Outside plant cable shall not extend more than fifty (50) feet into a building interior before terminating and transitioning to standard indoor fiber optic cable.
 3. Fiber optic cabling shall be provided as the primary media for any exterior network components installed remote to building, as well as all network communications links for all backbone communications.
 - a. The Contractor shall be responsible for the determination of actual segment lengths. Actual quantities will be calculated by the routing as indicated on the contract drawings and/or in the field based on existing conditions.
 4. All splices shall be fusion type. Mechanical splices shall not be acceptable.
 5. Conductive fiber optic cable shall be provided for all exterior system components requiring control capabilities in the support of their operation. Include all necessary surge protection and grounding for conductive cabling.
 6. Refer to related specification sections for additional information related to fiber optic cabling types, sizes and testing requirements.

D. Environmental Conditions:

1. Systems, components, devices materials, and equipment shall be capable of withstanding the environmental conditions of the space without mechanical or electrical damage or degradation of operating capabilities or performance.
 - a. Interior, Controlled Environment: System components, installed in temperature-controlled interior environments shall be rated for continuous operation in ambient conditions of 2 to 50 deg C (36 to 122 deg F) dry bulb and 20 to 90 percent relative humidity, non-condensing and shall utilize NEMA 250, Type 1 enclosures.
 - b. Interior, Uncontrolled Environment: System components installed in non-temperature-controlled interior environments shall be rated for continuous operation in ambient conditions of -18 to 50 deg C (0 to 122 deg F) dry bulb and 20 to 90 percent relative humidity, non-condensing and shall be installed in NEMA 250, Type 4X enclosures.

- c. Exterior Environment: System components, conduits and back-boxes installed in locations exposed to weather shall be rated for continuous operation in ambient conditions of -34 to 50 deg C (-30 to 122 deg F) dry bulb and 20 to 90 percent relative humidity, condensing. Rated for continuous operation where exposed to rain as specified in NEMA 250, winds up to 137 km/h (85 mph) and snow cover up to 610 mm (24 in) thick shall utilize NEMA 250, Type 4X enclosures.
- d. Hazardous Environment: System components, conduits and back-boxes located in areas where fire or explosion hazards may exist because of flammable gases or vapors, flammable liquids, combustible dust, or ignitable fibers shall be rated, listed, and installed according to NFPA 70.
- e. Corrosive Environment: System components, conduits, and back-boxes subjected to corrosive fumes, vapors, and wind-driven salt spray in coastal zones, shall utilize NEMA 250, Type 4X enclosures.
- f. Submersible Environment: System components, conduits and back-boxes subjected to prolonged submersion in water, shall utilize NEMA 250, Type 6P enclosures.
- g. Areas where equipment and devices may be subject to damage by the general population shall be installed in vandal resistant enclosures; all fire alarm system and related devices shall be provided with wire guards.
- h. Console: All console equipment shall, unless noted otherwise, be rated for continuous operation under ambient environmental conditions of 15.6 to 29.4 deg C (60 to 85 deg F) and a relative humidity of 20 to 80 percent.

E. Conduits/Raceway/Cable Trays:

- 1. Provide conduit and raceway systems for all communications networks as indicated below. Refer to all related specification sections for additional conduit and raceway information.
 - a. All disciplines shall have a properly sized, dedicated conduit system from end device to the communications space in which it terminates.
 - b. Vertical Wire runway shall be installed in dedicated conduits and shall be supported any /all risers between floors in closets or accessible locations; in no case shall any cable risers be unsupported.
 - c. Cables entering all communications equipment rooms shall be supported with Cable tray from entrance to rack/cabinet location as indicated on the contract drawings and/or herein specified.
- 2. All conduits/raceways shall be concealed and shall be installed above accessible finished ceilings and/or in walls. Any conduits/raceways installed in areas requiring installation to be exposed, shall be installed as tight as possible to ceilings and at right angles to walls/building lines and shall not obstruct any access hatches, equipment service panels, lighting or other equipment and/or devices. No exposed conduits/raceways shall be installed without prior approval of CCNY Project Manager and .
 - a. Where conduits cannot be concealed above ceilings or in walls and must be installed in finished or occupied areas of the building, all conduits shall be finished wire-mold type raceways or approved equivalent. Finished wire-mold type raceways shall not be installed without prior approval in writing by CCNY Project Manager and .
 - b. Where any equipment and/or junction boxes are installed above non-accessible

finished ceilings, the Contractor shall provide access hatches listed for the intended application. Access hatches shall be located so that service access to the equipment and/or junction boxes is unimpeded.

- 1) Access hatches shall not obstruct any equipment, service panels, lighting equipment, devices, or any Ownerural elements of the ceiling. At the time of submittals, the Contractor shall submit all proposed access hatch locations for review by the Design Professional.
- c. All conduits/raceways shall be supported in accordance with NEC requirements and shall be affixed in such a manner that tampering and/or removal without the use of specialized tools shall be prevented.
- d. All conduits/raceways shall be installed in a manner that prevents tampering or removal when installed in areas exposed to the general population.
 - 1) Provide tamper-resistant installation utilizing “torx with peg” security-fastening devices for all conduits/raceways, equipment, devices and appurtenances in all areas accessible to the general population and/or areas subjected to tampering or vandalism.
- e. Interior raceways shall be a minimum 3/4 inch unless otherwise noted. Exterior raceways shall be a minimum 1 inch. Size all raceways and install conductors in accordance with NEC requirements. Fill ratio shall not exceed 40 percent for indoor raceways or exterior raceways.
 - 1) EMT conduit with compression fittings and/or MC cabling may be utilized in all inaccessible ceiling areas unless otherwise restricted by code.
 - 2) Threaded Rigid metal conduit shall be used on all exterior applications, stub-ups and all interior areas where concealed conduit requirements cannot be met and are exposed to tampering or damage by the general population.
 - a) All areas considered being of high risk due to the nature of the occupancy or the need to protect and maintain the integrity of the cabling shall be installed in rigid threaded conduits.
- f. Conduit expansion couplings shall be furnished and installed in all areas where expansion/contraction of structure may occur in order to couple two sections of a conduit runs to support longitudinal movement. The Contractor shall refer to Owner drawings for exact locations of all building expansion joints.
 - 1) Conduit expansion couplings shall be consistent with the size the conduit being installed, shall be steel electrogalvanized, and shall meet all environmental and seismic conditions.
 - 2) Expansion couplings shall be weatherproof and approved for use indoors or outdoors without an external bonding jumper.
 - 3) Expansion couplings shall be UL Listed and approved for use in wet locations.
 - 4) Expansion couplings shall comply with UL 514B, CSA 22.2 No. 18 3-12, NEMA FB1.
- g. Exterior raceways: PVC schedule 40 conduit at the minimum shall be utilized in all underground applications unless otherwise specified by related specification

sections. The conduit shall be buried at a minimum 36" below grade. Warning flagging tape shall be buried 12" below grade to indicate the conduit routing location. Refer to related specification sections for additional information.

- 1) All exterior conduits larger than 2" in diameter shall be provided with dedicated inner-duct conduit systems, segregated by network type (i.e. security, etc.) and shall include a minimum of one spare empty inner-duct per conduit.
 - 2) The Contractor shall have the option to utilize the same trench/routing location as other utilities. In no case shall any system conduits or duct banks be combined with other electrical utilities without providing the required separation between conduits as necessary to ensure the minimal transmission or conduction of any RF and/or EMI signals.
- h. Outlet Boxes: shall be 4 x 4 x 2-1/8 inches deep with single gang reducer plate where required for all data outlet locations and single gang for wall mounted telephone locations.
- 1) All outlet boxes shall be provided with single or dual gang device mud-rings flush to finished wall as required based on type and configuration of outlet and type of wall construction.
 - 2) Use deep masonry boxes at masonry construction. T-Bar hangers or other appropriate mounting hardware shall be utilized to support boxes mounted in the ceiling.
3. Cable Trays (Communications Rooms): Provide cable trays in all communications rooms and closets for routing horizontal distribution and backbone communications cables. All cable trays shall be constructed of aluminum with two side rails and 9" rung spacing. Cable tray shall be complete with all materials, miscellaneous hardware and all appurtenances required for a complete cable distribution and support system.
- a. All cable tray widths shall be sized according to the total number of cables to be supported within the various trays plus an additional 100% spare capacity for future expansion capability. At the minimum, all cable trays installed in communications rooms and closets shall be a minimum of 24" wide by 4" deep, unless otherwise noted.
 - b. Install cable tray in a manner ensuring that all circuits fully comply with all ANSI/TIA standards.
 - 1) Maintain a minimum clearance of 24" between top of cable tray and ceiling structure or other equipment or raceway.
 - 2) Maintain a minimum clearance of 12" between bottom of cable tray and top ceiling grid or other equipment or raceway.
 - 3) Maintain a minimum clearance of 24" from all conduits or cables used for electrical power distribution.
 - 4) Maintain a minimum clearance of 12" between bottom of cable tray and top of equipment racks and/or cabinets
 - 5) Maintain a minimum clearance of 24" from fluorescent lighting. All Pathways shall cross perpendicular to fluorescent lighting and electrical power cables or conduits.
 - 6) Cable tray supports shall be attached to the structural ceiling or walls with hardware or other installation and support aids specifically designed for the cable tray and designed to support the cable tray's weight and required

- cable weight and volume.
 - 7) Do not attach cable tray supports to ceiling support system or other mechanical support systems.
 - 8) Load span criteria: Install tray supports in accordance with the load criteria of L/240.
 - 9) Cable Trays shall be supported at 6-foot intervals.
 - 10) All Cable trays shall be installed without burrs, sharp edges, or projections, which may damage cable insulation.
 - 11) All lengths or sections of cable tray shall be bonded and grounded in accordance with NEC, TIA, IEEE.
- c. Follow manufacturers' instructions for installing, components and adjusting all equipment and cabling. Submit two (2) copies of such instructions to the CCNY Project Manager before installing any equipment. Provide a copy of such instructions at the equipment during any work on the equipment. Where no instructions are included with the equipment, follow accepted industry practices and workmanlike installation standards.

