town of tonawanda

Project Manual

POLICE DEPARTMENT

1835 Sheridan Drive
Tonawanda, New York 14223

Corey Flatau
Chief of Police

Proposal For

Job No. 3077.7
Abatement and Renovations



Prepared By:

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Bid Due Date: November 10th, 2026

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BR-1 NOTICE TO BIDDERS
TOWN OF TONAWANDA OFFICE OF THE TOWN ENGINEER

LEGAL NOTICE

SEALED PROPOSALS for the work included in the **Abatement and Renovation to 1835 Sheridan Drive, Job 3077.7,** will be received by the Town Clerk of the Town Tonawanda, 2919 Delaware Avenue, Room 14, Kenmore, New York 14217 on behalf of the Town Board of the Town of Tonawanda until **3:30PM**, Prevailing Time, **November 10th** at which time they will be publicly opened. The envelopes containing the bids must be sealed, addressed to the Town Clerk and designated:

SEALED BID FOR
Job 3077.7 – Abatement and Renovation to 1835 Sheridan Drive

with the bidder's name and address, clearly printed on the outside.

This project consists of **renovations of the second floor to include roof deck fire proofing abatement, removal and replacement of existing ceilings and lights and HVAC modifications.**

Beginning **September 28th, 2026,** Bid Documents can be ordered through the following web site: www.avalonbuff-planroom.com in the "Public Jobs" section. If you do not have internet access or have questions on ordering from the site, please contact Avalon Document Services at 716-995-7777. Bid Documents can be picked up at Avalon Document Printing at 40 La Riviere Drive, Suite 150, Buffalo, NY 14202 upon a non-refundable fee per set. Payment can be submitted by company check or money order made payable to Avalon Document Services or by Avalon account or credit card. Bidders must be registered with Avalon as having obtained a complete set of Bidding Documents. Bids submitted on copies of Bidding Documents from other sources will not be accepted.

Bidding Documents will be shipped from Avalon upon request and upon receipt of an additional non-refundable shipping charge payable to Avalon. Bidding Documents are also available for review at the Office of the Town Engineer, Dodge Reports, and Construction Exchange of Buffalo and WNY (www.conexbuff.com).

Attention of bidders is particularly called to the requirements as to conditions of employment to be observed and minimum wage rates to be paid under the contract.

Effective December 30, 2024, in order to be qualified to work on public works projects covered by Article 8 of the Labor Law, all contractors and subcontractors must be registered with the New York State Department of Labor. **Proof of registration with the New York State Department of Labor pursuant to Labor Law §220-I must be submitted with bid.**
https://dol.ny.gov/news/new-york-state-department-labor-announces-new-registry-

contractors-and-subcontractors-engaged

The Owner/Town reserves the right to reject any or all bids for failure to comply with the requirements of the Contract Documents but may, at its discretion, waive any informalities or r

The Owner/Town further reserves the right to reject any or all bids or to award a contract which, in its judgment, is in the best interest of the Owner.

No bidder may withdraw his/her/its bid within ninety (90) days after the opening thereof, without forfeiting the bid security, but may withdraw same at any time prior to the opening thereof. Bidder must sign the statement of non-collusion in accordance with Chapter 751 of the Laws of the State of New York.

BY ORDER OF THE TOWN BOARD OF THE TOWN OF TONAWANDA, ERIE COUNTY, NEW YORK.

Marguerite Greco
Town Clerk
Town of Tonawanda

Dated: **September 25, 2026**

Publish: **September 25, 2026**

BR-2 INFORMATION TO BIDDERS
TOWN OF TONAWANDA, NEW YORK

OFFICE OF THE TOWN ENGINEER

1. RECEIPT AND OPENING OF BIDS: The Town of Tonawanda, New York, (herein called the "Owner"), invites bids on the form attached hereto, all blanks of which must be appropriately filled in. Bids will be received by the Owner at the Office of the Town Clerk, Municipal Building, 2919 Delaware Avenue, Room 14, Kenmore, New York 14217, until **November 10th, 2026, at 3:30PM**, Prevailing Time, at which time they will be publicly opened. The envelopes containing the bids must be sealed, addressed to the Town Clerk and designated with the **Project Name: Abatement and Renovation to 1835 Sheridan Drive, Project Number 3077.7**, and the bidder's name and address, clearly printed on the outside.

   The Owner may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities in or reject any and all bids. Any bid may be withdrawn prior to the above scheduled time for the opening of the bids or authorized postponement thereof. Any bids received after the time and date specified shall not be considered. No bidder may withdraw a bid within the time indicated on the legal advertisement after the actual date of the opening thereof.

2. PRE-BID MEETING: The Pre-bid meeting will be hold on October 19th at 10:00am, 1835 Sheridan Drive, Tonawanda, NY 14223.

3. PREPARATION OF PROPOSAL: Proposals must be submitted on the prescribed form. All blank spaces for bid prices must be filled in, in print or ink, in both words and figures, with the various amounts for which the proposal is made.

   All bids must be submitted in sealed envelopes bearing on the outside the name of the bidder, his/her/its address, and the name of the project for which the bid is made. (If forwarded by mail, the sealed envelope containing the proposal and marked as directed above, must be enclosed in another envelope addressed for delivery to the Town Clerk of the Town of Tonawanda, preferably by registered mail.)

4. QUALIFICATIONS OF BIDDERS: The Owner may make such investigation as it deems necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish to the Owner all such information and data for this purpose as the Owner may

request. The Owner reserves the right to reject any bid if the evidence submitted by or investigation of such bidder fails to satisfy the Owner that such bidder is properly qualified to carry out the obligations of the Contract and to complete the work contemplated therein.

5. BID SECURITY: Each bid must be accompanied by the certified check of the bidder, or by a bid bond prepared on the form of bid bond attached hereto duly executed by the bidder as principal and having as surety thereon a surety company approved by the Owner, in an amount not less than five percent (5%) of the amount of the base bid. Such checks or bid bonds will be returned to all except the three (3) lowest formal bidders within one (1) week after the formal opening of bids, and the three (3) lowest bidders within two (2) days after the Owner and the accepted bidder have executed the Contract, or if no Contract has been executed, within ninety (90) days after the date of the opening of bids, upon demand of the bidder at any time thereafter so long as he has not been notified of the acceptance of his bid.

6. LIQUIDATED DAMAGES FOR FAILURE TO ENTER INTO CONTRACT: The successful bidder, upon his failure or refusal to execute and deliver the contract and bond within ten (10) calendar days after he has received notice of the acceptance of his bid, shall forfeit to the Owner, as liquidated damages for such failure or refusal, the security deposited with his bid. The Owner shall also be entitled to additional damages equal to the difference between the amount of the bidder's Proposal and that which is subsequently accepted by the Buyer from another bidder to complete the work.

   Notice of the acceptance of the proposal will be given to the successful bidder by the Town of Tonawanda by posting a letter to the address stated in said proposal.

7. CONDITIONS OF WORK: Each bidder must inform himself/herself/itself fully of the conditions relating to the construction and labor under which the work is now being or will be performed. Failure to do so will not relieve a successful bidder of his/her/its obligation to furnish all material and/or labor necessary to carry out the provisions of the Contract Documents and to complete the contemplated work for the consideration set forth in his bid. Insofar as possible, the Contractor, in the carrying out of the work, must employ methods or means as will not cause any interruption with the work of any other Contractor or the operation by the Town of its facilities.

8. ADDENDA AND INTERPRETATIONS: No interpretation of the meaning of plans, specifications, or other Contract Documents will be made to any bidder orally. Every request for such interpretation shall be in writing and emailed to **Teresa Liddle, PE., Project Manager, LiRo Engineers, Inc., liddlet@liro-hill.com**, and to receive consideration must be received at least five (5) days prior to the date fixed for the opening of bids. Any and all such interpretations and any supplemental instructions will be on the form or written addenda to the specifications, which if issued, will be mailed by registered mail with return receipt requested to all prospective bidders (at the address furnished for such purposes) not later than three (3) days prior to the date fixed for the opening of the bids. Failure of any bidder to receive any such addendum or interpretation shall not relieve bidder from any obligation under his bid submitted. All addenda so issued shall become part of the Contract Documents.

9. CONSTRUCTION TERMS AND CONDITIONS: The bidder is warned that the construction terms and conditions hereinafter fully set forth in the General Conditions will be rigidly enforced.

10. SECURITY FOR FAITHFUL PERFORMANCE: Simultaneously with his delivery of the executed Contract, the successful bidder must deliver to the Owner an executed bond in the amount of one hundred percent (100%) of the accepted bid as security for the faithful performance of his Contract and for the payment of all persons performing labor or furnishing materials in connection therewith, prepared in the form of performance bond attached hereto and having as surety thereon such surety company or companies as are acceptable to the Owner, and as are authorized to transact business in this State.

11. POWER OF ATTORNEY: Attorneys-in-fact who sign bid bonds or contract bonds must file with each bond a certified copy of their power-of-attorney to sign said bonds.

12. SPECIAL CONDITIONS:

(A) Workmen's Compensation, Public Liability, and Property Damage Insurance requirements are set forth in detail in the Contract Documents.

(B) "All Risk" insurance requirements are set forth in Contract Special Conditions.

13. STATE LAWS AND REGULATIONS: The bidder's attention is specifically called to the fact that all labor laws of the State of New York which are applicable to the work to be performed under this Contract are a part of this Contract and apply fully as though they were written in the Contract Documents.

14. COMPARISON OF BIDS: Bids will be compared on the basis of totals of the total bid of the scheduled quantities comprising all items at the unit prices bid for these items, or on the lump sums, whichever applies. This Contract will be awarded to the responsible bidder whose bid, so determined, totals the lowest number of dollars, or to the bidder whose proposal is, in the opinion of the Town Board most advantageous to the Town.

In the event there is a discrepancy between the unit prices and the totals, the unit prices shall govern. In the event that there is a discrepancy between the unit prices written in words and written in figures, the unit prices written in words shall govern. No bid shall be accepted which does not contain a unit price for every item contained in the proposal form. (Lump sum bids will be similarly compared and decided).

15. TIME FOR COMPLETION: The time for completion of the contemplated work shall be in consecutive calendar days from the date specified in the order of the Engineer to the Contractor directing him/her/it to proceed with the work. The allotted time for completion of this Contract is the number of calendar days indicated by the bidder on the bid sheet or as printed thereon.

16. LIQUIDATED DAMAGES: Liquidated damages in the sums set forth in the form of Contract attached hereto will be assessed for each consecutive day of delay in the completion of the work not excusable as provided in the Contract Documents.

17. OBLIGATION OF BIDDER: At the time of the opening of the bids each bidder will be presumed to have inspected the site and to have read and be thoroughly familiar with the plans and Contract Documents (including all addenda). The failure or omission of any bidder to receive or examine any form, instrument or document shall in no way relieve any bidder from any obligation in respect to his bid.

18. CONTRACT DOCUMENTS: The "Bidding Requirements" section, “Contract Agreements” section, "Agreement", "Bid Bond", “Bidder’s Proposal”, "Specifications", and "Contract Drawings" (if applicable), are the Contract Documents that will form the Contract. Bidders

must examine each of the Contract Documents and make their own estimates of any difficulties associated with the delivery of the Goods.

19. OMISSIONS AND DISCREPANCIES: Should a bidder find discrepancies, in, or omissions from the Drawings or Contract Documents, or should he/she/they be in doubt as to their meaning, bidder should at once notify the Town, or its designee, who may send a written instruction to all bidders.

20. ACCEPTANCE OF PROPOSALS AND ITS EFFECT: The acceptance of a Proposal will be a notice in writing signed by a duly authorized representative of the Owner, and no other act of the Owner shall constitute acceptance of a Proposal. Acceptance shall bind the successful bidder to execute the Contract and to be responsible for damages as provided in Paragraph 15. The rights and obligations provided for in the Contract shall become effective and binding upon the parties only with its formal execution, however.

21. FAIR PROPOSALS: In submitting their proposals, bidders hereby declare that all persons interested as principal or principals, in the bid or proposal submitted for the Goods to be supplied, are named therein and that the proposal is fair in all respects; that it was prepared without collusion or fraud, and that no person in the employ of the Owner was or shall be interested in the performance of the contract or in the Goods or business to which it relates or in any portion of the profits thereof.

22. LAWS AND REGULATIONS: All applicable Federal, State and Municipal Laws, and rules and regulations of all authorities having jurisdiction over construction work in the locality of the project, shall apply to the contract throughout, and they are deemed to be included herein as though fully set forth.

23. POSTPONEMENT OF DATE FOR PRESENTING AND OPENING PROPOSALS: The Buyer reserves the right to postpone the date for presentation and opening of proposals and will give written or telegraphic notice of any such postponement to each prospective bidder.

24. NEW YORK STATE DEPARTMENT OF LABOR REQUIREMENTS: Effective December 30, 2024, in order to be qualified to work on public works projects covered by Article 8 of the Labor Law, all contractors and subcontractors must be registered with the New York State Department of Labor. Proof of registration with the New York State Department of Labor pursuant to Labor Law §220-I must be submitted with bid. https://dol.ny.gov/news/new-york-state-department-labor-announces-new-registry-contractors-and-subcontractors-engaged

25. DETERMINATION OF LOWEST QUALIFIED BIDDER: The Owner may make such investigations as it deems necessary to determine the ability of the bidder to supply the Goods, and the bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request. The Owner reserves the right to reject any bid if the evidence submitted by or investigation of such bidder fails to satisfy the Owner that such bidder is properly qualified to carry out the obligations of the Contract and to complete the work contemplated therein. Conditional bids will not be accepted. If required, the Contractor must also be able to show satisfactory credit to the extent of 25% of his/her bid price. Only qualified bidders who have adequate experience, finances, equipment, and personnel will be considered in making awards.

An award for separate sections may be made to one single Bidder, or to separate Bidders (if applicable).

The Owner reserves the right to make an award for an amount of Goods less than the total indicated, in order to come within proposed funds for the project. Except where the Owner exercised the right reserved herein to reject any or all proposals, the Contract will be awarded by the Owner to a qualified and responsible bidder who has submitted the lowest bid determined by the sum of the following:

For a Lump Sum Bid.

Algebraic sum of individual bid items, or
Algebraic sum of alternatives elected by Buyer after opening of bids, or
Amount of unit price Goods based on quantities given in proposal form or estimated by Buyer or Engineer.

For a Unit Price Bid.

Sums of unit price Goods based on quantities given in schedule, or
Algebraic sum of alternatives elected by Buyer after opening of bids.

BR-3 SCOPE OF WORK

TOWN OF TONAWANDA

Abatement and Renovation to 1835 Sheridan Drive

Job 3077.7

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

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

1.2 LOCATION AND SCOPE OF WORK

This project consists of **renovations of the second floor to include roof deck fire proofing abatement, removal and replacement of existing ceilings and lights and HVAC modifications.**

1. Project Location: Town of Tonawanda Police Department

2. Owner: Town of Tonawanda Police Department
   1835 Sheridan Drive
   Tonawanda, New York 14223

A. The Scope of Work described herein is an overall summary of the responsibilities of the Contractor(s) and their relation to the Owner. It does not supersede the specific requirements of the other Contract Documents.

1.3 WORK COVERED BY CONTRACT DOCUMENTS

A. All Contractors are responsible for completing the bid forms located in the Bid Requirements Section of this document.

1.4 DESCRIPTION OF WORK

The Work consists of, but is not limited to, the following (Refer to Appendix A, Contract Drawings, and the remainder of the Contract Documents for complete Scope of Work):

1. General: It is the intent and purpose of these Specifications and accompanying Drawings to describe the general construction Work associated and included under JOB 3077.7 – Abatement and Renovation to 1835 Sheridan Drive
2. The CONTRACTOR shall return to original condition, satisfactory to the OWNER and ENGINEER, any damaged property or facilities caused by the CONTRACTOR's operations at the CONTRACTOR's expense.
3. The CONTRACTOR shall submit a final work plan within 14 days of award of the contract defining at a minimum the procedures to be employed, the equipment and materials to be used, the safety plan to be used during the work, and a schedule defining duration of the work with milestone subtasks.
4. The CONTRACTOR shall supply all supervision, labor, equipment, and materials to complete the work outlined in this section unless specified otherwise. The Work under the project includes, but is not limited to, the following:
    a. **Asbestos abatement of roof deck and 2nd floor ceiling systems.**
    b. **Removal and new ceiling assembly, grid & accessories.**
    c. **Removal and new lighting fixtures and controls.**
    d. **Removal and new diffusers and associated ductwork in court area.**

5. As a part of the Work, the CONTRACTOR shall provide the following:
    a. Furnish and install all material and provide storage and insurance of material.
    b. Deliver material and equipment to job site.
    c. Provide storage trailers as necessary.
    d. Maintaining of all Project Record Documents including MBE/WBE reports, if required.
    e. Other requirements as defined in the Contract Documents.
    f. Provide third party inspections as required by the permitting authority and NYS Building Code.
    g. Removal of all waste generated by the Work per Owner's and Contractor's environmental requirements.
    h. Provide all rigging necessary to remove existing construction and set new facilities in place.
    i. Removal of all waste generated by Work per EPA requirements, NYSDEC and local authority regulations.

C. The CONTRACTOR shall submit a final construction schedule within 14 days of award of the Contract defining, at a minimum: the procedures to be employed; the equipment and materials to be used; the safety plan to be used during the work; and a schedule defining duration of the work with milestone subtasks.

D. The CONTRACTOR shall supply all supervision, labor, equipment, and materials to complete the work outlined in this section unless specified otherwise.

E. The CONTRACTOR shall return to original condition, satisfactory to the OWNER and ENGINEER, any damaged property or facilities caused by the CONTRACTOR's operations at the CONTRACTOR's expense.

1.5 CONTRACTS

A. The following Contract Documents apply to **JOB 3077.7 – Abatement and Renovation to 1835 Sheridan Drive**

1. Bidding Requirements
2. Contract Agreements
3. Technical Specifications
4. New York State Prevailing Wage Rates
5. Contract Drawings

1.6 CONTRACTOR USE OF PREMISES

A. Use of the Site: Limit use of the premises to work areas indicated or as directed by Owner. Confine operations to areas within the contract limits indicated or as directed by the Owner. Do not disturb portions of the site beyond the areas in which the Work is indicated without approval of Owner and Engineer.

1. Owner Occupancy: Allow for Owner occupancy.
2. Driveways and Entrances: Keep driveways and entrances serving the premises and building clear and available to the Owner, the Owner's employees, the public, and emergency vehicles at all times. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on site.
3. Other Contractors: Coordinate with multiple contractors on site including those completing parallel projects.

B. Contractor shall:

1. Assume full responsibility for protection and safekeeping of products and equipment stored on or off premises.
2. Move stored products at the request of the Owner that interfere with the operations of the Owner or other contractors.
3. Obtain, and pay for if required, all additional storage or work areas required for his/her operations.

C. Use of Existing Facilities:

1. Maintain the existing facilities not affected by construction throughout the entire construction period.
2. Repair any damage cause by construction operations.
3. Take all precautions necessary to protect the facilities and its occupants during the construction period.

D. Contractors are required to perform their work during normal daytime construction hours.

1.7 OCCUPANCY REQUIREMENTS

A. Full Owner Occupancy: The Owner will occupy the site during the entire construction period. Cooperate with the Owner during construction operations to minimize conflicts and facilitate owner usage. Perform the Work so as not to interfere with the Owner's Operations.

END OF SECTION

BR-4 PROPOSAL

BIDS DUE: **November 10, 2026** **Job 3077.7**

3:30 PM Local Time

Job 3077.7 – Abatement and Renovation to 1835 Sheridan Drive

PROPOSAL OF _____ (NAME OF BIDDER)

PHONE: _____ FAX: _____

ADDRESS OF BIDDER: _____

PRIMARY CONTACT NAME: _____

PRIMARY CONTACT EMAIL ADDRESS: _____

FEDERAL EMPLOYER IDENTIFICATION NUMBER: _____

NEW YORK STATE DEPARTMENT OF LABOR REGISTRATION NUMBER: _____

Not For Bidding

Bid Item 1 **Asbestos Abatement and Demolition**

Lump sum to provide demolition and asbestos removal per HM-101

Lump Sum: $_____

_____

(Amount written out in words)

Bid Item 2 **General Contracting**

Lump sum for ceilings per A series drawings

Lump Sum: $_____

_____

(Amount written out in words)

Bid Item 3 **Electrical**

Lump sum for lightings as per E series drawings

Lump Sum: $_____

_____

(Amount written out in words)

Bid Item 4 **HVAC**

Lump sum for HVAC modifications as per M series drawings

Lump Sum: $_____

_____

(Amount written out in words)

Alt. Bid Item 1 **Contingency Allowance**

Allowance to cover the cost of additional work, as approved by the Owner, in the Allowance Price of:

Lump Sum: $ 50,000.00

Not For Bidding

Fifty Thousand Dollars and Zero Cents

(Amount written out in words)

Alt. Bid Item 2 **Expanded work schedule**

Lump Sum Bid for the owner to approve a modified work schedule such that the asbestos abatement work may occur up to 24-hrs per day and reduce the abatement duration.

Lump Sum: $_____

_____

(Amount written out in words)

_____Days reduced abatement duration

TOTAL BID **$**_____

(Bid Item 1 + Bid Item 2 + Bid Item 3 + Bid Item 4 + Alternate 1 + Alternate 2)

_____

(Amount written out in words)

Not For Bidding

To: The Town Clerk

Town of Tonawanda, New York

Dear Sir or Madam:

The undersigned hereby declare(s) that he/she/they is/are the only person(s) interested in this; that it is made without connection with any person or firm making another bid for the same contract; that the bid is in all respects fair and without collusion or fraud; that no official or officer of the Town of Tonawanda, New York, nor any person in the employ of said Town is directly or indirectly interested in this bid, in the supplies or work to which it relates, or in any portion of the profits thereof.

Accompanying this proposal is either a certified check, or a bid bond for five percent (5%) of the bid which shall become the property of the Town of Tonawanda, New York, if, in case, this proposal shall be accepted by the Town through its Town Board, and the undersigned should fail or neglect to execute a contract with and give a bond to the said Town; otherwise, the said security is to be returned to the undersigned.

The undersigned also declare(s) that he/she/they will commence work on or about **10 days** after notice to proceed, and will substantially complete the work within **120,** days from the Notice to Proceed, in accordance with the terms of the contract.

The undersigned also declare(s) that he/she/they has/have carefully examined the form of contract and specifications herein referred to on file with the Town Engineer and will provide all the necessary tools, appliances, and other means of construction, and do all the work and furnish all the materials called for by said specifications and in accordance with their requirements, for the following prices, to it:

Not For Bidding

Supervisor, Town Board and Town Engineer:

The undersigned bidder has carefully examined the Contract Documents and also the local site conditions affecting the cost and administration of the work, and will provide all necessary labor, machinery, tools, apparatus and other means of construction and do all the work and furnish all equipment for the Project, as called for by the Contract, in accordance with plans and specifications thereof, on file in the office of the Town Engineer, 2005 Sheridan Dr, Suite 200, Tonawanda, New York 14223, and in accordance with all addenda issued by the Owner and mailed by the undersigned prior to the opening of the bids, whether received by the undersigned or not, complete, in place, tested and ready for use.
All prices must be written in words as well as expressed by figures. In case of variation, the written prices shall govern.

All amounts and totals stated above will be subject to verification by the Owner. In case of variation between unit prices and amounts and total stated by the bidder, the unit prices will be considered to be his bid.

All bids must be for the entire work and must have each blank space filled in.

It is understood that the quantities given in this proposal are approximate only and are given as a basis for the comparison of proposals. The Owner does not expressly or by implication agree that the actual amount of work will even approximately correspond herewith, but reserves the right to increase or decrease the amount of any item of the work listed, as may be found desirable or necessary during the carrying out of the construction work, and the unit prices quoted in this proposal shall apply without change to such variation in the quantities of each or all items.

For extra work, if any, performed in accordance with the annexed form of Contract, compensation shall be in accordance with the General Conditions.

Bidder acknowledges receipt of the Addenda listed below and further acknowledges that provisions of each Addendum have been included in the preparation of his Bid.

Not For Bidding

Addendum No.	Date Received	Addendum No.	Date Received
_____	_____	_____	_____
_____	_____	_____	_____

If this proposal is accepted by the Owner, the undersigned agrees to complete the entire work proposed under this Contract within the number of calendar days from and including the date specified in the written notice from the Engineer to proceed.

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

The undersigned bidder shall furnish the names of any sub-contractors and suppliers proposed to be used on this contract and shall indicate the division of work involved. The listing of proposed sub-contractors and suppliers are not required if these are indeterminate at the time of bidding. If such is the case, the form shall be provided with the word "indeterminate" written in the provided space at the time of bidding.

DIVISION OF WORK	SUBCONTRACTOR

MATERIAL	SUPPLIER

Enclosed is a guarantee, as required, consisting of a _____ (certified check or bid bond).

_____
Signature of Bidder

By_____

Title_____

Not For Bidding

This proposal MUST BEAR the written signature of the bidder or an authorized agent of the bidder.

If the bidder is a partnership, the proposal must be signed by a partner. If the bidder is a corporation, the proposal must be signed by a duly authorized agent or officer of such corporation, under the seal of the corporation. The title of such officer must be stated or a certified copy of the authorization of such agent must be attached.

If a corporation, give the state of incorporation, using the phrase, "A corporation organized under the laws of _____".

If a partnership, give the names of partners, using the phrase, "Co-partners trading and doing business under the firm name and style of _____".

If an individual, using a trade name, give the individual name, using also the phrase, "An individual doing business under the firm name and style of _____

_____".

Address _____

_____

Date _____

Not For Bidding

BR-5 NON-COLLUSION CERTIFICATE

LAWS OF THE STATE OF NEW YORK

After September 1, 1965, all bids, be they for purchase contracts or for public works, must be accompanied by a statement subscribed and affirmed by the bidder.

The statement or certification is set forth in the law and reads as follows:

> "non-collusive bidding certification, by submission of this bid or proposal, the bidder certifies that: (a) This bid or proposal has been independently arrived at without collusion with any other bidder or with any competitor or potential competitor; (b) This bid or proposal has not been knowingly disclosed and will not be knowingly disclosed, prior to the opening of bids or proposals for this project, to any other bidder, competitor or potential competitor; (c) No attempt has been made or will be made to induce any other person, partnership or corporation to submit or not to submit a bid or proposal; (d) The person signing this bid or proposal certifies that he has fully informed himself regarding the accuracy of the statements contained in this certification, and under the penalties of perjury, affirms the truth thereof, such penalties being applicable to the bidder as well as to the person signing in its behalf; (e) That the attached hereto (if a corporate bidder) is a certified copy of resolution authorizing the execution of this certificate by the signator of this bid or proposal in behalf of the corporate bidder.

_____
Name of Bidder

By:_____
Signature

NOTE: CORPORATIONS COMPLETE THE FOLLOWING:

RESOLVED, that_____be authorized to sign and submit the proposal of this corporation for the following project:

_____

and to include in such bid or proposal the certificate as to non-collusion required by Section One Hundred Three-D of the General Municipal Law as the act and deed of such corporation, and for any inaccuracies or misstatements in such certificate this corporate bidder shall be liable under the penalties of perjury."

The foregoing is a true and correct copy of the resolution adopted by _____ _____Corporation at a meeting of its Board of Directors held on the _____day of_____, 20_____.

_____
Secretary

(Seal of The Corporation)

BR-6 FORM OF BID BOND

KNOW ALL MEN BY THESE PRESENT, THAT WE, THE UNDERSIGNED,

_____, As the Principal and
(Insert Name of Bidder)

_____, As Surety, are
(Insert Name of Surety)

Hereby held and firmly bound unto the Town of Tonawanda, New York,

In the Sum of: _____Dollars ($_____)
As Liquidated damages for payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

The Conditions of the above obligation is such that whereas the Principal has submitted to the Town of Tonawanda, New York, a certain Bid, attached hereto and hereby made part hereof to enter into a contract in writing, for the

_____Contract No._____

NOW THEREFORE,

(A) If said Bid shall be rejected, or, in the alternate

(B) If said Bid shall be accepted and the Principal shall execute and deliver a Contract in the form of Contract attached hereto (properly completed in accordance with said bid) and shall furnish a Bond for the faithful performance of said Contract, and shall in all other respects perform the agreement created by the acceptance of said bid.

Then this obligation shall be void, 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 amount of this obligation as herein stated.

The surety, for value received, hereby stipulates and agrees that the obligation of said surety and its Bond shall be in no way impaired or affected by any extension of the time within which the principal may accept such Bid, and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Parties hereto have duly executed this Bond on this _____ Day of _____, 20_____.

(SEAL) _____

(Name of Principal)

By_____

(SEAL) _____

(Name of Surety)

By_____

Sealed and Delivered in the presence of:

_____

_____

ACKNOWLEDGMENT OF PRINCIPAL, IF A CORPORATION

State of _____)

County of _____) ss

On this _____Day of _____, 20_____, Before me personally came and appeared_____ to me known, who, being by me duly sworn, did depose and say that he resides at _____: that he is the _____ of _____ The Corporation described in and of which executed the foregoing instrument; that he knows the seal of said Corporation; that one of the impression of such seal; that it was so affixed by order of the Directors of said Corporation, and that he signed his name thereto by like order.

(SEAL)

_____

ACKNOWLEDGMENT OF PRINCIPAL, IF A PARTNERSHIP

State of _____)

County of _____) ss

On this _____Day of _____, 20_____, before me personally came and appeared_____ to me known and known to me to be one of the members of the firm of _____ _____described in and who executed the foregoing instrument and he acknowledged to me that he executed the same as and for the act and for the act and deed of said firm.

(SEAL)

_____

ACKNOWLEDGMENT OF PRINCIPAL, IF AN INDIVIDUAL

State of _____)

County of _____) ss

On this _____Day of _____, 20_____, before me personally came and appeared_____ to me known and known to me to be the person described in and who executed the foregoing instrument and acknowledged that he executed the same.

(SEAL)

_____

BR-7 EXEMPTION FROM SALES TAX

EXEMPTION FROM SALES AND USE TAX OF PURCHASES OF MATERIAL TO BECOME INTEGRATED INFRASTRUCTURE, BUILDING OR REAL PROPERTY OF CERTAIN EXEMPT ENTITIES.

"Chapters 513 and 514, Laws of 1974, have amended Tax Law Section 1115(a) (15) to exempt all tangible personal property which will become an integral component part of real property of all exempt organizations described in Section 1116(a) pursuant to a capital improvement contract entered into on or after September 1, 1974. These amendments eliminate the requirement that tangible personal property be sold to the exempt organization pursuant to a time and materials contract before such property is incorporated into the realty for contracts entered into after August 31, 1974. A technical amendment to section 1115(a) (16) was also made and is explained on page 2 of this letter."

"There will be no change in the documentation required between the governmental entity customer and the prime contractor. The signed contract will be sufficient proof of the exempt status of purchases made for such contract. However, there is a change in the documentation between the prime contractor and subcontractor. The prime contractor will no longer be required to prepare a Contractor's Exempt Purchase Certificate (ST-120.1) for the subcontractor's records. The existence of a signed contract document between the prime contractor and the subcontractor, which identifies the project, location and exempt owner, will form the basis of exemption of tangible personal property, purchased for incorporation into the exempt project. When purchasing the qualifying tangible personal property from a supplier, the contractor or subcontractor will continue to use a Contractor's Exempt Purchase Certificate, which is being revised to reflect the change in law. Until the revised form is available, the existing ST-120.1 (8/69) may be used for post August 31, 1974 contracts by adding the 'date of contract' in the space where the project is described and checking box 'A'."

"OTHER TAXABLE PURCHASES BY CONTRACTORS - Contractor's purchases of tangible personal property which do not become an integral component part of the exempt organization's real property and are consumed by the contractor as well as purchases of taxable services, continue to be subject to tax. However, these purchases of tangible personal property by the contractor which are not incorporated into the realty but are later sold and transferred to the exempt organization as tangible personal property continue to be exempt."

"The following types of property and services are representative, but not included to be all inclusive, of purchases which are taxable to all contractors, irrespective of whether the contractor has a time and material contract or lump sum contract which was entered into before September 1, 1974, or on or after such date, with an exempt organization;

1. Construction machinery and equipment, including rentals or repair parts.

2. Contractor's office supplies.

3. Contractor's supplies, tool, and miscellaneous equipment, including forms materials, and scaffolding (whether purchased or rented).

4. Temporary heat.

5. Telephone and electric services.

6. Any other items purchased or rented by a contractor for his use in performing the contract and not incorporated into the realty."

BR-8 SCHEDULE OF MINIMUM WAGE RATES

The minimum wage rates to be paid to laborers and mechanics engaged in the construction of this project shall be the latest wage rates established by the State Industrial Commissioner. The Contractor shall pay New York State Wage Rates and must pay the rate in effect throughout the duration of the contract. Current New York State Wage Rates are provided on the following pages.

The labor on this contract shall be performed in all respects in full accordance with the Labor Law of the State of New York. In accordance with Section 220, Subdivision 3, and Section 220 D, of the Labor Law, the Industrial Commissioner has designated as the hourly minimum rates to be paid to employees on this work. The rates shown on the schedule shall be posted in a prominent and convenient place for the inspection of the Contractor's employees.

Article 8, Section 220 of the Labor Law, as amended by Chapter 750 of the Laws of 1956, provides, among other things, that it shall be the duty of the fiscal officer to make a determination of the schedule of wages and supplements to be paid to all laborers, workmen and mechanics employed on public works projects. The amount of supplements listed on the schedule does not necessarily include all types of prevailing supplements.

The Contractor shall make provisions for disability benefits, workmen's compensation, unemployment insurance and social security, as required by law.

The most current schedule will be incorporated in the final contracts.

Kathy Hochul, Governor

Roberta Reardon, Commissioner

Town of Tonawanda

Jason Colvin
690 Delaware Avenue
Buffalo NY 14209

Schedule Year	2026 through 2027
Date Requested	09/28/2026
PRC#	2026027923

Location	Tonawanda, NY
Project ID#	3077.7
Project Type	Asbestos abatement and ceiling replacement

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 2026 through June 2027. 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.

Contractor Registry

Effective December 30, 2024 all contractors and subcontractors submitting bids or performing construction work on public work projects, or private projects covered by Article 8 of the Labor Law, are required to register with the New York State Department of Labor (NYSDOL) under Labor Law Section 220-i. To register, contractors and subcontractors must submit an application through NYSDOL's Contractor Registry portal which is available through the agency's Management System for Protecting Worker Rights (MPWR) https://mpwr-public.labor.ny.gov/en/login.

For additional information, please visit online.

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 form 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, contemperaneous, 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

Town of Tonawanda

Jason Colvin
690 Delaware Avenue
Buffalo NY 14209

Schedule Year 2026 through 2027
Date Requested 09/28/2026
PRC# 2026027923

Location Tonawanda, NY
Project ID# 3077.7
Project Type Asbestos abatement and ceiling replacement

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: $_____

Approximate Starting Date: ____/____/____

Approximate Completion Date: ____/____/____

Contract Type:
[ ] (01) General Construction
[ ] (02) Heating/Ventilation
[ ] (03) Electrical
[ ] (04) Plumbing
[ ] (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.

(12.20)

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

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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.

NEW YORK STATE OF OPPORTUNITY. Department of Labor

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)

WE ARE YOUR DOL

NEW YORK STATE | Department of Labor

New York State Department of Labor
Bureau of Public Work

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 of 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 requirement s 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.