F. Penetrations of Walls and Floors:

1. All wall/floor penetrations are to be sleeved and fire stopped with approved fire stopping material or sealant as applicable for the type of penetration. Coordinate all cable and conduit penetrations of building with all affected trades. Refer to all related specification sections for additional wall/floor penetration requirements.
 - a. All penetrations of rated walls and floors shall be fire stopped in accordance with the ASTM and NFPA standards. Refer to related specification sections for additional information.
 - b. Floor penetrations shall be sleeved with a minimum sleeve diameter of 4 inches. An additional penetration shall be provided for future use, sleeved, and capped and fire stopped as required.
 - c. Coordinate size of wall penetration with conduit size, number of conductors. Comply with all NEC requirements.
 - d. The fire rating of all penetrated walls, floors, and ceiling structures shall be strictly maintained. All penetrations shall be fire-stopped and sealed by the Contractor.
 - e. Install fire-stopping in open penetrations and in the annular space of penetrations for fire rated barriers.
 - f. Installation of fire-stops shall be performed by an applicator/installer qualified and trained by the manufacturer. Installation shall be performed in strict accordance with manufacturer's detailed installation procedures.
 - g. Installation of all fire-stopping shall be in accordance with fire test reports, fire resistance requirements, acceptable sample installations, manufacturer's recommendations, local fire and building authorities, and applicable codes and shall be installed in a manner acceptable to the CCNY Project Manager.

3.6 ELECTRICAL POWER DISTRIBUTION

- A. All 120/208VAC emergency electrical power shall be provided by this Contractor from the nearest emergency distribution panel as required for the proper operation of all communications systems, devices and/or components.

1. Coordinate CCNY Project Manager prior to connections and/or modifications to the electrical distribution panels. Additional locations requiring electrical power by the specific products and/or integrator selected equipment shall be the responsibility of this Contractor to include as part of this project.
 - a. Primary power for all system controls, sub-control panels, processors, and power supplies shall be configured to switch to emergency backup power sources automatically when primary power is interrupted without degradation of any critical system functions.
 - b. All electrical power shall be hardwired to the panel. System components or panels employing the use of plug-in transformers, extension cords or cheater cords for the connection to electrical power shall not be acceptable.
 - c. If no spare 20A/1P circuits are available for use, the Contractor shall provide a new subpanel adjacent to the existing panel. Remove (3) 20A/1P breakers and replace with a 60A/3P breaker to feed the subpanel.
 - d. Subpanel shall be 60A MLO with 18 circuits. Reconnect the (3) 20A/1P circuits to this new panel. Extend branch wiring as required. The Contractor shall size feeder to subpanel per the national electric code.

3.7 TRANSIENT VOLTAGE SUPPRESSION

- A. Transient Voltage Surge Suppression: All cables and conductors extending beyond building façade, except nonconductive fiber optic cables, which serve as communications, control, or signaling circuits shall be protected against Transient Voltage surges and have Transient Voltage Surge Suppression (TVSS) protection.
 1. The TVSS device shall be UL listed in accordance with Standard TIA 497B installed at each end. Lighting and surge suppression shall be a multi-strike variety and include a fault indicator.
 2. Protection shall be furnished at the equipment and additional triple solid state surge protectors rated for the application on each wire line circuit shall be installed within 914.4 mm (3 ft) of the building cable entrance. Fuses shall not be acceptable for surge protection applications. All inputs and outputs shall be tested in both normal mode and common mode to verify there is no interference at the minimum surge suppression test shall meet the following criteria.
 - a. All system power supplies serving exterior system components or devices shall be provided with the appropriate transient surge suppression protection on both the line side as well as the load side.
 - 1) A 10-microsecond rise time by 1000 microsecond pulse width waveform with a peak voltage of 1500 volts and a peak current of 60 amperes shall be the minimum performance requirements. Provide surge suppression in accordance with all manufacturers requirements.
 - 2) An 8-microsecond rise time by 20-microsecond pulse width waveform with a peak voltage of 1000 volts and a peak current of 500 amperes shall be the minimum performance requirements. Provide surge suppression in accordance with all manufacturers requirements.
 - 3) Maximum series current: 2 AMPS. Provide units manufactured by

Advanced Protection Technologies, model # TE/FA 10B or TE/FA 20B or approved equivalent.

- 4) Operating Temperature and Humidity: -40 to 85 degrees C (-40 to 185 degrees) shall be the minimum performance requirements. Provide surge suppression in accordance with all manufacturers requirements.

3.8 GROUNDING AND BONDING

A. All electronic equipment, conduits, cable trays, racks/cabinets and cable shields shall be properly grounded and bonded in accordance with all requirements of TIA 607-A, NEC 250 and IEEE 1100. Where identified as applicable to the project, all equipment grounding and bonding shall be in accordance with all related specification sections and Motorola R56 Standards and Guidelines for Communications Sites.

1. A Telecommunications Grounding System shall be installed in all communications equipment rooms. Grounding system shall provide equalization of the grounding potentials between the building power system and the telecommunications main grounding bus-bar (TMGB) as well as all telecommunications grounding bus-bars (TGB). Grounding bus-bar shall provide the diversion of electrical transients from the telecommunications cables and to provide a safety ground for all equipment racks/cabinets, conduits, cable trays and cable shields as well as providing the required coupling to cancel and/or reduce transients.
 - a. The TMGB and each TGB shall be provided where indicated on the drawings and shall provide an effective bonding connection to the nearest approved building grounding electrode (e.g., structural steel) as well as to the local power distribution panel grounding system (e.g., ac branch circuit panel bd's equipment grounding busbar).
 - 1) The minimum bonding shall be #6 AWG copper conductor connected to the TMGB and all TGB's. Connections shall be 2-hole NEMA type compression or exothermic welded connections.
2. All grounding connections shall provide the equalization of all grounding potentials between the building power system and the grounding terminations at the communications equipment in order to provide the diversion of electrical transients as well as providing the necessary coupling in order to cancel and/or reduce any voltage transients.
 - a. Equipment Grounding: Metallic structures, equipment racks, cabinets and enclosures as well as all raceways, cable trays, junction boxes, outlet boxes, machine frames, and other conductive items shall be bonded and grounded.
 - b. Duct Banks and Manholes: Provide an insulated equipment grounding conductor in each duct containing any voltage conductors, sized per NEC except that minimum size shall be No. 2 AWG. Bond the equipment grounding conductors to the grounding bus, to all manhole hardware and ground rods, to the cable shielding grounding provisions for all cable splices, terminations and equipment enclosures.
 - c. Metallic Fences equipped with communications equipment: Fences shall be grounded with a ground rod at each fixed gate post and at each corner post.

- 1) Drive ground rods until the top is 300 mm (12 inches) below grade. Attach a No. 4 AWG copper conductor, by exothermic weld to the ground rods and extend underground to the immediate vicinity of fence post. Lace the conductor vertically into 300 mm (12 inches) of fence mesh and fasten by two approved bronze compression fittings, one to bond wire to post and the other to bond wire to fence.
 - 2) Each gate section shall be bonded to its gatepost by a 3 by 25 mm (1/8 by one inch) flexible braided copper strap and ground post clamps. Clamps shall be of the anti- electrolysis type.
3. All connections of grounding conductors to ground rods, bus bars, rebar, structural members, pipes and fences, as well as splices of any ground conductors, shall be made by exothermic welds except where otherwise noted. All connections to bar lugs shall be exothermic weld or compression type connections. Bolted type connection of ground conductors may only be made where terminal lugs or blocks have been furnished and installed in equipment by the manufacturer.
 - a. Equipment grounding conductors shall be insulated stranded copper, except for sizes No. 10 AWG and smaller shall be solid copper. Insulation color shall be continuous green for all equipment grounding conductors, except that wire sizes No. 4 AWG and larger shall be permitted to be identified per the NEC.
 - 1) At the minimum bonding connection shall be a #6 AWG copper conductor. All grounding shall provide an effective bonding connection between the protected equipment to the nearest approved building grounding electrode (structural steel) as well as to the local power distribution panel grounding system (e.g., ac branch circuit panel bd's equipment grounding busbar). All bonding and grounding connections shall be NEMA type compression or exothermic welded connections.
4. Refer to related Division 26 specification sections and drawings for any additional grounding and bonding requirements.

3.9 MAINTENANCE & SERVICE

A. General Requirements

1. The Contractor shall provide all services required and equipment necessary to maintain the all communications systems associated with this project in fully operational state as specified after formal written acceptance of the system.
 - a. Provide all necessary material required for performing scheduled adjustments or other non-scheduled work. Impacts on facility operations shall be minimized when performing scheduled adjustments or other non-scheduled work. Refer to Division 01 specification section for additional information.
 - b. The adjustment and repair of the communications systems shall include all software and firmware up-dates on all computers, CPU's, HMI terminals, devices, communications and data transmission medias' (DTM), facility interface processors, signal transmission equipment and processors.
 - c. Test, inspect, and service each system on a semi-annual basis at six month

intervals during the warranty period from the time of final acceptance. The Contractor shall compare each six-month test results with the test results at the time of final acceptance.

1) The Contractor shall include as part of the semi-annual test the calibration and/or adjustment of any device, component, and/or system that has deviated from the original test results at the time of final acceptance.

d. For each semi-annual maintenance period, provide written notification to CCNY Project Manager of the systems condition before and after service, the exact components that were tested and serviced, and overall status of the system.

B. Personnel

1. Service personnel shall be manufacturer certified in the maintenance, testing, and repair of the type of system and equipment provided for the project. Provide CCNY Project Manager the name of the designated service representative, and of any change in personnel.

a. CCNY Project Manager shall be provided copies of system manufacturer certifications for all designated service representatives.

2. Schedule of all work to be performed during regular working hours, Monday through Friday, excluding federal holidays.

C. Emergency Service

1. CCNY shall initiate service calls whenever the system is not functioning properly. The Contractor shall provide CCNY with an emergency service center telephone number. The emergency service center shall be staffed 24 hours a day 365 days a year. CCNY shall have sole ownership for determining catastrophic and non-catastrophic system failures.

a. For catastrophic system failures, the Contractor shall provide same day eight (8) hour service response with a defect correction time not to exceed sixteen (16) hours from arrival on site. Catastrophic system failures are defined as any system failure that CCNY determines will place the facility(s) at increased risk.

b. For non-catastrophic failures, the Contractor within 1 business day with a defect correction time not to exceed 48 hours from time of notification.

D. Records & Logs

1. The Contractor shall maintain records and logs of each task and organize cumulative records for each component and for the complete system chronologically. A continuous log shall be submitted for all devices. The log shall contain all initial settings, calibration, repair, and programming data. Complete logs shall be maintained and available for inspection on site, demonstrating planned and systematic adjustments and repairs have been accomplished for the system.

E. Work Request

1. The Contractor shall separately record each service call request, as received. The record shall include the serial number identifying the component involved, its location, date and time the call was received, specific nature of trouble, names of service personnel assigned to the task, instructions describing the action taken, the amount and nature of the materials used, and the date and time of commencement and completion.
2. The Contractor shall deliver a record of the work performed within five (5) working days after the work was completed.

F. System Modifications

1. The Contractor shall make any recommendations for system modification in writing to CCNY Project Manager. No system modifications, including operating parameters and control settings, shall be made without prior written approval from the CCNY Project Manager. Any modifications made to the system shall be incorporated into the operation and maintenance manuals and all related documentation.

3.10 WARRANTY

A. Warrant material and workmanship for a period as specified in the Contract Documents and all related specification sections. The warranty period shall commence from the date the Contractor received written notification of Final Acceptance from CCNY. At the minimum, the Contractor shall provide warranty provisions:

1. Warrant the replacement of defective components/materials and/or correct defective work when given notice by CCNY during the warranty period.
 - a. At no time is the Contractor to use the extra materials provided under the scope of this project to replace malfunctioning or damaged equipment and or components. The Contractor shall replace all malfunctioning or damaged equipment and or components with new. The repair and then reinstallation of malfunctioning or damaged equipment shall not be acceptable.
2. Warranty excludes liability for consequential incidental, or special damages due to vandalism, misuse, or acts of god.
3. Onsite warranty response time by qualified technician shall be within 8 hours upon receipt of request from CCNY.
4. Warranty repairs shall be provided to CCNY at no cost. This shall include but not limited to replacement of all defective components/materials, all labor charges, all travel costs and all vehicle charges.
5. Response time shall be 7 days a week / 24 hours a day / 365 days a Year.
6. Provide test, inspection, and service of each system on a semi-annual basis at six month intervals.
7. Contractor must provide verification that they maintain their principle base of operation along with the personnel that will be responsible for providing service within 3 hours driving time to the project site. This tenet of the warranty shall remain in effect for the life of the warranty.
8. All TCP/IP-based communications systems cabling and related appurtenances shall be provided with the manufacturer's 25-year extended warranty in addition to all requirements above.

- B. The Contractor shall, as a condition of final payment, execute a written warranty certifying all contract requirements have been completed according to all requirements of the Contract Documents.
1. All system testing, commissioning, demonstration and training shall be performed prior to final system acceptance. All defects or damages due to faulty materials or workmanship shall be replaced without delay, to the satisfaction of the CCNY Project Manager, at the Contractor's expense.
 - a. The Contractor shall provide written documentation of test results and stating what was done to correct any deficiencies. The first inspection shall occur 90 calendar days after the acceptance date. The last inspection shall occur 30 calendar days prior to the end of the warranty.
 - b. The warranty period shall be extended until the last inspection and associated corrective actions are complete. Where any equipment and/or labor covered by Contractor's or manufacturer's warranty, has been replaced, due to failure, the warranty period for any replaced equipment or restored work shall be reinstated for a period equal to the original warranty period, and commencing with the date of completion of the replacement or restoration work.
 2. In the event any manufacturer customarily provides a warranty period greater than one (1) year, the Contractor's warranty shall be for the same duration for that component.

3.11 FIELD SERVICES

- A. In addition to all testing requirements as specified by Division 01 specification section and all related Division 27 specification sections, testing of all systems, sub-systems and cabling infrastructures shall be provided in accordance with all requirements of this section.
- B. Notify CCNY Project Manager in writing, prior to the closing of any ceilings and ten (10) days advance of testing all system cabling to prevent delays in construction schedules.
1. Test all cabling to confirm that no grounds, shorts, sneak currents, RFI and EMI conditions exist prior to start-up and commissioning of all, components, devices, equipment and/or systems.
 - a. Before requesting a final inspection, the Contractor shall perform a series of end to end installation performance tests. The Contractor shall submit for approval by CCNY Project Manager all test procedures to be employed, test result forms, and timetable for testing all fiber optic and UTP structured copper wiring.
 - b. Acceptance of the simple test procedures discussed below is predicated on the Contractor's use of the recommended products including but not limited to, fiber optic cable, category structured cable, cross-connect blocks, patch panels, and outlet devices specified and adherence to the inspection requirements and practices set forth. Acceptance of the completed installation will be evaluated in the context of each of these factors.
- C. Acceptance of the simple test procedures discussed below is predicated on the Contractor's use of the specified products including but not limited to, all Division 27 systems, sub-systems, system components, fiber optic cable, category structured cable, cross-connect blocks, patch panels, and outlet devices as specified by all related specification sections and installed in accordance the Contract documents, manufacturer's recommended practices and all applicable codes, standards

and industry practices. Acceptance of the completed installation for each system will be evaluated in the context of each of these factors.

D. General

1. Phases of Testing:
2. Factory Acceptance Test (FAT) / Manufacturer's Proof of Concept Test (as applicable)
3. On-Site Performance Verification Testing
4. On-Site Endurance Testing
5. Test Plan/Procedure: The Contractor shall provide six (6) hardcopies and an electronic copy of the test plan/procedures for each testing phase for the review and approval of CCNY Project Manager. The test plan for each phase shall detail the objectives of all tests. The tests shall clearly demonstrate that the system and its components fully comply with the requirements specified herein. The test plan shall be provided at least forty-five (45) days prior to the scheduled start of each test. Test plans shall contain at a minimum:
 - a. Functional procedures including use of any test equipment
 - b. Test equipment is to be identified by manufacturer and model
 - c. Interconnection of test equipment and steps of operation shall be defined
 - d. Test records shall include test equipment serial number, calibration date and calibration certification of test equipment
 - e. Expected results required to comply with specifications
 - f. Traceability matrix referencing specification requirements with specific test procedures
 - g. Record of test results with witness initials or signature and date performed
 - h. Pass or fail evaluation with comments.
 - i. The test procedures shall provide conformity to all specification requirements. Satisfactory completion of the test procedure is necessary as a condition of system acceptance.
 - j. The Contractor's Quality Assurance organization shall review all formal test procedures prepared by the Contractor and deliverable under the contract to assure the tests cover all requirements and that there is a conformity between the conducted test, the test results and specification requirements
 - k. Documentation verification, both interconnects and functionality shall be part of the test. Where documentation is not in accordance with the installed system interconnect and operating procedures, the system shall not be considered accepted until the system and documentation correlate.
 - l. All testing must be witnessed by CCNY Project Manager. The Contractor shall cooperate fully in this regard.
 - m. Test Reports: The Contractor shall prepare, for each test, a test report document that shall certify successful completion of that test. Six (6) hardcopies and one electronic version of the test report shall be submitted to CCNY Project Manager for review and acceptance within seven (7) days following each test. The test report shall contain, at a minimum:
 - n. Commentary on test results.
 - o. A listing and discussion of all discrepancies between expected and actual results and of all failures encountered during the test and their resolution.

- p. Complete copy of test procedures and test data sheets with annotations showing dates, times, initials, and any other annotations entered during execution of the test.
- q. Signatures of persons who performed and witnessed the test.
- 6. Test Resolution: Any discrepancies or problems discovered during these tests shall be corrected by the Contractor at no cost to CCNY. The problems identified in each phase shall be corrected and the percentage of the entire system re-tested determined by CCNY, before any subsequent testing phase is performed.