*Contractor Registry (LL 220-I):
Labor Law Section 220-i requires that contractors obtain a Contractor Registry certificate of registration prior to bidding on or commencing work on a public or private project subject to prevailing wage requirements. Subcontractors also are prohibited from commencing work on covered employment unless they have received a Contractor Registry certificate. Contractors are required to submit their Certificate of Registration with their bid materials. A public database is available online to confirm registration at data.ny.gov to confirm registration validity. For additional information on how to register and the requirements, visit https://dol.ny.gov/public-work-contractor-and-subcontractorregistry-
landing.

Payrolls and Payroll Records

Every contractor and subcontractor MUST keep original payrolls or transcripts subscribed and affirmed as true under penalty of perjury. Payrolls must be maintained for at least three (3) years from the projects date of completion. Additionally, as per Article 6 of the Labor Law, contractors and subcontractors are required to establish, maintain, and preserve for not less that 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.

Payroll records and transcripts are required to be kept on site during all the time that work under that contract is being performed.

NOTE: *For more detailed information regarding Article 9 prevailing wage contracts, please refer to "General Provisions of Laws Covering Workers on Article 9 Public Work Building Service Contracts".*

If you have any questions concerning the attached schedule or would like additional information, please write to:

New York State Department of Labor
Bureau of Public Work
State Office Campus, Bldg. 12
Albany, NY 12240

OR

Contact the nearest BUREAU of PUBLIC WORK District Office

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

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. 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. Please Note: Updates to the Wage Schedule shall be made on a quarterly basis.

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.

Shift Work

If the timeline of the contract requires shift work be performed to meet deadlines, the BPWE will enforce the shift work rate as the required rate on the project whether or not shift work is specifically addressed in the contract.

Paid Prenatal Leave

Every employer shall be required to provide to its employees twenty hours of paid prenatal personal leave during any fifty-two week calendar period. Paid prenatal personal leave shall mean leave taken for the health care services received by an employee during their pregnancy or related to such pregnancy, including physical examinations, medical procedures, monitoring and testing, and discussions with a healthcare provider related to the pregnancy. Paid prenatal personal leave may be taken in hourly increments. Benefits for paid prenatal personal leave shall be paid in hourly installments. Employees shall receive compensation at the employee's regular rate of pay, or the applicable minimum wage established by the labor law, whichever is greater, for the use of Paid Prenatal leave.

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

Erie County General Construction

Boilermaker — 09/01/2026

JOB DESCRIPTION Boilermaker **DISTRICT** 12

ENTIRE COUNTIES
Allegany, Cattaraugus, Chautauqua, Chemung, Erie, Genesee, Livingston, Monroe, Niagara, Ontario, Orleans, Schuyler, Steuben, Wayne, Wyoming, Yates

WAGES

Per hour:	07/01/2026	01/01/2027 Additional
Boilermaker	$ 41.50	$ 2.50*

The wage rate will be 90% of the above for Maintenance work on boilers less than 100,000 pph.

* To be allocated at a later date.

SUPPLEMENTAL BENEFITS
Per hour: $ 32.38 + 1.49*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

OVERTIME PAY
See (B, E, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 15, 25) on HOLIDAY PAGE

REGISTERED APPRENTICES
Terms at 6 Months

1st	2nd	3rd	4th	5th	6th	7th	8th
65%	65%	70%	75%	80%	85%	90%	95%

Supplemental Benefits per hour:

All Terms: $ 32.38 + 1.49*

*This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

12-7

Broadband — 09/01/2026

JOB DESCRIPTION Broadband **DISTRICT** 4

ENTIRE COUNTIES
Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orleans, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Wyoming, Yates

PARTIAL COUNTIES
Orange: Only in the Village of Greenwood Lake, Village of Highland Falls, Town of Tuxedo, and Town of Patterson

WAGES
NOTE: Applies to all public work and covered private projects, including those receiving ConnectAll funding subject to New York State Labor Law §224-E, solicited on or after July 1,2025. For all other projects solicited prior to July 1,2025 please see LINEMAN ELECTRICIAN(1)-TELEDATA

Per Hour:	07/01/2026	08/04/2026
Field Tech Install/Repair*	$ 52.85	$ 54.44

For outside work (excluding installation on building construction/alteration/renovation projects), stopping at first point of attachment (demarcation), installing/maintaining/repairing broadband internet service.

"Broadband", "Broadband Service", or "Broadband Internet" means mass-market retail service by wire or radio that provides the capability to transmit data to and receive data from all or substantially all internet endpoints, including any capabilities that are incidental to and enable the operation of the communications service, but excluding dial-up internet access service.

*NOTE: EXCLUDES work within ten(10) feet of High Voltage (600 Volts and over) transmission lines. Please see LINEMAN rates.
*NOTE: Does not include the operation of equipment. Please see applicable OPERATING ENGINEER rates.
*NOTE: Does not include Groundmen/Flagger/Flagmen. Please see LABORER/LABORER-HEAVY/HIGHWAY rates.

SUPPLEMENTAL BENEFITS
Per Hour:

$ 23.24

OVERTIME PAY
See (B, K, *R) on OVERTIME PAGE
* Two and one half times the hourly rate after the 8th hour

HOLIDAY
Paid: See (5, 6, 7, 11, 12) on HOLIDAY PAGE
Overtime: See (5, 6, 7, 11, 12) on HOLIDAY PAGE

4-CWA-Dist2

Carpenter - Building — 09/01/2026

JOB DESCRIPTION Carpenter - Building **DISTRICT** 12

ENTIRE COUNTIES
Erie

PARTIAL COUNTIES
Cattaraugus: : Townships of Persia and Perrysburg

WAGES

Per hour:	07/01/2026	07/01/2027 Additional	07/01/2028 Additional
Carpenter	$ 38.47	3.50*	2.50*
Certified Welder	41.47	3.50*	2.50*
Diver-Wet Day	63.47	3.50*	2.50*
Diver-Dry Day	39.97	3.50*	2.50*

* To be allocated at a later date.

NOTE ADDITIONAL AMOUNTS PAID FOR THE FOLLOWING WORK LISTED BELOW (per hour worked):
- When an employee performs work within a contaminated area on a State and/or Federally designated hazardous waste site, and where relevant State and/or Federal regulations require employees to be furnished and use or wear required forms of personal protection, then the employee shall receive their regular hourly rate plus $1.50 per hour.

- Certified Welders shall receive $ 3.00 per hour over the Journeyworker's rate of pay when the employee is required to be certified and performs DOT or ABS specified welding work.

- Depth pay for Divers based upon deepest depth on the day of the dive (per diem payment):

0' to 80'	no additional fee
81' to 100'	additional $0.50 per foot
101' to 150'	additional $0.75 per foot
151' and deeper	additional $1.25 per foot

- Penetration pay for Divers based upon deepest penetration on the day of the dive (per diem payment):

0' to 50'	no additional fee
51' to 100'	additional $0.75 per foot
101'and deeper	additional $1.25 per foot

- Diver rates applies to all hours worked on dive day.

SHIFT WORK
On Contracting Agency mandated shift work, the following rates will be applicable:
1st Shift - Regular Rate
2nd Shift - Premium of 10% of base wage per hour
3rd Shift - Premium of 15% of base wage per hour
Shift work shall be defined as implementing at least two (2) shifts in a twenty-four (24) consecutive hour period. Shift work must be for a minimum of three (3) consecutive days.

SUPPLEMENTAL BENEFITS
Per hour worked:

Carpenter(s)	$ 30.16
Diver(s)	30.16

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages per hour:
One year terms at the following percentage of Journeyman's base wage:

Carpenter Apprentices:

1st	2nd	3rd	4th
65%	70%	75%	80%

Supplemental Benefits per hour worked:

1st	2nd	3rd	4th
$13.30	$13.30	$15.90	$15.90

ADDITIONAL AMOUNTS PAID PER HOUR WORKED TO APPRENTICES FOR SPECIFIC TYPES OF WORK PERFORMED:
- Certified Welders shall receive $ 3.00 per hour over the apprentice's rate of pay when the apprentice is required to be certified and performs DOT or ABS specified welding work.
- When an apprentice performs work within a contaminated area on a State and/or Federally designated hazardous waste site, and where relevant State and/or Federal regulations require the apprentice to be furnished and use or wear required forms of personal protection, then the apprentice shall receive his regular hourly rate plus $ 1.50 per hour.

12-276B-Cat

Carpenter - Building / Heavy&Highway — 09/01/2026

JOB DESCRIPTION Carpenter - Building / Heavy&Highway **DISTRICT** 2

ENTIRE COUNTIES
Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orleans, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Wyoming, Yates

PARTIAL COUNTIES
Orange: The area lying on Northern side of Orange County demarcated by a line drawn from the Bear Mountain Bridge continuing west to the Bear Mountain Circle, continue North on 9W to the town of Cornwall where County Road 107 (also known as Quaker Rd) crosses under 9W, then east on County Road 107 to Route 32, then north on Route 32 to Orrs Mills Rd, then west on Orrs Mills Rd to Route 94, continue west and south on Route 94 to the Town of Chester, to the intersection of Kings Highway, continue south on Kings Highway to Bellvale Rd, west on Bellvale Rd to Bellvale Lakes Rd, then south on Bellvale Lakes Rd to Kain Rd, southeast on Kain Rd to Route 17A, then north and southeast along Route 17A to Route 210, then follow Route 210 to NJ Border.

WAGES

Wages per hour:	07/01/2026	07/01/2027 Additional
Carpenter - ONLY for Artificial Turf/Synthetic Sport Surface	$ 39.69	$ 2.25*

*To be allocated at a later date.

Note - Does not include the operation of equipment. Please see Operating Engineers rates.

SUPPLEMENTAL BENEFITS
Per hour worked:

Journeyworker	$ 27.84

OVERTIME PAY
See (B, E, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (5) on HOLIDAY PAGE
Overtime: See (5, 6, 16) on HOLIDAY PAGE
Notes:
When a holiday falls upon a Saturday, it shall be observed on the preceding Friday. Whan a holiday falls upon a Sunday, it shall be observed on the following Monday.
An employee taking an unexcused day off the regularly scheduled day before or after a paid Holiday shall not receive Holiday pay.

REGISTERED APPRENTICES
Wages per hour (1300 hour terms at the following percentage of Journeyworker's wage):

1st	2nd	3rd	4th

65%	70%	75%	80%

Supplemental Benefits per hour worked:

$ 19.08	$ 19.69	$ 21.86	$ 22.47

2-42AtSS

Carpenter - Heavy&Highway — 09/01/2026

JOB DESCRIPTION Carpenter - Heavy&Highway **DISTRICT** 12

ENTIRE COUNTIES
Erie

WAGES

Per hour:	07/01/2026	07/01/2027 Additional
Carpenter	$ 45.23	$ 2.65*
Pile Driver	45.23	
Diver-Wet Day	70.23	
Diver-Dry Day & Dive Tender	46.23	
Effluent & Slurry Diver-Wet Day	105.35	
Effluent & Slurry Diver-Dry Day	69.34	

* To be allocated at a later date.

NOTE ADDITIONAL AMOUNTS PAID FOR THE FOLLOWING WORK LISTED (per hour worked):
- State or Federal designated hazardous site, requiring protective gear shall be an additional $2.50 per hour.
- Certified Welders when required to perform welding work will receive an additional $5.00 per hour.

ADDITIONAL NOTES PERTAINING TO DIVERS/TENDERS:
- The pilot of an ADS or submersible will receive one and one-half (1 1/2) times the Diver-Wet Day Rate for time submerged.
- All crew members aboard a submersible shall receive the Diver-Wet Day rate.
- Depth pay for Divers based upon deepest depth on the day of the dive (per diem payment):

0' to 50'	no additional fee
51'to 100'	additional $0.50 per foot
101' to 150'	additional $0.75 per foot
151' to 200'	additional $1.25 per foot
201' or deeper	additional $1.50 per foot

- Penetration pay for Divers based upon deepest penetration on the day of the dive (per diem payment):

0' to 50'	no additional fee
51' to 100'	additional $0.75 per foot
101' to 200'	additional $1.00 per foot
201' or deeper	additional $1.25 per foot

- Diver rates apply to all hours worked on dive day.

SUPPLEMENTAL BENEFITS

Per hour worked:	
Carpenter(s)	$ 33.35
Pile Driver(s)	33.35
Diver(s)	33.35

OVERTIME PAY
See (B, E, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (5, 6) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE
In the event a Holiday falls on a Saturday, the Friday before will be observed as a Holiday. If a Holiday falls on a Sunday, then Monday will be observed as a Holiday. Employee must work scheduled workday before and after the Holiday.

REGISTERED APPRENTICES
Wages per hour:
One year terms at the following percentage of Journeyman's wage:
Carpenter Apprentice:

07/01/2026	1st	2nd	3rd	4th
	65%	70%	75%	80%

Pile Driver Apprentice (1300 hour terms at percentage of Pile Driver Rate)

07/01/2026	1st	2nd	3rd	4th
	65%	70%	75%	80%

Supplemental benefits Carpenter/Pile Driver per hour worked:

1st	2nd	3rd	4th
$20.27	$20.96	$23.20	$23.89

NOTE ADDITIONAL AMOUNTS PAID PER HOUR WORKED TO APPRENTICES FOR SPECIFIC TYPES OF WORK PERFORMED:
- State or Federal designated hazardous site, requiring protective gear shall be an additional $2.50 per hour.
- Certified welders when required to perform welding work will receive an additional $5.00 per hour.

12-276HH-Erie

Electrician — 09/01/2026

JOB DESCRIPTION Electrician **DISTRICT** 3

ENTIRE COUNTIES
Erie

PARTIAL COUNTIES
Cattaraugus: Only the Townships of Ashford, East Otto, Ellicottville, Farmersville, Freedom, Franklinville, Lyndon, Machias, Mansfield, New Albion, Otto, Perrysburg, Persia and Yorkshire.
Genesee: Only the Townships of Alabama, Alexander, Darien, Oakfield,Pembroke and that portion of the Towns of Batavia and Elba that are west of Little Tonawanda Creek; Tonawanda Creek; the City limits of Batavia (in effect prior to Feb. 1, 1970) and State Highway 98 north of the City of Batavia, then north on Highway 98 to the Orleans County line.
Wyoming: Only the Townships of Arcade, Attica, Bennington, Eagle, Java, Orangeville, Sheldon and Wethersfield.

WAGES

Per hour:	07/01/2026	06/01/2027 Additional
Electrician*	$ 47.50	$5.50

* Includes teledata work

Additional $0.50/hr in shafts over 25 ft. deep and in underground tunnels over 75 ft. long.
Additional $0.75/hr for work on toothpicks, structural steel, temporary platforms, swinging scaffolds, boatswain chairs, smoke stacks or water towers 30 ft above the floor or for work on rolling scaffolds and ladders over 50 ft.
Additional $1.50/hr for Cable Splicers on such work as lead, and shielded cable and splices or terminations on cable 5KV and above.
Additional $1.00/hr for Hot work (Atomic plants).
Additional $2.00/hr for work on radio, TV, light towers and floating platforms or climbing ladders in excess of 100 ft. high.

SHIFT WORK
When shift work is mandated either in the job specification or by the contracting agency the following premiums apply:
17.3% for work from 4:30PM - 1:00AM
31.4% for work from 12:30AM - 9:00AM

SUPPLEMENTAL BENEFITS
Per hour:
$ 34.88*
* NOTE - add 6% of the posted straight time or applicable premium wage rate.

OVERTIME PAY
See (B, E, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages per hour:

Hour terms at the following wages:

0 to 1000	1000 to 2000	2000 to 3500	3500 to 5000	5000 to 6500	6500 to 8200
$ 23.75	$ 28.50	$ 30.90	$ 33.25	$ 35.65	$ 40.40

Supplemental benefits per hour:

0 to 2000	2000 to 6500	6500 to 8200
$ 15.55*	$ 27.10*	$ 34.88*

* NOTE - add 6% of the posted straight time or applicable premium wage rate.

3-41

Elevator Constructor — 09/01/2026

JOB DESCRIPTION Elevator Constructor **DISTRICT** 3

ENTIRE COUNTIES
Allegany, Cattaraugus, Chautauqua, Erie, Genesee, Niagara, Orleans, Wyoming

WAGES

Per hour:	07/01/2026
Elevator Constructor	$ 65.07
Helper	45.55

SUPPLEMENTAL BENEFITS
Per hour:
$ 38.99
Note - add 6% of regular hourly rate for all hours worked.

OVERTIME PAY
See (D, O) on OVERTIME PAGE

HOLIDAY
Paid: See (5, 6, 15, 16) on HOLIDAY PAGE
Overtime: See (5, 6, 15, 16) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages per hour:

One year (1,700 hour each) terms at the following percentage of Journeyworker's wage:

1st*	2nd	3rd	4th
55%	65%	70%	80%

*Note - 0-6 months of the 1st year term is paid at 50% of Journeyman's wage with no supplemental benefits.

Supplemental benefits per hour:
$ 38.99

Note - add 6% of regular hourly rate for all hours worked.

3-14

Glazier — 09/01/2026

JOB DESCRIPTION Glazier **DISTRICT** 3

ENTIRE COUNTIES
Allegany, Cattaraugus, Chautauqua, Erie, Genesee, Niagara, Orleans, Wyoming

WAGES

Per hour:	07/01/2026
Glazier	$ 36.00
Working off Suspended Scaffold (Swing Stage)	$ 38.00

SUPPLEMENTAL BENEFITS
Per hour:

Journeyworker Glazier	$ 31.47

OVERTIME PAY
See (B, E, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE for Glazier and Glazier Apprentice
Paid: See (5, 6) on HOLIDAY PAGE for Maintenance
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages per hour:

Glazier: 1000 hour terms at the following percentage of Journeyworker's wage:

1st	2nd	3rd	4th	5th	6th	7th	8th
$ 21.50	$ 22.50	$ 23.50	$ 24.50	$ 25.50	$ 26.50	$ 27.50	$ 28.50

Supplemental benefits per hour:

1st & 2nd terms	$ 8.65
3rd & 4th terms	11.15
5th & 6th terms	12.65
7th & 8th terms	14.15

3-660

Insulator - Heat & Frost — 09/01/2026

JOB DESCRIPTION Insulator - Heat & Frost **DISTRICT** 3

ENTIRE COUNTIES
Allegany, Cattaraugus, Chautauqua, Erie, Niagara, Wyoming

PARTIAL COUNTIES
Genesee: Only the Townships of Alabama, Alexander, Darien, Oakfield and Pembroke.

WAGES

Per Hour:	07/01/2026	05/01/2027	05/01/2028	05/01/2029
		Additional	Additional	Additional
Heat & Frost Insulator	$ 40.65	$4.25	$4.50	$5.15

SUPPLEMENTAL BENEFITS
Per hour:
$ 31.54

OVERTIME PAY
See (B, *E, **Q) on OVERTIME PAGE
* Note - Double time after 10 hours on Saturday.
** Note - Triple time on Labor Day if WORKED.

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages per hour:

One year terms at the following percentage of Journeyworker's wage:

1st	2nd	3rd	4th
60%	70%	75%	80%

Supplemental Benefits per hour:

1st	$ 9.76
2nd	13.34
3rd	31.54
4th	31.54

3-4

Ironworker — 09/01/2026

JOB DESCRIPTION Ironworker **DISTRICT** 3

ENTIRE COUNTIES
Cattaraugus, Chautauqua

PARTIAL COUNTIES
Allegany: Entire county except the Towns of Birdsall, Burns and Grove.
Erie: All except the Town of Grand Island north of Whitehaven Road.
Genesee: Only the Townships of Alabama, Alexander, Darien and Pembroke
Steuben: Only the Townships of Canisteo, Freemont, Greenwood,Hartsville, Hornell, Hornellsville, Howard, Jasper, Troupsburg and West Union
Wyoming: Only the Townships of Arcade, Attica, Bennington, Eagle,Gainsville, Java, Orangeville, Pike, Sheldon, Warsaw and Wethersfield.

WAGES

Per hour:	07/01/2026
Structural	$ 38.43
Ornamental	38.43
Layout	38.43
Rodmen	38.43
Reinforcing	38.43

Welders	38.43
Riggers & Mach. Movers	38.43
Curtain Wall Erector	38.43
Window Erector	35.88
Fence Erector	36.75

SHIFT WORK
When shift work is mandated either in the job specification or by the contracting agency the following premiums apply:
10% for second shift work from 2:00PM - 7:00PM
15% for third shift work from 7:00PM - 12:00AM

When a single irregular shift is worked outside the standard workday with the start times based on second and third shifts, a 10% premium on hours worked applies.

SUPPLEMENTAL BENEFITS
Per hour:

Fence Erectors	$ 33.79
All others	35.29

OVERTIME PAY
See (B, E, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages per hour:

One year terms at the following wage:

1st	2nd	3rd	4th
$ 21.50	$ 23.50	$ 25.50	$ 27.50

Supplemental benefits per hour:

1st	2nd	3rd	4th
$ 15.85	$ 26.21	$ 27.69	$ 29.17

3-6

Ironworker — 09/01/2026

JOB DESCRIPTION Ironworker **DISTRICT** 3

ENTIRE COUNTIES
Niagara

PARTIAL COUNTIES
Erie: Only that portion of the Township of Grand Island north of Whitehaven Road.
Orleans: Only the Townships of Ridgeway, Shelby and Yates.

WAGES
Per hour: 07/01/2026

Structural	$ 38.25
Ornamental	38.25
Reinforcing	38.25
Rigger & Mach. Mover	38.25
Pre-Engineered	38.25
Fence Erector	38.25
Pre-Cast Erector	38.25
Welder	38.25
Window Erector	38.25

SHIFT WORK
When shift work is mandated either in the job specification or by the contracting agency the following premiums apply:
10% for second shift work from 2:00PM - 7:00PM
15% for third shift work from 7:00PM - 12:00AM

When a single irregular shift is worked outside the standard workday with the start times based on second and third shifts, a 10% premium on hours worked applies.

SUPPLEMENTAL BENEFITS
Per hour:

$ 35.80

OVERTIME PAY
See (B, E, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages per hour:

One year terms at the following wage:

1st term	$ 21.50
2nd term	23.50
3rd term	25.50
4th term	27.50

Supplemental benefits per hour:

1st term	$ 14.03
2nd term	22.12
3rd term	23.27
4th term	24.43

3-9

Laborer - Building — 09/01/2026

JOB DESCRIPTION Laborer - Building **DISTRICT** 3

ENTIRE COUNTIES
Erie

PARTIAL COUNTIES
Cattaraugus: Only the Townships of Perrysburg and the Village Gowanda.

WAGES
CLASS A: Basic, Safety Man, Flagman, Tool Room Man, Nurseryman, Demolition Worker, Top Man, Wrecker, IBC Barriers Except on Structures, Guard Rail, Asphalt Shovelers, Foundation Laborer over 8' in Depth, Hod Carriers, Plaster Tender, Plaster Scaffold Builder, Pneumatic Gas, Electric Tool Operator including all forms of Busters, Jackhammers and Chipping Guns, Steel Burners.

CLASS B: Mortar Mixer, Asphalt Smoothers, Pneumatic Gas, Electric Tool Operator including all forms of Busters, Jackhammers and Chipping Guns over 8' in depth.

CLASS C: Worker on any Swing Scaffold, Blaster, Plumbing Laborer, Wagon Drill Operator, Bottomman (caisson or cofferdam), Laser Setter, Asphalt Rakers, Asphalt Screed Man.

CLASS D: Stone Cutter, Curb Setter and Flag Layer.

CLASS E: Asbestos Removal, Deleader.

CLASS F: Hazardous Waste Worker.

*For wearing of replaceable cartridge respirator in excess of 2 hours per day - add $1.00 to Group A rate.

Per hour:	07/01/2026
Building Laborer:	
CLASS A	$ 35.33
CLASS B	35.50
CLASS C	35.61
CLASS D	36.08
CLASS E	36.83
CLASS F	37.33

SUPPLEMENTAL BENEFITS
Per hour:
$ 28.25

OVERTIME PAY
See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (22) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages per hour:

Hour terms at the following percentage of Journeyworker's wage:

0 to 1500 to 3000 to 4000
70% 80% 90%

Supplemental benefits per hour:

$ 28.25

3-210b

Laborer - Heavy&Highway **09/01/2026**

JOB DESCRIPTION Laborer - Heavy&Highway **DISTRICT** 3

ENTIRE COUNTIES
Erie

WAGES
Heavy/Highway Laborer:
GROUP A: Basic, Drill Helper, Flagman, Outboard and Hand Boats, Demolition Worker, Nurseryman, IBC Barriers (except on structures), Guard Rails, Road Markers.

GROUP B: Grade Checker, Chain Saw, Concrete Aggregate Bin, Concrete Bootmen, Gin Buggy, Hand or Machine Vibrator, Jack Hammer, Mason Tender, Mortar Mixer, Pavement Breaker, Handlers of Steel Mesh, Small Generators for Laborers' Tools, Pipe Layers, Vibrator Type Rollers, Tamper, Drill Doctor, Tail or Screw Operator on Asphalt Paver, Water Pump Operators (2" and Single Diaphragm), Nozzle (Asphalt, Gunite, Seeding, and Sand Blasting), Laborers on Chain Link Fence Erection, Rock Splitter and Power Unit, Pusher Type Concrete Saw and all other Gas, Electric, Oil and Air Tool Operators, Wrecking Laborer and Laser Man.

GROUP C: All Rock or Drilling Machine Operators (Except Quarry Master and Similar Type), Acetylene Torch Operators, Asphalt Raker, Powderman and Welder.

GROUP D: Blasters, Curb and Flatwork Formsetter not on structures, Stone or Granite Curb Setters and Stone Cutter.

Per hour: 07/01/2026

Heavy/Highway Laborer:

GROUP A	$ 39.00
GROUP B	39.20
GROUP C	39.40
GROUP D	39.60

For all Deleader & Asbestos work add $1.50 to Group A rate.
For all Hazardous waste work add $2.00 to Group A rate.
For wearing of replaceable cartridge respirator in excess of 2 hours per day - add $1.00 to Group A rate.

Sewer/Water Laborer:
GROUP A: Basic, Flagman, Top man, Wreckers.

GROUP B: Foundation, Plaster tender, Scaffold bootman, Pneumatic, gas, electric, tool operator, jackhammer, chipping guns.

GROUP C: Mortar Mixer, over 8 ft. in depth.

GROUP D: Pavement formsetter, Steelburner, Caisson, Wagon Drill Oper., PipeLayer, Swing Scaffold.

GROUP E: Utility pave driver, Laser operator.

GROUP F: Blaster.

Per hour: 07/01/2026

Sewer/Water Laborer:

GROUP A	$ 39.00
GROUP B	39.10
GROUP C	39.15
GROUP D	39.25

GROUP E	39.60
GROUP F	40.00

For all Deleader & Asbestos work add $1.50 to Group A rate.
For all Hazardous waste work add $2.00 to Group A rate.

SHIFT WORK
An additional $4.00 per hour is required when an irregular work shift starting any time from 3:30PM to 1:00AM is mandated either in the job specification or by the contracting agency.

SUPPLEMENTAL BENEFITS
Per hour:
$ 31.31

OVERTIME PAY
See (B, E, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (5, 6) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages per hour:

Hour terms at the following percentage of Journeyworker's wage:

0 to 1500	to 3000	to 4000
70%	80%	90%

Supplemental benefits per hour:

$ 31.31

3-210h

Laborer - Tunnel — 09/01/2026

JOB DESCRIPTION Laborer - Tunnel **DISTRICT** 3

ENTIRE COUNTIES
Erie

WAGES
CLASS A: Mole Nipper, Powder Handler, Changehouse Attendant and Top Laborer.

CLASS B: Air Spade, Jackhammer, Pavement Breaker.

CLASS C: Top Bell.

CLASS D: Bottom Bell, Side or Roofbelt Driller, Maintenance men, Burners, Block Layers, Rodmen, Caulkers, Miners helper, Trackmen, Nippers, Derailmen, Electrical Cablemen, Hosemen, Groutmen, Gravelmen, Form Workers, Movers and Shaftmen, Conveyor men.

CLASS E: Powder Monkey.

CLASS F: Blasters, Ironmen and Cement Worker, Miner, Welder, Heading Driller.

CLASS G: Steel Erectors, Piledriver, Rigger.

Per hour:	07/01/2026
Tunnel Laborer:	
CLASS A	$ 40.50
CLASS B	40.65
CLASS C	40.75
CLASS D	41.25
CLASS E	41.35
CLASS F	41.75
CLASS G	42.00

For all Deleader & Asbestos work add $1.50 to Class A rate.
For all Hazardous waste add $2.00 to Class A rate.
For wearing of replaceable cartridge respirator in excess of 2 hours per day - add $1.00 to Group A rate.

SHIFT WORK
An additional $4.00 per hour is required when a single irregular work shift starting any time from 3:30PM to 1:00AM is mandated either in the job specification or by the contracting agency.

SUPPLEMENTAL BENEFITS
Per hour:
$ 31.31

OVERTIME PAY
See (B, E, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (5, 6) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages per hour:

Hour terms at the following percentage of Journeyworker's wage:

0 to 1500 to 3000 to 4000
70% 80% 90%

Supplemental benefits per hour:

$ 31.31

3-210t

Lineman Electrician — 09/01/2026

JOB DESCRIPTION Lineman Electrician **DISTRICT** 6

ENTIRE COUNTIES
Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Wyoming, Yates

WAGES
A Lineman/Technician shall perform all overhead aerial work. A Lineman/Technician on the ground will install all electrical panels, connect all grounds, install and connect all electrical conductors, assembly of all electrical materials, conduit, pipe, or raceway; placing of fish wire; pulling of cables, wires or fiber optic cable through such raceways; splicing of conductors; dismantling of such structures, lines or equipment.

Crane Operators: Operation of any type of crane on line projects.
Crawler Backhoe: Operation of tracked excavator/crawler backhoe with 1/2 yard bucket or larger on line projects.
Digging Machine Operator: All other digging equipment and augering on line projects.

A Groundman/Truck Driver shall: Build and set concrete forms, handle steel mesh, set footer cages, transport concrete in a wheelbarrow, hand or machine concrete vibrator, finish concrete footers, mix mortar, grout pole bases, cover and maintain footers while curing in cold weather, operate jack hammer, operate hand pavement breaker, tamper, concrete and other motorized saws, as a drill helper, operate and maintain generators, water pumps, chainsaws, sand blasting, operate mulching and seeding machine, air tools, electric tools, gas tools, load and unload materials, hand shovel and/or broom, prepare and pour mastic and other fillers, assist digger operator/equipment operator in ground excavation and restoration, landscape work and painting. Only when assisting a lineman technician, a groundman/truck driver may assist in installing conduit, pipe, cables and equipment.

NOTE: Includes Teledata Work within ten (10) feet of High Voltage Transmission Lines. Also includes digging of holes for poles, anchors, footer, and foundations for electrical equipment.

-----Below rates applicable on all overhead and underground distribution and maintenance work, and all overhead and underground transmission line work and the installation of fiber optic cable where no other construction trades are or have been involved. Includes access matting for line work.

Per hour:	07/01/2026	05/03/2027	05/01/2028
Group A:			
Lineman, Technician	$ 64.37	$ 66.84	$ 69.47
Crane, Crawler Backhoe	64.37	66.84	69.47
Welder, Cable Splicer	64.37	66.84	69.47
Group B:			
Digging Mach. Operator	$ 57.93	$ 60.16	$ 62.52
Group C:			
Tractor Trailer Driver	$ 54.71	$ 56.81	$ 59.05
Groundman, Truck Driver	51.50	53.47	55.58

Equipment Mechanic	51.50	53.47	55.58
Group D:			
Flagger	$ 35.40	$ 36.76	$ 38.21

Additional 3% per hour above regular rate for entire crew when a helicopter is used. This will increase to 5% on May 03, 2027.

-----Below rates applicable on all electrical sub-stations, switching structures, fiber optic cable and all other work not defined as "Utility outside electrical work." Includes access matting for line work.

Group A:			
Lineman, Technician	$ 64.37	$ 66.84	$ 69.47
Crane, Crawler Backhoe	64.37	66.84	69.47
Cable Splicer	70.81	73.52	76.42
Certified Welder,			
Pipe Type Cable	$ 67.59	$ 70.18	$ 72.94
Group B:			
Digging Mach. Operator	$ 57.93	$ 60.16	$ 62.52
Group C:			
Tractor Trailer Driver	$ 54.71	$ 56.81	$ 59.05
Groundman, Truck Driver	51.50	53.47	55.58
Equipment Mechanic	51.50	53.47	55.58
Group D:			
Flagger	$ 35.40	$ 36.76	$ 38.12

Additional 3% per hour above regular rate for entire crew when a helicopter is used. This will increase to 5% on May 03, 2027.

-----Below rates applicable on all railroad catenary installation and maintenance, third rail installation, bonding of rails and pipe type cable and installation of fiber optic cable. Includes access matting for line work.

Group A:			
Lineman, Tech, Welder	$ 65.81	$ 68.34	$ 71.03
Crane, Crawler Backhoe	65.81	68.34	71.03
Cable Splicer	72.39	75.17	78.13
Certified Welder,			
Pipe Type Cable	69.10	71.76	74.58
Group B:			
Digging Mach. Operator	$ 59.23	$ 61.51	$ 63.93
Group C:			
Tractor Trailer Driver	$ 55.94	$ 58.09	$ 60.38
Groundman, Truck Driver	52.65	54.67	56.82
Equipment Mechanic	52.65	54.67	56.82
Group D:			
Flagger	$ 36.20	$ 37.59	$ 39.07

Additional 3% per hour above regular rate for entire crew when a helicopter is used. This will increase to 5% on May 03, 2027.

-----Below rates applicable on all overhead and underground transmission line work & fiber optic cable where other construction trades are or have been involved. This applies to transmission line work only, not other construction. Includes access matting for line work.

Group A:			
Lineman, Tech, Welder	$ 67.10	$ 69.68	$ 72.43
Crane, Crawler Backhoe	67.10	69.68	72.43
Group B:			
Digging Mach. Operator	$ 60.39	$ 62.71	$ 65.19
Group C:			
Tractor Trailer Driver	$ 57.04	$ 59.23	$ 61.57
Groundman, Truck Driver	53.68	55.74	57.94
Equipment Mechanic	53.68	55.74	57.94

Group D:			
Flagger	$ 36.91	$ 38.32	$ 39.84

Additional 3% per hour above regular rate for entire crew when a helicopter is used. This will increase to 5% on May 03, 2027.

SHIFT WORK

The following rates will apply on all contracting agency mandated multiple shifts of at least five (5) days duration worked between the hours listed below:

1ST SHIFT	8:00 AM to 4:30 PM REGULAR RATE
2ND SHIFT	4:30 PM to 1:00 AM REGULAR RATE PLUS 17.3 %
3RD SHIFT	12:30 AM to 9:00 AM REGULAR RATE PLUS 31.4 %

SUPPLEMENTAL BENEFITS

Per hour:

	07/01/2026	05/03/2027	05/01/2028
Group A	$ 32.91*	$ 34.41*	$ 35.91*
Group B	$ 28.91*	$ 30.41*	$ 31.91*
Group C	$ 28.51*	$ 29.71*	$ 30.91*
Group D	$ 28.41*	$ 29.54*	$ 30.67*

*NOTE: Plus 7% of the hourly wage paid. The 7% is based on the straight time rate or the premium time rate.

OVERTIME PAY

See (B, E, Q, X) on OVERTIME PAGE. NOTE: Double time for all emergency work designated by the Contracting Agency.
WAGE CAP - Double the straight time hourly base wage shall be the maximum hourly wage compensation for any hour worked. Contractor is still responsible to pay the hourly benefit amount for each hour worked.

HOLIDAY

Paid	See (5, 6, 8, 15, 25) on HOLIDAY PAGE
Overtime	See (5, 6, 8, 15, 25) on HOLIDAY PAGE

NOTE: All paid holidays falling on Saturday shall be observed on the preceding Friday. All paid holidays falling on Sunday shall be observed on the following Monday. Supplements for holidays paid at straight time.

REGISTERED APPRENTICES

WAGES per hour: 1000 hour terms at the following percentage of the applicable Journeyworker's Lineman wage.

1st	2nd	3rd	4th	5th	6th	7th
60%	65%	70%	75%	80%	85%	90%

SUPPLEMENTAL BENEFITS per hour:

	07/01/2026	05/03/2027	05/01/2028
All terms:	$ 28.41*	$ 29.54*	$ 30.67*

*NOTE: Plus 7% of the hourly wage paid. The 7% is based on the straight time rate or the premium time rate.

6-1249a

Lineman Electrician - Teledata — 09/01/2026

JOB DESCRIPTION Lineman Electrician - Teledata **DISTRICT** 6

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

NOTE: Applies to all public work and covered private projects, including those receiving ConnectAll funding subject to LL 224-E,solicited prior to July 1, 2025. For all projects, excluding dial-up internet access service, solicited on or after July 1, 2025, please see BROADBAND

Per hour:	07/01/2026	01/04/2027	01/03/2028	01/01/2029
Cable Splicer	$ 42.03	$ 43.30	$ 44.59	$ 45.93
Installer, Repairman	39.89	41.09	42.32	43.59
Teledata Lineman	39.89	41.09	42.32	43.59
Tech., Equip. Operator	39.89	41.09	42.32	43.59
Groundman/Flagger	21.14	21.78	22.43	23.10

For outside work, stopping at first point of attachment (demarcation).

NOTE: EXCLUDES Teledata work within ten (10) feet of High Voltage (600 volts and over) transmission lines. For this work, please see LINEMAN.

SHIFT WORK

The following rates apply when the contracting agency mandates multiple shifts of at least five (5) days duration are worked. When two (2) or three (3) shifts are worked the following rates apply:

1ST SHIFT	REGULAR RATE
2ND SHIFT	REGULAR RATE PLUS 10%
3RD SHIFT	REGULAR RATE PLUS 15%

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker	$ 6.18 plus 4%*	$ 6.43 plus 5%*	$ 6.43 plus 6%*	$ 6.68 plus 7%*

*NOTE: The percentage (%) listed above is based on the hourly wage paid, straight time rate or premium time rate.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

WAGE CAP - Double the straight time hourly base wage shall be the maximum hourly wage compensation for any hour worked. Contractor is still responsible to pay the hourly benefit amount for each hour worked.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 16) on HOLIDAY PAGE

6-1249LT - Teledata

Lineman Electrician - Traffic Signal, Lighting — 09/01/2026

JOB DESCRIPTION Lineman Electrician - Traffic Signal, Lighting **DISTRICT** 6

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Cortland, Delaware, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orleans, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Warren, Washington, Wayne, Wyoming, Yates

WAGES

Lineman/Technician shall perform all overhead aerial work. A Lineman/Technician on the ground will install all electrical panels, connect all grounds, install and connect all electrical conductors which includes, but is not limited to road loop wires; conduit and plastic or other type pipes that carry conductors, flex cables and connectors, and to oversee the encasement or burial of such conduits or pipes.

Crane Operators: Operation of any type of crane on Traffic Signal/Lighting projects.
Crawler Backhoe: Operation of tracked excavator/crawler backhoe with 1/2 yard bucket or larger on Traffic Signal/Lighting projects.
Digging Machine Operator: All other digging equipment and augering on Traffic Signal/Lighting projects.

A Groundman/Truck Driver shall: Build and set concrete forms, handle steel mesh, set footer cages, transport concrete in a wheelbarrow, hand or machine concrete vibrator, finish concrete footers, mix mortar, grout pole bases, cover and maintain footers while curing in cold weather, operate jack hammer, operate hand pavement breaker, tamper, concrete and other motorized saws, as a drill helper, operate and maintain generators, water pumps, chainsaws, sand blasting, operate mulching and seeding machine, air tools, electric tools, gas tools, load and unload materials, hand shovel and/or broom, prepare and pour mastic and other fillers, assist digger operator/equipment operator in ground excavation and restoration, landscape work and painting. Only when assisting a lineman technician, a groundman/truck driver may assist in installing conduit, pipe, cables and equipment.

A flagger's duties shall consist of traffic control only.

Per hour:	07/01/2026	05/03/2027	05/01/2028
Group A:			
Lineman, Technician	$ 55.31	$ 57.40	$ 59.64
Crane, Crawler Backhoe	55.31	57.40	59.64
Certified Welder	58.08	60.27	62.62
Group B:			
Digging Machine	$ 49.78	$ 51.66	$ 53.68
Group C:			

Tractor Trailer Driver	$ 47.01	$ 48.79	$ 50.69
Groundman, Truck Driver	44.25	45.92	47.71
Equipment Mechanic	44.25	45.92	47.71
Group D:			
Flagger	$ 33.19	$ 34.44	$ 35.78

Above rates are applicable for installation, testing, operation, maintenance and repair on all Traffic Control (Signal) and Illumination (Lighting) projects, Traffic Monitoring Systems, and Road Weather Information Systems. Includes digging of holes for poles, anchors, footer foundations for electrical equipment; assembly of all electrical materials or raceway; placing of fish wire; pulling of cables, wires or fiber optic cable through such raceways; splicing of conductors; dismantling of such structures, lines or equipment.

SHIFT WORK

The following rates will apply on all contracting agency mandated multiple shifts of at least five (5) days duration worked between the hours listed below:

1ST SHIFT	8:00 AM TO 4:30 PM	REGULAR RATE
2ND SHIFT	4:30 PM TO 1:00 AM	REGULAR RATE PLUS 17.3%
3RD SHIFT	12:30 AM TO 9:00 AM	REGULAR RATE PLUS 31.4%

SUPPLEMENTAL BENEFITS

Per hour:

	07/01/2026	05/03/2027	05/01/2028
Group A	$ 32.91*	$ 34.41*	$ 35.91*
Group B	$ 28.91*	$ 30.41*	$ 31.91*
Group C	$ 28.51*	$ 29.71*	$ 30.91*
Group D	$ 28.41*	$ 29.54*	$ 30.67*

*NOTE: Plus 7% of the hourly wage paid. The 7% is based on the straight time rate or the premium time rate.

OVERTIME PAY

See (B, E, Q, X) on OVERTIME PAGE.
NOTE: Double time for all emergency work designated by the Contracting Agency.
WAGE CAP - Double the straight time hourly base wage shall be the maximum hourly wage compensation for any hour worked. Contractor is still responsible to pay the hourly benefit amount for each hour worked.

HOLIDAY

Paid: See (5, 6, 8, 15, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 15, 25) on HOLIDAY PAGE
NOTE: All paid holidays falling on Saturday shall be observed on the preceding Friday. All paid holidays falling on Sunday shall be observed on the following Monday. Supplements for holidays paid at straight time.

REGISTERED APPRENTICES

WAGES per hour: 1000 hour terms at the following percentage of the applicable Journeyworker's Lineman wage.

1st	2nd	3rd	4th	5th	6th	7th
60%	65%	70%	75%	80%	85%	90%

SUPPLEMENTAL BENEFITS per hour:

	07/01/2026	05/03/2027	05/01/2028
All terms:	$ 28.41*	$ 29.54*	$ 30.67*

*NOTE: Plus 7% of the hourly wage paid. The 7% is based on the straight time rate or the premium time rate.

6-1249a-LT

Lineman Electrician - Tree Trimmer — 09/01/2026

JOB DESCRIPTION Lineman Electrician - Tree Trimmer **DISTRICT** 6

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Wyoming, Yates

WAGES

Applies to line clearance, tree work and right-of-way preparation on all new or existing energized overhead or underground electrical, telephone and CATV lines. This also includes stump removal near underground energized electrical lines including telephone and CATV lines.

Per hour:	07/01/2026	01/01/2027	01/03/2027
Tree Trimmer	$ 34.67	$ 34.67	$ 36.23
Equipment Operator	30.67	30.67	32.05
Equipment Mechanic	30.67	30.67	32.05
Truck Driver	24.93	24.93	26.05
Groundman	20.53	20.53	21.45
Flagger	16.20	16.20*	16.93

* This rate may be subject to a minimum wage increase 01/01/2027.

SUPPLEMENTAL BENEFITS
Per hour:

Journeyworker	$ 11.23*	$ 11.48*	$ 11.48*

*NOTE: Plus 4.5% of the hourly wage paid. The 4.5% is based on the straight time rate or the premium time rate.

OVERTIME PAY
See (B, E, Q, X) on OVERTIME PAGE
WAGE CAP - Double the straight time hourly base wage shall be the maximum hourly wage compensation for any hour worked. Contractor is still responsible to pay the hourly benefit amount for each hour worked.

HOLIDAY
Paid: See (5, 6, 8, 15, 16, 25) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 15, 16, 25) on HOLIDAY PAGE
NOTE: All paid holidays falling on a Saturday shall be observed on the preceding Friday. All paid holidays falling on a Sunday shall be observed on the following Monday.

6-1249TT

Mason - Building — 09/01/2026

JOB DESCRIPTION Mason - Building **DISTRICT** 3

ENTIRE COUNTIES
Erie, Niagara

PARTIAL COUNTIES
Cattaraugus: Only the Township of Perrysburg and the Village of Gowanda.

WAGES

Per hour:	07/01/2026	04/01/2027 Additional	04/01/2028 Additional
Plasterer	$ 35.05	$3.00	$3.50

Additional $5.00/hr for work on swing stage over 19 feet.

SUPPLEMENTAL BENEFITS
Per hour:
$ 25.59

OVERTIME PAY
Exterior work only See (B, E, E2, Q) on OVERTIME PAGE.
All other work See (B, E, Q) on OVERTIME PAGE.

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages per hour:

Hour terms at the following dollar amounts:

	07/01/2026
0-2000	$ 24.00
2000-4000	$ 26.00
4000-6000	$ 28.00
6000-8000	$ 28.00

Supplemental benefits per hour:

Hour terms at the following dollar amounts:

0-2000	$ 1.00
2000-4000	$ 3.00
4000-6000	$ 4.00
6000-8000	$ 8.00

3-9-Pltr

Mason - Building — 09/01/2026

JOB DESCRIPTION Mason - Building **DISTRICT** 5

ENTIRE COUNTIES
Erie, Niagara

PARTIAL COUNTIES
Cattaraugus: Only the Township of Perrysburg and the Village of Gowanda.

WAGES

Per Hour:	07/01/2026
Building:	
Bricklayer	$ 40.44
Stone Mason	40.44
Tuck Pointer	40.44

SUPPLEMENTAL BENEFITS
Per hour:

Journeyworker	$ 36.14

OVERTIME PAY
See (B,E,E2*,Q) on OVERTIME PAGE
*Note - Or other conditions beyond the employer's control such as fire or natural disaster.

HOLIDAY

Paid:	See (1) on HOLIDAY PAGE
Overtime:	See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages per hour:

1250 hour terms at the following wage:

1st	2nd	3rd	4th
$ 30.57	$ 31.59	$ 34.01	$ 37.28

Supplemental benefits per hour:

1st	2nd	3rd	4th
$ 15.28	$ 21.94	$ 27.20	$ 31.62

5-3B-Z3

Mason - Building / Heavy&Highway — 09/01/2026

JOB DESCRIPTION Mason - Building / Heavy&Highway **DISTRICT** 3

ENTIRE COUNTIES
Erie, Niagara

PARTIAL COUNTIES
Cattaraugus: Only the Township of Perrysburg and the Village of Gowanda.

WAGES

Per hour:	07/01/2026	07/01/2027 Additional	07/01/2028 Additional
Cement Mason	$ 38.00	$3.00	$3.00

Additional $1.00 per hr for Swing scaffold or exterior scaffold 42' or higher.
Additional $1.00 per hr when required to wear respirator.

SUPPLEMENTAL BENEFITS
Per hour:

$ 33.22

OVERTIME PAY
See (B, E, Q, V) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages per hour:

750 hour terms at the following dollar amounts:

1st	2nd	3rd	4th	5th	6th
$ 22.80	$ 24.70	$ 26.60	$ 28.50	$ 30.40	$ 32.30

Supplemental benefits per hour:

1st	2nd	3rd	4th	5th	6th
$ 8.86	$ 11.86	$ 11.80	$ 15.05	$ 17.20	$ 20.54

3-111Erie

Mason - Heavy&Highway — 09/01/2026

JOB DESCRIPTION Mason - Heavy&Highway **DISTRICT** 5

ENTIRE COUNTIES
Allegany, Broome, Chautauqua, Chemung, Chenango, Cortland, Delaware, Genesee, Livingston, Monroe, Ontario, Orleans, Otsego, Schuyler, Seneca, Steuben, Tioga, Tompkins, Wayne, Wyoming, Yates

PARTIAL COUNTIES
Cattaraugus: Enitre county except in the Township of Perrysburg and the Village of Gowanda only the Bricklayer classification applies.
Erie: Only the Bricklayer classification applies.
Niagara: Only the Bricklayer classification applies.

WAGES
Per hour: 07/01/2026
Heavy & Highway:
Cement Mason $ 41.38
Bricklayer 41.38

SUPPLEMENTAL BENEFITS
Per hour:

Journeyworker $ 27.03

OVERTIME PAY
See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages per hour:

1500 hour terms at the following percentage of Journeyworker's wage:

1st	2nd	3rd	4th
50%	60%	70%	80%

Supplemental benefits per hour:

1st term	$ 15.78
2nd term	$ 25.07
3rd term	$ 25.56
4th term	$ 26.05

5-3h

Mason - Tile Finisher — 09/01/2026

JOB DESCRIPTION Mason - Tile Finisher **DISTRICT** 5

ENTIRE COUNTIES
Erie, Niagara, Orleans

PARTIAL COUNTIES
Cattaraugus: Only the Township of Perrysburg and the Village of Gowanda.

WAGES
Per hour: 07/01/2026

Building:
Marble, Slate, Terrazzo and Tile Finisher $ 38.21

SUPPLEMENTAL BENEFITS
Per hour: $ 20.47

OVERTIME PAY
See (B,E,E2*,Q) on OVERTIME PAGE
*Note - Or other conditions beyond the employer's control such as fire or natural disaster.

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages per hour:

1200 hours 1st and 2nd term and 1300 hours 3rd term at the following wage:

1st	2nd	3rd
$ 24.07	$ 27.48	$ 31.22

Supplemental benefits per hour:

1st	2nd	3rd
$ 11.04	$ 13.52	$ 15.67

5-3TF - Z3

Mason - Tile Setter — 09/01/2026

JOB DESCRIPTION Mason - Tile Setter **DISTRICT** 5

ENTIRE COUNTIES
Erie, Niagara, Orleans

PARTIAL COUNTIES
Cattaraugus: Only in the Township of Perrysburg and the Village of Gowanda.

WAGES
Per hour: 07/01/2026
Building:
Marble, Slate, Terrazzo and Tile Setter $ 40.00

SUPPLEMENTAL BENEFITS
Per hour: $ 36.08

OVERTIME PAY
See (B,E,E2*,Q) on OVERTIME PAGE
*Note - Or other conditions beyond the employer's control such as fire or natural disaster.

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages per hour:

1250 hour terms at the following wage:

1st	2nd	3rd	4th
$ 30.17	$ 31.10	$ 33.24	$ 37.17

Supplemental benefits per hour:

1st	2nd	3rd	4th
$ 15.38	$ 22.08	$ 27.57	$ 31.28

Millwright **09/01/2026**

JOB DESCRIPTION Millwright **DISTRICT** 6

ENTIRE COUNTIES
Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orleans, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Wyoming, Yates

WAGES
THE FOLLOWING RATE APPLIES TO ANY GAS/STEAM TURBINE AND OR RELATED COMPONENT WORK, INCLUDING NEW INSTALLATIONS OR MAINTENANCE AND ANY/ALL WORK PERFORMED WITHIN THE PROPERTY LIMITS OF A NUCLEAR FACILITY.

Per hour:	07/01/2026	07/01/2027 Additional	07/01/2028 Additional
Millwright - Power Generation	$ 50.00	$ 3.00*	$ 3.00*

* To be allocated at a later date.

NOTE: ADDITIONAL PREMIUMS PAID FOR THE FOLLOWING WORK LISTED BELOW (amount subject to any overtime premiums):
- Certified Welders shall receive an additional $ 1.75 per hour provided they are directed to weld.
- If a work site has been declared a hazardous site by the Owner and the use of protective gear (including, as a minimum, air purifying canister-type chemical respirators) is required, then that employee shall receive an additional $ 1.50 per hour.
- An employee performing the work of a machinist shall receive an additional $ 2.00 per hour. For the purposes of this premium to apply, a "machinist" is a person who uses a lathe, Bridgeport, milling machine or similar type of tool to make or modify parts.
- When performing work underground at 500 feet and below, the employee shall receive an additional $ 1.00 per hour.

SUPPLEMENTAL BENEFITS
Per hour paid:

Journeyworker	$ 28.45*

*NOTE: Subject to OT premium

OVERTIME PAY
See (B, E, E2, Q, V) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE
NOTE: Any holiday that falls on Sunday shall be observed the following Monday. Any holiday that falls on Saturday shall be observed the preceding Friday.

REGISTERED APPRENTICES
WAGES per hour: One year terms at the following percentage of Journeyworker's wage:

Appr. 1st year	65%*
Appr. 2nd year	75%*
Appr. 3rd year	80%*
Appr. 4th year	90%*

*NOTE: Additional premium for the following work listed below:

Certified Welder	$ 1.75
Hazardous Waste Work	1.50
Machinist	2.00
Underground (500' and below)	1.00

SUPPLEMENTAL BENEFITS per hour:

Appr. 1st year	$ 11.96
Appr. 2nd year	23.50
Appr. 3rd year	25.15
Appr. 4th year	26.80

6-1163Power

JOB DESCRIPTION Millwright **DISTRICT** 12

ENTIRE COUNTIES
Erie, Genesee, Niagara

WAGES

Per hour:	07/01/2026	07/01/2027 Additional	07/01/2028 Additional
Building	$ 46.23	$3.50*	$3.50*
Heavy & Highway**	$ 49.73		

* To be allocated at a later date

NOTE ADDITIONAL PREMIUMS PAID FOR THE FOLLOWING WORK LISTED BELOW (amount subject to any overtime premiums):

**H/H work performed on hazardous waste sites where employees are required to wear protective gear shall receive an additional $2.00 per hour.

- If a building work site has been declared a hazardous site and the use of protective gear (including, at a minimum, air purifying canister-type chemical respirators) are required, then that employee shall receive a $1.50 premium per hour.

- Certified Welders shall receive $1.75 per hour in addition to the current Millwright's rate provided he/she is directed to perform certified welding.

- An employee performing work on site as a machinist shall receive $2.00 per hour in addition to the current Building & Heavy Highway Millwright's rate. For the purposes of this premium to apply, a "machinist" is a person who uses a lathe, Bridgeport, milling machine or similar type of tool to make or modify parts.

- When performing work underground at 500 feet and below, the employee shall receive an additional $1.00 per hour.

SUPPLEMENTAL BENEFITS
Per hour Paid:

All Classifications	$ 32.29

OVERTIME PAY
See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid:	See (1) on HOLIDAY PAGE
Overtime:	See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages per hour:

(1)year terms at the following percentage of Journeyworker's rate:

1st	2nd	3rd	4th
65%*	75%*	80%*	90%*

* NOTE ADDITIONAL PREMIUMS PAID FOR THE FOLLOWING WORK LISTED BELOW (amount subject to any overtime premiums):

Certified Welder	$ 1.75
Hazardous Waste (Bldg)	1.50
Hazardous Waste (H/H)	2.00
Machinist	2.00
Underground (500' and below)	1.00

SUPPLEMENTAL BENEFITS per hour:

1st	2nd	3rd	4th
$ 11.96	$ 26.19	$ 28.22	$ 30.26

12-1163-Gen/Erie/Nia

Operating Engineer — 09/01/2026

JOB DESCRIPTION Operating Engineer **DISTRICT** 12

ENTIRE COUNTIES
Cattaraugus, Chautauqua, Erie, Niagara, Orleans, Wyoming

PARTIAL COUNTIES

Genesee: The portion of the county that lies west of a line down the center of Route 98 excluding that area that lies within the City of Batavia.

WAGES

	07/01/2026
Per Hour:	
Concrete Pump Operator (Up to 46 Meters)	$ 49.75
Concrete Pump Operator (46 Meters or Larger)	54.21

- Additional $ 2.50 per hour for Hazardous Work Sites.

SUPPLEMENTAL BENEFITS

	07/01/2026	01/01/2027
Per Hour:	$ 33.90	$ 34.15
At Time and a Half	38.50	38.75
At Double Time	43.10	43.35

OVERTIME PAY
See (B, E, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

12-17Pump

Operating Engineer - Building — 09/01/2026

JOB DESCRIPTION Operating Engineer - Building **DISTRICT** 12

ENTIRE COUNTIES
Cattaraugus, Chautauqua, Erie, Niagara, Orleans, Wyoming

PARTIAL COUNTIES
Genesee: Only that portion of the county that lies west of a line down the center of Route 98 excluding that area that lies within the City of Batavia.

WAGES
CLASS A: Air Hoist, All Boom Type Equipment, All Pans and Carry-Alls, Archer Hoist, Asphalt Curb and Gutter Machines, Asphalt Roller, Asphalt Spreader or Paver, Automatic Fine Grade Machine (CMI or similar, first and second operator), Backhoe and Pullhoe, Backhoe and Pullhoe (tractor mounted, rubber tired), Back Filling Machine, Belt Placer (CMI or similar type), Bending Machine (Pipe), Bituminous Spreader and Mixer, Blacktop Plants (Automated and Non-automated), Blast or Rotary Drill (Truck or Track Mounted), Blower for Burning Brush, Boiler (when used for power), Boom Truck (excluding pick-up and delivery), Boring Machine, Bulldozer, Cableway, Cage Hoist, Caisson Auger, Central Mix Plant (and all concrete batching plants), Cherry Picker, Concrete Cleaning Decontamination Machine Operator, Concrete Curb and Gutter Machine, Concrete Curing Machine, Concrete Cutters (Vermeer or Similar Type), Concrete Mixer (over 1/2 cu yd.), Concrete Pavement Spreaders and Finishers, Concrete Paver, Conveyor, Core Drill, Crane, Crusher, Decon of Equipment, Derrick, Dragline, Dredge, Drill Rig (Tractor Mounted), Dual Drum Paver, Electric Pump used in conjunction with Well Point Systems, Elevating Grader (self propelled or towed), Elevator, Excavator (all purpose, hydraulically operated), Farm Tractor with Accessories, Fine Grade Machine, Forklift, Front End Loader, Generator (10 outlets or more), Gradall, Grader, Grout or Gunite Machine, Head Tower, Heavy Equipment Robotics Operator/Mechanic, Helicopter (when used for hoisting), Hoist (one drum), Hoisting Engine, Horizontal Directional Drill Locator, Horizontal Directional Drill Operator, Hydraulic Boom, Hydraulic Hammer (self-propelled), Hydraulic Pipe Jack Machine (or similar type machine), Hydraulic Rock Expander (or similar type machine), Hydraulic System Pumps, Hydro Crane, Hydro Hammer (or similar type), Industrial Tractor, Jersey Spreader, Kolman Plant Loader (and similar type loaders), Laser Screed, Locomotive, Lubrication Truck, Maintenance Engineer, Maintenance, Lubrication Unit or Truck, Mine Hoist, Mixer for Stabilized Base (self-propelled), Monorail, Motorized Hydraulic Pin Puller, Motorized Hydraulic Seeder, Mucking Machine, Mulching Machine, Multiple Drum Hoist (more than one drum in use), Overhead Crane, Peine Crane (or similar type), Pile Driver, Plant Engineer, Pneumatic Mixer, Post Hole Digger and Driver, Power Broom, Pump Crete, Push Button Hoist, Push or Snatch Cat, Quarry Master or equivalent, Road Widener, Rock Bit Sharpener (all types), Roller (all), Rolling Machine (pipe), Rotomill, Scissors Trucks, Lift, or Boom Lift of any type (when used for hoisting), Scoopmobile, Shovel, SideBoom, Skidsteer/Bobcat (Similar Type), Skimmer, Slip Form Paver (CMI or similar type), Snorkel/Vacuum Truck, Strato-Tower, Stump Chipping Machine, Tire Truck and Drivers performing tire repair (exclude outside vendor), Towed Roller, Tractor Drawn Belt-Type Grader/Loader, Tractor Shovel, Tractor with Towed Accessories, Tractor (when using winch power), Tractors, Trencher, Truck Crane, Truck Mechanic and Helper (exclude Teamsters when repairing their own trucks), Tunnel Shovel, Tube Finisher (CMI and similar type), Ultra High Pressure Waterjet Cutting Tool System Operator/Mechanic, Vacuum Blasting Machine Operator/Mechanic, Vibratory Compactor, Vibro Tamp, Well Drilling Machine, Well Point, Winch, Winch Truck with A Frame.

CLASS B: Aggregate Bin, Aggregate Plant, Apprentice Engineer, Apprentice Engineer Driver, Articulated Off Road Material Hauler, Boiler (used in conjunction with production), CMI and similar type Concrete Spreads (Apprentice Engineer), Cement Bin, Chipping Machine and Chip Spreader, Compressors (4 or less), Compressors (any size, but subject to other provisions for Compressors, Dust Collectors, Generators, Mechanical Heaters, Pumps, Welding Machines - four of any type or combination), Concrete Mixer (1/2 cu. yd. and under), Fireman, Form Tamper, Form Trucks (excluding Teamster or delivery), Fuel Truck or Drivers (exclude Teamster or delivery), Heaters, Heating Boiler (used for temporary heat), Helper on Lubrication Unit or Truck, Jeep Trencher, Power Heaterman, Power Plant in excess of 10 K.W., Pumps, Revinius Widener, Steam Boilers (if manning or license by local law is required), Steam Cleaner (when used for cleaning equipment on the job site), Welding Machine (1 machine over 300 amps or 2 or 3 machines regardless of amps).

Per hour:	07/01/2026	07/01/2027 Additional
Class A	$ 52.53	$ 6.00*
Class B	48.03	
Crane Operator:		
5 to 110 tons	57.53	
111 to 199 tons	58.53	
200 to 599 tons	59.53	
600 to 999 tons	61.53	
1000 tons +	62.53	
Tower Crane	58.53	

Cranes in Luffer Configuration additional $5.00/Hr.
Cranes with external ballast (tray or wagon) additional $5.00/Hr.

Additional $2.50/hr. for Hazardous Work Site
Additional $1.00/hr. for Tunnel Work
Additional $8.00/hr. for Contracting agency Mandated Shift Work (Projects Bid After 7/1/2025)

* To be allocated at a later date.

SUPPLEMENTAL BENEFITS
Per Hour:

Journeyworker	$ 37.39
At Time and one Half	46.11
At Double Time	54.83

OVERTIME PAY
See (B, E, *E2, P, V) on OVERTIME PAGE
* Only Saturdays between October 15th and April 15th.

- Overtime rate is 1.5X the hourly wage plus $9.93/Hr.
- Double-Time calculation rate is 2X the hourly wage plus $19.85/Hr.

HOLIDAY
Paid: See (5, 6) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages per hour:
1 year Terms at the following wages:

1st	2nd	3rd	4th
$ 45.03	$ 46.03	$ 47.03	$ 48.03

Supplemental benefits Per Hour:

All Apprentices	$ 36.99
At Time and One Half	45.51
At Double Time	54.03

12-17b

Operating Engineer - Heavy&Highway — 09/01/2026

JOB DESCRIPTION Operating Engineer - Heavy&Highway **DISTRICT** 12

ENTIRE COUNTIES
Chautauqua, Erie, Niagara, Orleans

WAGES
Marine Construction/Dredging

Class 1: Diver/Wet Tender, Engineer, Engineer(hydraulic dredge), Blaster.

Class 2(A): Crane, Backhoe Operator, Material Handler, ALL Self-propelled Drill Rigs, Mechanic/Welder, Asst. Engineer(hydraulic dredge), Leverman(hydraulic dredge), Diver/Dry Tender.

Class 2(B): Friction, Lattice Boom, or Crane License Certificate, Endorse Tug or Tow Boat Operator.

Class 3: Deck Equipment Operator, (Machineryman), Maintenance of Crane, Tug/Launch Operator, Loader/Dozer on Barge.

Class 4: Deck Equipment Operator and Machinery Man/Fireman on 4 equipment units or more, Off Road Trucks, Deck Hand, Tug Engineer, Crane Maintenance (50 tons and under/ backhoe 115,000lbs or less), Asst. Tug Operator, Blaster Helper.

Per hour:	07/01/2026
Class 1	$ 56.00
Class 2(A)	54.50
Class 2(B)	57.50
Class 3	50.00
Class 4	45.50

Additional to be paid when working with Hazardous/Toxic Waste (based on EAP levels):
Level A - $2.50/Hr.
Level B - 2.00/Hr.
Level C - 1.00/Hr.
Level D - 0.50/Hr.

SUPPLEMENTAL BENEFITS
Per Hour Paid:

ALL CLASSES	$ 36.81

OVERTIME PAY
See (B, E, I, *S, X) on OVERTIME PAGE
* If the holiday is worked

HOLIDAY
Paid: See (5, 6, 15, 25) on HOLIDAY PAGE

12-17 Marine

Operating Engineer - Heavy&Highway — 09/01/2026

JOB DESCRIPTION Operating Engineer - Heavy&Highway **DISTRICT** 12

ENTIRE COUNTIES
Cattaraugus, Chautauqua, Erie, Niagara, Orleans, Wyoming

PARTIAL COUNTIES
Genesee: Only that portion of the county that lies west of a line down the center of Route 98 excluding that area that lies within the City of Batavia.

WAGES

CLASS A: Air Hoist, All Boom Type Equipment, All Pans and Carry-All's, Asphalt Curb and Cutter Machines, Asphalt Roller, Asphalt Spreader or Paver, Automatic Fine Grade Machine (CMI or similar, first and second operator), Backhoe and Pullhoe (all), Back Filling Machine, Belt Placer (CMI or similar type), Bending Machine (pipe), Bituminous Spreader and Mixer, Blacktop Plant (all), Blast or Rotary Drill (Truck or Track Mounted), Blower for Burning Brush, Boiler (when used for power), Boom Truck, Boring Machine, Bulldozer, Cableway, Cage Hoist, Caisson Auger, Central Mix Plant (and all Concrete Batching Plants), Cherry Picker, Concrete Cleaning Decontamination Machine, Concrete Curb and Gutter Machine, Concrete Curing Machine, Concrete Mixer (over 1/2 cu. yd.), Concrete Pavement Spreaders and Finishers, Concrete Paver, Concrete Saw (self propelled), Conveyor, Convoying Vehicles Convoying Engineer's Equipment, Core Drill, Crane, Crusher, Decontamination of Equipment, Derrick, Dragline, Dredge, Drill Rig (Tractor Mounted), Dual Drum Paver, Electric Pump used in conjunction with Well Point Systems, Elevating Grader (self propelled or towed), Elevator, Excavator (all purpose, hydraulically operated), Farm Tractor with Accessories, Fine Grade Machine, Forklift, Front End Loader, Gradall, Grader, Grout or Gunite Machine, Head Tower, Heavy Equipment Robotics Operator/Mechanic, Hoist (all types), Hoisting Engine, Horizontal Directional Drill Locator, Horizontal Directional Drill Operator, Hydraulic Boom, Hydraulic Hammer (self propelled), Hydraulic Pipe Jack Machine, (or similar type machine), Hydraulic Rock Expander (or similar type machine), Hydraulic System Pumps, Industrial Tractor, Jersey Spreader, Kolman Plant Loader (and similar type Loaders), Laser Screed, Locomotive, Log Skidder (similar type), Maintenance Engineer, Maintenance, Lubrication Unit or Truck, Mine Hoist, Mixer for Stabilized Base (self propelled), Monorail, Motorized Hydraulic Pin Puller, Motorized Hydraulic Seeder, Mucking Machine, Mulching Machine, Overhead Crane, Parts Chasing, Peine Crane (or similar type), Pile Driver, Plant Engineer, Pneumatic Mixer, Post Hole Digger and Post Driver, Power Broom, Pump Crete, Push Button Hoist, Push or Snatch Cat, Quarry Master (or equivalent), Road Widener, Rock Bit Sharpener (all types), Roller (all), Rolling Machine (Pipe), Rotomill, Scoopmobile, Shovel, Side Boom, Skidsteer/Bobcat (similar type), Skimmer, Slip Form Paver (CMI or similar, first and second operator), Snorkel/Vacuum Truck, Strato-Tower, Tire Truck & Repair, Towed Roller, Tractor Drawn Belt-Type Grader/Loader, Tractor Shovel, Tractor with Towed Accessories, Tractors (when using winch power), Trencher, Truck Crane, Tug Boats, Tunnel Shovel, Tube Finisher (CMI and similar), Vacuum Blasting Machine Operator/Mechanic, Vibratory Compactor, Vibro Tamp, Waterjet Cutting Tool System Operator/Mechanic (Ultra High Pressure), Well Drilling Machine, Well Point, Winch, Winch Truck with A Frame.

CLASS B: Aggregate Bin, Aggregate Plant, Apprentice Engineer, Apprentice Engineer Driver, Articulated Off Road Material Hauler, CMI and similar type Concrete Spreads (Apprentice Engineer), Cement Bin, Chipping Machine and Chip Spreader, Compressors (4 or less), Compressors: any size, but subject to other provisions for Compressors, Dust Collectors, Generators, Mechanical Heaters, Pumps, Welding Machines (four of any type or combination), Concrete Mixer (1/2 cu. yd. and under), Fireman, Form Tamper, Fuel Truck, Heating Boiler (used for temporary heat), Helper on Lubrication Unit or Truck, Jeep Trencher, Power Heaterman, Power Plant in excess of 10 K.W., Pumps (4" or over), Revinius Widener, Steam Cleaner, Stump Chipping Machine, Welding Machine (1 machine over 300 amps or 2 or 3 machines regardless of amps).

Operating Engineer- Heavy & Highway, Sewer (includes cleaning, lining & rehab), Water & Tunnel

Per hour:	07/01/2026	07/01/2027 Additional
Class A	$ 52.39	$ 5.50*
Class B	47.89	
Crane Operator:		
5 to 110 tons	57.39	
111 to 199 tons	58.39	
200 to 599 tons	59.39	
600 to 999 tons	61.39	
1000 tons +	62.39	
Tower Crane	58.39	

Cranes in Luffer Configuration additional $5.00/Hr.
Cranes with external ballast (tray or wagon) additional $5.00/Hr.