E. Factory Acceptance Testing

- 1. Test Setup Equipment: Equipment shall be actual products or identical models of products to those designated to be delivered and installed at the site. The following equipment shall be setup and used for conducting pre-delivery test:
 - a. Operator equipment associated with system.
 - b. End devices and displays associated with system.
 - c. Software associated with system.
 - d. Administrative console equipment.
 - e. Sufficient signal transmission media (STM) and associated equipment and accessories to provide a fully integrated system model. Include at least one of each type STM circuit.
 - f. Number of field processors required for system to be installed at site.
 - g. Enough load and data simulators to provide simulation of full load operational conditions as required by design. Loads shall be manually or software generated.
- 2. Preparation: Ensure that development of system is complete, required approvals of submittals have been obtained, and sufficient equipment procured to completely demonstrate and test system. Schedule pre-delivery test with CCNY Project Manager at least 45 days prior to test:
- 3. Time: Prior to delivery of any equipment to site. Conduct on weekdays during standard business working hours.
- 4. Location: Manufacturer's plant or other location approved by CCNY Project Manager.
- 5. Items to be tested shall be set up and performance verified prior to arrival of CCNY Project Manager at test site.
- 6. Test: The purpose is to test the complete computer software package and equipment of the system and demonstrate that all specified features and performance criteria are met. All requirements of the specification shall be tested including, but not limited to:
 - a. Functionality including reporting and response.
 - b. System capacity.
 - c. Hardware interaction.
 - d. Hardware and software interaction.
 - e. Demonstrate report generation.
- 7. Acceptance: Acceptance of system to perform sufficiently and provide specified functions shall be determined by CCNY Project Manager witnessing the factory acceptance test. In addition to the CCNY Project Manager, testing shall be witnessed by up to two (2) additional CCNY's authorized representatives.

- a. Acceptance Criteria: Performance of system shall equal or exceed criteria stated in individual specification sections.
 - b. If system does not perform satisfactorily, the Contractor shall make corrections and modifications and schedule new test with CCNY Project Manager. Compliance is at the sole discretion of CCNY Project Manager.
8. Completion:
- a. At successful completion of test, dismantle equipment so as to prevent damage. Replace all defective or worn items.
 - b. Re-pack in original containers all equipment to be delivered to site for installation. Mark on containers that items were used in factory test.
9. Reporting:
- a. Record all test procedures and results.
 - b. Submit report in accordance with reporting requirements in General Testing Requirements Section.

F. Performance Verification Testing

- 1. Complete operational testing of all components and systems shall be witnessed by CCNY Project Manager and/or .
- 2. Schedule test with CCNY Project Manager. Do not begin testing until:
 - a. All systems have been installed and individually and jointly tested to ensure they are operating properly.
 - b. Written permission from CCNY Project Manager has been received.
- 3. Testing: As part of performance verification, test all components of system. The tests shall demonstrate system features.
- 4. Verification: Verify correct operation of the required system functionality as defined in these specifications.
- 5. Adjustment, Correction, and Completion:
 - a. Correct deficiencies and retest affected components.
 - b. Make necessary adjustments and modification to system after obtaining approval of CCNY Project Manager or authorized representative.
 - c. Completion: Performance verification test shall be complete when testing or retesting of each component has produced a positive result and has been approved in writing by CCNY Project Manager or authorized representative.
- 6. Recording:
 - a. Describe actual operational tests performed and equipment used and list personnel performing tests.
 - b. Record in tabular form all test results, deficiencies, and corrective measures.
- 7. Termination
 - a. Performance verification test shall be terminated by CCNY Project Manager when:
 - b. Individual systems, system components, subsystems, or cabling infrastructure fail to perform as specified.
 - c. It is determined that a system or sub-system is missing any components or installation is not complete.

- d. Upon termination, corrective work shall be performed and performance verification test rescheduled with CCNY Project Manager.
- e. Retesting shall be performed by Contractor at no additional expense.
- f. Contractor shall continue to perform corrective actions and retest until system passes all tests to satisfaction of CCNY Project Manager.

G. Endurance Testing

- 1. Provide personnel to monitor the system operation 24 hours per day, including weekends and holidays during endurance testing.
- 2. Start test after:
 - a. Successful completion of performance verification testing.
 - b. Training as specified has been completed.
 - c. Correction of deficiencies has been completed.
 - d. Receipt of written start notification from CCNY Project Manager.
- 3. Monitor all systems during endurance testing. Coordinate monitoring with CCNY Project Manager.
- 4. Recording: Record data on approved forms so as to provide a continuous log of systems performance. Include:
 - a. Date and time for all entries.
 - b. Name of individual making entry.
 - c. Environmental conditions.
 - d. CCNY activities in process.
 - e. Description of all alarm annunciations, responses, corrective actions, and causes of alarms. Classify as to type of alarm.
 - f. Description of all equipment failures, including software errors.
 - g. Description of all maintenance and adjustment operations performed on system.
 - h. Daily and weekly tabulations.
 - i. Daily entries of performance data shall be reviewed by the CCNY Project Manager to observe monitoring of system.
- 5. CCNY Project Manager may terminate testing at any time when any system, sub-system, system component or cabling infrastructure fails to perform as specified. Upon termination of testing, the Contractor shall commence an assessment period.

H. Adjustment, Correction, and Maintenance

- 1. During endurance testing make adjustments and corrections to system only after obtaining written approval of CCNY Project Manager.
- 2. During endurance testing, perform required maintenance on systems including provision of replacement parts.

I. Final Inspection and Acceptance

- 1. After endurance testing is complete, review tabulated records with CCNY Project Manager.
- 2. The Contractor will not be responsible for failures caused by:

- a. Outage of main power in excess of backup power capability provided that automatic initiation of all backup sources was accomplished and automatic shutdowns and restarts of systems performed as specified.
- b. Failure of any CCNY furnished power, communications, and control circuits provided failure was not due to Contractor furnished equipment, installation, or software.
- c. Failure of existing CCNY equipment provided failure was not due to Contractor furnished equipment, installation, or software.
3. When performance of integrated system does not fall within the above rates, determine cause of deficiencies, correct, and retest.
 - a. When requested by CCNY Project Manager, extend monitoring period for a time as designated by CCNY's Project Manager.
 - b. Submit final report of endurance testing containing all recorded data.
4. The Contractor shall submit written certification that:
 - a. The Contract Documents have been reviewed.
 - b. All required as-built documentation has been submitted and approved by CCNY Project Manager and .
 - c. The Project had been inspected for compliance with the Contract Documents.
 - d. The Work has been completed in accordance with the Contract Documents.
 - e. The equipment and systems have been tested and are shown operational in the presence of CCNY Project Manager and .
 - f. The Project is completed, and is ready for final inspection.

3.12 TRAINING

A. General

1. By means of training classes augmented by individual instruction as necessary, the Contractor shall fully instruct the CCNY's designated staff in the operation, adjustment and maintenance of all products, equipment and systems. The Contractor shall be required to provide all training aids, e.g., notebooks, manuals. The Contractor shall provide an appropriate training area equipped with all required equipment. The location of the training area shall be coordinated with the CCNY.
2. All training shall be completed a minimum of two weeks prior to system cut over. Training schedule shall support the various work shifts of the CCNY's personnel and shall be subject to CCNY approval.
3. Training shall be conducted by experienced and factory authorized personnel and supported by training aids. An adequate number and amount of training material shall be provided by the Contractor. The following is considered a minimum.
 - a. Functional flow-charts, overall block diagrams, and descriptive material for all software;
 - b. Schematic drawings for each of the hardware components;
 - c. All procedure manuals, specification manuals, and operating manuals;
 - d. As-built drawings.
4. Participants shall receive individual copies of technical manuals and pertinent documentation at the time the course is conducted. The courses shall be scheduled such that CCNY personnel can participate in all courses (no overlap).

5. A final course schedule and syllabus shall be prepared by the Contractor for each course to be conducted for CCNY personnel and submitted for review at least four (4) weeks prior to the scheduled date of the course commencement.
6. Each course outline shall include, in addition to the subject matter, a short review of the prerequisite subjects (where appropriate); how this course fits into the overall training program; the objective; the standards of evaluation; and any other topics that will enhance the training environment.
7. Provide detailed video recordings in high quality digitally formatted media of all demonstration and training of all systems and system operations.
 - a. Utilize remote microphones as may be required to ensure high quality audio of the recorded demonstrations.
 - b. Permanently and professionally label all recorded materials and provide self-sealing plastic cases for each training session.
8. All training requirements identified are minimum requirements.

B. Types of Training

1. User Training: System users shall be instructed in all aspects of operations of the system, including the business intelligence tool and all reporting functions and shall conform to the following minimum requirements:
 - a. Training classes shall be scheduled not less than 48 hours apart to allow The CCNY's User/Operators to familiarize themselves with all system operations.
 - b. Basic Training: Provide twelve (12) hours of basic user training shall be provided (2-hour class repeated 6 times spaced over a two-week interval. User training shall be conducted at a location that is coordinated with the CCNY.
 - c. Advanced Training: Provide twelve (12) hours of advanced user training shall be provided (4-hour class repeated 3 times with six advanced users per class). User training shall be conducted at a location that is coordinated with CCNY.
 - d. System Administrator Training: System Administrator Training shall be provided. System Administrator Training shall include both classroom work and field training.
 - e. Software/Operational Training: Provide twenty-Four (24) hours of software training (24 hours of training shall be repeated 1 time for 1 system administrator).
2. The Contractor shall structure each training course to describe all systems, software and applications as well as support programs. This course shall include a functional overview of the complete software and operations of each system. The course material must be presented in depth by a factory authorized instructor and shall covering in detail at the minimum all system functions, features rebooting and maintenance criteria.
3. Provide operation, parts, and maintenance manuals defining operation and troubleshooting methods of all systems and review with The CCNY's User/Operators as part of training demonstrations.
4. Provide detailed video recordings in high quality digitally formatted media of all demonstration and training of all systems and system operations.
 - a. Utilize remote microphones as may be required to ensure high quality audio of the recorded demonstrations.
 - b. Permanently and professionally label all recorded materials and provide self-sealing plastic cases.