Additional $2.50/hr. for Hazardous Work Site
Additional $1.00/hr. for Tunnel Work
Additional $8.00/hr. for Contracting agency Mandated Shift Work (Projects Bid After 7/1/2025)

* To be allocated at a later date.

SUPPLEMENTAL BENEFITS
Per hour:

Journeymen	$ 37.36
At Time and a Half	$ 46.06
At Double Time	$ 54.77

OVERTIME PAY
See (B, E, Q) on OVERTIME PAGE
- Overtime rate is 1.5X the hourly wage plus $9.93/Hr
- Double-Time Calculation rate is 2X the hourly wage plus $19.85/Hr.

HOLIDAY
Paid: See (5, 6) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages per hour:
Apprentices at 1 year terms
07/01/2026

1st	2nd	3rd	4th
$ 44.89	$ 45.89	$ 46.89	$ 47.89

Supplemental Benefits	
All Apprentices	$ 36.96
At Time and a Half	$ 45.46
At Double Time	$ 53.97

12-17 hh/sw/t

Operating Engineer - Survey Crew — 09/01/2026

JOB DESCRIPTION Operating Engineer - Survey Crew **DISTRICT** 12

ENTIRE COUNTIES
Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orleans, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Warren, Washington, Wayne, Wyoming, Yates

PARTIAL COUNTIES
Dutchess: The northern portion of the county from the northern boundary line of the City of Poughkeepsie, north.

WAGES
These rates apply to Building, Tunnel, and Heavy Highway.

Per hour:
SURVEY CLASSIFICATIONS:
Party Chief - One who directs a survey party and/or works independently.
Surveyor - One who operates the surveying instruments for measurements.
Survey Assistant - One who assists the Party Chief or Surveyor.

	07/01/2026	07/01/2027 Additional	07/01/2028 Additional
Party Chief	$ 56.64	$ 5.50*	$ 5.50*
Surveyor	52.74	$ 4.50*	$ 4.50*
Surveyor Assistant	36.00	$ 3.50*	$ 3.50*

Additional $3.00/hr. for Tunnel Work.
Additional $2.50/hr. for EPA or DEC certified toxic or hazardous waste work.

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS
Per hour worked:

Party Chief	$ 32.45
Surveyor	$ 32.45
Survey Assistant	$ 20.60

OVERTIME PAY
See (B, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (5, 6) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES
WAGES: 1000 hour terms based on percentage of Surveyor wage:

07/01/2026

0-1000	1001-2000	2001-3000
60%	70%	80%

SUPPLEMENTAL BENEFIT per hour worked:
All Terms: $ 22.65

12-158-545 D.H.H.

Operating Engineer - Survey Crew - Consulting Engineer — 09/01/2026

JOB DESCRIPTION Operating Engineer - Survey Crew - Consulting Engineer **DISTRICT** 12

ENTIRE COUNTIES
Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orleans, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Warren, Washington, Wayne, Wyoming, Yates

PARTIAL COUNTIES
Dutchess: The northern portion of the county from the northern boundary line of the City of Poughkeepsie, north.

WAGES
These rates apply to feasibility and preliminary design surveying, line and grade surveying for inspection or supervision of construction when performed under a Consulting Engineer Agreement.

Per hour:
SURVEY CLASSIFICATIONS:
Party Chief - One who directs a survey party and/or works independently
Surveyor - One who operates the surveying instruments for measurements
Survey Assistant - One who assists the Party Chief or Surveyor.

	07/01/2026	07/01/2027 Additional	07/01/2028 Additional
Party Chief	$ 56.64	$ 5.50*	$ 5.50*
Surveyor	52.74	$ 4.50*	$ 4.50*
Survey Assistant	36.00	$ 3.50*	$ 3.50*

Additional $3.00/hr. for Tunnel Work.
Additional $2.50/hr. for EPA or DEC certified toxic or hazardous waste work.

*To be allocated at a later date.

SUPPLEMENTAL BENEFITS
Per hour worked:

Party Chief	$ 32.45
Surveyor	$ 32.45
Survey Assistant	$ 20.60

OVERTIME PAY
See (B, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (5, 6) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES
WAGES: 1000 hour terms based on percentage of Surveyor wage:

07/01/2026		
0-1000	1001-2000	2001-3000
60%	70%	80%

SUPPLEMENTAL BENEFIT per hour worked:
All Terms: $22.65

12-158-545 DCE

Painter — 09/01/2026

JOB DESCRIPTION Painter **DISTRICT** 3

ENTIRE COUNTIES
Allegany, Erie, Genesee, Niagara, Orleans, Wyoming

PARTIAL COUNTIES
Cattaraugus: Entire County except the Townships of Conewango, Leon, Napoli, New Albion, Randolph and South Valley.
Chautauqua: Only the Townships of Awkright, Dunkirk, Hanover, Pomfret, Portland, Sheridan and Villenova.
Livingston: Only the Townships of North Dansville, Nunda, Ossian,Portage, Sparta, Spring Water and West Sparta.
Steuben: Only the Townships of Avoca, Canisteo, Cohocton, Dansville,Fremont, Greenwood, Hartsville, Hornellsville, Howard, Jasper, Prattsburg, Pulteney, Troupsburg, Tuscarora, Urbana, Wayland, Wayne, Woodhull, West Union, Wheeler, and the City of Hornell.

WAGES

Per hour:	07/01/2026
Basic Rate (Brush & Roll)	$ 34.00
Spray painting, wallcovering	34.00

Abrasive and hydroblasting	34.00
Taping/DryWall Finisher	35.00
Skeleton Steel*	34.75

* Skeleton Steel: No floors, walls or ceiling are constructed, including radio and television towers, flagpoles, smokestacks and cranes.

SUPPLEMENTAL BENEFITS
Per hour:

Basic Rate (Brush & Roll) Spray painting, wallcovering Abrasive and hydroblasting and Skeleton Steel	$ 29.44
Taping/Drywall Finisher	$ 29.94

OVERTIME PAY
Exterior work only See (B, E2, E4, F, R) on OVERTIME PAGE.
All other work See (B, F, R) on OVERTIME PAGE.

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages per hour:

Painter/Decorator: 750 hour terms at the following wage:

1st	2nd	3rd	4th	5th	6th	7th	8th
$ 18.00	$ 19.00	$ 20.00	$ 21.00	$ 22.00	$ 23.00	$ 24.00	$ 25.00

Taper/Drywall Finisher: 750 hour terms at the following wage:

1st	2nd	3rd	4th	5th	6th
$ 20.00	$ 21.00	$ 22.00	$ 23.00	$ 24.00	$ 25.00

Supplemental benefits per hour:

Painter/Decorator and Taper/Drywall Finisher:

1st	2nd	3rd	4th	5th	6th	7th	8th
$ 3.35	$ 5.35	$ 6.35	$ 6.85	$ 7.35	$ 7.85	$ 8.35	$ 8.60

3-4-Buf, Nia, Olean

Painter — 09/01/2026

JOB DESCRIPTION Painter **DISTRICT** 3

ENTIRE COUNTIES
Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Cortland, Delaware, Erie, Genesee, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Niagara, Oneida, Onondaga, Ontario, Orleans, Oswego, Otsego, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Wayne, Wyoming, Yates

WAGES
Per hour: 07/01/2026

Bridge	$ 47.39
Tunnel	47.39
Tank*	45.39

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.

*Tank rate applies to indoor and outdoor tanks, tank towers, standpipes, digesters, waste water treatment tanks, chlorinator tanks, etc. Covers all types of tanks including but not limited to steel tanks, concrete tanks, fiberglass tanks, etc.

SHIFT WORK
Note an additional $1.50 per hour is required when the contracting agency or project specification requires any shift to start prior to 6:00am or after 12:00 noon.

SUPPLEMENTAL BENEFITS
Per hour:
$ 32.81

OVERTIME PAY
Exterior work only See (B, E2, E4, F, R) on OVERTIME PAGE.
All other work See (B, F, R) on OVERTIME PAGE.

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages per hour:

750 hour terms at the following wage:

1st	2nd	3rd	4th	5th	6th
$ 24.00	$ 26.00	$ 28.00	$ 30.00	$ 34.00	$ 38.00

Supplemental benefits per hour:

1st	2nd	3rd	4th	5th	6th
$ 6.60	$ 6.95	$ 7.30	$ 7.65	$ 8.00	$ 8.35

3-4-Bridge, Tunnel, Tank

Painter - Metal Polisher — 09/01/2026

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

	07/01/2026
Metal Polisher	$ 41.33
Metal Polisher*	42.43
Metal Polisher**	45.33

*Note: Applies on New Construction & complete renovation
** Note: Applies when working on scaffolds over 34 feet.

SUPPLEMENTAL BENEFITS
Per Hour:

Journeyworker:
All classifications $ 13.99

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:

	07/01/2026
1st year	$ 20.67
2nd year	22.73
3rd year	24.80
1st year*	$ 21.06
2nd year*	23.17
3rd year*	25.34
1st year**	$ 23.17
2nd year**	25.23
3rd year**	27.30

*Note: Applies on New Construction & complete renovation
** Note: Applies when working on scaffolds over 34 feet.

Supplemental benefits:

Per hour:

1st year	$ 9.19
2nd year	9.19
3rd year	9.19

8-8A/28A-MP

Plumber — 09/01/2026

JOB DESCRIPTION Plumber **DISTRICT** 3

ENTIRE COUNTIES
Cattaraugus, Chautauqua, Erie, Niagara, Wyoming

PARTIAL COUNTIES
Allegany: Only the Townships of Allen, Alma, Amity, Angelica, Belfast, Bolivar, Caneadea, Centerville, Clarksville, Cuba, Genesee, Friendship, Granger, Hume, New Hudson, Rushford, Wirt and that portion of Scio which lies west of Rt. 19.
Genesee: Only the Townships of Alabama, Alexander, Batavia, Darien, Elba, Oakfield, Pembroke and the City of Batavia.
Orleans: Only the Townships of Ridgeway, Shelby and Yates.

WAGES

Per hour:	07/01/2026	05/03/2027 Additional	05/01/2028 Additional
Plumber	$ 46.27	$4.00	$4.00
Steamfitter	$ 46.27		

Note - Add 10% (ten percent) to wage when HAZMAT training is required or when OSHA compliant respirator protection is required.

SUPPLEMENTAL BENEFITS
Per hour:

$ 30.91

Note - $7.00 of this amount must be paid at the same premium as the wage.

OVERTIME PAY
See (*B, **E, Q) on OVERTIME PAGE
* Double time after 11 hours per day on Weekdays.
** Double time after 10 hours per day on Saturday.

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 16) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages per hour:

One year terms at the following percentage of Journeyworker's wage:

1st	2nd	3rd	4th	5th
50%	60%	70%	80%	90%

Note - Add 10% (ten-percent) to wage when HAZMAT training is required or when OSHA compliant respirator protection is required.

Supplemental benefits per hour:

$ 25.99

Note - $7.00 of this amount must be paid at the same premium as the wage.

3-22-P

Roofer — 09/01/2026

JOB DESCRIPTION Roofer **DISTRICT** 3

ENTIRE COUNTIES
Erie, Genesee, Niagara, Orleans, Wyoming

WAGES

Per hour:	07/01/2026
Asbestos Removal	$ 41.46
Slate, Tile	38.61
Precast tile / slabs	38.61
Crete / gypsum planks	38.61
Damp and waterproofer	38.46
Composition, sprayers,	38.46
Asphalt mastic,	38.46
Steep roofers	38.46

SHIFT WORK
When shift work is mandated either in the job specification or by the contracting agency the following premiums apply:
15% of hourly rate for second shift
20% of hourly rate for third shift

SUPPLEMENTAL BENEFITS
Per hour:

$ 28.81

OVERTIME PAY
See (B, *E, **E2, Q) on OVERTIME PAGE
* and ** Double time after 8 hours on Saturday.

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages per hour:

Hour terms at the following percentage of Journeyworker's wage:

0 to 999	to 1499	to 1999	to 2499	to 2999	to 3499	to 4499
65%	70%	75%	80%	85%	90%	95%

Supplemental benefits per hour:

0 to 999	to 1499	to 1999	to 2499	to 2999	to 3499	to 4499
$ 12.06	$ 17.47	$ 17.78	$ 25.67	$ 26.45	$ 27.24	$ 28.03

3-74

Sheetmetal Worker — 09/01/2026

JOB DESCRIPTION Sheetmetal Worker **DISTRICT** 3

ENTIRE COUNTIES
Erie, Genesee, Niagara, Orleans, Wyoming

WAGES

Per hour:	07/01/2026	05/31/2027	05/29/2028
		Additional	Additional
Sheet Metal Worker	$ 44.63	$3.00	$3.00

Additional $0.50 per hour for work more than 30" above floor on boatswain chair.
Additional $1.00 per hour for work in "Hot" areas of atomic laboratories, atomic plants, or any premises where radio-active materials are stored or handled and personal protective equipment is required.
Additional $1.00 per hour for work when required to have 40-hour HAZMAT training or the use of OSHA compliant respirator is required.

SHIFT WORK
When shift work is mandated either in the job specification or by the contracting agency the following premiums apply:
All 2nd shift work shall receive 10% per hour above the rate of wages.
All 3rd shift work shall receive 15% per hour above the rate of wages.

SUPPLEMENTAL BENEFITS
Per hour:

$ 30.98*

* Note - $19.74 of this amount must be paid at the same premium as the wages per overtime hours.

OVERTIME PAY
See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 16) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages per hour:
One year terms at the following wage:

1st term	$ 25.78
2nd term	30.88
3rd term	33.75

4th term	35.62	
5th term	39.38	
Supplemental benefits per hour:		
1st term	$ 18.80	Note - $8.56 of this amount must be paid at the same premium as the wage.
2nd term	23.11	Note - $12.87 of this amount must be paid at the same premium as the wage.
3rd term	28.47	Note - $17.23 of this amount must be paid at the same premium as the wage.
4th term	28.83	Note - $17.59 of this amount must be paid at the same premium as the wage.
5th term	29.54	Note - $18.30 of this amount must be paid at the same premium as the wage.

3-71

Sprinkler Fitter — 09/01/2026

JOB DESCRIPTION Sprinkler Fitter **DISTRICT** 1

ENTIRE COUNTIES
Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orleans, Oswego, Otsego, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Washington, Wayne, Wyoming, Yates

WAGES
Per hour

	07/01/2026	01/01/2027	04/01/2027	01/01/2028
Sprinkler Fitter	$ 47.91	$ 47.91	$ 50.76	$ 50.76

SUPPLEMENTAL BENEFITS
Per hour

Journeyworker	$ 30.71	$ 31.71	$ 31.71	$ 32.71

OVERTIME PAY
See (B, E, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE
Note: When a holiday falls on Sunday, the following Monday shall be considered a holiday and all work performed on either day shall be at the double time rate. When a holiday falls on Saturday, the preceding Friday shall be considered a holiday and all work performed on either day shall be at the double time rate.

REGISTERED APPRENTICES
One Half Year terms at the following wage per hour:

	07/01/2026	01/01/2027	04/01/2027	01/01/2028
1st Term	$ 24.50	$ 24.50	$ 25.73	$ 25.73
2nd Term	27.35	27.35	28.72	28.72
3rd Term	29.63	29.63	31.11	31.11
4th Term	31.91	31.91	33.50	33.50
5th Term	33.62	33.62	35.30	35.30
6th Term	36.47	36.47	38.29	38.29
7th Term	38.75	38.75	40.68	40.68
8th Term	41.03	41.03	43.08	43.08
9th Term	43.30	43.30	45.47	45.47
10th Term	45.58	45.58	47.86	47.86
Supplemental Benefits per hour:				
1st & 2nd Term	$ 10.23	$ 11.23	$ 11.23	$ 12.23
3rd & 4th Term	22.79	23.79	23.79	24.79
All Other Terms	23.04	24.04	24.04	25.04

1-669

Teamster - Building / Heavy&Highway — 09/01/2026

JOB DESCRIPTION Teamster - Building / Heavy&Highway **DISTRICT** 3

ENTIRE COUNTIES
Erie, Niagara

PARTIAL COUNTIES
Genesee: Only in the Townships of Alabama, Darien and Pembroke.
Orleans: Only the Townships of Ridgeway, Shelby and Yates.
Wyoming: Only in the Townships of Arcade, Bennington, Java and Sheldon.

WAGES

GROUP 1: Warehousemen, Yardmen, Truck Helpers, Pickups, Panel Trucks, Flatboy Material Trucks (straight jobs), Single Axle Dump Trucks, Dumpsters, Material Checkers and Receivers, Greasers, Truck Tiremen, Mechanics Helpers and Parts Chasers.

GROUP 2: Off Road Tandems and Batch Trucks, Mechanics, Dispatcher.

GROUP 3: Semi Truck, Asphalt Distributor Trucks and Agitator, Mixer Trucks and dumpcrete type vehicles, Truck Mechanic, Fuel and Water Trucks

GROUP 4: Specialized Earth Moving Equipment, Euclid type, or similar off-highway, where not self-loading, Straddle (Ross) Carrier, and self -contained concrete mobile truck.

GROUP 5: Off-highway Tandem Back-Dump, Twin Engine Equipment and Double-Hitched Equipment where not self-loading.

Per hour:	07/01/2026	07/01/2027 Additional
ALL GROUPS	$ 52.23	$ 4.00

Add $2.00 when required to use personal protection when performing hazardous waste removal work.

SHIFT WORK
An additional $4.00 per hour is required when a single irregular work shift starting any time from 3:30PM to 1:00AM is mandated either in the job specification or by the contracting agency.

SUPPLEMENTAL BENEFITS
Per hour:
$ 17.55*
*Note - Only $ 9.00 per hour needs to be paid for overtime hours.

OVERTIME PAY
See (B, G, P) on OVERTIME PAGE

HOLIDAY
Paid: See (5, 6) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

3-449

Teamster - Building / Heavy&Highway — 09/01/2026

JOB DESCRIPTION Teamster - Building / Heavy&Highway **DISTRICT** 3

ENTIRE COUNTIES
Erie, Niagara

WAGES

Per hour:	07/01/2026	06/01/2027 Additional
Dump Truck Operator*	$ 33.00	$1.50
Lowboy	$ 35.00	

Tractor trailer drivers pulling a dump, live bottom, flatbed, step deck, or walking floor trailer will receive an additional $1.00 per hour

*Does not include Single Axle Dump Trucks (see Teamster Group 1).
*Does not include Off-highway Dump Trucks (see Teamster Groups 2-5).

SUPPLEMENTAL BENEFITS
Per hour:
$ 2.31

OVERTIME PAY
See (B, B2, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (5, 6) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

3-449d-DT

Welder — 09/01/2026

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	07/01/2026

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
(B3)	Time and one half of the hourly rate after 40 straight 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)	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)

1. Name and complete address ☐ (Check if new or change)

Telephone Fax

E-Mail:

2. NY State Units (see Item 5).

- ☐ 01 DOT
- ☐ 02 OGS
- ☐ 03 Dormitory Authority
- ☐ 04 State University Construction Fund
- ☐ 05 Mental Hygiene Facilities Corp.
- ☐ 06 OTHER N.Y. STATE UNIT
- ☐ 07 City
- ☐ 08 Local School District
- ☐ 09 Special Local District, i.e., Fire, Sewer, Water District
- ☐ 1O Village
- ☐ 11 Town
- ☐ 12 County
- ☐ 13 Other Non-N.Y. State (Describe)

3. SEND REPLY TO ☐ (check if new or change)
Name and complete address:

Telephone Fax

E-Mail:

4. SERVICE REQUIRED. Check appropriate box and provide project information.

☐ New Schedule of Wages and Supplements.

APPROXIMATE BID DATE :

☐ Additional Occupation and/or Redetermination

PRC NUMBER ISSUED PREVIOUSLY FOR THIS PROJECT :

OFFICE USE ONLY

B. PROJECT PARTICULARS

5. Project Title

Description of Work

Contract Identification Number

Note: For NYS units, the OSC Contract No.

6. Location of Project:
Location on Site

Route No/Street Address

Village or City

Town

County

7. Nature of Project - Check One:

- ☐ 1. New Building
- ☐ 2. Addition to Existing Structure
- ☐ 3. Heavy and Highway Construction (New and Repair)
- ☐ 4. New Sewer or Waterline
- ☐ 5. Other New Construction (Explain)
- ☐ 6. Other Reconstruction, Maintenance, Repair or Alteration
- ☐ 7. Demolition
- ☐ 8. Building Service Contract

8. OCCUPATION FOR PROJECT :

- ☐ Construction (Building, Heavy Highway/Sewer/Water)
- ☐ Tunnel
- ☐ Residential
- ☐ Landscape Maintenance
- ☐ Elevator maintenance
- ☐ Exterminators, Fumigators
- ☐ Fire Safety Director, NYC Only
- ☐ Fuel Delivery
- ☐ Guards, Watchmen
- ☐ Janitors, Porters, Cleaners, Elevator Operators
- ☐ Moving furniture and equipment
- ☐ Trash and refuse removal
- ☐ Window cleaners
- ☐ Other (Describe)

9. Does this project comply with the Wicks Law involving separate bidding? YES ☐ NO ☐

10. Name and Title of Requester

Signature

SEE PAGE TWO FOR LAWS RELATING TO PUBLIC WORK CONTRACTS

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 09/18/2026

Article 8

AGENCY	Fiscal Officer	FEIN	EMPLOYER NAME	EMPLOYER DBA NAME	ADDRESS	DEBARMENT START DATE	DEBARMENT END DATE
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	DOL		ALEXANDER DELISA		411 THEODORE FREMND SUITE 206RYE NY 10580	09/03/2025	09/03/2030
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	*****8017	AMIN ELECTRICAL CORP.		97-23 218TH STREET QUEENS VILLAGE NY 11429	12/04/2025	12/04/2030
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 CASALE		20 HEATHER RIDGE ROAD TROY NY 12180	05/20/2025	05/20/2030
DOL	DOL		ANTHONY MONGELLI		PO BOX 2064 MONROE NY 10950	02/12/2024	02/12/2029
DOL	DOL	*****8421	B & B DRYWALL, INC		206 WARREN AVE APT 1WHITE PLAINS NY 10603	12/14/2021	12/14/2026
DOL	DOL	*****3932	B ROC CONSTRUCTION INC		7307 WOODSIDE ROAD VICTOR NY 14564	05/06/2025	05/06/2030
DOL	DA	*****2404	BJA RENOVATION, CORP		33 DOLLARD DR NORTH BABYLON NY 11703	03/19/2025	03/19/2030
DOL	DOL	*****5078	BLACK RIVER TREE REMOVAL, LLC		29807 ANDREWS ROAD BLACK RIVER NY 13032	10/17/2023	10/17/2028
DOL	DOL		C.M.C CONTRACTORS, INC.		500 WEST PUTNAM AVE SUITE 400GREENWICH CT 06830	09/03/2025	09/03/2030
DOL	DOL		CARLOS F. ESCOBAR		411 THEODORE FREMD AVE SUITE 206RYE NY 10580	09/03/2025	09/03/2030
DOL	DOL		CARLOS FIGUEROA		411 THEODORE FREMND AVE SUITE 206RYE NY 10580	09/03/2025	09/03/2030
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	DOL		CESAREO TULA		120 SEARS AVE ELMSFORD NY 10523	09/26/2025	09/26/2030
DOL	DOL	*****2292	CHAMPION MAINTENANCE CONTRACTORS, INC.		211 SOUTH RIDGE STREET RYE BROOK NY 10573	09/03/2025	09/03/2030
DOL	NYC	*****2117	CHARAN ELECTRICAL ENTERPRISES		9-11 40TH AVENUE LONG ISLAND CITY NY 11101	09/26/2023	09/26/2028
DOL	DOL		CHARLES CASALE		55 MAIN AVENUE WYNANTSKILL NY 12198	05/20/2025	05/20/2030
DOL	DOL		CHARLES CASALE		55 MAIN AVENUE WYNANTSKILL NY 12198	05/20/2025	05/20/2030
DOL	DOL		CHRISTOPHER PEROSI		5507 NESCONSET HIGHWAY MT. SINAI NY 11766	07/17/2025	07/17/2030
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	*****7619	DANCO CONSTRUCTION UNLIMITED INC.		485 RAFT AVENUE HOLBROOK NY 11741	10/19/2021	10/19/2026
DOL	DOL		DANIEL DELISA		211 SOUTH RIDGE STREET RYE BROOK NY 10573	09/03/2025	09/03/2030
DOL	DOL		DANIEL LOHAN		6836 N. LEXINGTON LANE NILES IL 60714	05/28/2026	05/28/2031
DOL	DOL		DANIEL ROBERT MCNALLY		7 GREENFIELD DRIVE WARWICK NY 10990	03/25/2022	03/25/2027
DOL	DOL		DARWIN PEGUESE		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	DOL		DENISE NAGLE		36 OAKWOOD TRAIL S AL MONROE NY 10950	10/29/2025	10/29/2030

NYSDOL Bureau of Public Work Debarment List 09/18/2026

Article 8

DOL	DOL		DINA TAYLOR		64 N PUTT CONNERS RD NEW PALTZ NY 12561	05/10/2023	05/10/2028
DOL	DOL	*****2337	EGL DRAINAGE SOLUTION & REPAIRS LLC		5507 NESCONSET HIGHWAY MT. SINAI NY 11766	07/17/2025	07/17/2030
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	NYC		ENRICO MANETTA		101 MALBA DR. WHITESTONE NY 11357	04/01/2026	04/01/2031
DOL	DOL		EUGENIUSZ "GINO" KUCHAR		195 KINGSLAND AVE BROOKLYN NY 11222	12/22/2023	12/22/2028
DOL	DOL	*****2998	G.E.M. AMERICAN CONSTRUCTION CORP.		195 KINGSLAND AVE BROOKLYN NY 11222	12/22/2023	12/22/2028
DOL	DA		GEORGE LUCEY		150 KINGS STREET BROOKLYN NY 11231	01/19/1998	01/19/2998
DOL	NYC		GHANSHYAM AMIN		97-23 218TH STREET QUEENS VILLAGE NY 11429	12/04/2025	12/04/2030
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		HENRY WICKE A/K/A HENRY WICKE, JR.		36 OAKWOOD TRAIL S AL MONROE NY 10950	10/29/2025	10/29/2030
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	*****6961	HUNTER ELEVATOR COMPANY, INC.		36 OAKWOOD TRAIL S AL MONROE NY 10950	10/29/2025	10/29/2030
DOL	DOL	*****2397	ISLAND BREEZE MARINE, INC.		6400 BALTIMORE NATIONAL CANTONSVILLE MD 21228	10/24/2024	10/24/2029
DOL	DOL	*****5010	J. LINDSLEY ENTERPRISE, LLC		1002 STATE ROUTE 176 FULTON NY 13069	07/30/2025	07/30/2030
DOL	DOL	*****0241	J. LINDSLEY ROOFING, LLC		211 NORTH 2ND STREET FULTON NY 13069	07/30/2025	07/30/2030
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
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 LINDSLEY		211 NORTH 2ND STREET FULTON NY 13069	07/30/2025	07/30/2030
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	*****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	DOL		JENNIFER LINDSLEY		211 NORTH 2ND STREET FULTON NY 13069	07/30/2025	07/30/2030
DOL	DOL		JERRY DASTON		36 OAKWOOD TRAIL S AL MONROE NY 10950	10/29/2025	10/29/2030
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 NAGLE A/K/A JOHN NAGLE, JR.		36 OAKWOOD TRAIL S AL MONROE NY 10950	10/29/2025	10/29/2030
DOL	DOL		JONATHAN DELISA		411 THEODORE FREMND AVE SUITE 206RYE NY 10580	09/03/2025	09/03/2030
DOL	DOL		JORGE FIGUEROA		411 THEODORE FRMND AVE SUITE 206RYE NY 10580	09/03/2025	09/03/2030
DOL	DA		JOSEPH DEMASCO		33 DOLLARD DRIVE NORTH BABYLON NY 11703	01/30/2026	01/30/2031
DOL	DA		JOSEPH DEMASCO		33 DOLLARD DRIVE NORTH BABYLON NY 11703	03/19/2025	03/19/2030
DOL	DOL		JOSEPH HALL		937 US ROUTE 11 CENTRAL SQUARE NY 13036	10/21/2024	10/21/2029
DOL	DOL	*****2271	JOSEPH HALL COMPANIES LLC		937 US ROUTE 11 CENTRAL SQUARE NY 13036	10/21/2024	10/21/2029
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
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		KEAN INDUSTRIES, LLC		2345 RT. 52 SUITE 2NHOPEWELL JUNCTION NY 12533	12/18/2023	12/18/2028

DOL	DOL		KEVIN FUNEZ URBINA A/K/A KEVIN FUNEZ		1009 LYNDALE AVE TRENTON NJ 08629	12/16/2024	12/16/2029
DOL	DOL	*****8760	KJ&J CONSTRUCTION, LLC		1009 LYNDALE AVE TRENTON NJ 08629	12/16/2024	12/16/2029
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	DOL	*****3716	LIGHTNIN ELECTRIC INC.		3418 NORTHERN BLVD SUITE 5-27LONG ISLAND CITY NY 11101	12/13/2024	12/13/2029
DOL	AG	*****3291	LINTECH ELECTRIC, INC.		3006 TILDEN AVE BROOKLYN NY 11226	02/16/2022	02/16/2027
DOL	DOL		LIZETTE PONCE		411 THEODORE FREMND AVE SUITE 206RYE NY 10580	09/03/2025	09/03/2030
DOL	NYC	*****7516	MANCO ENTERPRISES OF NY, INC.		44-17 54TH DR. MASPETH NY 11378	04/01/2026	04/01/2031
DOL	NYC	*****1783	MANETTA ENTERPISES, INC. D/B/A MANETTA INDUSTRIES		44-17 54TH DR. MASPETH NY 11378	04/01/2026	04/01/2031
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	*****1320	MJC MASON CONTRACTING, INC.		42 FOWLER AVENUE CORTLAND MANOR NY 10567	10/25/2022	10/25/2027
DOL	DOL	*****1320	MJC MASON CONTRACTING, INC.		42 FOWLER AVENUE CORTLAND MANOR NY 10567	01/24/2023	01/24/2028
DOL	DOL		MOHAMMAD MIAN		8269 21ST ST BELLEROSE NY 11426	12/22/2022	12/22/2027
DOL	NYC		NASEER CHAUDHRY		2349 BRAGG STREET BROOKLYN NY 11229	04/22/2025	04/22/2030
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 JERICHO 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 BARNETT		33 DOLLARD DR BABYLON NY 11703	03/04/2025	03/04/2030
DOL	DOL		NICHOLAS RAO		411 THEODORE FREMND AVE SUITE 206RYE NY 10580	09/03/2025	09/03/2030
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		NIKOLA NTONI		3418 NORTHERN BLVD SUITE 5-27LONG ISLAND CITY NY 11101	12/13/2024	12/13/2029
DOL	NYC	*****6971	NN CONSTRUCTION, INC.		2349 BRAGG STREET BROOKLYN NY 11229	04/22/2025	04/22/2030

DOL	NYC	*****5643	NYC LINE CONTRACTORS, INC.		402 JERICHO 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	*****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	*****2041	QUALITY STEEL ERECTORS INC.		6836 N. LEXINGTON LANE NILES IL 60714	05/28/2026	05/28/2031
DOL	DOL	*****4772	R.W. LOBDELL CONSTRUCTION LLC		635 WEST DRYDEN ROAD FREEVILLE NY 13068	01/31/2025	01/31/2030
DOL	DOL	*****2633	RAW POWER ELECTRIC CORP.		3 PARK CIRCLE MIDDLETOWN NY 10940	07/11/2022	07/11/2027
DOL	DOL		ROBBYE BISSESAR		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		ROSA GARCIA		411 THEODORE FRMND AVE SUITE 206RYE NY 10580	09/03/2025	09/03/2030
DOL	DOL	*****7172	RZ & AL INC.		198 RIDGE AVENUE VALLEY STREAM NY 11581	06/06/2022	06/06/2027
DOL	DA	*****0476	SAMCO ELECTRIC CORP.		3735 9TH ST LONG ISLAND CITY NY 11101	01/05/2023	01/05/2028
DOL	DA		SILVANO TRAVALJA		3735 9TH ST LONG ISLAND CITY NY 11101	01/05/2023	01/05/2028
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		STEVEN DELISA		411 THEODORE FREMND AVE SUITE 206RYE NY 10580	09/03/2025	09/03/2030
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	*****4855	TECH INDUSTRIES LLC		20 HEATHER RIDGE ROAD TROY NY 12180	05/20/2025	05/20/2030
DOL	DOL	*****2426	THE MATRUKH GROUP, INC.		4307 28TH AVE PO BOX 9082ASTORIA NY 11103	10/11/2024	10/11/2029
DOL	DOL		THOMAS LOBDELL		635 WEST DRYDEN ROAD FREEVILLE NY 13068	01/31/2025	01/31/2030
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	DOL	*****8485	TULA PLUMBING AND HEATING LLC		120 SEARS AVE ELMSFORD NY 10523	09/26/2025	09/26/2030
DOL	DOL	*****8210	UPSTATE CONCRETE & MASONRY CONTRACTING CO INC		449 WEST MOMBSHA ROAD MONROE NY 10950	06/06/2022	06/06/2027
DOL	DOL		VINCENT CORRAO		PO BOX 393 NANUET NY 10954	09/17/2024	09/17/2029
DOL	DOL		WILLIAM A BELL		7307 WOODSIDE ROAD VICTOR NY 14564	05/06/2025	05/06/2030
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 SCRIVENS		4192 SIR ANDREW CIRCLE DOYELSTOWN PA 18902	07/18/2024	07/18/2029

NYSDOL Bureau of Public Work Debarment List 09/18/2026

Article 8

DOL	DOL	*****9494	WND CONSTRUCTION LLC		411 THEODORE FREMD AVENUE SUITE 206RYE NY 10580	09/03/2025	09/03/2030
DOL	DOL		XENOFON EFTHIMIADIS		29-10 38TH AVENUE LONG ISLAND CITY NY 11101	10/11/2023	10/11/2028

BR-9 SPECIAL CONDITIONS

1. In the event of conflicts between the hereinafter enumerated special conditions and the contract plans and specifications, the plans and specifications shall be considered amended and superseded by these special conditions.
2. Contractor shall procure and pay for all permits and licenses necessary for the execution of the work.
3. All Contractor operations are to be coordinated with the Town of Tonawanda personnel. The Town of Tonawanda reserves the right to suspend Contractors operations at any time.
4. Successful bidder will be required to sign the standard Town of Tonawanda Contract which is hereby made a part of the bidding documents.
5. Insurance requirements as set forth in the contract (see Sample Agreement CA-2).

Section 220 Penalties

8. (a) The head of a state or municipal department, board, commission or office authorized or required by law to issue any permit for or in connection with any work involving the employment of employees in employment as defined in this article, and notwithstanding any general or special statute requiring or authorizing the issue of such permits, shall not issue such permit unless proof duly subscribed by an insurance carrier is produced in a form satisfactory to the chair, that the payment of disability benefits for all employees has been secured as provided by this article. Nothing herein, however, shall be construed as creating any liability on the part of such state or municipal department, board, commission or office to pay any disability benefits to any such employee if so employed.

(b) The head of a state or municipal department, board, commission or office authorized or required by law to enter into any contract for or in connection with any work involving the employment of employees in employment as defined in this article, and notwithstanding any general or special statute requiring or authorizing any such contract, shall not enter into any such contract unless proof duly subscribed by an insurance carrier is produced in a form satisfactory to the chair, that the payment of disability benefits for all employees has been secured as provided by this article.

CA-1 GENERAL CONDITIONS

TOWN OF TONAWANDA

OFFICE OF THE TOWN ENGINEER

1. EXECUTION, CORRELATION AND INTENT OF DOCUMENTS –

(A) The contract documents shall be signed in duplicate by the Owner and the Contractor. In case the Owner and the Contractor fail to sign the General Conditions, Drawings or Specifications, the Engineer shall identify them.

(B) The contract documents are complementary, and what is called for by any one shall be as binding as if called for by all. The intention of the documents is to include all labor and materials, equipment and transportation necessary for the proper execution of the work. It is not intended, however, that these materials or work not covered by or properly inferable from any heading, branch, class for trade of the specifications shall be supplied unless distinctly so noted on the drawings.

(C) Materials or work described in words which so applied have a well-known technical or trade meaning shall be held to refer to such recognized standards.

2. TERMS/DEFINITIONS –

CONTRACT AND CONTRACT DRAWINGS - The Specifications, Exhibits, Addenda, Information for Bidders and the Proposal as accepted by the Owner as evidenced by the Owners' Notice of Award to the Contractor, shall form part of this Contract and the provisions thereof shall be as binding upon the Parties hereto as if they were herein fully set forth. The Table of Contents, Title, Headings, Running Headlines and Marginal Notes contained herein and in said documents are solely to facilitate reference to various provisions of the Contract Documents and in no way effect, limit or cast light upon the interpretation of the provisions to which they refer. Whenever the term "Contract Documents" is used, it shall mean and include this Contract, Exhibits, Specifications, Addenda, Notice to Bidders, Information to Bidders and the Proposal as accepted by the Owner. In case of any conflict or inconsistency between provisions of this Contract and those of the Specifications, the provisions of this Contract shall govern.

WORK - The term "Work" as used herein, refers to work at the site of the project, is that work normally done at the location of the project, and includes all plant, labor, materials, supplies, equipment, and other facilities and things necessary or proper for or incidental to the carrying out and completion of the terms of this Contract. The term "Work Performed" shall be construed to include material delivered to and suitably stored at the site of the project.

EXTRA WORK - The term "Extra Work" as used herein, refers to and includes work required by the Owner which in the judgment of the Engineer involves changes in or additions to that required by the Plans and Specifications and Addenda in their present form.

SUBCONTRACTOR - A person, firm or corporation supplying labor and materials or labor for work at the site of the project.

ENGINEER - In the performance of the work, the Owner shall be represented by the Town Engineer (herein called the "Engineer") or by any other person designated by said Town Engineer as his agent, or by any other person designated by the Owner to perform the duties of the Engineer.

NOTICE - The term "Notice" as used herein, shall mean and include written notice. Written notice shall be deemed to have been duly served when delivered to or at the last known business address of the person, firm or corporation for whom intended, or to his, their, or its duly authorized agent, representative or officer; or when enclosed in a postage prepaid wrapper or envelope addressed to such person, firm or corporation at his, their or its last known business address and deposited in a United States mail box.

DIRECTED: REQUIRED: APPROVED: ACCEPTABLE - Whenever they refer to the work or its performance, "Directed", "Permitted", "Required", "Ordered", "Designated", "Prescribed", and words of like import, shall imply the direction, permission, requirement, order, designation, prescription of the Engineer; and "Approved", "Acceptable", "Satisfactory", "In the Judgment of", and words of like import, shall mean approved by, acceptable to or satisfactory to or in the judgment of the Engineer.

SCOPE OF WORK - The Contractor will furnish all plant, labor, materials, supplies, equipment and other facilities and things necessary or proper for or incidental to the work contemplated by this Contract as required by and in strict accordance with the applicable plans, and/or specifications and addenda, prepared by the Engineer, and/or required by and in strict accordance with such changes as are ordered and approved pursuant to this Contract, and will perform all other obligations imposed on him by this Contract.

3. ENUMERATION OF PLANS, SPECIFICATIONS & ADDENDA DRAWINGS

*AS IDENTIFIED ON THE TABLE OF CONTENTS

The foregoing drawings are made a part of this Contract and are referred to herein as the "Drawings".

SPECIFICATIONS - The attached specifications as follows describe in general the character of materials to be furnished and the equipment and methods of doing the work. They describe the nature of the work in general but do not purport to cover all details entering into the work.

ADDENDA – Any and all addenda issued in accordance with paragraph 7 of section BR-2 Information to Bidders.

4.A. COMPENSATION TO BE PAID TO THE CONTRACTOR - The Owner will pay and the Contractor will accept in full consideration for the performance of the Contractor's obligations hereunder the prices as stipulated in the Proposal hereto attached.

4.B. - TERMINATION FOR CONVENIENCE OF THE OWNER

A. The performance of work under this Contract may be terminated by the Owner in accordance with this Article in whole, or from time to time in part, whenever the Engineer shall determine that such termination is in the best interest of the Owner. Any such termination shall be affected by delivery to the Contractor of a Notice of Termination specifying the extent to which performance of work under this Contract is terminated, and the date upon which such termination becomes effective.

B. After receipt of a Notice of Termination, and except as otherwise directed by the Engineer, the Contractor shall;

1. stop work under the Contract on the date and to the extent specified in the Notice of Termination;

2. place no further orders or subcontracts for materials, services or facilities, except as may be necessary for completion of the work under the Contract as is not terminated;

3. terminate all orders and subcontracts to the extent that they relate to the performance of work terminated by the Notice of Termination;

4. assign to the Owner, in the manner, at the times and to the extent directed by the Engineer, all of the right, title, and interest of the Contractor under the orders and subcontracts so terminated, in which case the Owner shall have the right, in its discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts;

5. settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, with the approval or ratification of the Engineer, to the extent he may require, which approval or ratification shall be final for all the purposes of this Article;

6. transfer title and deliver to the Owner, in the manner, at the times, and to the extent, if any, directed by the Engineer, (a) the fabricated or unfabricated parts, work in process, completed work supplies, and other material produced as a part of, or acquired in connection with the performance of, the work terminated by the Notice of Termination, and (b) the completed or partially completed plans, drawings, information, and other property which, if the Contract had been completed, would have been required to be furnished to the Owner;

7. use best efforts to sell, in the manner, at the times, to the extent, and at the price or prices directed or authorized by the Owner, any property of the types referred to in (4) above; provided, however, that the Contractor (a) shall not be required to extend credit to any purchaser, and (b) may acquire any such property under the conditions by and at a price or prices approved by the Engineer; and provided further that the proceeds of any such transfer or disposition shall be applied in reduction of any payments to be made by the Owner to the Contractor under this Contract or shall otherwise be credited to the price or cost of the work covered by this Contract or paid in such other manner as the Engineer may direct;

8. complete performance of such part of the work as shall not have been terminated by the Notice of Termination; and

9. take such action as may be necessary, or as the Engineer may direct, for the protection and preservation of the property related to this Contract which is in the possession of the Contractor and in which the Owner has or may acquire an interest.

C. After receipt of a Notice of Termination, the Contractor shall submit to the Engineer its termination claim, in the form and with certification prescribed by the Engineer. Such claim shall be submitted promptly but in no event later than one year from the effective date of termination, unless one or more extensions in writing are granted by the Engineer, upon request of the Contractor made in writing within such one-year period or authorized extension thereof. However, if the Engineer determines that the facts justify such action, the Engineer may receive and act upon any such termination claim at any time after such one-year period or any extension thereof. Upon failure of the Contractor to submit its termination claim within the time allowed, the Engineer may determine, on the basis of information available, the amount, if any, due to the Contractor by reason of the termination and shall thereupon pay to the Contractor the amount so determined.

5. TIME OF ESSENCE - Inasmuch as the provisions of this Contract relating to the time for performance and completion of the work are for the purpose of enabling the Owner to proceed with the construction of public improvements, such provisions are of the essence of this Contract.

A. DETAILED SCHEDULE – Contractor shall submit to the Engineer, when requested a bar graph schedule showing the order in which the Contractor proposes to carry on the work with dates at which the Contractor will start the several parts of the work and estimated dates of completion of the several parts – this schedule shall be subject to approval of the Engineer and Owner.

Contractor shall submit within ten (10) days after signing the Contract, a bar graph for the Engineer's review and approval. Once a month thereafter, the Contractor shall revise this graph based on actual progress to date.

6. COMMENCEMENT OF WORK - The Contractor will commence work on the date to be specified in the order of the Engineer as the date of such commencement and shall fully complete the work within the number of consecutive calendar days from said date hereinafter specified as the period for completion of this Contract, unless such period shall be extended, as hereinafter provided by the Owner.

7. TIME FOR COMPLETION - The Contractor agrees that the entire work included under this Contract will be completed within the time indicated in the proposal and including the date specified in the written notice from the Engineer to proceed. The date of completion shall be the date of the Certificate of Completion hereinafter specified.

8. LIQUIDATED DAMAGES FOR DELAY - Inasmuch as the damage and loss to the Owner which will result from a failure by the Contractor to complete the work within the period herein specified, including any extensions thereof fixed and approved as hereinafter provided, may include interest on moneys borrowed for construction and loss from the inability of the Owner to enter into possession, the damages of the Owner for delay in a case of such failure or failures on the part of such Contractor shall be liquidated as indicated in the contract agreement.

9. EXTENSIONS OF TIME - NO WAIVER - If the Contractor shall be delayed in the completion of his work by reason of unforeseeable causes beyond his control and without his fault or negligence, including, but not restricted to, acts of God or of a public enemy, acts or neglect of the Owner, acts or neglect of any other Contractor, fires, floods, epidemics, quarantine restrictions, strikes, riots, civil commotions or freight embargoes, the period herein above specified for completion of his work shall be extended by such time as shall be fixed by the Owner.

No extension of time shall be deemed a waiver by the Owner of his right to terminate the Contract for abandonment or delay by the Contractor as herein provided or relieve the Contractor from full responsibility for performance of his obligations hereunder.

10. EXTRA WORK: INCREASED COMPENSATION - The Owner may at any time by written order, and without notice to the sureties, require the performance of such extra work or changes in the work as it may find necessary or desirable. The amount of compensation to be paid to the Contractor for any extra work, as so ordered, shall be determined as follows:

A. By such applicable unit prices, if any, as are set forth in the Contract; or

B. If no such unit prices are so set forth, then by unit prices or the lump sum mutually agreed upon by the Owner and the Contractor; or

C. If no such unit prices are so set forth and if the parties cannot agree upon the unit prices or a lump sum, then by the actual net cost in money to the Contractor of the materials and of the wages of applied labor (including premiums for Workers' Compensation Insurance) required for such extra work, such rental for plant equipment (other than small tools) required and approved for such extra work, plus fifteen percentum (15%) as compensation for all other items of profit and costs or expenses including administration overhead, superintendents, insurance (other than Workers' Compensation Insurance), materials used in temporary structures, allowances made by the Contractor to subcontractors, additional premiums upon the Performance Bond of the Contractor and the use of small tools.

The provisions hereof shall not effect the power of the Contractor to act in case of an emergency, as herein provided.

11. CONSTRUCTION TERMS AND CONDITIONS

A. PRIORITY OF CONDITIONS - Any provisions of the Contract in conflict or inconsistent with the requirements of these conditions with the exception of such provisions as are required by applicable law or regulations, shall be void to the extent of such conflict or inconsistency.

B. CONTRACT SECURITY - The Contractor shall furnish a Surety Bond (Form attached) in the amount of at least equal to 100% of the Contract price as a security for the faithful performance of this Contract and for the payment of all persons performing labor and furnishing materials in connection with this Contract.

C. CONTRACTOR'S INSURANCE – The Contractor shall not commence work under this contract until all insurance required under this Contract, as outlined in paragraph 19 hereof, has been obtained and certificate(s) thereof issued by insurer(s), filed with the Town Clerk, and

such insurance approved by the Town, nor shall the Contractor allow any subcontractor to commence work on any subcontract until all similar insurance required of the subcontractor has been so obtained, filed, and approved.

The Contractor agrees to secure workers' compensation and disability insurance for the benefit of, and keep insured during the life of this Agreement, such employees as are necessary to be insured in compliance with the provisions of the Workers' Compensation Law of the State of New York. This Agreement shall be voided at the election of the Town and of no effect should the Contractor fail to comply with this provision.

The following minimum limits of Insurance shall be evidenced to the Town by the Contractor. During the course of this Agreement, the Contractor shall, at its sole cost, maintain in full force and effect the insurance listed below:

a.	Workers' Compensation Employer's Liability	New York State Statutory Unlimited in New York
b.	Commercial General Liability including Products Liability, Completed Operations Liability	
	Bodily Injury and Property Damage	$1,000,000 per occurrence $2,000,000 aggregate

Coverage must name the Town of Tonawanda, its Town Board, Officials, Employees and Agents as Additional Insureds on a primary and non-contributory basis and that coverage must be shown on the Certificate. (Please include Job Number on Certificate.)

Coverage should include Explosion, Collapse, Underground Hazard and Contractual Liability coverage.

Coverage should include a "Per Project" or "Per Location" endorsement that is listed on the Certificate.

Continued coverage shall remain in force for at least three years following the date of completion of the project.

c.	Auto Liability	$1,000,000 per accident
d.	Excess Umbrella Liability Providing Excess limits over the General And Auto Liability coverage listed above	$3,000,000 per occurrence
e.	Disability Coverage	New York State Statutory

The Contractor shall cause the Town to be furnished with certificates which shall in each instance show the name of the insurance carrier, policy number, effective date and expiration date and shall be signed by an authorized representative of the carrier. Each certificate shall

also state that in the event of any material change in or cancellation of said policy, the Town will receive thirty (30) days' prior written notice of such change or cancellation. Each certificate shall state that any such notice shall be sent to the Town.

Instructions for Preparing Certificates – The original certificate evidencing the above coverage shall be submitted **prior to the commencement** of work to the Town Clerk's Office, 2919 Delaware Avenue, Kenmore NY 14217. Each certificate shall note the Town of Tonawanda Job Number and Job Title. Evidence of renewal coverage must be submitted to the Town Clerk's Office by the date of the renewal. Coverage must be written by Insurance Company with a rating of at least B+ according to Best Key Rating Guide.

The Contractor shall furnish certificates of insurance for each subcontractor employed in the performance of the work. **Each subcontractor shall also be required to name the Town of Tonawanda, its Town Board, Officials, Employees and Agents as Additional Insureds on a primary and non-contributory basis on their general liability coverage.** The Town reserves the right to accept use of a particular subcontractor based upon, but not limited to, its ability to perform properly under the contract, insufficient resources, prior experience or conviction of a crime.

D. QUALIFICATIONS FOR EMPLOYMENT - The attention of the Contractor is called to the requirements of the laws of the State of New York restricting the employment of minors and other not fully qualified for employment on municipal work.

E. PAYMENT - Not more frequent than once per calendar month, the Owner will make partial payment to the Contractor on the basis of a duly approved estimate of the work performed during the preceding calendar month by the Contractor, but the Owner may retain five percent (5%) of the amount of each such estimate until final completion and acceptance of all work covered by this Contract.

Payment will not be made for materials unless incorporated in the work except where in the judgment of the Engineer such payment is justified.

12. OR EQUAL CLAUSES - Wherever in the Contract Documents a particular brand, make of material, device or equipment is specified and the specified equipment is not referencing a resolution adopted by the Town Board that there is a need for standardization of that equipment, such brand, make of material, device or equipment shall be regarded merely as a basis of design.

If three or more brands, makes of material, devices or equipment are shown or specified, each should be regarded as a standard and equal to each other. Any other brand, make, etc. which in the opinion of the Owner or his authorized agent is the recognized equal of those specified and is suitable for the purpose intended will be accepted.

All material and workmanship shall, in every respect, be in accordance with what, in the opinion of said Owner or his authorized agent, is in conformity with approved modern practice.

Wherever the plans, drawings, specifications or other Contract Documents, or the directions of the Owner or his authorized agent admit of doubt as to what is permissible and/or fail to note

the quality of any work, that interpretation will be made by the Engineer which is in accordance with approved modern practice to meet the particular requirements of the Contract.

In all cases, new materials shall be used unless this provision is waived by the Engineer.

13. INSPECTION AND TESTS - All materials and workmanship shall be subject to inspection, examination and tests by the Engineer at his discretion.

Without additional charge, the Contractor shall furnish promptly all reasonable facilities, labor and materials necessary to make tests so required safe and convenient.

If at any time before final acceptance of the entire work, the Engineer considers necessary or advisable an examination of any portion of the work already completed by removing or tearing out the same, the Contractor shall upon request furnish promptly all necessary facilities, labor and materials.

If such work is found defective in any material respect due to fault of the Contractor or any subcontractor, or of any of his subcontractors, or if any work shall be covered over without the approval or consent of the Engineer (whether or not the same shall be defective), the Contractor shall be liable for the expenses of such examination and of satisfactory reconstruction.

If, however, such approval and consent shall have been given and such work is found to meet the requirements of this Contract, the Contractor shall be recompensed for the expenses of such examination and reconstruction in the manner herein provided for the costs of extra work.

The selection of bureaus, laboratories and/or agencies for the inspection and tests of supplies, materials or equipment shall be made by the Owner.
Rejected work shall be removed from the site of the project.

14. PROTECTION OF THE WORK AND PROPERTY - EMERGENCY - The Contractor shall at all times safely guard the Owner's property from injury or loss in connection with this Contract. Contractor shall at all times safely guard and protect his own work; and that of adjacent property (as provided by law and the Contract Documents) from damage. The Contractor shall replace or make good any such damage, loss or injury unless such be caused directly by errors contained in the Contract Documents, or by the Owner, or his duly authorized agents or representatives. All passage-ways, guard fences, lights or other facilities required for protection by local authorities, or local conditions must be provided and maintained.

15. POWER OF CONTRACTOR TO ACT IN AN EMERGENCY - In case of an emergency which threatens loss or injury of property and/or safety of life, the Contractor will be allowed to act, without previous instructions from the Engineer. Contractor shall notify the Engineer thereof immediately thereafter. Any compensation claimed by the Contractor due to such extra work shall be submitted to the Engineer for approval.

Where the Contractor has not taken action but has notified the Engineer of an emergency threatening injury to persons or damage to the work or any adjoining property, upon authorization from the Engineer to prevent such threatened injury or damage, Contractor shall act as instructed or authorized by the Engineer. The amount of reimbursement claimed by the Contractor on account of any such action shall be determined in the manner provided in Section 10 hereof for the determination of extra work.

16. CERTIFICATE OF COMPLETION - Upon completion of all work whatsoever required, the Engineer shall file a written certificate with the Owner and with the Contractor as to the entire amount of work performed and the compensation earned by the Contractor including extra work and compensation therefor.

17. FINAL ESTIMATE AND PAYMENT - The Engineer shall, as soon as practicable after the completion of this Contract, make a final estimate in writing of the amount of work done thereunder, and the value of such work, and the Engineer shall also fix the date of completion of said work, and incorporate the same into the final estimate, and his decision thereon shall be final and binding.

The Owner shall within sixty-five (65) days after the date of completion pay the entire sum so found to be due hereunder after deducting therefrom all previous payments and all amounts to be kept and all amounts to be retained under the provisions of this Contract, except that in no event shall the Final Payment be made until the expiration of the time within which claims for labor performed and materials used or employed must be entered under the law. All prior estimates and payments shall be subjected to correction by this payment, which is throughout this Contract called "Final Payment".

18. ACCEPTANCE OF FINAL PAYMENT CONSTITUTES RELEASE - The acceptance by the Contractor of the Final Payment shall be and shall operate as a release of the Owner of all claims and of all liability to the Contractor for all things done or furnished in connection with this work and for every act and neglect of the Owners arising out of this work, excepting the Contractor's claim for interest upon the Final Payment, if this payment be improperly delayed. No payment, however, final or otherwise, shall operate to release the Contractor or his sureties from obligations under this Contract or the Performance Bond.

19. ADDITIONAL OR SUBSTITUTE BOND - If any time the Owner shall be or become dissatisfied with any surety or sureties, then upon the Performance Bond or it for any other reason such Bond shall cease to be adequate security to the Owner, the Contractor shall, within five (5) days after notice from the Owner to so do, substitute an acceptable Bond in such form and sum and signed by such other sureties as may be satisfactory to the Owner. The premiums on such Bond shall be paid by the Contractor. No further payment shall be deemed due nor shall be made until the new sureties shall be qualified.

20. PLANS AND SPECIFICATIONS - INTERPRETATIONS - The Contractor shall keep at the site of the work one copy of the Plans and Specifications which are a part of this Contract and shall at all times give the Engineer or his representatives access thereto. Anything shown on the Plans and not mentioned in the Specifications, or mentioned in Specifications and not shown on the Plans, shall have the same effect as if shown or mentioned respectively in both. In case of any conflict or inconsistency between the Plans and Specifications, the Specifications shall govern. Any discrepancy between the figures and drawings shall be submitted by the Contractor to the Engineer whose decision thereon shall be conclusive.

21. ADDITIONAL INSTRUCTIONS AND DETAIL DRAWINGS - The Contractor will be furnished additional instructions and detail drawings to carry out the work included in the Contract. The additional drawings and instructions thus supplied to the Contractor will coordinate the Contract Documents and will be so prepared that they can be reasonably

interpreted as a part thereof. The Contractor shall carry out the work in accordance with the additional detail drawings and instructions.

The Contractor and the Engineer will prepare jointly:

(A) A schedule of dates at which special detail drawings are required and who shall prepare them. Such drawings, if any, to be furnished by the Engineer will be furnished according to said schedule.

(B) A schedule fixing the respective dates for the submission of shop or setting drawings, the beginning of manufacture, testing and installation of materials, supplies and equipment and the completion of various parts of the work. Each such schedule to be subject to changes from time to time in accordance with the progress of the work.

22. SHOP OR SETTING DRAWINGS - The Contractor shall submit promptly two (2) copies of each shop or setting drawings prepared in accordance with the predetermined schedule under the provisions of Paragraph 21 hereof. After examination of such drawings by the Engineer and the return thereof, the Contractor shall make such changes or corrections to drawings as have been indicated and shall furnish the Engineer with two (2) corrected copies. Additional copies if requested by the Engineer shall be furnished promptly and without cost. Approval by the Engineer shall be in general and will not relieve the Contractor of his responsibility for the detailed accuracy of such drawings and the details and fit of the materials or parts involved. Where detail drawings differ from the Plans and Specifications, even though approved by the Engineer, such materials or parts or equipment shall be on the responsibility of the Contractor, unless he shall have notified the Engineer in writing and received approval thereof at the time he furnished such drawings.

23. CONDITIONS FOUND DIFFERENT - It is expressly understood and agreed by and between the parties hereto that the Contractor takes the ground where said work is to be performed as he finds it. The Owner makes no guaranty or representation, express or implied, as the nature or configuration of the soil or as to encumbrances or obstacles existent or non-existent on, above, or below the surface, and the Contractor shall not make any claim for damages or extras on account of any unforeseen difficulty or danger encountered in the progress of the work.

24. CONTRACTOR'S TITLE TO MATERIALS - No materials or supplies 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 judgment by which an interest is retained by the seller. The Contractor warrants that he has good title to all materials and supplies used by him in the work.

25. SUPERINTENDENCE BY CONTRACTOR - At the site of the work, the Contractor shall employ a construction superintendent or foreman who shall have full authority to act for the Contractor. It is understood that such representative shall be acceptable to the Engineer and shall be one who can be continued in that capacity for the particular job involved unless he ceases to be on the Contractor's payroll.

26. REPRESENTATIONS OF THE CONTRACTOR - The Contractor represents or warrants:

(A) That Contractor is financially solvent and is experienced in and competent to perform the type of work or to furnish the plant, materials, supplies or equipment to be performed or furnished by Contractor; and

(B) That Contractor is familiar with all Federal, State, Municipal and Department Laws, Ordinances and Regulations which may effect the work of those employed therein, including but not limited to any special acts relating to the work or to the project of which it is a part; and

(C) That such temporary and permanent work required by the Contract Documents as is to be done by Contractor can be satisfactorily constructed and used for the purpose for which it is intended, and that such construction will not injure any person or damage any property; and

(D) That Contractor has carefully examined the Plans and/or the Specifications and the site of the work, and that from Contractor's own investigations Contractor is satisfied as to the nature, the location and character of the work, quality and quantity of surface and sub-surface materials likely to be encountered, the character of equipment and the other facilities needed for the performance of the work, the general and local conditions, and all other materials which may in any way effect the work or its performance.

27. SEPARATE CONTRACTS - The Owner may, insofar as this Contract may be one of the several to be awarded in connection with a given project, require the Contractor to coordinate efforts with those of other contractors working on the site to the end that all work will be conducted smoothly and with a minimum of interference with the other. Cooperation may extend to the arrangement for storage of materials and the detailed execution of the work. The Contractor, including any subcontractors, shall keep informed as to the progress of the work and the detail work of others and shall notify the Engineer immediately of lack of progress or defective workmanship on the part of others where such lack of progress or defective workmanship will interfere with his own operations. Failure of a Contractor to so notify the Engineer or to keep informed of the progress of work shall be construed as acceptance by Contractor of the status of the work as being satisfactory for proper coordination with Contractor's own work.

28. PATENT RIGHTS - As a part of Contractor's obligations hereunder and without any additional compensation, the Contractor will pay for all patent fees or royalties in respect to the work or any part thereof and will fully indemnify the Owner for any loss on account of infringement of any patent rights unless, prior to his use in the work of a particular process or product, he notified the Owner in writing that such process or product is an infringement of a patent.

29. SURVEYS, PERMITS AND REGULATIONS - Unless otherwise expressly provided for in the Contract Documents, the Owner will furnish the Contractor all surveys necessary for the execution of the work.

The Contractor shall procure and pay for all permits and licenses necessary for the execution of his work and the use of such work when completed.

The Contractor shall comply with all laws, ordinances, rules and regulations relating to the performance of the work, the protection of adjacent property, and the maintenance of passageways, guard fences, or other protective facilities.

30. CORRECTION OF THE WORK - All work shall be subject to the approval of the Engineer as herein provided. If, in the opinion of the Engineer, it is undesirable to remove or replace any

defective or damaged materials or work, or work not performed in accordance with the Plans and/or Specifications, the compensation to the Contractor shall be reduced by such amounts as in the judgment of the Engineer shall be equitable.

The Contractor expressly warrants that his work shall be free from any defects of materials or workmanship and agrees to correct any such defects which may appear within one (1) year following the final completion of the work. Neither the acceptance of the completed work nor the payment therefor shall operate to release the Contractor or his sureties from any obligations under or upon this contract or the performance bond.

31. OWNER'S RIGHT TO WITHHOLD PAYMENT - The Owner may withhold from the Contractor so much of any approved payments due his as may, in the judgment of the Owner, be necessary.

(A) To assure the payment of just claims then due or unpaid of any persons supplying labor or materials for the work;

(B) To protect the Owner from loss due to defective work not remedied; or

(C) To protect the Owner from 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 any of his subcontractors. The Owner shall have the right as agent for the Contractor to apply any such amounts withheld in such manner as the Owner may deem proper to satisfy such claims or to secure such protection. Such application of such money shall be deemed payments for the account of the Contractor.

32. OWNER'S RIGHT TO STOP WORK OR TERMINATE CONTRACT – If:

(A) the Contractor shall be adjudged bankrupt or make an assignment for the benefit of creditors, or

(B) a receiver or liquidator shall be appointed for the Contractor or for any of his property and shall not be dismissed within twenty (20) days after such appointment, or the proceedings in connection therewith shall not be stayed on appeal within the said twenty (20) days, or

(C) the Contractor shall refuse or fail after notice of warning from the Engineer to supply enough properly skilled workmen or proper materials, or

(D) the Contractor shall refuse or fail to prosecute the work or any part thereof with such diligence as will insure its completion within the period herein specified (or any duly authorized extension thereof) or fail to complete the work within said period, or

(E) the Contractor shall fail to make prompt payment to persons supplying labor or materials for the work, or

(F) the Contractor shall fail to or refuse to regard laws, ordinances or the instructions of the Engineer or otherwise be guilty of a substantial violation of any provision of the Contract;

then, and in any such event, the Owner without prejudice to any other rights or remedy it may have, may by seven (7) days Notice to the Contractor terminate the employment of the Contractor and his right to proceed, either as to the entire work or (at the option of the Owner) as to any portion thereof as to which delay shall have occurred, and may take possession of the work and complete the work by Contract or otherwise, as the Owner may deem expedient. In such case, the Contractor shall not be entitled to receive any further payment until the work is finished. If the unpaid balance of the compensation to be paid the Contractor hereunder shall exceed the expense of so completing the work (including compensation for additional managerial, administrative and inspection services and any damages for delay), such excess shall be paid to the Contractor. If such expense shall exceed such unpaid balance, the Contractor and his sureties shall be liable to the Owner for such excess. If the right of the Contractor to proceed with the work is so terminated, the Owner may take possession of and utilize in completing the work such materials, appliances, supplies, plant and equipment as may be on the site of the work and necessary therefor.

If the Owner does not so terminate the right to the Contractor to proceed, the Contractor shall continue to work.

33. CONTRACTOR'S RIGHT TO TERMINATE CONTRACT OR TO STOP WORK - If the work shall be stopped by order of the Court or any other public authority, for a period of three (3) months without act or fault of the Contractor or of any of his agents, servants, employees or sub-contractors, the Contractor may, upon ten (10) days notice to the Owner, discontinue his performance of the work and/or terminate the Contract, in which event the liability of the Owner to the Contractor shall be determined as provided in the paragraphs immediately preceding, except that the Contractor shall not be obligated to pay the Owner any excess of the expense of completing the work over the unpaid balance of the compensation to be paid the Contractor hereunder.

34. USES OF PREMISES AND REMOVAL OF DEBRIS - The Contractor expressly undertakes at his own expense:

(a) To take every precaution against injuries to persons or damage to property;

(b) to store his apparatus, materials, supplies and equipment in such orderly fashion at the site of the work as will not unduly interfere with the progress of his work or the work of any other contractors;

(c) to place upon the work or any part thereof only such loads as are consistent with the safety of that portion of the work;

(d) frequently to clean up all refuse, rubbish, scrap materials and debris caused by his operations, to the end that all times the site of the work shall present a neat, orderly and workmanlike appearance;

(e) before final payment, to remove all surplus materials, false work, temporary structures, including foundations thereof, plant of any description and debris of every nature resulting from his operations and to put the site in a neat, orderly condition;

(f) to effect all cutting, fitting or patching of his work required to make the same conform to the plans and/or specifications, and, except with the consent of the Engineer not to cut or otherwise alter the work of any other contractors.

35. WEATHER CONDITIONS - In the event of temporary suspension of the work or during inclement weather or whenever the Engineer shall direct, the Contractor will and will cause his subcontractors to protect carefully his and their work and materials against damage or injury from the weather. If, in the opinion of the Engineer, any work or materials shall have been injured by reason of failure on the part of the Contractor or any of the subcontractors so to protect his work, such work and materials shall be removed and replaced at the expense of the Contractor.

36. ALL WORK SUBJECT TO CONTROL OF ENGINEER - In the performance of the work, the contractors shall abide by all orders, directions and requirements of the Engineer and shall perform all work to the satisfaction of the Engineer, and at such time and places, by such methods and in such manner and sequence as he may require. The Engineer shall determine the amount, quality, acceptability and fitness of all parts of the work, shall interpret the Plans, Specifications, Contract Documents and any extra work orders and shall employ no plant, equipment, materials, methods or men to which the Engineer objects and shall remove no plant materials, equipment or other facilities from the site of the work without the Engineer's permission. Upon request of the Engineer shall confirm in writing any oral order, direction, requirement or determination.

37. ENGINEER'S CONTROL NOT LIMITED - The enumeration herein or elsewhere in the Contract Documents of particular instances in which the opinion, judgment, discretion or determination of the Engineer shall control or in which work shall be performed to his satisfaction or subject to his approval or inspection, shall not imply that only matters similar to those enumerated shall be so governed and performed, but without exception all the work shall be governed and so performed.

38. PROVISIONS REQUIRED BY LAW DEEMED INSERTED - Each and every provision of Law and Clause required by law to be inserted in this Contract shall be deemed inserted in this Contract herein and the Contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon application of either party, the Contract shall forthwith be physically amended to make such insertion.

39. SUBLETTING, SUCCESSOR AND ASSIGNS - The Contractor shall not sublet any part of the work under this Contract, nor assign any moneys due him here- under, without first obtaining the written consent of the Owner. This Contract shall insure to the benefit of and be binding on the parties hereto and upon their respective successors and assigns; but neither party hereto shall assign or transfer his right, title or interest herein in whole or in part without the consent of the other.

40. GUARANTEE - The Contractor guarantees that the work to be done under this Contract, and the materials furnished by him and used in the construction of the work shall be free from defects or flaws and shall comply with the Plans and/or Specifications and any other

requirement of this Contract, expressed or implied. This guaranty shall be for a period of one (1) year from the date of completion. This guaranty includes extra work duly authorized in all its parts and in accordance with the terms of the Contract. The Contractor shall replace

promptly without charge any work, material or equipment, or any parts thereof, which in the opinion of the Owner shall fail to meet the above guarantee during the twelve months herein referred to.

It is hereby, however, specifically agreed and understood that this guarantee shall not include any repairs made necessary by any cause or causes other than defective work or materials.

The Contractor shall at all times within said period of guaranty keep the paving of any street, sidewalk or any walks or driveways and the surface of the ground over this work, or adjacent thereto, in the position and conditions required by this Contract and refill any settlement of the street or sidewalk paving or ground over or adjacent to this work or any erosion in the backfilling or any surface graded by him due to any cause whatsoever, when so directed by the Owner.

If the Contractor fails to make promptly any of the repairs required above during the guarantee period, after written notice to so do, the Owner may cause the repairs to be made and the Contractor shall pay the expense THEREOF.

41. RESPONSIBILITY FOR ACCIDENTS - The Contractor shall be responsible for all accidents to men, animals, plant and materials due either directly or indirectly to his operations and occurring before the acceptance of the work.

42. CONTRACTOR'S RISK - The Contractor shall assume risks incident to the work and during its progress shall be entirely responsible for the injury, accident or damage occasioned. Through any neglect on his part or that of anyone in his employ. He shall take all necessary precautions to prevent the same. Neither the completion of the work nor the final payment therefor shall discharge the Contractor from his responsibility for any claims from injury to persons or property which may have arisen during the work.

43. CONTRACTOR'S PLANT - If, at any time during the progress of the work, the methods and appliances used, or to be used appear to the Engineer to be inefficient or inappropriate for securing the best quality of work or a proper rate of progress, he may order the Contractor to improve the method or appliances, and the Contractor shall conform to such order; but the failure of the Engineer to so demand shall not relieve the Contractor of his obligation to secure the best quality of work and a proper rate of progress.

44. NOTICE AND SERVICE THEREOF - Both the address given in the Proposal upon which this Contract is based and the Contractor's office at or near the site of the work are hereby designated as places to either of which notices, letters and other communications to the Contractor shall be certified, mailed or delivered. The delivering at the above named places or depositing in a postpaid wrapper directed to the first named place, in any post office box regularly used or maintained by the Post Office Department or any notice, letter, or other communication to the Contractor shall be deemed sufficient service thereof on the Contractor, and the date of said service shall be the date of such delivery or mailing. The first named address may be changed at any time by an instrument in writing executed and acknowledged by the Contractor and delivered to the Owner or his representative. Nothing herein contained shall be deemed to

preclude or render inoperative the service of any notice, letter or other communication upon the Contractor personally.