3.14 PROJECT CLOSEOUT REQUIREMENTS

- A. In addition to all final close requirements as specified by Division 01, specification section 27 05 00 specification section, the Contractor shall provide all requirements of this section.
- B. Final System Acceptance
 - 1. In addition to the requirements set forth in Division 01, the Contractor shall prepare and issue a Certificate of Project Completion, containing:
 - a. The date of project completion.
 - b. A list of items that have been corrected by the Contractor.
 - c. The time and date CCNY will assume possession of the system (transfer of ownership).
 - d. The date that warranty begins.
 - 2. CCNY Project Manager will perform an inspection after receipt of written certification. The project completion inspection shall include, but not be limited to:
 - a. The project's contracted work and any additional change orders.
 - b. All equipment and systems tested and shown operational in the presence of CCNY Project Manager and .
 - 3. After the inspection, CCNY Project Manager will prepare and submit to the Contractor, a list of items to be completed or corrected, as determined by the inspection, along with the designated timeframe for completion.
 - 4. Should CCNY Project Manager consider the work not to be complete, CCNY Project Manager or will immediately notify the Contractor, in writing, stating the reasons. The Contractor shall complete the work, and then send a second written notice to CCNY Project Manager certifying that the Project is complete. CCNY Project Manager shall then re-inspect the work upon Contractor's request at a scheduled re-inspection time.
 - a. At any time, CCNY shall have the right to Contract with a third party in order to complete and/or inspect any work of which Contractor failed to conform with the Contract requirements. All cost for this third party shall be borne by the original Contractor responsible for delivering the project.
- C. Inspections
 - 1. At the completion of the project and prior to final acceptance of the Work, provide evidence of final inspections and approvals to CCNY, in accordance with all requirements of the Contract Documents as well as required by the authorities having jurisdiction.
 - a. CCNY approval is required prior to final system acceptance and payment.

END OF SECTION

SECTION 27 11 00 - NETWORK COMMUNICATIONS SYSTEMS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. General provisions of the Contract, including National Railroad Passenger Corporation (CCNY) “General Provisions for Construction Contracts” (General Provisions) and Supplementary General Provisions and all documents included within this Contract apply to this Section.
- B. Related Sections:
 - 1. Division 27 – Common Work Results for Communications Systems
- C. Reference Symbols:
 - 1. All device symbols are defined by the appropriate symbol schedules. Because of the scale of the drawings, symbols are shown on drawings as close as possible to the mounting location.
 - a. Contractor shall coordinate exact locations with all CCNY drawings, site plans, reflected ceiling plans, furniture plans, mechanical and electrical drawings as well as all affected trades prior to submittal of any shop drawings.
- D. Abbreviations:
 - 1. Refer to Specification Section 27 05 00 for additional information.
- E. Definitions:
 - 1. Refer to Specification Section 27 05 00 for additional information.

1.02 SUMMARY

- A. The intent of this specification is to establish a standard of quality, overall system configuration and equipment requirements for the installation of a new structured cabling system in support of a facility wide TCP/IP data/telecommunications network, infrastructure and specified security systems.
 - 1. The Contractor shall be responsible for providing all design, installation, programming, commissioning, testing, and certifications as necessary to provide complete infrastructure to support all TCP/IP-based networks and systems in accordance with the Contract Drawings and/or as herein specified.
 - 2. The installation, performance, features, functions, software, and programming criteria as specified herein as well as all related specification sections have been designed to offer the maximum system efficiency ease of operation, occupant safety and the protection of equipment as recommended by the CCNY.
 - a. Any deviations from the specified criteria shall be documented, reviewed, and agreed to in writing by CCNY Project Manager prior to submission of bids. Refer to Division 01, Division 28 and all related Division 27 specification section for product substitutions.
- B. It is the responsibility of the Contractor to ensure that the installed system meets or exceeds every standard set forth in these specifications. The Contractor shall provide all cabling, communications outlets, conduits, system components, termination equipment, racks/cabinets, emergency electrical power, software, programming and all appurtenances as well as all

- necessary testing, commissioning and certifications as required to provide a complete and fully operational TCP/IP based network, whether such items are specifically included in this section or not.
- C. The Contractor shall furnish all labor, equipment, materials, testing, commissioning, programming, and certification in connection with the installation of a complete premises communications network system as indicated on the drawings and as herein specified.
1. The systems installation shall be fully complete with all labor, equipment, materials, components and all required appurtenances as indicated on the contract drawings and/or described herein.
 - a. The systems shall include at the minimum but not limited to the following;
 - 1) Category 6 Plenum rated cabling
 - 2) Fiber Optic Cabling (Network Backbone)
 - 3) Conduit/Duct/Raceway/Cable Tray Systems
 - 4) Distribution/Termination Patch Panels
 - 5) Equipment Racks/Cabinets
 - 6) Communications Outlets/Jacks
 - 7) Equipment Bonding and Grounding
- D. The Contractor and all sub-contractors for this work shall have read all of the General Conditions, Special Requirements, General Requirements, and all applicable related specification sections and in the execution of all work shall be bound by all of the conditions and requirements therein.
- E. Prior to the submission of the Bid, any discrepancies or inconsistencies noted within these specifications and/or the project drawings shall be brought to the immediate attention of CCNY Project Manager.
1. Project specifications and drawings may not deal individually with every component, control, device, or appurtenance, which may be required to produce the specified system configuration, and/or as necessary to meet the equipment and cabling requirements. Coordinate all integration requirements with CCNY Project Manager and all appropriate systems providers.
 2. Because of the scale of the drawings, symbols are shown on drawings as close as possible to the mounting location. The Contractor shall coordinate the installation of all cabling, materials, equipment, devices, jacks, cable trays, and conduits with all affected trades and document all coordination at the time of shop drawing submittals.
- F. This Contractor shall assume total responsibility for coordinating all inter-building wiring, any common carrier provided network equipment, and/or CCNY-provided equipment as it relates to the operation of these systems.

1.03 SCOPE OF WORK

- A. The Contractor shall furnish all labor, equipment, materials, cabling, and the performance of all testing, commissioning and certification in connection with the installation of a complete premises TCP/IP-based communications network and analog telephone structured cabling system in accordance with all requirements of the project drawings and/or as herein specified.
1. Provide and install all equipment described herein, including, but not limited to all, jacks/outlets, Category 6 cabling, Category 3 cabling, fiber optic cabling, coaxial cabling, patch panels, punch-down blocks, distribution hardware, and patch cables as

well as all conduits, outlet boxes and appurtenances necessary to provide complete and fully operating network communications structured cabling system.

B. Communications Systems Design Requirements:

1. Provide a complete operational communications network infrastructure including but not limited to all cabling, jacks, cabling distribution and termination components as indicated on the contract drawings and as herein specified.
 - a. All horizontal network connections shall utilize Category 6 copper cabling and hardware for distribution to all control equipment as indicated on the contract drawings. All horizontal cabling shall be routed through the facility in conduit sized to support the network cabling requirements from the device to the respective communications space and shall terminate on Category 6 patch panels in the communications equipment racks. Appropriately sized cable tray shall be installed in the telecommunications spaces for routing from the end of the conduit to the equipment rack.
 - 1) NOTE: Category 6 cables shall not be cinched too tightly; cable ties at patch panel locations shall be hook-and-loop (VELCRO) type tie-wraps only. Plastic wire ties shall not be accepted on any Category 6 cabling.
 - b. All communications cabling shall be terminated at both ends of the permanent link at all equipment locations in fiber optic, and/or Category 6 patch panels.
 - c. The Contractor is responsible for the installation of the entire network communications infrastructure: including all workmanship, standards of quality, adherence to the contract documents, certification testing, as-built documentation, labeling, and final warranty in relationship to the performance and installation of the structured cabling systems in accordance with the contract drawings and/or as herein specified.

C. Backbone Design Requirements:

1. The intended function of the communications network is to transmit data communications signals from a central location to several individual data drop locations. Upon completion of the work in accordance with the contract documents, the system shall be capable of transmitting data signals at a rate of 1000 Mbps minimum over Category 6 cable and a minimum of 10Gbps over single-mode fiber optic cables based upon the transmitting distance, laser attenuation and number of links.
 - a. Multi-mode 50/125 micron (nominal) optical fiber cable shall be capable of transmitting signals at both 1310 and 1550 nm capable of providing a nominal 5km @ 1GBPS @1000 Base LX and nominal 10km @ 10GBPS @10GBASE-LX4 transmission rates.
 - b. Single-mode 8.3/125 micron (nominal) optical fiber cable shall be capable of transmitting signals at both 1310 and 1550 nm capable of providing a nominal 5km @ 1GBPS @1000 Base LX and nominal 10km @ 10GBPS @10GBASE-LX4 transmission rates.
 - c. All fiber optic cable shall be terminated on LC-type connectors and ports.
 - d. All telephone outlets shall utilize Category 6 copper cabling. All horizontal cabling shall be routed through the facility in conduit sized to support the network cabling requirements from the device to the respective communications space and shall terminate on Category 6 patch panels in the communications

equipment racks. Appropriately sized cable tray shall be installed in the telecommunications spaces for routing from the end of the conduit to the equipment rack.

- e. All communications cabling shall be terminated at both ends of the permanent link at all equipment locations in fiber optic, and/or Category 6 patch panels..
- 2. The Contractor must certify in writing that the structured cabling system(s) are installed in accordance to the project documents, the referenced standards as well as all manufacturer requirements.
- 3. In addition, the Contractor shall provide in writing all extended manufacturers' warranties for matching compatibility of the structured cabling system as well as all as-built drawings and field test reports for both the fiber and copper cabling systems before CCNY will accept the installation.

1.04 REFERENCES

- A. Refer to Specification Section 27 05 00 for additional information.
- B. CCNY: Most Recent edition of all Architectural, Structural, Site, Electronics, Communications, Security, IT, Access Control, and VSS standards.