45. LEGAL RIGHTS NOT WAIVED - Neither the inspection of the Engineer nor other representing the Owner nor any order measurement or certificate of the Engineer, nor any order by the Owner for the payment of money, nor any payment for or acceptance of, the whole or part of the work by the Engineer or the Owner, nor any extension of time, nor any possession taken by the Owner or its employees, shall operate as a waiver of any provision of this Contract, or of any power herein reserved to the Owner or any right to damages herein provided; nor shall any waiver of any breach of this Contract be held to be a waiver of any other subsequent breach. Any remedy provided in this Contract shall be taken and construed as cumulative; that is in addition to each and every remedy herein provided; and the Owner shall be entitled to a writ of injunction against any breach of the provisions of this Contract.

46. INDEMNITY - Contractor agrees to defend, indemnify and hold harmless the Town, its officers, employees, representatives, and/or agents against any and all claims, causes of actions, suits, proceedings, damages, liabilities, losses, costs and expenses, including all attorneys' fees and court costs associated therewith, in connection with loss of life, personal injury and/or property damage arising out of or incidental to Contractor's work under this Contract, including any work performed by Contractor's subcontractors.

In any and all claims against Owner or Engineer or any of their agents or employees by an employee of Contractor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the foregoing indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation acts, disability benefit acts or other employee benefit acts.

47. EXEMPTION FROM SALES AND COMPENSATING USE TAXES OF THE STATE OF NEW YORK AND OF CITIES AND COUNTIES -

A. The Owner is exempt from payment of sales and compensation use taxes of the State of New York and of cities and counties on all materials separately sold to the Owner pursuant to this Contract. This exemption does not, however, apply to tools, machinery, equipment or other property purchased by, leased by or to the Contractor or subcontractor or to supplies or materials not incorporated into the completed project. The Contractor and its subcontractors shall be responsible for and pay for any and all applicable taxes, including sales and compensating use taxes, on such tools, machinery, equipment or other property or such unincorporated supplies and materials, and the provisions set forth below will not be applicable to such tools, machinery, equipment, property, supplies or materials.

48. MATERIAL, APPLIANCES, EMPLOYEES –

A. Unless otherwise stipulated, the Contractor shall provide and pay for all materials, labor, water, tools, equipment, fight, power, transportation and other facilities necessary for the execution and completion of the work.

B. Unless otherwise specified, all materials shall be new and both work and materials shall be of a good quality.

C. The Contractor shall, if required, furnish satisfactory evidence as to the kind and quality of materials.

D. The Contractor shall at all times enforce strict discipline and good order among its employees, and shall not employee on the work any unfit person or any one not skilled in assigned work.

CA-2 SAMPLE AGREEMENT

THIS DOCUMENT CANNOT BE ALTERED IN ANY MANNER WITHOUT THE WRITTEN CONSENT OF ALL PARTIES TO THIS AGREEMENT

A G R E E M E N T

MADE this_____ day of _____, 2026, between the TOWN OF TONAWANDA, a municipal corporation in the County of Erie and State of New York, 2919 Delaware Avenue, Kenmore, New York 14217, hereinafter called the "Town," party of the first part, and _____, hereinafter called the "Contractor," party of the second part,

WITNESSETH:

FIRST: The Contractor will furnish all plant, materials, equipment, labor and other facilities and things necessary and proper for or incidental to the construction of **Job 3077.7 – Abatement and Renovations to 1835 Sheridan Drive** in the Town of Tonawanda, County of Erie and State of New York, all of which is to be done in complete and full accordance and compliance with and pursuant to plans, specifications, profiles and drawings therefor prepared by the Town Engineer or his designee, and filed in the offices of the Clerk of said Town and said Town Engineer and which are made a part hereof with the same force and effect as though set forth in full herein, and are to cooperate so that any work or materials exhibited in the plans and/or drawings and not mentioned in the specifications are to be executed the same as if they were mentioned in the specifications and set forth in the plans and drawings to the true intent and meaning of the plans, specifications, profiles and drawings, without any extra charge therefor.

SECOND: Said entirely work shall be completed and all materials shall be furnished and installed according to said plans, specifications, profiles and drawings within _____ calendar days from the date of the Notice to Proceed.

THIRD: No laborer, worker or mechanic in the employ of the Contractor, or any subcontractor or other person doing or contracting to do the whole or a part of the work contemplated by this contract, shall be permitted or required to work more than eight hours in any calendar day or more than five days in any one week, excepting in case of extraordinary emergency, and then subject to the approval of the New York State Commissioner of Labor pursuant to the Labor Law, and overtime pay shall be according to the specifications incorporated into this contract.

FOURTH: The wages to be paid for a legal day's work to laborers, workers, or mechanics under this contract shall be not less than the prevailing rate of wages as defined and determined by the Labor Law of the State of New York, from time to time during the performance of the work hereunder. The prevailing rate of wages is attached to the bid of the Contractor herein.

FIFTH: The Contractor agrees with the Town:

(a) That in the hiring of employees for the performance of work under this contract or any subcontract hereunder, no contractor, subcontractor, nor any person acting on behalf of such contractor or subcontractor, 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;

(b) That no contractor, subcontractor nor any person on the behalf of either of them shall, in any manner, discriminate against or intimidate any employee hired for the performance of work under this contract on account of race, creed, color, disability, sex or national origin;

(c) That there may be deducted from the account payable to the Contractor by the Town under this 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 provisions of the contract;

(d) That this contract may be cancelled or terminated by the Town, 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 of the contract; and

(e) That the Contractor and its subcontractors shall comply with civil rights and human rights law in all hiring and employment related to the work covered by this contract.

SIXTH: The Contractor further agrees that it will comply with all laws of the State of New York and local laws, ordinances, rules and regulations of the Town of Tonawanda, at its own cost and expense, in any way affecting the work to be done or materials furnished under this contract, including the securing of workers' compensation for the benefit of and to keep insured during the life of this contract, all employees to be engaged in the work to be performed hereunder. The Contractor shall, before commencing work under this contract, file in the office of the Town Clerk, evidence that such workers' compensation and insurance, as outlined in paragraph Nineteenth hereof, has been secured and premium(s) paid therefor. This contract shall be void and of no effect unless the Contractor shall secure compensation for the benefit of, and keep insured during the life of such contract, its employees, in compliance with the Workers' Compensation Law of the State of New York.

SEVENTH: It is understood and agreed between the parties hereto that no claims for damages or extra or additional work shall be made in connection with this contract, except claims for such extra work as may be ordered in writing by the Town Engineer or his designee and approved by the Town Board, by resolution duly adopted by it, and further evidenced by a supplemental agreement between the Town and the Contractor covering the same.

EIGHTH: It is understood and agreed that in case there is a variation among the terms of this contract and plans, drawings and specifications related hereto, or Contractor's bid, the Town shall determine which shall control, and its decision shall be final.

NINTH: It is further understood and agreed that title to all materials delivered upon the work and/or paid for, or partly paid for, by the Town shall vest in and become the property of the Town.

TENTH: It is further agreed that the Contractor shall and will keep and maintain the improvement hereinbefore referred to in good condition and repair for a term of one year from the date of completion and acceptance of the same, in accordance with the plans, specifications, drawings and this contract, without expense to the Town or the taxpayers thereof or any of them, and will provide a bond or bonds of a corporation duly authorized to guarantee the performance of this contract, and to do business in the Town of Tonawanda, Erie County, New York, as surety covering the work herein contemplated, satisfactory to the Town.

ELEVENTH: The bid of the Contractor for its work on this project, dated **_____,** and addressed to the Town Board of the Town of Tonawanda, New York, a copy of which bid is hereto annexed, is made a part of this contract with the same force and effect as though set forth in full herein, and the total unit prices of which is **_____and ___/100 ($_____) DOLLARS.**

In consideration of the faithful and complete performance of this contract by the Contractor, the Town will pay to the Contractor the stipulated unit price as set forth in said proposal, for the amount of work approved for payment by the Town.

TWELFTH: It is further agreed that in the event the materials necessary to be furnished do not total the number and amount set forth in said bid, then the Town shall receive credit for the materials so unused, and for the work that will not be required as a result thereof, and in the event that the materials necessary to be furnished amount to or total more than those set forth in the bid, then the Contractor is to be paid as per the unit prices indicated in said proposal above described. The Contractor will commence work on the date specified by the Town Engineer or his designee, following awarding of the project by the Town Board, and shall fully complete the work as specified in paragraph marked SECOND, unless such time is extended by the Town.

THIRTEENTH: It is the contemplation of the Town and Contractor and the parties hereto mutually assent that, if the Contractor shall be delayed in the completion of its work by reason of unforeseeable causes beyond its control and without its fault or negligence, including, but not restricted to, acts of God, or of the public enemy, acts of neglect of the Town, acts of neglect of any other contractor, fires, floods, epidemics, quarantine, restrictions, strikes, riots, civil commotion, freight embargoes, or priority regulations, the period hereinabove specified for completion of its work shall be extended by such time as shall be fixed by the Town. No extension of time shall be deemed a waiver of the right to terminate the contract or shall relieve the Contractor from full responsibility for performance hereunder.

FOURTEENTH: Upon the completion of all work whatsoever required, the Town Engineer or his designee shall file a written certificate with the Town and with the Contractor as to the entire amount of work performed and compensation earned by the Contractor, including extra work and compensation therefor.

FIFTEENTH: The acceptance by the Contractor of final payment shall be and shall operate as a release to the Town of all claims and all liability to the Contractor for all things done or furnished in connection with this work and for every act and neglect of the Town and others relating to or arising out of this work, excepting the Contractor's claims for interest upon the Final Payment, if this payment be improperly delayed. No payment, however, final or otherwise, shall operate to release the Contractor or its sureties from any obligations under this contract or the performance bond.

SIXTEENTH: Should the Contractor encounter subsurface and/or latent conditions materially differing from those shown on the plans or indicated in the specifications, it shall immediately give notice to the Town Engineer, or his designee, of such conditions, before they are disturbed. The Town Engineer, or his designee, shall thereupon promptly investigate the conditions, and if the Town Engineer, or his designee, find that they materially differ from those shown on the plans or indicated in the specifications, the Town Engineer, or his designee, shall

at once make such changes in the plans and/or specifications as the Town Engineer, or his designee, may find necessary. Any increase or decrease of cost resulting from such changes is to be adjusted in the manner provided herein for adjustments as to extra and/or additional work and changes.

SEVENTEENTH: The Town, pursuant to provisions of the Labor Law, and distinguishing this clause from any retainage provisions of this contract or its incorporated documents, may withhold from the Contractor so much of any approved payments due as may in the judgment of the Town be necessary:

(a) to assure the payment of just claims then due and unpaid of any persons supplying labor or materials for the work;

(b) to protect the Town from loss due to defective work not remedied; and/or

(c) to protect the Town from loss due to injury to persons or damage to the work or property of other contractors, subcontractors, or others caused by the act of neglect of the Contractor or any subcontractors. The Town shall have the right, as agent for the Contractor to apply any such amounts so withheld in such manner as the Town may deem proper to satisfy such claims or to secure such protection. Such application of such money shall be deemed payments for the account of the Contractor.

EIGHTEENTH: The Contractor shall not commence work under this contract until all insurance required under this Contract, as outlined in paragraph 19 hereof, has been obtained and certificate(s) thereof issued by insurer(s), filed with the Town Clerk, and such insurance approved by the Town, nor shall the Contractor allow any subcontractor to commence work on any subcontract until all similar insurance required of the subcontractor has been so obtained, filed, and approved.

NINETEENTH: The Contractor agrees to secure workers' compensation and disability insurance for the benefit of, and keep insured during the life of this Agreement, such employees as are necessary to be insured in compliance with the provisions of the Workers' Compensation Law of the State of New York. This Agreement shall be voided at the election of the Town and of no effect should the Contractor fail to comply with this provision.

The following minimum limits of Insurance shall be evidenced to the Town by the Contractor. During the course of this Agreement, the Contractor shall, at its sole cost, maintain in full force and effect the insurance listed below:

a.	Workers' Compensation Employer's Liability	New York State Statutory Unlimited in New York
b.	Commercial General Liability including Products Liability, Completed Operations Liability	
	Bodily Injury and Property Damage	$1,000,000 per occurrence $2,000,000 aggregate

1. **Coverage must name the Town of Tonawanda, its Town Board, Officials, Employees and Agents as Additional Insureds on a primary and non-contributory basis and that coverage must be shown on the Certificate.** (Please include Job Number on Certificate.)

2. Coverage should include Explosion, Collapse, Underground Hazard and Contractual Liability coverage.

3. Coverage should include a "Per Project" or "Per Location" endorsement that is listed on the Certificate.

4. Continued coverage shall remain in force for at least three years following the date of completion of the project.

c.	Auto Liability	$1,000,000 per accident
d.	Excess Umbrella Liability Providing Excess limits over the General And Auto Liability coverage listed above	$3,000,000 per occurrence
e.	Disability Coverage	New York State Statutory

The Contractor shall cause the Town to be furnished with certificates which shall in each instance show the name of the insurance carrier, policy number, effective date and expiration date and shall be signed by an authorized representative of the carrier. Each certificate shall also state that in the event of any material change in or cancellation of said policy, the Town will receive thirty (30) days' prior written notice of such change or cancellation. Each certificate shall state that any such notice shall be sent to the Town.

Instructions for Preparing Certificates – The original certificate evidencing the above coverage shall be submitted **prior to the commencement** of work to the Town Clerk's Office, 2919 Delaware Avenue, Kenmore NY 14217. Evidence of renewal coverage must be submitted to the Town Clerk's Office by the date of the renewal. Coverage must be written by Insurance Company with a rating of at least B+ according to Best Key Rating Guide.

The Contractor shall furnish certificates of insurance for each subcontractor employed in the performance of the work. **Each subcontractor shall also be required to name the Town of Tonawanda, its Town Board, Officials, Employees and Agents as Additional Insureds on a primary and non-contributory basis on their general liability coverage.** The Town reserves the right to accept use of a particular subcontractor based upon, but not limited to, its ability to perform properly under the contract, insufficient resources, prior experience or conviction of a crime.

TWENTIETH: The Contractor shall not, without the written consent of the Town, assign, transfer, convey, sublet or otherwise dispose of any interest in this contract in whole or in part; of any moneys due or to become due hereunder; or of the Contractor's right, title or interest in this contract; or of the Contractor's power to execute this contract.

TWENTY-FIRST: If, through acts of neglect on the part of the Contractor, any other contractor or subcontractor, the Contractor shall suffer loss or damage during the work, the Contractor agrees to settle with such other contractor or subcontractor by agreement or arbitration, if such other contractor or subcontractor is willing to do so. If such other contractor or subcontractor shall assert any claim against the Town on account of any damage alleged to have been so sustained, the Town shall notify the Contractor, who shall indemnify and save harmless the Town against any such claim, including all associated costs and attorneys' fees.

TWENTY-SECOND: Contractor agrees to defend, indemnify and hold harmless the Town, its officers, employees, representatives, and/or agents against any and all claims, causes of actions, suits, proceedings, damages, liabilities, losses, costs and expenses, including all attorneys' fees and court costs associated therewith, in connection with loss of life, personal injury and/or property damage arising out of or incidental to Contractor's work under this Contract, including any work performed by Contractor's subcontractors.

TWENTY-THIRD: If the Contractor shall not proceed with the work and furnishing of materials within ten (10) days after being so notified by the Town Engineer, or his designee, the Town may cause the work incomplete under this contract to be performed and the materials furnished by another contractor or contractors, and the cost of the same to be charged against the amount or amounts payable to the Contractor under this contract. Any deficiency shall be paid by the Contractor.

TWENTY-FOURTH: If all work to be performed and materials furnished under this contract has (have) not been performed and/or furnished by the date specified in paragraph SECOND of this contract, then and in that event the Contractor shall forfeit a sum equal to one (1%) percent of the contract price, or an amount as set by addendum, if any, to the specifications incorporated into this contract, per day for each day after the date set in paragraph SECOND hereof, for the completion of this contract. Said sum is not to be considered in any way a penalty, but as liquidated damages for the failure to complete this contract by the completion date above mentioned.

TWENTY-FIFTH: The Contractor shall furnish or cause to be furnished, a certificate signed by the supplier of any material and/or products to be furnished under this contract, certifying that the material and/or products furnished under this contract comply(ies) in all respects with the specifications which are made a part of this contract. Such certificate is to be presented to the inspector on the job and/or the Town Engineer, or his designee, for approval before delivery on the job, of said material and/or products.

TWENTY-SIXTH: Whenever a judicial or administrative action or proceeding has been commenced or the Town in good faith believes that an action or proceeding may be commenced, relating to this contract or any performance of work and services and/or delivery of goods thereunder, the Town may either issue a stop order to the Contractor prohibiting any further work, services or delivery of goods, for a limited time, or may terminate this contract or any part thereof. If the stop order is revoked within a period of sixty (60) days after the date of issuance, the Contractor shall proceed to fulfill his/her/its obligations under this contract without additional charge to the Town for the delay, but the date for performance and completion shall be extended by the amount of time during which the stop order was in effect. If the stop order is not revoked within sixty (60) days, this contract may be terminated by either party. The Town retains the right to terminate this contract at any time within such sixty (60) day period. In the event of termination, the Contractor shall be entitled to be paid for the costs incurred for work and services performed and/or goods delivered prior to the Contractor's receipt of the stop order, or if there was no stop order, prior to the termination of this contract, plus ten percent (10%) of such costs to compensate for overhead, expenses and anticipated profits. The Town shall have no other or further liability to such Contractor. The Contractor shall submit proof to the Town verifying the amount of actual costs incurred. The Contractor's costs shall include the amounts actually paid or payable by such Contractor and incurred in connection with this contract. Any controversy or claim arising out of or relating to this paragraph, or the breach thereof shall be settled by binding arbitration in accordance with the rules of the American Arbitration Association in the Town of Tonawanda, New York, and judgment upon the award

rendered by the arbitrator(s) may be entered in any court having jurisdiction thereof. Any action or proceeding is hereby deemed to be foreseeable, and any provisions of this contract relating to unforeseeable causes of delay or termination shall not apply when the Contractor is delayed or stopped from completing this contract by the Town under the provisions of this paragraph.

TWENTY-SEVENTH: The Contractor, also known as the Bidder, certifies that:

(a) the bid has been prepared by the Contractor, (also known as the Bidder) independently and has been submitted without collusion with any other vendor of materials, supplies, or equipment of the type described in the invitation for bids; and

(b) the contents of the bid have not been communicated by the Contractor, also known as the Bidder, nor, to the best of its belief and knowledge, by any of its employees or agents, to any person not an employee or agent of the Contractor, (also known as the Bidder) or to any person not an employee or agent of, or itself the surety on any bond furnished herewith prior to the official opening of the bid.

IN WITNESS WHEREOF, the respective parties hereto have caused this instrument to be signed by their duly authorized officers and their respective seals to be hereto attached.

TOWN OF TONAWANDA

(S E A L) by _____
John J. Flynn, Supervisor

(S E A L)

By _____

Its_____

STATE OF NEW YORK)

COUNTY OF ERIE) ss:

On the ____ day of _____, in the year 2026, before me, the undersigned, personally appeared JOHN J. FLYNN, 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, and that by his/her/their signature on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

_____
Notary Public

STATE OF NEW YORK)
COUNTY OF _____) ss:

On the ____ day of _____, in the year 2026, before me, the undersigned, 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, and that by his/her/their signature on the instrument, the individual(s), or the person upon behalf of which the Individual(s) acted, executed the instrument.

_____
Notary Public

CA-3 PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that we, _____ of _____ (hereinafter called Principal) and the _____ a corporation of the State of _____, having its principal office in the City of _____ and authorized to do business in the State of New York (hereinafter called Surety), are held and firmly bound unto the Town of Tonawanda, New York (hereinafter called Obligee), in the amount of _____ _____ ($_____) DOLLARS, lawful money of the United States of America, for the payment of which the Principal and the Surety hereby bind themselves, their heirs, executors, administrators, successors and assigns jointly and severally, firmly by these presents.

WHEREAS, the above bounden Principal has by written contract dated _____ entered into a contract with the Obligee for _____ _____ _____ which contract is by reference made a part hereof (hereinafter called Contract).

NOW, THEREFORE, the condition of this obligation is such that if the Principal shall:

1 — well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements of said Contract during the original term of said Contract and any extensions thereof that may be granted by the Obligee, with or without notice to the Surety, and during the life of any guaranty required under the Contract, and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements of any and all duly authorized modifications of said Contract that may hereafter be made, notice of which modifications to the Surety being hereby waived; and

2 — promptly make payment to all persons having a direct contact with the Principal or with a subcontractor of the Principal supplying labor and material in the prosecution of the work provided for in said Contract and any and all duly authorized modifications of said contract that may hereinafter be made, notice of which modifications to the Surety being hereby waived;

then this obligation shall be void, otherwise to remain in full force and effect.

PROVIDED, HOWEVER, and this bond is executed and accepted upon the following express conditions:

1 — That all person who have supplied **LABOR AND MATERIAL** as aforesaid shall have a direct right to action hereunder against the Principal and the Surety, subject, however, to the prior right of the Obligee to recover hereunder on account of any loss or damage caused to it by the failure of the Principal to perform the Contract as aforesaid.

2 — That if the Principal shall abandon said Contract or be lawfully compelled by reason of a default to cease operations hereunder, the Surety shall have the right at its option to complete said Contract or sublet the completion thereof.

3 — That the Obligee shall notify the Surety by registered letter, addressed and mailed to its Home Office, of any breach of said Contract within a reasonable time after such breach shall have come to the knowledge of the Obligee.

4 — That the Surety shall not be liable hereunder for any damages or compensation recoverable under any Workmen's Compensation or Employer's Liability Statute.

5 — That no suit, action or proceeding for loss or damage caused by a breach of any of the conditions of this bond shall be brought against the Surety by the Obligee after one (1) year from the day on which final payment under the Contract falls due.

6 — That no suit, action or proceeding for loss caused by the failure of the Principal to pay all persons supplying labor and material in the prosecution of the work under said Contract shall be brought against the Surety after six (6) months from the day on which final payment of the Contract becomes due.

Signed, sealed and dated this _____ day of _____, 2026.

_____
Principal

_____[SEAL]
Principal

By _____
President - Vice President -
Secretary - Treasurer

_____[SEAL]
Surety

By _____

STATE OF NEW YORK)
COUNTY OF _____) ss:

On this day of , 2026, before me personally came _____to me known and known to me to be the individual described in and who executed the foregoing instrument and s/he acknowledged to me that s/he executed the same.

_____
Notary Public

STATE OF NEW YORK)
COUNTY OF _____) ss:

On this day of , 2026, before me personally came , a member of the co-partnership of

to me personally known and known to me to be the same person described in and who executed the within instrument, and s/he duly acknowledged to me that s/he executed the same as and for the act of said co-partnership of .

_____
Notary Public

STATE OF NEW YORK)
COUNTY OF _____) ss:

On this day of , 2026, before me personally came _____ to me personally known, who, being by me duly sworn, did depose and say that s/he resides in _____, _____, that s/he is the _____ of _____, the corporation described in and which executed the within instrument; that s/he knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation; that s/he signed her/his name thereto by like order.

_____
Notary Public

CA-4 SUBSTANTIAL COMPLETION

CONTRACTOR _____ CONTRACTOR ID _____

PROJECT/JOB NO. _____ ISSUED_____

Acknowledgment is made that the items listed hereunder have been placed in service on DATE:_____. These items have been observed and found to be satisfactory and are therefore accepted by the Town of Tonawanda, subject to expeditious completion of punch list items. The period of guarantee, if any, for said items shall begin on the date above:

It is understood and agreed that the Contractor shall not hereafter be responsible for normal maintenance costs due directly to the use of these items by the Town nor will the Contractor be liable for any damage resulting directly from the misuse of these items by the Town of Tonawanda.

Notwithstanding inspection, acceptance and use of the aforesaid items by the Town of Tonawanda on the date stated above, the Contractor warrants that if called for in the specifications he shall, upon notice and without undue delay, make good or repair, without expense to the Town of Tonawanda, the whole or any part of the above items which shall, within one year of the date stated above, fail or develop unfitness for which it is intended as a result of any defect.

CONTRACTOR_____BY_____DATE_____

TOWN OF TONAWANDA BY_____DATE_____

REJECTION FORM

The subject items have been observed for the period listed above and found to be operating unsatisfactorily and are therefore unacceptable to the Town of Tonawanda and are to be taken out of service immediately, wherever it is possible to do without interfering with plant operation. A letter listing reasons for rejection shall be forthcoming.

TOWN OF TONAWANDA BY_____DATE_____

CA-5 FORM OF AFFIDAVIT FOR FINAL PAYMENY

TOWN OF TONAWANDA

OFFICE OF THE TOWN ENGINEER

STATE OF NEW YORK)

COUNTY OF ERIE)

_____being duly sworn,
deposes and says that he/she is the Contractor for_____
WORK in the construction/demolition of:

for the TOWN OF TONAWANDA, the Owner, and says that he/she is the

_____of
(President or Vice President) (Secretary or Treasurer)

_____the contracting corporation.
(Name of Firm)

Deponent states that all bills and claims against the undersigned and his/her subcontractors for labor, materials and equipment employed in the performance of this Contract have been paid in full except the bills and claims listed below or on the schedule attached hereto. If NONE, so state -

"SEAL" _____
(Name of Contractor)

BY_____

Sworn to before me this _____

day of _____, 20_____

_____
Notary Public or Commissioner of Deeds

CA-6 CONSENT OF SURETY FOR RELEASE

TOWN OF TONAWANDA
OFFICE OF THE TOWN ENGINEER

PROJECT: _____ JOB NO.: _____

_____ CONTRACT DATE: _____

OWNER: TOWN OF TONAWANDA

CONTRACTOR: _____

_____

_____

In accordance with the provisions of the Contract between the Owner and the Contractor as indicated above, the

_____

_____

_____, SURETY COMPANY,

on bond of

_____

_____

_____, CONTRACTOR.

hereby approves of the final payment to the Contractor, and agrees that final payment to the Contractor shall not relieve the Surety Company of any of its obligations to the Town of Tonawanda, New York, OWNER, as set forth in the said Surety Company's bond.

IN WITNESS WHEREOF,
the Surety Company has hereunto set its hand this _____ day of _____20_____

_____
Surety Company

BY: _____
Signature of Authorized Representative

_____
Name

(Seal) :

_____
Title

CA-7 FORM OF GUARANTEE

TOWN OF TONAWANDA

OFFICE OF THE TOWN ENGINEER

DATE: _____ OWNER: TOWN OF TONAWANDA

Gentlemen:

The undersigned guarantees the _____ for the _____under its Contract dated _____ with the Town of Tonawanda and change orders thereto, be in accordance with drawings and specifications prepared by _____, including approved modifications to said drawings and specifications, and to be free from imperfect workmanship and/or materials.

Furthermore, the undersigned agrees to repair at its own expense, for a period of _____ (___) year(s) from the date of completion and acceptance by the TOWN, all of the work completed and covered under said Contract and Change Orders, that may prove defective.

Furthermore, the undersigned also agrees to pay the cost of repairing all damages to other work resulting from the defects of its own work and to pay the cost of replacing other work, which the undersigned may disturb in the making good defects, in its own work.

It is also understood that the TOWN OF TONAWANDA and/or ENGINEERS shall give notice of observed defects with reasonable promptness, and all questions arising under this guarantee shall be decided by the TOWN OF TONAWANDA.

All corrections to defective work are to be done promptly and at the convenience of the Owner. Access to the work is to be scheduled by the Owner during normal working hours.

Guarantee Period starts _____.

_____
(Contractor)

By _____

Witness _____

BUILDING DEPARTMENT

2005 Sheridan Drive Suite 210 • Buffalo, New York 14223
Phone (716) 877-8801 • Fax (716)871-8845

APPLICATION FOR CONTRACTORS LICENSE

APPLICATION DATE: _____

BUSINESS NAME: _____

BUSINESS ADDRESS: _____

_____

YEARS IN BUSINESS: _____ NUMBER OF EMPLOYEES: _____

CONTACT PERSON: _____ DATE OF BIRTH: _____

CONTACT PHONE: _____ EMAIL: _____

DRIVERS LICENSE: _____

IF PARTNERSHIP OR CORPORATION, LIST ALL PARTNERS OR CORPORATE OFFICERS:

Name:	Address:	Phone # :

LIST TYPES OF WORK PERFORMED: _____

_____

_____

INSURANCE AGENT NAME & PHONE #: _____

_____

NAME OF FINANCIAL INSTITUTION USED FOR ESCROW ACCOUNT FOR CUSTOMERS: _____

_____

APPLICANT HEREBY AFFIRMS TO THE LAWS AND ORDINANCES OF THE TOWN OF TONAWANDA, THE RULES AND REGULATIONS OF THE STATE OF NEW YORK NOW EXISTING OR WHICH MAY HEREAFTER BE ADOPTED; AND SUBJECT TO SUCH RULES AND REGULATIONS RELATING TO ALL CONTRACTORS WHICH HAVE BEEN OR MAY HEREAFTER BE ADOPTED AND PRESCRIBED BY THE TOWN OF TONAWANDA.

SIGNATURE: _____ TITLE: _____ DATE: _____

- **ANNUAL FEE: $125.00** (NON-REFUNDABLE).
- CHECK OR MONEY ORDER ONLY. MAKE PAYABLE TO THE TOWN OF TONAWANDA.
- INSURANCE CERTIFICATES ARE DUE AT TIME OF SUBMITTAL AND MUST BE CURRENT. APPLICATION SUBMITTED WITHOUT PROPER INSURANCE FORMS WILL BE CONSIDERED INCOMPLETE.
- NO WORK SHALL TAKE PLACE UNTIL REQUIRED LICENSE DOCUMENTS ARE RECEIVED AND APPROVED.

SECTION 02 81 00 – WASTE CHARACTERIZATION, REMOVAL AND DISPOSAL

PART 1 - GENERAL

1.1 SCOPE OF WORK:

A. The Contractor shall furnish all labor, materials, tools, equipment, utilities and other services necessary for the removal, characterization, transportation, and disposal/recycling of all contaminated materials, hazardous wastes, and Universal Waste generated from the Contract Work. This includes the collection of waste characterization samples as necessary to facilitate disposal and/or recycling of all generated wastes.

B. The Contractor is responsible for choosing appropriate treatment/recycling/disposal facilities and identifying those facilities to the Owner's Representative. Disposal of all waste streams must be at permitted TSDF's and disposal facilities in compliance with all regulatory requirements. In addition, the Contractor is responsible for making all waste determinations and for performing all sampling and analysis requirements specified by the receiving disposal or recycling facilities.

C. The handling, transportation and disposal of wastes shall be performed in strict accordance with USEPA, USDOT, State, and local regulations. Compliance with any obligation based upon Federal, State, or local environmental, public health, or safety laws, rules, regulations or requirements is required. Methods to address compliance shall be coordinated with the Owner's Representative.

D. The Contractor must supply the name and address of all facilities that shall receive the waste. The wastes include those associated with the decontamination, asbestos removal, demolition and equipment removal activities of the facility. These wastes may include asbestos containing materials, metals contaminated materials, petroleum products, PCB-containing materials, materials such as scrap metal, steel, copper, tin, piping, electrical, wood, concrete and masonry items.

1.2 SUBMITTALS:

A. Name, address, and USEPA and NYSDEC permits or licenses (as appropriate), of all proposed beneficial use, recovery, or recycling facility.

B. Name, address, and USEPA and NYSDEC permits or licenses (as appropriate), of all waste transporters/haulers.

C. Name, address, and USEPA and NYSDEC permits or licenses (as appropriate), of recipient landfill and incinerators.

D. Following final removal, and disposal/recycling or destruction, Owner's Representative and the Owner shall be provided with waste transport and disposal/recycling documents (e.g., manifests), as well as weight tickets and certificates of destruction as appropriate.

1.3 CODES AND REGULATIONS:

A. The following is a list of many of the relevant Federal and State laws, regulations, codes and guidelines that the Contractor shall follow and be familiar with. This list is by no means exhaustive and the Contractor shall be required to meet and comply with all applicable, relevant, and appropriate Federal, State and local laws and codes.

1. Toxic Substances Control Act (TSCA), USEPA (1976).

2. Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), USEPA (1980).

3. USEPA 40 CFR 170, Preparation of Hazardous Materials for Transportation.

4. USEPA 40 CFR Parts 260-272, Resource Conservation and Recovery Act (RCRA).

5. 40 CFR Part 273, Universal Waste Rule.

6. USEPA 40 CFR 761 (PCBs).

7. USDOT 49 CFR Parts 100-180, Hazardous Materials Regulations.

8. 6 NYCRR Part 361, Solid Waste & Material Recovery Facilities.

9. 6 NYCRR Part 362, Solid Waste Combustion, Transfer and Processing Facilities.

10. 6 NYCRR Part 363, Solid Waste Landfills.

11. 6 NYCRR Part 364, Waste Transporters.

12. 6 NYCRR Part 365, Biohazard Waste Management Facilities.

13. 6 NYCRR Part 370, Hazardous Waste Management System.

14. 6 NYCRR Part 371, Identification and Listing of Hazardous Waste.

15. 6 NYCRR Part 372, Hazardous Waste Manifest System and Related Standards for Generators, Transporters and Facilities.

16. 6 NYCRR Parts 373-1 through 373-4, TSDF Facilities and Standards.

17. 6 NYCRR Subpart 374-3, Standards for Universal Wastes.

18. 6 NYCRR Part 376, Land Disposal and Treatment Standards.

19. OSHA 29CFR 1910, Occupational Safety and Health Standards.

20. OSHA 29CFR 1926, Safety and Health Regulations for Construction.

21. Universal Waste Rule as described in the Federal Register.

B. The Contractor is required to secure and maintain all required regulatory permits necessary to perform all aspects of the work. The Contractor shall containerize and store waste in accordance with all applicable regulations. The Contractor and Waste Haulers will be responsible for all required placards and labeling.

1.4 WASTE STREAMS:

A. Abatement, demolition and cleaning shall produce a wide range of materials, some of which have specific management requirements. Materials generated during the Work shall be separated by the Contractor or subcontractor according to their intended disposition (i.e., salvage, recycle, disposal) and the applicable regulatory requirements for the respective management method. Specific handling, transport and disposal requirements for the various materials are provided in the appropriate sections of the Technical Specifications. Requirements for Universal Waste are provided in 1.5 of this of this Section.

B. Transportation and Containment Controls - The Contractor shall be responsible for transportation and containment controls utilized during the transport of materials associated with the remediation and demolition process.

C. Waste Tracking

1. The Contractor shall establish a record system that accounts for all waste. The Contractor must be able to document custody of all waste from the time it is removed from the work area until it is disposed of, recycled or incinerated at an approved facility. All containers are to be appropriately marked/labeled.

2. All the original manifests, bills-of-ladings and any receipts or certifications generated during the handling and disposal processes shall be provided to the Owner.

3. Final manifests and documents must be provided to the Owner within 30 days of the removal of contaminated materials from the Site by the waste hauler or as required for the applicable regulations.

1.5 GENERAL HAZARDOUS AND UNIVERSAL WASTE REMOVAL:

A. This section includes a listing of the types of wastes that the Contractor will be required to develop precautions and procedures to be followed to protect against the contamination of the building and Site; allow for the safety of his workers and the public; and, to identify proper means of treatment, storage and disposal. Contractor must also comply with the requirements of all Contract Technical Specifications. Waste includes, but is not limited to:

1. Mercury vapors contained within fluorescent light bulbs or tubes, metal halide, or high-intensity discharge (HID) lamps;

2. Mercury containing thermostats, thermometers and gauges;

3. Lead acid and other batteries;

4. Computers, electrical panels and smoke detectors.

B. The Contractor shall develop all applicable waste manifests, shipping papers, profile sheets, land ban forms and any other documentation and coordinate with the Owner's Representative regarding proper signatures.

C. The work area includes all areas where the above referenced materials slated for removal and subsequent disposal are present. For general locations and quantities, refer to Contract Drawings.

D. The Contractor will be required to perform any demolition required to locate and remove any Universal Wastes, identified wastes, transformer and tank carcasses, and other items identified in the Contract Specifications and Contract Drawings for removal.

16 WASTE MANAGEMENT:

A. This section describes the sources and classifications of wastes that are anticipated to be generated throughout the project; the staging and characterization procedures that shall be used; the packaging and storage methods that shall be used once the wastes are characterized; and, the transportation and disposal requirements and approved disposal facilities for wastes.

B. Staging Procedures - The manner in which the materials are staged is dependent on the classification of the material (hazardous waste, non-hazardous waste or recyclable material), whether the material is solid or liquid, and the quantity that shall be generated. Materials shall be staged in accordance with applicable regulations within locations approved by the Owner's Representative.

C. Packaging - The Contractor shall ensure that wastes from the demolition process are stored and placed in appropriate containers for storage and shipping. Waste materials that are to be sent off-site for disposal shall be loaded into appropriate DOT-approved containers and transported to the waste storage area to await disposal. A unique container identification number shall be assigned to each container to allow proper tracking during on-site management and off-site disposal. Each container shall be labeled with its unique container identification number, the date of generation, the type and approximate quantity of material, and the activity from which the waste was generated. This information shall be recorded by the Contractor and reviewed on a weekly basis to ensure that no materials are stored on-site while awaiting disposal for a period longer than the applicable regulatory mandated period (i.e., 90 days for hazardous waste).

D. The Contractor shall be responsible for providing appropriate containers, transporting, and disposing of all wastes including asbestos containing materials, metals contaminated materials, petroleum products, petroleum contaminated soil/groundwater, solvents, construction and demolition debris. Construction and Demolition debris includes non-contaminated rubble, non-contaminated debris, and clean soil. All wastes must be taken to an appropriate disposal or recycling facility which has not been previously rejected by the Owner.

E. The Contractor shall manage all surplus materials and waste generated in the performance of the Contract in accordance with applicable Federal, State, and local laws and regulations. No section herein is intended to prevent the Contractor from removing surplus material or waste to appropriate off-site locations for beneficial reuse, recovery or recycling purposes, unless a specific location has been rejected by the Owner. The Contractor is encouraged to reuse, salvage or recycle materials to the maximum extent possible.

PART 2 – PRODUCTS

2.1 GENERAL:

A. Contractor shall be responsible for identifying the appropriate shipping containers. Some examples include 35 or 55 gallon metal or fiber drums, with lids that can be secured and sealed for ballasts; RC-4, RC U-Bent and RC-HID lamp recycling cartons; lab packs or over-packs for containerized liquids (paints, thinners, cleaning fluids, etc). Drums or containers must meet the required OSHA, USEPA (40 CFR Parts 264-264 and 300), and DOT Regulations (49 CFR Parts 171-178).

B. Contractor shall provide the appropriate waste labels identifying contents as regulated TSCA, Universal Waste, and RCRA hazardous wastes as defined by USEPA, NYSDEC and all other applicable Federal and State regulations.

C. Contractor shall provide refrigerant recovery tanks and cylinders to hold and temporarily store compressed refrigerant gasses (ozone depleting substances as defined by the Clean Air Act – CFC, HFC, HCFC or virgin refrigerants).

PART 3 - EXECUTION

3.1 GENERAL:

A. Procedures and methods contained herein are to provide guidance to protect from the contamination of the environment and exposure to workers, while handling contaminated materials, hazardous wastes, and Universal Waste, and their respective components during disassembly for disposal/recycling/destruction.

B. Removal and disposal/recycling of all mercury fluorescent and HID lights, mercury gauges, and batteries will follow all Universal Waste Rule requirements.

C. On-site recovery and recycling of refrigerants, if required, must be conducted in compliance with the Clean Air Act (CAA) and by authorized and certified personnel as defined in Section 608 of the CAA.

3.2 PERSONAL PROTECTIVE EQUIPMENT:

A. Personal protective equipment (PPE) shall consist of (at a minimum) safety goggles or other protective eye-ware, work shoes with non-slip soles and steel toes, chemical resistant gloves that cover the hand (e.g., neoprene or nitrile gloves), an apron that covers the front of the worker's body from shoulder to calves or disposable Tyvek coverall, and respiratory protection, as necessary.

B. Personal protective equipment contaminated by handling operations should be disposed of as contaminated waste.

3.3 WASTE DISPOSAL:

A. Fluorescent fixtures are to be repackaged for recycling or disposed at an appropriate facility. Certificates of destruction are to be provided for lamps destroyed or recycled. Waste manifests are to be provided for lamps that are landfilled.

B. Non-leaking PCB ballasts are to be either landfilled or destroyed by high-temperature incineration. Landfilled ballasts are to be properly manifested. Certificates of destruction must be provided for destroyed ballasts. Waste shipment records are to be provided for all materials transported from the Site.

C. Leaking PCB ballasts (and any associated materials contaminated by such leakage) must be destroyed by high-temperature incineration. Certificates of destruction and waste transport/shipment records must be provided upon completion.

D. Batteries and mercury containing gauges/levels/thermostats shall be disposed of under the Universal Waste Rule.

E. All other wastes are to be disposed of in accordance with all applicable Federal, State and Local regulations.

3.5 QUALIFICATIONS:

A. The Contractor shall have the following qualifications:

1. Performance of at least two projects in the previous three years that are similar to the work required for this project.

2. It has developed and employed a Work Plan, Contingency Plan, and Site-Specific Health and Safety Plan similar to that required for this project.

3. It has established a Quality Control Program that includes hazard communications and chemical hygiene plans; employee background checks and medical testing; and, waste determination procedures and guidelines.

5. It has a project manager available for this project with at least three years of experience performing similar work; field experience in at least three similar projects; all required training certifications; fluent in the English language and capable of communicating with all the staff; and, is experienced in visual inspection, handling, cleaning, storage and field characterization of hazardous materials similar to those anticipated on this project.

6. For firm and persons specified above, submit documentation and resumes to demonstrate their capabilities and experience. Include a list of completed projects with project contact names, addresses, and phone numbers.

END OF SECTION 028100

SECTION 028213 - ASBESTOS ABATEMENT

PART 1 GENERAL

1.1 SCOPE OF WORK

A. This asbestos abatement project shall include the removal and disposal of all asbestos-containing spray-applied fireproofing (SFP) and SFP-contaminated materials located within the space between the second-floor suspended ceiling and the underside of the roof deck, including the suspended ceiling systems and associated materials, at the Town of Tonawanda Police Headquarters. The abatement area comprises approximately 14,720 square feet and includes, but is not limited to, asbestos-containing SFP located on the corrugated metal roof deck, structural steel roof supports, hangers, and all associated overspray, residue, debris, and SFP-contaminated materials

B. This asbestos abatement Project will include the removal and disposal of asbestos-containing materials in support of the renovations of the second-floor ceiling in the police department for the Town of Tonawanda.

The below listed asbestos containing materials will require removal as part of the Contract Work:

- Sprayed-on Fireproofing – 14,720 SF– Damaged/Friable
- ACM-contaminated existing Plaster Ceiling -3,830 SF – Intact/Non-Friable
- ACM-contaminated existing 2'x2' Suspended Ceiling 9,950 SF – Intact/Non-Friable
- ACM Plaster Ceiling, 150 SF – Intact/Non-Friable

C. The Contractor shall be aware of all conditions of the Project and is responsible for verifying quantities and locations of all Work to be performed. Failure to do so shall not relieve the Contractor of its obligation to furnish all labor and materials necessary to perform the Work.

D. All Work shall be performed in strict accordance with the Project Documents and all governing codes, rules, and regulations. Where conflicts occur between the Project Documents and applicable codes, rules, and regulations, the more stringent shall apply.

E. The Contractor is required to ensure cooperation of its personnel with the 3rd party asbestos project monitor and air sampling technician. The Contractor shall be responsible for the provision of sufficient electric power and safe access to all locations as necessary for the asbestos project monitor and air sampling technician to fulfill his/her duties.

1.2 SPECIAL JOB CONDITIONS:

A. Any special job conditions are described below:

1. In addition to the requirements of OSHA 1926.1101, the Contractor shall be required to perform daily personal air monitoring in accordance with Section 1.9 of this specification.
2. The Contractor shall be responsible for the provision of sufficient electric power and safe access to all locations as necessary for the asbestos project monitor and air sampling technician to fulfill his/her duties.

3. The Contractor shall be responsible for the provision of suitable disposable suites (e.g. Tyvek) and P100 respirator filters for all Authorized Visitors and the 3rd party project monitor and air sampling technician to conduct inspections of regulated work areas.

1.3 PERMITS AND COMPLIANCE:

A. The Contractor shall assume full responsibility and liability for compliance with all applicable Federal, State, and local laws, rules, and regulations pertaining to Work practices, protection of Workers, authorized visitors to the site, persons, and property adjacent to the Work.

B. Perform asbestos related Work in accordance with New York State Department of Labor Industrial Code Rule, 12 NYCRR Part 56, effective 3/21/07, as specified herein. Where more stringent requirements are specified, adhere to the more stringent requirements.

C. The Contractor must maintain current licenses pursuant to New York State Department of Labor and Department of Environmental Conservation for all Work related to this Project, including the removal, handling, transport, and disposal of asbestos containing materials.

D. The Contractor must have and submit proof upon request that all persons employed by the Contractor to engage in or supervise Work on any asbestos Project have a valid NYS asbestos handling certificate pursuant to Industrial Code Rule, 12 NYCRR Part 56, effective 3/21/07.

E. Should the Contractor choose to apply for any variance, approval of the Owner and Construction Manager is first required.

F. It is the sole responsibility of the Contractor to determine what, if any, patents are applicable to the Project. The Contractor shall pay all royalties and/or license fees. He shall defend all suits or claims for infringement of any patent rights and save the Town of Tonawanda, Facility, Architect, Environmental Consultant, and Engineer harmless from loss, including attorney's fees, on account thereof.

G. Failure to adhere to the Project Documents shall constitute a breach of the Contract and the Owner shall have the right to and may terminate the Contract provided, however, the failure of the Owner to terminate shall not relieve the Contractor from future compliance.

1.4 SUBMITTALS:

A. Pre-Work Submittals: Within 7 days prior to the pre-construction conference, the Contractor shall submit 3 copies of the documents listed below:

1. Contractor license issued by New York State Department of Labor.

2. A list of Projects performed within the past two (2) years and include the dollar value of all Projects. Provide Project references to the Owner; including consultant and air monitoring firm's names, contact persons, address, and phone number.

3. Progress Schedule:

a. Show the complete sequence of abatement activities and the sequencing of Work within each building or building section.

b. Show the dates for the beginning and completion of each major element of Work including substantial completion dates for each Work Area, building, or phase.

4. Project Notifications: As required by Federal and State regulatory agencies together with proof of transmittal (i.e. certified mail return receipt).

5. Building Occupant Notification: As required by regulatory agencies.

6. Abatement Work Plan: Provide plans that clearly indicate the following:
   a. All Work Areas/containments numbered sequentially.
   b. Locations and types of all decontamination enclosures.
   c. Entrances and exits to the Work Areas/containments.
   d. Type of abatement activity/technique for each Work Area/containment.
   e. Number and location of negative air units and exhaust. Also provide calculations for determining number of negative air pressure units.
   f. Proposed location and construction of storage facilities and field office.
   g. Location of water and electrical connections to building services.
   h. Waste transport routes through the building to the waste storage container.
7. Disposal Site/Landfill Permit from applicable regulatory agency.
8. NYS Department of Environmental Conservation Waste Transporter Permit.

B. On-Site Submittals: Refer to Part 3.01.D for all submittals, documentation, and postings required to be maintained on-site during abatement activities.

C. Project Close-out Submittals: Within 30 days of completion of the asbestos abatement portion of the project, the Contractor shall submit 4 copies of the documents listed below. One set of the documents shall be forwarded to the Facility.
   1. **Originals** of all waste disposal manifests, seals, and disposal logs.
   2. OSHA compliance air monitoring records conducted during the Work.
   3. Daily project log, including the entry/exit log.
   4. A list of all Workers used in the performance of the Project, including name, NYS Dept. of Motor Vehicle Photo Identification Card number, and NYS DOL certification number.
   5. Disposal Site/Landfill Permit from applicable regulatory agency.
   6. Final project notifications and variances.

1.5 PRE-CONSTRUCTION CONFERENCE:

A. Prior to start of preparatory Work under this Contract, the Contractor shall attend a pre-construction conference attended by Owner, Facility Personnel, and asbestos Project Monitor.

B. Agenda for this conference shall include but not necessarily be limited to:
   1. Contractor's scope of Work, Work plan, and schedule to include number of workers and shifts.
   2. Contractor's safety and health precautions including protective clothing and equipment and decontamination procedures.
   3. Environmental Consultant's duties, functions, and authority.
   4. Contractor's Work procedures including:
      a. Methods of job site preparation and removal methods.
      b. Respiratory protection.

c. Disposal procedures.

d. Cleanup procedures.

e. Fire exits and emergency procedures.

5. Contractor's required pre-work and on-site submittals, documentation, and postings.

6. Contractor's plan for twenty-four (24) hour Project security both for prevention of theft and for barring entry of unauthorized personnel into Work Areas.

7. Temporary utilities.

8. Handling of furniture and other moveable objects.

9. Storage of removed asbestos containing materials.

10. Waste disposal requirements and procedures.

C. In conjunction with the conference, the Contractor shall accompany the Owner and Asbestos Project Monitor on a pre-construction walk-through documenting existing condition of finishes and furnishings, reviewing overall Work plan, location of fire exits, fire protection equipment, water supply and temporary electric tie-in.

1.6 APPLICABLE STANDARDS AND REGULATIONS:

A. The Contractor shall comply with the following codes and standards, except where more stringent requirements are shown or specified:

B. Federal Regulations:

1. 29 CFR 1910.1001, "Asbestos" (OSHA)

2. 29 CFR 1910.1200, "Hazard Communication" (OSHA)

3. 29 CFR 1910.134, "Respiratory Protection" (OSHA)

4. 29 CFR 1910.145, "Specification for Accident Prevention Signs and Tags" (OSHA)

5. 29 CFR 1926, "Construction Industry" (OSHA)

6. 29 CFR 1926.1101, "Asbestos, Tremolite, Anthophyllite, and Actinolite" (OSHA)

7. 29 CFR 1926.500 "Guardrails, Handrails and Covers" (OSHA)

8. 40 CFR 61, Subpart A, "General Provisions" (EPA)

9. 40 CFR 61, Subpart M, "National Emission Standard for Asbestos" (EPA)

10. 49 CFR 171-172, Transportation Standards (DOT)

C. New York State Regulations:

1. 12 NYCRR Part 56, "Asbestos", Industrial Code Rule 56 (DOL) ("ICR56")

2. 6 NYCRR, Parts 360, 364, Disposal and Transportation (DEC)

3. 10 NYCRR, Part 73, "Asbestos Safety Program Requirements" (DOH)

D. Standards and Guidance Documents:

1. American National Standard Institute (ANSI) Z88.2-80, Practices for Respiratory Protection

2. ANSI Z9.2-79, Fundamentals Governing the Design and Operation of Local Exhaust Systems
3. EPA 560/585-024, Guidance for Controlling Asbestos Containing Materials in Buildings (Purple Book)
4. EPA 530-SW-85-007, Asbestos Waste Management Guidance

1.7 NOTICES:

A. The Contractor shall provide notification of intent to commence asbestos abatement activities as indicated below.

1. At least ten (10) Working days prior to beginning abatement activities, send written notification to:

   U.S. Environmental Protection Agency

   National Emissions Standards for Hazardous Air Pollutants (NESHAPS) Coordinator

   26 Federal Plaza

   New York, NY 10007.

2. At least ten (10) days prior to beginning abatement activities send written notification to:

   New York State Department of Labor

   Division of Safety and Health, Asbestos Control Program.

   State Office Campus

   Building 12 - Room 454

   Albany, NY 12240

B. The Contractor is required to send notifications to regulatory agencies via mail or package delivery service that will provide proof of delivery and receipt.

C. The Contractor shall post and/or provide Building Occupant Notification at least 10 days prior to beginning abatement activities as required by Industrial Code Rule, 12 NYCRR Part 56. The posting shall include the following information:

1. The locations of the abatement Project.
2. The amounts and types of asbestos containing materials being abated.
3. The commencement and completion dates of the Project.
4. The name, address, and asbestos license number of the Abatement Contractor.
5. The name, address, and asbestos license number of the Asbestos Project Monitoring firm and laboratory.

1.8 PROJECT MONITORING AND AIR SAMPLING:

The Owner's Representative shall be the initial point of contact for all Contract related work.

A. The Owner shall also engage the services of an Environmental Consultant (the Consultant) who shall serve as the Owner's NYSDOL licensed Project Monitoring Firm to oversee the performance of the asbestos abatement Project and provide direction as required throughout the entire abatement period.

B. The Contractor is required to ensure the cooperation of its personnel with the Owner's Representative and Environmental Consultant for the air sampling and Project monitoring functions described below. The Contractor shall comply with all direction given by the Owner's Representative and Environmental Consultant during the course of the Project.

C. The Environmental Consultant shall provide the following administrative services:

1. Review and approve or disapprove all submittals, shop drawings, schedules, and samples.
2. Assure that all notifications to governmental agencies by the Contractor are submitted in a timely manner and are correct in content.
3. Review and approve the Contractor's OSHA compliance testing laboratory.

D. The Environmental Consultant shall staff the Project with a trained and certified person(s) to act on the Owner's behalf at the job site. This individual(s) shall be designated as the Abatement Project Monitor (APM).

1. The APM shall be on-site at all times the Contractor is on-site until the completion of the asbestos abatement portion of the project. The Contractor shall not be permitted to conduct any Work unless the APM is on-site.
2. The APM shall have the authority to direct the actions of the Contractor verbally and in writing to ensure compliance with the Project documents and all regulations. The APM shall have the authority to Stop Work when gross Work practice deficiencies or unsafe practices are observed, or when ambient fiber concentrations outside the removal area exceed 0.01 f/cc or background level.
    a. Stop Work order shall be effective immediately and remain in effect until corrective measures have been taken and the situation has been corrected.
    b. Standby time required to resolve the situation shall be at the Contractor's expense.
3. The APM shall provide the following services:
    a. Inspection of the Contractor's Work, practices, and procedures, including temporary protection requirements, for compliance with all regulations and Project specifications.
    b. Provide abatement Project air sampling as required by applicable regulations (NYS, AHERA) and the Owner. Sampling will include background, pre-abatement, during abatement and clearance sampling.
    c. Verify daily that all Workers used in the performance of the Project are certified by the appropriate regulatory agency.
    d. Monitor the progress of the Contractor's Work and report any deviations from the schedule to the Owner.
    e. Monitor, verify, and document all waste load-out operations.
    f. Verify that the Contractor is performing personal air monitoring daily, and that results are being returned and posted at the site as required.
    g. The APM shall maintain a log on site that documents all project related and Environmental Consultant and Contractor actions, activities, and occurrences.
4. The following minimum inspections shall be conducted by the APM. Additional inspections shall be conducted as required by Project conditions.

a. Pre-Construction Inspection: The purpose of this inspection is to verify the existing conditions of the Work Areas and to document these conditions.

b. Pre-Commencement Inspection: The purpose of this inspection is to verify the integrity of each containment system prior to disturbance of any asbestos containing material. This inspection shall take place only after the Work Area is fully prepped for removal.

c. Work Inspections: The purpose of this inspection is to monitor the Work practices and procedures employed on the Project and to monitor the continued integrity of the containment system. Inspections within the regulated abatement work areas shall be conducted by the APM during all preparation, removal, and cleaning activities at least twice every work shift. Additional inspections shall be conducted as warranted.

d. Pre-Encapsulation Inspection: The purpose of this inspection is to ensure the complete removal of Asbestos Containing Material (ACM), from all surfaces in the Work Area prior to encapsulation.

e. Visual Clearance Inspection: The purpose of this inspection is to verify the Contractor's certification that all materials have been removed from the Work Area and the absence of all visible accumulations of debris in the Work Area. This inspection shall be conducted after encapsulation and removal of all surface plastic in the area, except for critical barriers, but before final air clearance testing.

f. Post-Clearance Inspection: The purpose of this inspection is to ensure the complete removal of ACM, including debris, from the Work Area after satisfactory final clearance sampling and removal of all critical barriers and equipment from the Work Area.

g. Punch List Inspection: The purpose of this inspection is to verify the Contractor's certification that all Work has been completed as contracted and the existing condition of the area prior to its release to the Owner.

E. The Environmental Consultant shall provide abatement Project air sampling and analysis as required by applicable regulations (New York State and/or AHERA). Sampling will include background, pre-abatement, during-abatement, and clearance sampling.

1. Unless otherwise required by applicable regulations, the Environmental Consultant shall have samples analyzed by Phase Contrast Microscopy (PCM). Results shall be available within 24 hours of completion of sampling.

2. For large and small Projects, samples shall be collected as required by applicable regulations (New York State and/or AHERA).

3. For tent removals, a minimum of at least one clearance sample shall be collected in each tent. Additional samples shall be collected in accordance with small or large Project requirements if cumulative Project quantities exceed those of a minor Project.

4. If the air sampling during abatement reveals airborne fiber levels at or above 0.01 fibers/cc or the pre-abatement/environmental level (whichever is greater) outside the Work Area, then the Environmental Consultant shall issue an immediate Stop Work order. The Contractor shall then inspect the barriers for leakage and HEPA vacuum and/or wet clean the surface outside the Work Area. The Contractor shall bear the burden of any and all costs incurred by this delay.

5. The Environmental Consultant shall submit copies of all final air clearance results to the NYS Department of Labor at the completion of the Project.

1.9 CONTRACTOR AIR SAMPLING:

A. In addition to the requirements of OSHA 1926.1101, the Contractor shall be required to perform personal air monitoring every Work shift in each Work Area during which abatement activities occur in order to determine that appropriate respiratory protection is being worn and utilized.

B. The Contractor shall conduct air sampling that is representative of both the 8-hour time weighted average and 30-minute short-term exposures to indicate compliance with the permissible exposure and excursion limits.

C. The Contractor's laboratory analysis of air samples shall be conducted by an NYS DOH ELAP approved laboratory, subject to approval of the Environmental Consultant.

D. Results of personnel air sample analyses shall be available, verbally, within twenty-four (24) hours of sampling and shall be posted upon receipt. Written laboratory reports shall be delivered and posted at the Work site within five (5) days. Failure to comply with these requirements may result in all work being stopped until compliance is achieved.

1.10 PROJECT SUPERVISOR:

A. The Contractor shall designate a full-time Project Supervisor who shall meet the following qualifications:

1. The Project Supervisor shall hold New York State certification as an Asbestos Supervisor.

2. The Project Supervisor shall meet the requirements of a "Competent Person" as defined by OSHA 1926.1101 and shall have a minimum of one year experience as a supervisor.

3. The Project Supervisor must be able to read and write English fluently, as well as communicate in the primary language of the Workers.

B. If the Project Supervisor is not on-site at any time whatsoever, all work associated with the asbestos abatement project shall be stopped. The Project Supervisor shall remain on-site until the asbestos abatement portion of the project is complete. The Project Supervisor cannot be removed from the Project without the written consent of the Owner and the Environmental Consultant. The Project Supervisor shall be removed from the Project if so requested by the Owner.

C. The Project Supervisor shall maintain the Project Log Book required by New York State Department of Labor and section 2.03 of the specifications and the Waste Disposal Log required by section 4.04 of the specifications.

D. The Project Supervisor shall be responsible for the performance of the Work and shall represent the Contractor in all respects at the Project site. The Supervisor shall be the primary point of contact for the Asbestos Project Monitor.

1.11 MEDICAL REQUIREMENTS:

A. Before exposure to airborne asbestos fibers, provide Workers with a comprehensive medical examination as required by 29 CFR 1910.1001 and 29 CFR 1926.1101.

1. This examination is not required if adequate records show the employee has been examined as required by 29 CFR 1910.1001, and 29 CFR 1926.1101 within the past year.

2. The same medical examination shall be given on an annual basis to employees engaged in an occupation involving asbestos fibers and within thirty (30) calendar days before or after the termination of employment in such occupations.

B. As required by 29 CFR 1910.1001, and 29 CFR 1926.1101 maintain complete and accurate records of employees' medical examinations for a period of thirty (30) years after termination of employment and make records of the required medical examinations available for inspection and copying to: The Assistant Secretary of Labor for Occupational Safety and Health, the Director of the National Institute for Occupational Safety and Health (NIOSH), authorized representatives of either of them, and each employee's physician upon the request of the employee or former employee.

C. The Contractor shall furnish the Owner evidence of its firm's medical surveillance program required under 29 CFR 1910.1001, and 29 CFR 1926.1101.

1.12 TRAINING:

A. As required by applicable regulations, prior to assignment to asbestos Work instruct each employee with regard to the hazards of asbestos, safety and health precautions, and the use and requirements of protective clothing and equipment.

B. Establish a respirator program as required by ANSI Z88.2 and 29 CFR 1910.134, and 29 CFR 1926.1101. Provide respirator training and fit testing.

1.13 RESPIRATORY PROTECTION:

A. Select respirators from those approved by the Mine Safety and Health Administration (MSHA), and the National Institute for Occupational Safety and Health (NIOSH), Department of Health and Human Services.

B. Where fiber levels permit, and in compliance with regulatory requirements, Powered Air Purifying Respirators (PAPR) are the minimum allowable respiratory protection permitted to be utilized during gross removal operations.

C. Respirators shall be individually fit-tested to personnel under the direction of an Industrial Hygienist on a yearly basis. Fit-tested respirators shall be permanently marked to identify the individual fitted, and use shall be limited to that individual. Fit-test records shall be maintained on site for each employee.

D. No respirators shall be issued to personnel without such personnel participating in a respirator training program.

E. A storage area for respirators shall be provided by the Contractor in the clean room side of the personnel decontamination enclosure where they will be kept in a clean environment.

F. High Efficiency Particulate Air (HEPA) respirator filters shall be approved by NIOSH and shall conform to the OSHA requirements in 29 CFR 1910.134 and 29 CFR 1926.1101.

G. The Contractor shall provide and make available a sufficient quantity of respirator filters so that filter changes can be made as necessary during the work day. Filters will be removed and discarded as ACM waste during the decontamination process. Filters cannot be reused. Filters must be changed if breathing becomes difficult.

H. Filters used with negative pressure air purifying respirators shall not be used any longer than one eight (8) hour work day.

I. Any authorized visitor, Worker, or supervisor found in the Work Area not wearing the required respiratory protection shall be removed from the Project site and may not be permitted to return.

J. The Contractor shall have at least two (2) Powered Air Purifying Respirators stored on site designated for authorized visitors use. Appropriate respirator filters for authorized visitors shall be made available by the Contractor.

1.14 DELIVERY AND STORAGE:

A. Deliver all materials to the job site in original packages with containers bearing manufacturer's name and label.

B. Store all materials at the job site in a suitable and designated area.

1. Store materials subject to deterioration or damage away from wet or damp surfaces and under cover.

2. Protect materials from unintended contamination and theft.

3. Storage areas shall be kept clean and organized.

C. Remove damaged or deteriorated materials from the job site. Materials contaminated with asbestos shall be disposed of as asbestos debris as herein specified.

1.15 TEMPORARY UTILITIES:

A. Shut down and lock out all electrical power to the asbestos Work Areas.

B. Provide temporary 120-240 volt, single phase, three wire, 100 amp electric service with Ground Fault Circuit Interrupters (GFCI) for all electric requirements within the asbestos Work Area.

1. All power to the Work Area shall be brought in from outside the area through GFCI's at the source.

2. Where available, obtain from Owner's existing system. Otherwise provide power from other sources (i.e. generator).

3. Provide temporary wiring and "weatherproof" receptacles in sufficient quantity and location to serve all HEPA equipment and tools.

4. Provide wiring and receptacles as required by the Environmental Consultant for air sampling equipment.

C. Provide temporary lighting with "weatherproof" fixtures for all Work Areas including decontamination chambers.

1. The entire Work Area shall be kept illuminated at all times.

2. Provide lighting as required by the Environmental Consultant for the purposes of performing required inspections.

D. All temporary devices and wiring used in the Work Area shall be capable of decontamination procedures including HEPA vacuuming and wet-wiping.

E. Provide temporary water source to meet all applicable project water requirements (i.e. decontamination units, wetting materials, etc.). Utilize domestic water service, if available, from Owner's existing system. Provide hot water heaters with sufficient capacity to meet Project demands.

PART 2 PRODUCTS

2.1 PROTECTIVE CLOTHING:

A. Provide personnel utilized during the Project with disposable protective whole body clothing, head coverings, gloves and foot coverings. Provide disposable plastic or rubber gloves to protect hands. Cloth gloves may be worn inside the plastic or rubber for comfort, but shall not be used alone. Make sleeves secure at the wrists and make foot coverings secure at the ankles by the use of tape, or provide disposable coverings with elastic wrists or tops.

B. Provide sufficient quantities of protective clothing to assure a minimum of four (4) complete disposable outfits per day for each individual performing abatement Work.

C. Eye protection and hard hats shall be provided and made available for all personnel entering any Work Area.

D. Authorized visitors shall be provided with suitable protective clothing, headgear, eye protection, and footwear whenever they enter the Work Area.

2.2 SIGNS AND LABELS:

A. Provide warning signs and barrier tapes at all approaches to asbestos Work Areas. Locate signs at such distance that personnel may read the sign and take the necessary protective steps required before entering the area.

1. Provide danger signs in vertical format conforming to 29 CFR 1926.1101, minimum 20" x 14" displaying the following legend.

DANGER
ASBESTOS
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
AUTHORIZED PERSONNEL ONLY

2. Provide 3" wide red or yellow barrier tape printed with black lettered, "DANGER ASBESTOS REMOVAL". Locate barrier tape across all corridors, entrances and access routes to asbestos Work Area. Install tape 3' to 4' above finish floor elevation.

B. Provide asbestos danger labels affixed to all asbestos materials, scrap, waste, debris and other products contaminated with asbestos.

1. Provide asbestos danger labels of sufficient size to be clearly legible, displaying the following legend:

DANGER
CONTAINS ASBESTOS FIBERS
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
DO NOT BREATHE DUST
AVOID CREATING DUST

2. Provide the following asbestos labels, of sufficient size to be clearly legible, for display on waste containers (bags or drums) which will be used to transport asbestos contaminated material in accordance with United States Department of Transportation 49 CFR Parts 171 and 172:

RQ HAZARDOUS
SUBSTANCE
SOLID, NOS
ORM-E, NA 9188
ASBESTOS

3. Generator identification information shall be affixed to each waste container indicating the following printed in indelible ink:

Generator Name:
Facility Name:
Facility Address:

2.3 PROJECT LOG BOOK:

A. Provide a permanently bound Project log book. Log book shall contain on title page the Project name, name, address and phone number of Owner; name, address and phone number of Environmental Consultant; name, address and phone number of Abatement Contractor; emergency numbers including, but not limited to local Fire/Rescue department.

B. All entries into the log shall be made in non-washable, permanent ink and such pen shall be strung to or otherwise attached to the log to prevent removal from the log-in area. Under no circumstances shall pencil entries be permitted.

C. All persons entering and exiting the Work Area shall sign the log and include name, last 4 digits of social security number, and time.

D. The Project Supervisor shall document all Work performed daily and note all inspections required by NYS Industrial Code 12 NYCRR Part 56, i.e. testing and inspection of barriers and enclosures.

2.4 SCAFFOLDING AND LADDERS:

A. Provide all scaffolding and/or staging as necessary to accomplish the Work of this Contract. Scaffolding may be of suspension type or standing type such as metal tube and coupler, tubular welded frame, pole or outrigger type or cantilever type. The type, erection and use of all scaffolding and ladders shall comply with all applicable OSHA construction industry standards.

B. Provide scaffolding and ladders as required by the Environmental Consultant for the purposes of performing required inspections.

2.5 SURFACTANT (AMENDED WATER):

A. Wet all asbestos-containing materials prior to removal with surfactant mixed and applied in accordance with manufacturer's printed instructions.

B. Approved Manufacturer:

1. International Protective Coatings Corp.: Serpiflex Shield
2. American Coatings Corp.: EPA 55 Asbestos Removal Agent
3. Certified Technologies: CerTane 2075 Penetrating Surfactant
4. Alternate Approved by the Environmental Consultant

2.6 ENCAPSULANT:

A. Encapsulant shall be tinted or pigmented so that application when dry is readily discernible.

B. Approved Manufacturer:

1. International Protective Coatings Corp.: Serpiflex Shield
2. American Coatings Corp.: FNE High Temperature Sealant
3. Certified Technologies: CerTane 1000 Post Removal Encapsulant
4. Alternate Approved by the Environmental Consultant

2.7 DISPOSAL BAGS, DRUMS, AND CONTAINERS:

A. Provide 6 mil polyethylene disposal bags printed with asbestos caution labels. Bags shall also be imprinted with U.S. Department of Transportation required markings.

B. Provide 30 or 55 gallon capacity fiber or metal drums capable of being sealed air and water tight if asbestos waste has the potential to damage or puncture disposal bags. Affix asbestos caution labels on lids and at one-third points around drum circumference to assure ready identification.

C. Containers and bags must be labeled with the names of the waste generator and the location at which the waste was generated in accordance with 40 CFR Part 61 NESHAPS.

D. Labeled ACM waste containers or bags shall not be used for non-ACM waste or trash. Any material placed in labeled containers or bags, whether turned inside out or not shall be handled and disposed of as ACM waste.

2.8 HEPA VACUUM EQUIPMENT:

A. All dry vacuuming performed under this contract shall be performed with High Efficiency Particulate Absolute (HEPA) filter equipped industrial vacuums conforming to ANSI Z9.2-79.

B. Provide tools and specialized equipment including scraping nozzles with integral vacuum hoods connected to a HEPA vacuum with flexible hose.

C. Approved Manufacturers:

1. Hako Minuteman
2. Micro-Trap Inc.
3. Control Resource Systems, Inc.

2.9 POWER TOOLS:

A. Any power tools used to drill, cut into, or otherwise disturb asbestos material shall be equipped with HEPA filtered local exhaust ventilation.

2.10 POLYETHYLENE SHEETING:

A. All polyethylene (plastic) sheeting used on the Project (including but not limited to sheeting used for critical and isolation barriers, fixed objects, walls, floors, ceilings, waste container) shall be at least 6 mil fire retardant sheeting.