1.05 SYSTEMS DESCRIPTION

- A. Refer to Specification Section 27 05 00 for additional information.

1.06 SUBMITTALS

- A. Refer to Specification Section 27 05 00 for additional information.

1.07 QUALITY ASSURANCE

- A. Refer to Specification Section 27 05 00 for additional information.

1.08 DELIVERY, STORAGE AND HANDLING

- A. Refer to Specification Section 27 05 00 for additional information.

1.09 OPERATIONS AND MAINTENANCE

- A. Refer to Specification Section 27 05 00 for additional information.

1.10 SOFTWARE AGREEMENT

- A. Refer to Specification Section 27 05 00 for additional information

1.11 EXTRA MATERIAL

- A. NOT USED

PART 2 – PRODUCTS

2.01 MANUFACTURED PRODUCTS

- A. Manufacturers listed as acceptable or equal shall not relieve the Contractor of providing all systems in accordance with all functions and performance requirements of the Contract Documents.

- B. Where manufacturer and/or model numbers reference specific system components in this specification, it is to establish the performance requirements and quality of the systems and components only.
1. It is in no way an inference that the referenced model numbers are the manufacturer's current product and are the only acceptable components for this project unless specifically referenced as "no substitutions."
 2. Contractor shall provide the manufacturers' most current product that shall meet and/or exceed the specified performance and features of all data, and telecommunications equipment and/or systems.
 - a. systems.
- C. Unless specified otherwise, the equipment furnished shall fall into six classes, and with the exception of Class 6, all of the material within a single class shall be the standard product of one manufacturer. Exceptions are noted as "Class Exempt." The six classes are as follows:
1. CLASS ONE-A (1A): Category 6 and Category 3 UTP copper cables (both horizontal and backbone), Category 6 patch cords, blocking kits, interconnection devices, connectors, wiring blocks, punch down blocks, patch panels, and telecommunications outlets.
 - a. Note: All material covered in "Class One-A" shall conform to all manufacturers' cable/component matching connectivity requirements for the connection of all communications outlets, patch panels and cabling appurtenances provided as part of this project.
 - b. Other cabling systems meeting the listed performance and warranty requirements will be considered following compliance with all substitution requirements in accordance with Division 1 specification section titled "Substitutions."
 2. CLASS ONE-B (1B): Fiber Optic Cable (both horizontal and backbone), fiber optic jumpers, interconnection devices, connectors, wiring blocks, patch panels, and telecommunications outlets.
 - a. Note: All material covered in "Class One-B" shall conform to all manufacturers' cable/component matching connectivity requirements for the connection of all communications outlets, patch panels and cabling appurtenances provided as part of this project.
 3. CLASS TWO: Inner-duct systems.
 4. CLASS THREE: Equipment racks, Wire Management Systems and Cable Trays.
 5. CLASS FOUR: Communications Equipment Cabinets and Wire Management Panels.
 6. CLASS FIVE: Velcro wire ties/cable wraps, storage rings, labels, "D" rings (metal only), nuts, bolts, screws, and other miscellaneous and hardware.
 7. CLASS SIX: Furnished by Contractor. Active network systems/Equipment/Hardware (Layer 2/3 core, access, and distribution network switches; routers; firewalls; network servers, VoIP telephone exchange, telephone and voice mail servers, telephone instruments)
 - a. Active Network Equipment will be provided by CCNY.

- D. All equipment and peripheral devices shall be the standard product of a single manufacturer and shall display the manufacturer's name on each component.

2.02 COMMUNICATIONS NETWORK EQUIPMENT AND COMPONENTS

- A. Data Communications Outlets (Category 6)
1. Data Jacks/Faceplates: 4 pair, TIA-568B pinning, Category 6 compliant.
 2. Modular Outlet Jacks & Faceplates: Standard 8-position, RJ-45 style, un-keyed, designed for 4-pair, 100 ohm balanced unshielded twisted pair (UTP) cable, 26-22 AWG solid or stranded conductors.
 3. Accessories: Category 6 Jacks shall include a translucent stuffer cap for wire retention and to permit visual inspection. Jacks shall have attached wiring instruction labels to permit either T568A or T568B wiring configurations.
- B. Equipment Cabinets/Patch Panels/Appurtenances
1. Furnish and install floor mounted equipment cabinets where indicated on the contract drawings in quantities and size to provide sufficient capacity to install all necessary components and cabling as required to fulfill the system requirements and shall be provided with a minimum of 30% spare capacity for the installation of additional components or future expansion. All cabinets shall be provided with the following minimum requirements:
 - a. UL Listed
 - b. Minimum (48) standard 19" rack units (RU)
 - c. 30" minimum usable equipment mounting depth
 - d. Front and rear adjustable rack rails
 - e. Rear door with removable top and bottom covers
 - f. Plexiglass or metal mesh front door with lock
 - g. Top vented cabinet panel Internal vertical and horizontal cable manager(s)
 - 1) Horizontal cable managers
 - a) Horizontal wire managers to have both front and rear channels with covers.
 - 2) Vertical cable managers
 - a) Racks
 - Each rack to have one full-length double sided vertical wire manager installed on each side.
 - b) Cabinets
 - Each cabinet to have one full-length vertical wire manager installed internally on each side.
 - Co-location cabinets shall have internal vertical wire managers installed in each section. The vertical wire manager shall be designed by the cabinet manufacturer to be used with the particular cabinet installed.
 - h. Cable collecting rail and wire management system
 - i. Vertical Power Distribution Unit (PDU)
 - j. Grounding busbar

- k. Frame levelers or leveling feet
 - l. Power Strip
 - m. Air circulation fans with filters
 - 1) The Contractor shall size fans to maintain manufacturer's recommended operating temperatures for all electronic components installed in cabinet. At the minimum provide a one dual 114 cfm fan.
2. Furnish and install Rack Mounted Fiber Optic Patch Panels (FOPP's) in sufficient quantities to support all fiber terminations in all free-standing communications equipment cabinets:
- a. Up to 0 to 96 strands: 2 RU Housing.
 - b. All housings: Furnish and install pigtailed splice cassettes, (6) duplex LC-UPC duplex ports per cassette (12 strands per cassette), OS2 single-mode fiber. Furnish and install cassettes in sufficient quantities to terminate all incoming fiber optic strands.
 - c. Furnish housings with minimum 20% spare cassette slot capacity for addition of future cassettes.
 - d. Patch panel cassettes shall be terminated on fiber optic pigtails from the factory. Fusion splice incoming building cables to factory pigtails within included cassette splice trays. Field-connectorized patch panels shall not be acceptable. Install fan out kits and splice trays where incoming or outgoing fiber optic cables are loose tube, gel-filled type OSP cables. All loose tube, gel-filled, OSP cables shall be spliced to pigtails prior to connection to patch panel.
 - e. Quantity of Mechanical splice trays shall be sufficient to terminate all OSP fibers
 - f. Fiber cable splice trays shall be used for all fiber cable terminations requiring spliced pigtails.
 - g. Splice cases installed without splice trays designed are prohibited
 - h. Splice trays shall be provided by same manufacture as LIU(s) installed.
3. Furnish and install modular Category 6 copper patch panels in sufficient quantities to support all Category 6 cabling terminations as indicated on the contract drawings:
- a. Patch panels shall contain 110-block rear terminations for horizontal cabling and RJ-45 front connections for patch cords.
 - b. Patch Panels shall be 48-port TIA-568B wired Category 6 rated.
4. Furnish and install Category 6 Patch Cables, high performance:
- a. Patch cables shall be provided in standard lengths of three (03), five (05), seven (07), ten (10) or (15) feet.
 - b. Provide Two (2) patch cables for each populated patch panel port; one in the communications room, and one in the work area/space.
 - 1) Patch cables in the communications room shall be of minimum length to permit installation without stress or strain at connection points to equipment, to permit relocation of cable to a different port on the same device, and to permit neat and workmanlike cable routing through cable management devices.
 - 2) Patch cables in the work area/workspace shall be (15) feet in length.

- c. All patch cables shall be TIA-568B compliant and meet all product matching criteria.
 - d. All patch cables shall be provided with jacket colors as indicated by the Contract Documents.
 - e. All Category 6 Patch cords must be provided by the same manufacturer as part of a certified structured cabling system and shall be color coordinated in accordance with cable and jack color coding requirements.
5. Fiber patch cords: Provide at demarcation and each termination room locations. 9.8 ft. (3.0 m), 8.3\125um OS2 single-mode, Duplex SC-APC to Duplex SC-APC. Provide one duplex patch cord for every duplex fiber optic patch panel port in all locations.
6. Network equipment cabinet wire management: Furnish and install wire management devices in network equipment cabinets as shown on the drawings and described in these specifications:
- a. 1 Rack Unit (RU) Horizontal Wire Manager
 - b. 2 Rack Unit (RU) Horizontal Wire Manager
 - c. Furnish and install hook-and-loop (Velcro) tie-wraps as required for neat and tidy rear cable management.
- C. Category 6 Cable – Data Network Communications
- 1. Category 6 Cable shall be cable tested to a minimum of 250Mhz, plenum-rated (CMP):
 - 2. All horizontal data drops shall be Category 6 and shall be terminated on CAT6-rated patch panels installed in the 19" equipment racks/cabinets.
 - 3. All data drops and backbone cables shall be installed in cable trays, dedicated conduits, or in cable chases and/or a combination thereof as indicated contract drawing or specified. In no case shall cable be supported on ceiling tiles, T-bars, or tie- wrapped to any conduit or pipes.
 - a. Category 6 cables shall not be cinched too tightly; cable ties at patch panel locations shall be VELCRO type tie-wraps only. Plastic wire ties shall not be accepted on any Category 6 cabling.
 - b. Each network drop shall be a dedicated Category 6 cable and shall not exceed a maximum distance of 295 feet from the associated communications room termination panel to the furthestmost data port for that network address.
 - c. Cable Support: Conduit properly sized and secured to the permanent building structure where not installed in raceway from device to respective communications space. In the communications spaces cable tray shall be installed to allow cable support from the end of the conduit entering the space to the equipment rack on which the cable will terminate.
 - d. Cable and wiring shall not lay loose on ceiling tiles or grids. Cable must be supported in all areas. Bridle rings, j- hooks, and tie-wrapped supporting methods are not acceptable.
 - e. Install all cabling parallel to building lines and follow building structure. Use cable support equipment/hardware recommended by the manufacturer and/or as herein specified.
 - f. Provide all terminations, cross-connects, wire management, surge protectors, etc. For a complete and operational system.

- g. Any copper data communications system cabling installed exterior to the building and/or all cabling being routed from the facility to any remote location external to the project location shall be outside rated (OSP) Category 6 cable, unless specified otherwise.

D. Fiber Optic Cable

1. Provide fiber cabling in accordance with the requirements of all related specification sections, at the minimum 12-strand single-mode cable unless otherwise indicated by the contract drawings.
 - a. Premises Distribution (inside): Type OFNP, tight buffer, laser enhanced, with UV resistant outer jacket, all dielectric (non-conducting), 8.3/125uM type “OS2,” and 12-strand 50/125 OM4 fiber.
 - b. Single-mode maximum optical transmission loss 1.0 /km at both 1310 and 1550 nm. Single mode fiber shall conform to TIA - 568 B; TIA - 492BAAA; and ANSI/ICEA S - 83 - 596.
 - c. All exterior fiber optic cable shall be rated for exterior applications and listed as Outside Plant (OSP) type fiber and installed in dedicated inner-duct conduit system segregated by network type and routed through dedicated conduits. (OSP cable shall not extend more than 50’ into the building before transitioning to indoor-rated cable).
2. Fiber Optic Cable Terminations
 - a. All fiber optic cable shall be spliced on to factory-terminated and connectorized patch panel cassettes in the equipment cabinet. Field-terminated or field-connectorized patch panel connections shall not be acceptable.
 - b. All splices shall be fusion type. Mechanical splices shall not be acceptable.
 - c. All fiber optic connectors and patch panel ports shall be duplex SC-type angle polish contact (SC-APC).
3. All fiber optic cabling shall be a continuous segment from demarcation to termination point. Splices shall not be permitted.
4. All fiber optic cabling shall be installed above accessible ceilings wherever possible.
5. All fiber installed shall be plenum rated installed in dedicated conduits.
6. Installation of all fiber optic cabling shall be in accordance with all guidelines established by the product manufacturer and all referenced industry standards.
7. Where fiber cable segments are installed in conduits, special care shall be taken to avoid damage to the cable.
 - a. While under pulling tension, the cable shall not be bent into a curve with a radius of less than twenty (20) times the cable diameter, or no less than manufacturers minimum.
 - b. Pulling tension shall not exceed manufacturer's recommended maximum tensile load. Contractor shall utilize a winch with tension control or a "break- away" link designed to break away at or below the recommended maximum pulling tension.
 - c. Use methods and lubricating compounds on cables and wires to prevent damage to material and products during pulling-in. Provide compounds that are not injurious to the cable and wire jackets that do not harden or become adhesive.

2.03 EQUIPMENT CABINET POWER DISTRIBUTION

A. Rack Mounted Power Distribution Unit

1. Provide rack mounted power distribution switch with surge protection for the distribution of all UPS connected power for each rack. The unit shall consist of a minimum of 12 AC power outlets, dual fed A/B circuiting, rated at 15 amps each and shall be equipped with integral surge protection circuitry (with bypass switch) capable of auto-resetting over-voltage and under-voltage protection.
2. The unit shall include a front mounted power switch (with guard) which shall control all 12 outlets. The four front mounted power outlets shall be spaced as transformer convenience outlets. The overall unit shall be single-height rack mountable chassis (1U) with three front panel indicator lights: (Power, Ground OK and Unsafe Voltage) and shall include front panel circuit breaker for protect or disconnect circuitry and dual 10-foot power cords for electrical power connectivity. The rear panel grounding lug shall be provided.
3. In addition to the above requirement the power distribution unit shall meet the following minimum requirements:
 - a. Integral Surge Protection Circuitry (with by-pass switch): Yes
 - b. Dual A/B Incoming Power Circuiting
 - c. Protect or Disconnect Circuitry: Yes
 - d. Thermal Fusing: Yes
 - e. Catastrophic Surge Circuit: Yes
 - f. Over/Under voltage Protection: Yes
 - g. Overvoltage Shutoff Gate: 144V \pm 11V
 - h. Under voltage Shutoff Gate: 84V \pm 6V
 - i. Single Pulse Energy Dissipation: 1350 Joules
 - j. Peak Impulse Current: 32,000A
 - k. EMI/RFI Noise Filtration: 50 (99.7%)
 - l. Line Voltage: 120VAC, 50/60Hz
 - m. Initial Clamping Level: 200V Peak, 141 Rms
 - n. UL 1449 Rating: 500V L-N, 500V L-G, 400V N-G
 - o. Protection Modes: L-N, L-G, N-G
 - p. Maximum Current Rating: 15A (1800W)
 - q. Response Time: 1-5 Nanoseconds
 - r. Plug Configuration: Straight
 - s. Number of Outlets: 12 (4 front, 8 rear)
 - t. Switched Outlets: All

B. Maintenance Bypass and Power Distribution Switch

1. Provide rack mounted maintenance bypass and power output distribution switch for UPS unit. The bypass switch shall permit the manual transfer of connected UPS loads to utility power via a maintenance bypass switch, permitting scheduled maintenance or UPS replacement without discontinuing power to the critical load. Transferring the unit back to UPS power shall be accomplished turning the switch to the load position and transferring the protected back to UPS service.
2. The maintenance bypass and power output distribution switch shall provide hardwired connections rated at 120V or 208V and include all brackets and hardware for rack mounting.

PART 3 – EXECUTION

3.01 COORDINATION

- A. Refer to Specification Section 27 05 00 for additional information.

3.02 EQUIPMENT PROTECTION

- A. In addition to all of the requirements of Specification Section 27 05 00, the Contractor shall comply with the following requirements:
 - 1. Examine all physical and environmental conditions, equipment and device locations, auxiliary system connectivity requirements impacting the installation of all network systems and report any unsatisfactory conditions in writing to CCNY Project Manager.

3.03 WORK PERFORMANCE

- A. In addition to all of the requirements of Specification Section 27 05 00, the Contractor shall comply with the following requirements:
 - 1. Prior to the final commissioning and/or programming of any network communications components, the Contractor shall provide a review with CCNY Project Manager addressing all network integrations, programming and related operational connectivity.
 - a. Failure to provide this review and get final sign-off prior to programming shall result in any costs related to changes requested by CCNY Project Manager not being charged to the project.

3.04 EQUIPMENT INSTALLATION

- A. Comply with all requirements of Specification Section 27 05 00.

3.05 COMMUNICATIONS CABLING REQUIREMENTS

- A. In addition to all requirements as specified by Specification Section 27 05 00 the network communications systems shall also be provided in accordance with the following requirements:
 - 1. All system cabling shall be of the type, size and specification as required by all contract documents as well as stipulated by all codes and standards as specified by Specification Section 27 05 00.
 - 2. All network communications cabling shall utilize Category 6 UTP cables and installed in accordance with the requirements of Specification Section 27 05 00. All network cabling bundles shall not contain any AC carrying conductors or non-associated network communications cables within the cable raceways\conduits or cable bundles.
 - a. In addition, all structured cabling associated with the installation of any network communications system shall comply with all requirements of TIA standards for the proper installation, termination and testing of all fiber optic and Category 6 UTP cabling.
 - b. The contractor shall provide all equipment, components, devices, hardware, equipment racks\cabinets, patch panels and all appurtenances necessary to provide fully operational network communications systems utilizing a UTP cabling topography. Coordinate all structured cabling with all trades prior to shop drawing submission.

3.06 ELECTRICAL POWER DISTRIBUTION

- A. Comply with all requirements of Specification Section 27 05 00.

3.07 TRANSIENT VOLTAGE SUPPRESSION

- A. Comply with all requirements of Specification Section 27 05 00.

3.08 GROUNDING AND BONDING

- A. Comply with all requirements of Specification Section 27 05 00.

3.09 EQUIPMENT IDENTIFICATION

- A. Comply with all requirements of Specification Section 27 05 00.

3.10 MAINTENANCE & SERVICE

- A. Comply with all requirements of Specification Section 27 05 00.

3.11 WARRANTY

- A. In addition to all of the requirements of Specification Section 27 05 00, the Contractor shall comply with the following requirements.
1. Provide all manufacturers extended cable warranties based on matching wire to component compatibility requirements. All cable warranties shall be in effect for a period of not less than 20 years.
 2. The warranty must include the following statements regarding the cabling system:
 - a. "That all communications networks have been certified and will support and conform to ANSI/TIA-568-C specifications covering any current or future application which supports transmission over a properly constructed and horizontal cabling system premises network which meets the channel and/or basic link performance as described in ANSI/TIA-568-C."
 - b. "That all communications networks are free from defects in material or faulty workmanship."

3.12 FIELD SERVICES

- A. In addition to all of the requirements of Specification Section 27 05 00, the Contractor shall comply with the following requirements.
1. UTP Cable Testing
 - a. Minimum Test Parameter requirements for Category 6 horizontal cabling.
 - b. Category 6: Each wire/pair shall be tested at both ends for the following utilizing Contractor generated test results forms:
 - 1) Wire Map.
 - 2) Length.
 - 3) Insertion Loss.
 - 4) Near-end crosstalk (NEXT) loss.
 - 5) Power sum near-end crosstalk (PSNEXT).
 - 6) Equal-level far-end crosstalk (ELFEXT).
 - 7) Power sum equal-level far-end crosstalk (PSELFEXT).

- 8) Return loss.
 - 9) Propagation delay.
 - 10) Delay Skew.
 - 11) Power Sum ACR.
- c. All UTP cable testing described herein shall exceed Category 6 transmission requirements of ANSI/TIA-568-C. In addition, all cable and component transmission performance parameters shall meet or exceed the 1 Gb/s transmission requirements for connecting hardware, per the requirements of TSB-155.
- 12) Additionally, the installed channel system shall exceed IEEE 802.3 DTE Power specification to (4) times the rated current limits with no degradation of performance or materials and shall be error free Gigabit Ethernet performance to the referenced standard. (All performance requirements shall be verified and documented by a RCDD technician at the time of testing).
- d. Channel system shall exceed 4 Gb/s data transmission capacity within the bandwidth of 1 – 250 MHz when configured in a 4- connector channel. The 4-connector channel test configuration shall utilize a Category 6 jack, patch panel, optional 6-110 block, and patch cords, all from the same manufacturer, with qualified Category 6 cable.
- e. The 4-connector Category 6 channel performance margins in the table below shall be guaranteed provided the configuration satisfies above requirements.

Electrical Parameter (1 - 250MHz)	Guaranteed Margins to Category-6 Channel Specifications
Insertion Loss	3 %
NEXT	4
PSNEXT	5
ELFEXT	4
PSELFEXT	5
Return Loss	2

- f. When errors are found, the source of each error shall be determined, corrected, and the cable re-tested. All defective components shall be replaced and retested. Defective components not corrected shall be reported to CCNY Project Manager with explanations of the corrective actions attempted.
- g. Test records shall be maintained using the approved test result forms. The form shall record closet number, riser pair number or outlet ID, outcome of test, indication of errors found (e.g., a, b, c, d, or e) cable length, re-test results after problem resolution and signature of the technician completing the tests.
- h. Test results for each 4 pair, Category 6, UTP cable must be submitted with identification to match labels on all patch panel ports and 8 position modular jacks, and identification to match as- built drawings associated with that cable.
- i. CCNY Project Manager shall observe and verify the accuracy of test results submitted.

- j. Contractor shall submit both hardcopy printouts and electronic copy of all trace test results.

2. FIBER OPTIC TESTING

- a. Contractor shall test each fiber strand. CCNY reserves the right to have a representative present during all or a portion of the testing process. If CCNY elects to be present during testing, test results will only be acceptable when conducted in the presence of CCNY.
- b. Fiber optic cable: each fiber strand shall undergo bi-directional testing for signal attenuation losses.
- c. Test Equipment
 - 1) Optical Power Meter (OPM)
 - 2) Optical Time-Domain Reflectometer(OTDR)
- d. Tests:
 - 1) All fiber strands shall be tested for attenuation using an Optical Power Meter and for optical link loss using the OTDR in both directions at 1310nm and 1550nm.
 - 2) Test all fiber cable on the reel before installation, with an optical light meter, to ensure fiber continuity and no factory defects.
- e. Fiber Optic Testing Specifications
 - 1) All testing shall be performed by factory trained and certified personnel.
 - 2) For all installed fiber optic cable TIA 455-171 Method D procedures will be adhered to (Bi-directionally).
 - 3) Loss Limits:
 - a) Connector loss shall not exceed 0.75 per connector pair
 - b) Cable loss shall not exceed 1.0 per kilometer tested at 1310nm and 1550nm for premises/inside plant single mode fiber optic cable.
 - c) Cable loss shall not exceed 0.5 per kilometer tested at 13010nm and 1550nm for outside plant single mode fiber optic cable.
 - d) Fiber optic cable tests shall meet all other requirements as specified in TIA 568.C.
- f. The Contractor is responsible for obtaining minimum loss in fiber connections and polishing per manufacturer's specifications.
- g. Pre-installation tests of Inter-plant fiber: pre-test each reel:
 - 1) Test each reel of fiber each strand for continuity with a light source.
 - 2) Then test with an OTDR to determine the nature and location of the defect: Measure end-to end attenuation and the distance to a high attenuation point.
 - 3) If it is determined by CCNY that the fiber is defective the Contractor shall contact the manufacturer and provide a completely new fiber reel.
- h. Tests for installed Inter-plant and Intra-plant fiber optic cable:
 - 1) Intra-plant and Inter-plant Single-mode: Bi-directional signal attenuation at 1310 and 1550 nm power meter.
 - 2) Interplant Single-mode: Bi-directional OTDR trace at 1310 and 1550 nm.
OSP ONLY

NOTE: Obtain the actual index of refraction from the cable Manufacturer before testing.

- i. Single-mode backbone links shall be tested as listed above and in accordance with ANSI/TIA-526-7, Method A.1, using not more than one reference jumper. All 50/125 um OM4 backbone links shall be tested at 850 nm and 1300 nm in accordance with ANSI/TIA-526-14A, Method A.1, using not more than one reference jumper.
- j. Power and Link Loss Budgets
- k. Contractor shall prepare and submit a fiber optic power and link loss budget report for all backbone fiber optic cabling links as part of shop drawing submissions.
- l. The report shall include the Power Budget, Link Loss, and Power Margin utilizing the following formulas for each backbone fiber optic link.
The “Power Budget,” P_B , is defined as the transmitter power of the specified transmitting network device (P_T) minus the sensitivity of the specified receiving network device (P_R): $P_B = P_T - P_R$
 - 3) The “Link Loss,” LL , is defined as the sum of all cabling and connector-related losses between the transmitter and receiver, including cable losses (the cable attenuation coefficient in /km multiplied by the anticipated cable length in km) and connector pair losses in at each patch panel.
- m. The Contractor’s calculations shall demonstrate a Power Margin, P_M , defined as the Power Budget minus the Link Loss ($P_M = P_B - LL$), of no less than 3 or as recommended by the active network equipment manufacturer.
- n. The calculated Link Loss and Power Margin shall be compared to the actual test results by the CCNY. The Contractor shall correct any Links that fail at no additional cost to CCNY.
- o. Submit all test reports for approval; an OTDR trace/signature report for every OS2 and OSP cable by strand and a fiber optic link attenuation record report for every cable by strand.
- p. Notify CCNY Project Manager in writing, ten (10) days advance of testing of all equipment and/or components to prevent delays in construction schedules.
 - 1) Perform all tests, as required, by authorities having jurisdiction throughout the facility.
 - 2) Test system for grounds to demonstrate that the ground resistance does not exceed the requirements of the National Electric Codes (NEC).
 - 3) Test all cabling to confirm that no grounds, shorts, sneak currents, RFI and EMI conditions exist prior to start-up and commissioning of all, components, devices, equipment and/or systems.
 - 4) Test all systems and components for proper function and operation; certify that all systems are in proper working operation in accordance with the Contract Documents prior to scheduling any system demonstrations.
 - 5) Test all fiber optic cabling with Optical Time Domain Reflectometer (OTDR) in accordance with all TIA protocols.
- q. Testing of all communications systems shall be in the presence of CCNY Project Manager as well as all appropriate representatives of the authorities having jurisdiction.

- r. All completed communications systems shall be fully tested in accordance with all requirements of TIA. Upon completion of a successful testing, the Contractor shall so certify in writing to CCNY Project Manager that all testing was completed, certified and left in first class operational condition, include all completed copper and fiber testing read-outs, certifications and test reports.
- s. The service of a competent, factory-trained technician authorized by the equipment manufacturer shall be provided to technically supervise installation and participate during initial system programming, start-up, final testing, assist in the final acceptance testing and demonstrations.
- t. At the minimum all acceptance testing, demonstrations and training shall include, but not be limited to the following:
 - 1) Communications Systems Network
 - 2) Integration of all Auxiliary Systems
- u. In addition, provide all testing, commissioning and certifications as specified by Division 01 specification sections and any manufacturer's recommendations or requirements.

3.13 TRAINING

- A. In addition to all of the requirements of Specification Section 27 05 00, the Contractor shall comply with the following requirements.
 - 1. Documentation:
 - a. Contractor shall provide documentation to include all test results and as-built drawings, test results shall be computer generated and shall include all trace reports indicating each pair tested in accordance with all requirements of Specification Section 27 05 00.
 - b. One Hard Copy shall also be provided to CCNY Project Manager. Software for viewing the test results shall also be provided in the soft copy package.
 - 2. Final Acceptance
 - a. Acceptance of all network communications systems, by CCNY Project Manager, shall be based on the results of testing, functionality, and the receipt of documentation. The testing, of all UTP cabling, fiber segments and all security and data network cables must meet the criteria established in the Specification Sections 27 05 00.
 - b. The Contractor must demonstrate to CCNY Project Manager that 1000 Mbps data signals can be successfully transmitted, bi-directionally, from the communications room patch panels to and from a minimum of 10% of individual data drops on each floor, witness tested by CCNY Project Manager. The number of data drop locations to be tested shall be determined by CCNY Project Manager. With regard to documentation, all required documentation shall be submitted to Owner.

3. As-Built Documentation:

- a. Contractor shall provide clean copies of the technology drawings depicting all as-built conditions for all data drop locations, cable routing and identification, patch panel, data switch port terminations, component layouts and all information as required by Division 01 specification section.

END OF SECTION

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