B. Decontamination enclosure systems shall utilize at least 6 mil opaque fire retardant plastic sheeting. At least 2 layers of 6 mil reinforced fire retardant plastic sheeting shall be used for the flooring.

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS:

A. Should the area beyond the Work Area(s) become contaminated with asbestos containing materials or elevated fiber levels, immediately stop Work and institute emergency procedures. Contaminated non-Work Areas shall be isolated and decontaminated in accordance with procedures established for asbestos removal. All costs incurred in decontaminating such non-Work Areas and the contents thereof shall be borne by the Contractor, at no additional cost to the Owner.

B. Medical approval, fit test reports, Worker Acknowledgments, and NYS DOL certificates shall be on site prior to admittance of any Contractor's employees to the asbestos Work Area.

C. Perform all asbestos removal Work using wet removal procedures. Mix and apply surfactant in accordance with manufacturer's written instructions. Dry removal procedures are not permitted.

D. The following submittals, documentation, and postings shall be maintained on-site during abatement activities at a location approved by the Asbestos Project Monitor:

1. Contractor license issued by New York State Department of Labor.
2. Certification, Worker Training, Medical Surveillance, Acknowledgments:
    a. New York State Asbestos Handler certification cards for each person employed in the removal, handling, or disturbance of asbestos.
    b. Evidence that Workers have received proper training required by the regulations and the medical examinations required by OSHA 29 CFR 1926.1101.
    c. Documentation that Workers have been fit tested specifically for respirators used on the Project.
3. Daily OSHA personal air monitoring results.
4. NYS Department of Health ELAP certification for the laboratory that will be analyzing the OSHA personnel air samples.
5. NYS Department of Environmental Conservation Waste Transporter Permit.
6. Project documents (specifications and drawings.)
7. Notifications and variances (site specific). Ensure that the most up-to-date notifications and variances are on-site.
8. Applicable regulations.
9. Material Safety Data Sheets of supplies/chemicals used on the Project.
10. Approved Abatement Work Plan.
11. List of emergency telephone numbers.

12. Waste Disposal Log

13. Project Log Book

E. The Work Area must be vacated by building occupants prior to decontamination enclosure construction and Work Area preparation.

F. All demolition necessary to access asbestos containing materials for removal must be conducted within negative pressure enclosures by licensed asbestos handlers. Demolition debris may be disposed of as construction and demolition debris provided the Asbestos Project Monitor determines that it is not contaminated with asbestos. If the demolition debris is determined to be contaminated, it must be disposed of as asbestos waste.

3.2 PERSONAL DECONTAMINATION ENCLOSURE:

A. Provide a personal decontamination enclosure consistent with ICR 56. The decontamination enclosure shall not be located within a work area. If the decontamination chamber is accessible to the public it shall be fully framed and sheathed to prevent unauthorized entry.

B. Access to the Work Area will be from the clean room through an air-lock to the shower, through an air lock to the equipment room, through an air lock to the Work Area. Each airlock shall be a minimum of three feet from door to door.

C. The decontamination enclosure ceiling and walls shall be covered with two layers of opaque 6 mil polyethylene sheeting. Two layers of 6 mil reinforced polyethylene sheeting shall be used to cover the floor.

D. Establish a triple layer of six mil polyethylene at the decontamination chamber doorways, weighted to insure a tight seal of the enclosure. Prior to establishing doorway seals move all required tools, scaffolding, and equipment into the Work Area.

E. The entrance to the clean room shall have a lockable door. Provide suitable lockers for storage of Worker's street clothes. Storage for respirators along with replacement filters and disposable towels shall also be provided.

F. Provide a temporary shower with individual hot and cold water supplies and faucets. Provide a sufficient supply of soap and shampoo. There shall be one shower head for every six Workers. The shower room shall be constructed in such a way so that travel through the shower chamber shall be through the shower. The shower shall not be able to be bypassed.

G. Shower water shall be drained, collected and filtered through a system with at least a 5.0 micron particle size collection capability containing a series of several filters with progressively smaller pore sizes to avoid rapid clogging of the system. The filtered waste water shall then be discharged in accordance with applicable codes and the contaminated filters disposed of as asbestos waste.

H. The equipment room shall be used for the storage of tools and equipment. A walk-off pan filled with water shall be located in the Work Area outside the equipment room for Workers to clean foot coverings when leaving the Work Area. A labeled 6 mil plastic ACM waste bag for collection of contaminated clothing shall be located in this room.

I. The personal decontamination enclosure shall be cleaned and disinfected minimally at the end of each Work shift and as otherwise directed by the Asbestos Project Monitor.

3.3 WASTE DECONTAMINATION ENCLOSURE:

A. Provide a waste decontamination enclosure consistent with ICR 56. The decontamination enclosure shall not be located within a work area. If the decontamination chamber is accessible to the public, it shall be fully framed and sheathed to prevent unauthorized entry.

B. The waste decontamination enclosure system shall consist of a washroom/cleanup room with an airlock to the Work Area and another airlock doorway to the holding area. Each airlock shall be a minimum of three feet from door to door. The entrance to the holding area shall have a lockable door.

C. The decontamination enclosure ceiling and walls shall be covered with two layers of opaque 6 mil polyethylene sheeting. Two layers of 6 mil reinforced polyethylene sheeting shall be used to cover the floor.

D. Establish a triple layer of six mil polyethylene at the decontamination chamber doorways, weighted to insure a tight seal of the enclosure. Prior to establishing doorway seals move all required tools, scaffolding, and equipment into the Work Area.

E. Where there is only one egress from the Work Area, the holding area of the waste decontamination enclosure system may branch off from the personnel decontamination enclosure equipment room, which then serves as the waste wash room.

F. The waste wash room water shall be drained, collected, and filtered through a system with at least a 5.0 micron particle size collection capability containing a series of several filters with progressively smaller pore sizes to avoid rapid clogging of the system. The filtered waste water shall then be discharged in accordance with applicable codes and the contaminated filters disposed of as asbestos waste.

G. In small asbestos Projects where only one egress from the Work Area exists, the shower room may be used as a waste washroom. In this instance, the clean room shall not be used for waste storage, but shall be used for waste transfer to carts, which shall immediately be removed from this enclosure.

3.4 WORK AREA ENTRY AND EXIT PROCEDURES:

A. Access to and from the asbestos Work Area is permitted only through the personnel decontamination enclosure unless otherwise stipulated in a site specific variance.

B. Workers shall sign the entry/exit log upon every entry and exit.

C. The following procedures shall be followed when entering the Work Area:

1. Before entering the Work Area, Workers shall proceed to the clean room, remove all street clothes, and don protective clothing, equipment, and respirators.

2. Workers shall proceed from the clean room through the shower room and the equipment room and into the Work Area.

D. The following procedures shall be followed when exiting the Work Area:

1. Before leaving the Work Area, gross asbestos contamination will be removed by brushing, wet cleaning and/or HEPA vacuuming.

2. In the equipment room, Workers shall remove disposable clothing, but not respirators, and shall place clothing in plastic disposal bags for disposal as contaminated debris prior to entering the shower room.

3. Workers shall shower thoroughly while wearing respirators then wash respirator with soap and water prior to removal.

4. Upon exiting the shower, Workers shall don new disposable clothing if the Work shift is to continue or street clothes to exit area. Under no circumstances shall Workers enter public non-Work Areas in disposable protective clothing.

3.5 WORK AREA PREPARATION:

A. Asbestos danger signs shall be posted at all approaches to the asbestos Work Area. Post all emergency exits as "emergency exit only" on the Work Area side, post with asbestos caution signs on the non-Work Area side. Provide all non-Work Area stairs and corridors accessible to the asbestos Work Area with warning tapes at the base of stairs and beginning of corridors. Warning tapes shall be in addition to caution signs.

B. Shut down and lock out the building heating, ventilating, and air conditioning and electrical systems. Provide temporary electric power and lighting as specified herein.

C. All surfaces and objects within the Work Area shall be pre-cleaned using HEPA vacuuming and/or wet-wiping methods. Dry sweeping and any other methods that raise dust shall be prohibited. ACM shall not be disturbed during pre-cleaning.

D. Movable objects within the Work Area shall be HEPA vacuumed and/or wet-wiped and removed from the Work Area.

E. All non-movable equipment in the Work Area shall be completely covered with 2 layers of polyethylene sheeting, at least 6 mil in thickness, and secured in place with duct tape and/or spray adhesive.

F. Provide enclosure of the asbestos Work Area necessary to isolate it from unsealed areas of the building in accordance with the approved asbestos Work plan and as specified herein.

G. Seal off all openings including but not limited to windows, diffusers, grills, electrical outlets and boxes, doors, floor drains, and any other penetrations of the Work Area enclosure, using 2 layers of at least 6 mil polyethylene sheeting to form a critical barrier or as described in the site specific variance.

H. Provide temporary framing and sheathing at openings larger than 32 square feet forming the limits of the asbestos Work Area. Sheathing thickness must be a minimum of 3/8 inch and all sheathing shall be caulked and the Work Area side sealed with two layers of 6 mil polyethylene sheeting to form an isolation barrier, or as described in the site specific variance.

I. Isolation barriers shall be installed at all elevator openings in the Work Area. Elevator controls shall be modified so that elevators bypass the Work Area.

J. Provide two layers of 6 mil polyethylene sheeting over all floor, wall, and ceiling surfaces. Isolation barriers shall also be covered with two layers (for a total of four layers) or perform as modified by the site specific variance. Sheeting shall be secured with spray adhesive and then sealed with duct tape. All joints in polyethylene sheeting shall overlap 12" minimum.

K. Unless otherwise specified for removal, the Contractor shall either protect all fiberglass insulation on piping, ductwork, tanks, etc. in the Work Area using two layers of six mil polyethylene or remove the insulation as asbestos containing waste.

L. Frame out emergency exits. Provide double layer 6 mil polyethylene sheeting and tape seal opening. Post as emergency exits only. Within the Work Area, mark the locations and directions of emergency exits throughout the Work Area using exit signs and/or duct tape.

M. Remove all items attached to or in contact with ACM only after the Work Area enclosure is in place. HEPA vacuum and wet wipe with amended water all removed items prior to their removal from the Work Area and before the start of asbestos removal operations.

N. Suspended ceiling tiles shall only be removed after Work Area preparation is complete, or as specified in the site specific variance. Non-contaminated ceiling tiles shall be HEPA vacuumed and removed from the Work Area before asbestos removals begin. Contaminated ceiling tiles shall be disposed of as asbestos waste.

3.6 NEGATIVE AIR PRESSURE FILTRATION SYSTEM:

A. Provide a portable asbestos filtration system that develops a minimum pressure differential of negative 0.02 in. of water column within all full enclosure areas relative to adjacent unsealed areas and that provides a minimum of 4 air changes per hour in the Work Area during abatement.

B. Such filtration systems must be operated 24 hours per day during the entire Project until the final cleanup is completed and satisfactory results of the final air samples are received from the laboratory.

C. The system shall include a series of pre-filters and filters to provide High Efficiency Particulate Air (HEPA) filtration of particles down to 0.3 microns at 100% efficiency and below 0.3 microns at 99.9% efficiency. Provide sufficient replacement filters to replace pre-filters every 2 hours, secondary pre-filters every 24 hours, and primary HEPA filters every 600 hours of operation.

D. A minimum of one additional filtration unit of at least the same capacity as the primary unit(s) shall be installed and fully functional to be used during primary unit (s) filter changing and in case of primary failure. There shall be at least one back-up unit for every five primary units.

E. At no time will the unit exhaust indoors, within 50 feet of a receptor, including but not limited to windows and doors, or adversely affect the air intake of the building.

F. Upon electric power failure or shut-down of any filtration unit, all abatement activities shall stop immediately and only resume after power is restored and all filtration units are fully operating. For shut-downs longer than one hour, all openings into the Work Area, including the decontamination enclosures, shall be sealed.

G. During final air clearance sampling, negative air filtration shall be reduced to half the required air changes per hour.

H. The Contractor shall provide either a manometer or a photohelic style negative air pressure gauge with chart recorder to measure and record negative pressure differential across the Work Area barriers without interruption 24 hours per day as directed by the Environmental Consultant.

I. The contractor shall observe all applicable preparation phase, removal and cleaning phase, and settling/ drying waiting periods as described in ICR 56.

3.7 REMOVAL OF ASBESTOS CONTAINING MATERIALS:

A. Asbestos-containing materials shall be removed in accordance with the Contract Documents and the approved Asbestos Work Plan.

B. Sufficiently wet asbestos materials with a low pressure, airless fine spray of surfactant to ensure full penetration prior to material removal. Re-wet material that does not display evidence of saturation.

C. One Worker shall continuously apply amended water while ACM is being removed.

D. Perform cutting, drilling, abrading, or any penetration or disturbance of asbestos containing material in a manner to minimize the dispersal of asbestos fibers into the air. Use equipment and methods specifically designed to limit generation of airborne asbestos particles. All power operated tools used shall be provided with HEPA equipped filtered local exhaust ventilation.

E. Upon removal of ACM from the substrate, the newly exposed surfaces shall be HEPA vacuumed and/or wet cleaned. Surfaces must be thoroughly cleaned using necessary methods and any required solvents to completely remove any adhesive, mastic, etc, unless stated otherwise in the site specific variance.

F. All removed material shall be placed into 6 mil plastic disposal bags or other suitable container upon detachment from the substrate or whenever there is enough accumulation to fill a single bag or container. Maintain the surfaces of the Work Area free of accumulation of asbestos debris.

G. Dust-tight enclosed inclined chutes shall be used for materials lowered from distances greater than 10 ft.

H. Large components shall be wrapped in two layers of 6 mil polyethylene sheeting. Sharp components likely to tear disposal bags shall be placed in fiber drums or boxes and then wrapped with sheeting.

I. Power or pressure washers are not permitted for asbestos removal or clean-up procedures.

J. All open ends of pipe and duct insulation not scheduled for removal shall be encapsulated using lag cloth.

K. All construction and demolition debris determined by the Asbestos Project Monitor to be contaminated with asbestos shall be handled and disposed of as asbestos waste.

L. The use of metal shovels, metal dust pans, etc. are not permitted inside the work area.

3.8 EQUIPMENT AND WASTE CONTAINER DECONTAMINATION AND REMOVAL Procedures:

A. External surfaces of contaminated containers and equipment shall be cleaned by wet cleaning and/or HEPA vacuuming in the Work Area before moving such items into the waste decontamination enclosure system airlock by persons assigned to this duty. The Work Area persons shall not enter the airlock.

B. The containers and equipment shall be removed from the airlock by persons stationed in the washroom during waste removal operations. The external surfaces of containers and equipment shall be cleaned a second time by wet cleaning.

C. The cleaned containers of asbestos material and equipment are to be dried of any excessive pooled or beaded liquid, placed in uncontaminated plastic bags or sheeting, as the item's physical characteristics demand, and sealed airtight.

D. The clean recontainerized items shall be moved into the airlock that leads to the holding area. Workers in the washroom shall not enter this airlock or the Work Area until waste removal is finished for that period.

E. Containers and equipment shall be moved from the airlock and into the holding area by persons dressed in clean personal protective equipment, who have entered from uncontaminated areas.

F. The cleaned containers of asbestos material and equipment shall be placed in water tight carts with doors or tops that shall be closed and secured. These carts shall be held in the holding area pending removal. The carts shall be wet cleaned and/or HEPA vacuumed at least once each day.

G. The exit from the decontamination enclosure system shall be secured to prevent unauthorized entry.

H. Where the waste removal enclosure is part of the personnel decontamination enclosure, waste removal shall not occur during shift changes or when the enclosure is otherwise occupied. Precautions shall be taken to prevent short circuiting and cycling of air outward through the shower and clean room.

3.9 APPLICATION OF ENCAPSULANT:

A. After first cleaning, prior to first sheeting removal, and after Work Area has been rendered free of visible residues, a thin coat of encapsulant shall be applied to any surfaces in the Work Area which were not the subject of removal.

B. In no event shall encapsulant be applied to any surface that was the subject of removal prior to obtaining satisfactory air monitoring results.

C. Encapsulants shall be pigmented or tinted to provide an indication for completeness of coverage. The Asbestos Project Monitor shall determine adequacy of coverage.

3.10 WORK AREA DECONTAMINATION:

A. Following completion of gross abatement and after all accumulations of asbestos waste materials have been containerized, the following decontamination procedures shall be followed unless modified by a site specific variance.

B. First Cleaning:

1. All bagged asbestos waste and unnecessary equipment shall be decontaminated and removed from the Work Area.

2. All surfaces in the Work Area shall be wet cleaned. A wet-purpose shop vacuum may be used to pick up excess liquid, and may either be decontaminated prior to removal from the Work Area or disposed of as asbestos waste.

3. The Asbestos Project Monitor shall conduct a visual inspection of the Work Area for cleanliness and completion of abatement.

4. The Contractor shall then apply a thin coat of encapsulant to all surfaces in the Work Area that were not the subject of removal. In no event shall encapsulant be applied to any surface that was the subject of removal prior to obtaining satisfactory air monitoring results.

5. After the encapsulant has dried, the first layer of polyethylene sheeting shall then be removed and bagged, and the Work Area shall be vacated for a minimum of 12 hours.

C. Second Cleaning

1. All surfaces in the Work Area shall be HEPA vacuumed and/or wet cleaned.

2. The Asbestos Project Monitor shall conduct a second visual inspection of the Work Area for cleanliness.

3. The second layer of polyethylene sheeting shall be removed and bagged and the Work Area shall be vacated for a minimum of 12 hours.

D. Third Cleaning

1. All surfaces in the Work Area shall be HEPA vacuumed and/or wet cleaned.

2. The Asbestos Project Monitor shall conduct a third visual inspection of the Work Area for cleanliness.

3. The Work Area shall be vacated for a minimum of 12 hours regardless of the cleaning method (HEPA vacuuming or wet cleaning) utilized.

4. Aggressive final clearance air sampling shall then be conducted by the Environmental Consultant.

5. Upon receipt of satisfactory final clearance air sampling results, the negative air pressure equipment can then be shut down and decontamination areas and isolation and critical barriers removed.

E. After isolation and critical barriers are removed, the Asbestos Project Monitor shall inspect the Work Area for cleanliness. If necessary, additional cleaning shall be performed by the Contractor as directed by the Asbestos Project Monitor.

F. As a result of any visual inspection by the Asbestos Project Monitor or should air sampling results indicate high fiber levels, the Contractor will clean or reclean the affected areas at no additional expense to the Owner.

3.11 TENT ENCLOSURES:

A. Tent enclosures may only be used in areas specifically permitted by NYS Department of Labor Code 12 NYCRR Part 56 or a Project specific variance issued by the NYS Department of Labor.

B. The Contractor shall restrict access to the immediate area where tent removal procedures are taking place using barrier tape and/or construction barriers. Caution signs shall be posted.

C. Remote personnel and waste decontamination enclosures shall be constructed. Configuration shall be as required by Project size.

D. The Work Area shall be precleaned. All objects and equipment that will remain in the restricted area during abatement shall be sealed with two layers of six mil polyethylene and tape.

E. The tent shall be a single use barrier constructed with a rigid frame and at least two layers of six mil polyethylene unless one layer of six mil polyethylene is otherwise permitted by a site specific variance. All seams shall be sealed airtight using duct tape and/or spray adhesive.

F. The tent shall be constructed with at least one airlock for worker/waste egress.

G. During removals, a HEPA vacuum or small capacity negative pressure filtration unit shall be used to provide a negative air pressure inside the tent.

H. Workers shall wear two disposable suits for all phases of Work. Workers exiting the tent shall HEPA vacuum the outer suit, enter the airlock, remove the outer suit and then place it back into the Work Area. A clean second suit shall be donned before exiting the airlock and proceeding to the decontamination enclosure or another work area.

I. OSHA compliance air monitoring is required per section 1.09.

J. ACM removal shall follow procedures defined in section 3.07.

K. Waste material shall be placed in properly labeled 6 mil plastic bags or other appropriate containers. The outside of the bags or containers shall be wet wiped and/or HEPA vacuumed before being passed into the airlock for double- bagging. The bags or containers shall then be transported to the decontamination enclosure and then bagged for a third time and transported to the waste storage container. All transportation of waste bags and containers outside the Work Area shall be in watertight carts.

L. Following completion of gross abatement and after all accumulations of asbestos waste materials have been containerized, the following decontamination procedures shall be followed.

1. All bagged asbestos waste and unnecessary equipment shall be decontaminated and removed from the Work Area.

2. All surfaces in the Work Area shall be wet cleaned. A wet-purpose shop vacuum may be used to pick up excess liquid, and shall be decontaminated prior to removal from the Work Area.

3. The Asbestos Project Monitor shall conduct a visual inspection of the Work Area for cleanliness and completion of abatement.

4. The Contractor shall then apply a thin coat of encapsulant to all surfaces in the Work Area that were not the subject of removal. In no event shall encapsulant be applied to any surface that was the subject of removal prior to obtaining satisfactory air monitoring results.

5. After the encapsulant has dried, aggressive final clearance air sampling shall then be conducted by the Environmental Consultant.

6. Upon receipt of satisfactory final clearance air sampling results, the tent shall be collapsed into itself, placed in suitable disposal bags, and transported to the waste decontamination enclosure. Isolation and critical barriers shall then be removed.

3.12 GLOVEBAG REMOVAL:

A. Glovebag removals may only be used as specifically permitted by NYS Department of Labor Code 12 NYCRR Part 56, or a Project specific variance issued by the NYS Department of Labor. Glovebags may only be used on piping.

B. In addition to conformance with applicable regulations and variances, glovebag removals are only permitted to be conducted within tent enclosures complying with these specifications. Removal and disposals must also be conducted in conformance with all Project variance conditions.

C. The Contractor shall restrict access to the immediate area where tent/glovebag removal procedures are taking place using barrier tape and/or construction barriers. Caution signs shall be posted.

D. Remote personnel and waste decontamination enclosures shall be constructed. Configuration shall be as required by Project size.

E. The Work Area shall be precleaned. All objects and equipment which will remain in the restricted area during abatement shall be sealed with two layers of six mil polyethylene and tape.

F. Glovebag removals shall utilize commercially available glovebags of at least six mil thickness. Use shall be in accordance with the manufacturer's instructions and the following minimum requirements:

1. The sides of the glovebag shall be cut to fit the size pipe being removed. Tools shall be inserted into the attached tool pocket.

2. The glovebag shall be placed around the pipe and the open edges shall be folded and sealed with staples and duct tape. The glovebag shall also be sealed at the pipe to form a tight seal.

3. Openings shall be made in the glovebag for the wetting tube and HEPA vacuum hose. The opening shall be sealed to form a tight seal.

4. All glovebags shall be smoke tested by the Asbestos Project Monitor before removal operations commence. Glovebags that do not pass the smoke test shall be resealed and then retested.

5. After first wetting the materials to be removed, removal may commence. ACM shall be continuously wetted. After removal of the ACM, the piping shall be scrubbed or brushed so that no visible ACM remains. Open ends of pipe insulation shall be encapsulated.

6. After the piping is cleaned, the inside of the glovebag shall be washed down and the wetting tube removed. Using the HEPA vacuum, the glovebag shall be collapsed and then twisted and sealed with tape with the ACM at the bottom of the bag.

7. A disposal bag shall be placed around the glovebag that is then detached from the pipe. The disposal bag is then sealed and transported to the decontamination enclosure.

G. After glovebag removals are complete, tent decontamination procedures shall be followed.

PART 4 DISPOSAL OF ASBESTOS WASTE

4.1 APPLICABLE REGULATIONS:

A. All asbestos waste shall be stored, transported and disposed of in accordance with the following regulations as a minimum:

1. 12 NYCRR Part 56-10

2. US EPA NESHAPS 40 CFR 61

3. US EPA Asbestos Waste Management Guidance EPA/530-SW85

4.2 TRANSPORTATION AND DISPOSAL SITE:

A. The Contractor's Hauler and Disposal Site shall be approved by the Owner.

B. The Contractor shall give twenty-four (24) hour notification prior to removing any waste from the site. Waste shall be removed from the site only during normal working hours unless otherwise specified. No waste may be taken from the site unless the Contractor and Environmental Consultant are present and the Environmental Consultant authorizes the release of the waste as described herein.

C. The Contractor shall have the Hauler provide the estimated date and time of arrival at the Disposal Site.

D. Upon arrival at the Project Site, the Hauler must possess and present to the Environmental Consultant a valid New York State Department of Environmental Conservation Part 364

Asbestos Hauler's Permit. The Environmental Consultant may verify the authenticity of the hauler's permit with the proper authority.

E. The Hauler, with the Contractor and the Environmental Consultant, shall inspect all material in the transport container prior to taking possession and signing the Asbestos Waste Manifests.

F. Unless specifically approved by the Owner, the Contractor shall not permit any off-site transfers of the waste or allow the waste to be transported or combined with any other off-site asbestos material. The Hauler must travel directly to the disposal site as identified on the notifications with no unauthorized stops.

4.3 WASTE STORAGE CONTAINERS:

A. All asbestos containing waste shall be containerized, transported and disposed of in accordance with NYSDOL, USEPA and NYSDEC requirements.

B. All waste containers used to transport RACM shall be fully enclosed and lockable (i.e. enclosed dumpster, trailer, etc.).

C. The Environmental Consultant shall verify that any vehicle transporting asbestos waste is listed on the New York State Department of Environmental Conservation Part 364 permit. Any vehicle not listed on the permit shall not be permitted to transport asbestos waste.

D. The container shall be plasticized and sealed with a minimum of one (1) layer of 6 mil polyethylene on the sides and two (2) layers of 6 mil polyethylene on the floor. Once on site, it shall be kept locked at all times, except during load out. The waste container shall not be used for storage of equipment or contractor supplies.

E. While on-site, the container shall be labeled with EPA Danger signage:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

F. The New York State Department of Environmental Conservation Asbestos Hauler's Permit number shall be stenciled on both sides and back of the container.

G. The container is not permitted to be loaded unless it is properly plasticized, has the appropriate danger signage affixed, and has the permit number appropriately stenciled on the container.

H. The Owner may initiate random checks at the Disposal Site to insure that the procedures outlined herein are complied with.

4.4 ASBESTOS WASTE SHIPMENT RECORDS:

A. Asbestos Waste Shipment Records shall be completed by the Contractor and verified by the Owner's Representative that all the information and amounts are accurate and the proper signatures are in place.

B. The Waste Shipment Records shall have the appropriate signatures of the Owner's Representative, the Contractor, and the Hauler representatives prior to any waste being removed from the site.

C. Copies of the completed Waste Shipment Records shall be retained by the Owner's Representative and the Contractor and shall remain on site for inspection.

D. Upon arrival at the Disposal Site, the Waste Shipment Record shall be signed by the Disposal Facility operator to certify receipt of ACM covered by the manifest.

E. The Disposal Facility operator shall return the original Waste Shipment Record to the Owner.

F. The Contractor shall forward copies of each Waste Shipment Record to the Owner's Representative within 14 days of the waste container being removed from the site. Failure to do so may result in payment being withheld from the Contractor.

G. The Contractor shall create and utilize a Waste Disposal Log to track the disposal of all project generated waste. This log shall be maintained by the Project Supervisor and shall be kept on site at all times.

H. Originals of all Waste Shipment Records and disposal logs shall be submitted by the Contractor to the Owner's Representative with the final close-out documentation and upon request.

END OF SECTION 028213

SECTION 028300 - LEAD MANAGEMENT

PART 1 - GENERAL

1.1 SCOPE:

A. Lead-based paint (LBP) is known to exist in the areas to be disturbed by the project. Perform all work necessary to carry out the proper management of all generated wastes in accordance with all applicable laws, codes, rules and regulations and in accordance with the requirements set forth in this Section. Provide all appropriate controls and protection for worker exposure to lead-based paint in accordance with OSHA requirements.

1.2 REGULATORY REQUIREMENTS:

A. Applicable guidelines and standards include, but are not limited to, the following:

1. New York State Department of Environmental Conservation

6 NYCRR Subparts 371-376

2. Code of Federal Regulations (CFR) Publications:

29 CFR,, Part 1926.62;

40 CFR 61, Subpart A General Provisions (Hazardous Air Pollutants Listing)

40 CFR 61.152 Standard for Waste Manufacturing, Demolition, Renovation, Spraying and Fabricating Operations

40 CFR 241 Guidelines for the Land Disposal of Solid Wastes

40 CFR 257 Criteria for Classification of Solid Waste

40 CFR 261 Identification and Listing of Hazardous Wastes

40 CFR 262 Standards Applicable to Generators of Hazardous Waste

3. American National Standards Institute (ANSI) Publications:

Z88.2-80 Practices for Respiratory Protection; Z87.1 Eye Protection

4. Steel Structure Painting Council (SSPC)

SSPC Guide 6 (CON): Guide for Containing Debris Generated During Paint Removal Operations

1.3 WORKER PROTECTION:

A. General

1. Any surface coating and/or underlying substrate containing lead in any concentration that shall be disturbed shall be treated as a potential lead hazard to workers in accordance with 29 CFR 1926.62. This standard applies to all construction work in which lead in any concentration is present.

2. The Contractor shall be responsible for maintaining a program in accordance with 29 CFR 1926.62 at minimum and shall be responsible for protecting and training his employees on worker safety, health hazards, etc. relating to lead. The following sections must be addressed by the Contractor in a lead health and safety program. This program shall be incorporated into the Contractor's written Health and Safety plan. These sections are not intended to constitute an exhaustive summary of all relevant obligations. The Contractor should consult the following publications and/or competent environmental counsel.

   OSHA - 3079 Respiratory Protection

   OSHA - 3142 Lead in Construction

B. Exposure Assessment/Personal Air Monitoring

1. Exposure assessment is the primary means of determining to what airborne level of lead workers are being exposed. The Contractor shall insure that workers are not exposed to lead at concentrations greater than the Permissible Exposure Limit (PEL) of 50 micrograms per cubic meter (ug/m^3) over an eight-hour time weighted average (TWA). The Contractor must initially determine if any employee is exposed to lead at or above the PEL. Until the findings of this initial exposure assessment indicate that the airborne concentrations do not exceed the PEL, the Contractor must provide respirator protection that shall adequately prevent worker exposure to airborne lead above the PEL. At a minimum, respirators must have a protection factor of at least ten. The Contractor must make this initial exposure assessment by personal air sampling representative of a full shift, including at least one sample for each job classification in each work area, either for each shift or for the shift with the highest exposure level.

2. If available, use exposure assessment data obtained within the last 12 months from previous jobs conducted under similar work conditions, control methods, work practices, and environmental conditions to be used in this contract or other objective data to demonstrate that work activities in this contract shall not exceed the PEL, provided that the assessment entailed comparable lead concentrations in coating materials, work practices, engineering controls, and rates of work.

3. Until the exposure assessment is performed, the Contractor must provide to his workers the following: respiratory protection with a protection factor of at least ten, personal protective clothing, lead-free change areas, hand washing facilities, biological monitoring and training

C. Medical Surveillance

Provide medical surveillance to workers until exposure monitoring reveals that workers are

not exposed on any day of the job to airborne lead at or above the Action Level of 30 ug/m^3. This consist 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 as stated in CFR 1926.62.

D. Training

Before workers start a job in a leaded environment, they must receive training. This training must include a description of the OSHA lead standard, the sources of lead exposure, the uses and limitations of respirators, the purpose of getting a blood lead test, the purpose of the initial exposure assessment, their rights to the results of the blood tests and air monitoring and the methods of controlling the level of lead exposure to a minimum.

E. Written Program

Have a written lead health and safety program which is to be submitted to Owner's Representative and imposed on all of his employees involved in operations that disturb or remove lead paint or lead dust or dirt for this contract. The program, at a minimum, shall address respirator protection that is in full compliance with all aspects of 29 CFR 1910.134, exposure assessment, signs to be posted in work areas, protective clothing, engineering and administrative controls, hygiene facilities and practices, decontamination, housekeeping, medical surveillance, training and other items to satisfy OSHA standards as required.

F. Respirator Protection

1. Have a respirator protection program in accordance with 29 CFR 1910.134. If respirators are necessary, the Contractor shall have his employees medically approved to wear respirators, establish and submit a written respirator program, select the proper respirator for the level of exposure to be encountered on the job, and have workers fit-tested to insure proper fit.

2. The minimum respiratory protection requirements for lead paint removal operations and lead-paint clean-up operations and for the disturbance of any other lead containing material for this contract shall be as per 29 CFR 1926.62 which includes job categories and functions where workers may be exposed to lead, including but not limited to, manual scraping, sanding, abrasive blasting, painting, clean-up operations and containment breakdown.

3. All workers are required to don an appropriate level of protection commensurate with the airborne concentrations of lead in which they are working. The level of protection shall be determined by the Contractor, based on objective air monitoring data.

G. Controlling Lead Exposure

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 level at a minimum. Torch cutting of surfaces with LBP shall require appropriate PPE and exposure controls. Power tools must be equipped with vacuum shrouds with high efficiency particulate air filters (HEPA). Eating and drinking must be prohibited in the work area. Hand washing facilities must be

provided. All personal protective clothing shall be removed at the end of the day.

1.4 LEAD MANANGEMENT:

A. General

1. Ensure that work plans and work methods utilized for lead paint management conform to all applicable laws, codes, rules and regulations, including, without limitation, the federal statutes governing lead Exposure Reduction, 15 U.S.C.A. Section 2681 et. seq., and OSHA regulation 29 CFR, Part 1926.62.

B. Work Plans

1. The Contractor shall be required to prepare task specific Work Plans, as a component of the Contractor's Project Work Plan, prior to starting Work detailing how he shall accomplish each task of work related to the disturbance of any lead containing paint surface or material. In each case the Contractor shall prepare the work plan with the needs, logistics and constraints of the individual job in mind, taking into account such factors as paint removal method, worker safety, proximity to the public, and protection of the environment including containment and air monitoring requirements. Torch cutting of LBP surfaces should be avoided and shall require exposure control measures including exposure monitoring and respiratory protection.

2. The Work Plans shall also include methods of minimizing and containing the generation of all dust, including dust generated while cleaning up construction and demolition debris. These methods may include such techniques as wet mopping and/or wiping, HEPA vacuuming or the use of a negative pressure ventilation system where lead dust is generated. Once the Work has been complete and debris has been properly removed from the Site, all surfaces shall be free and clear of visible dust. All work areas shall be cleaned on a daily basis at the end of each shift.

3. At no time shall the Contractor be permitted to perform any Work which may impact upon lead containing material until the Work Plan has been approved.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

3.1 PROTECTION OF ADJACENT AREAS AND THE ENVIRONMENT:

A. General

1. Areas of deteriorated paint requiring abatement (removal) are present throughout the proposed project area. In the event lead containing material is to be disturbed

during any work, take all necessary actions to ensure that all dust and debris is contained within the work area and that activities in no way results in the contamination with lead dust of any adjacent areas, building, or the environment.

B. Containment

1. In the event a containment structure is required, ensure that such containment prevents lead containing materials (LCM) from contaminating adjacent areas, building, or the environment in any fashion. This shall include any water runoff from wet removal methods. Where a containment structure is not required, the Contractor shall specify paint removal tools and methodologies which are fitted with HEPA filter vacuum shroud attachments or are otherwise designed to eliminate the possible release of LCM emissions into the air (i.e., chemical strippers).

C. Contamination

1. If it is determined by visual identification that adjacent areas, buildings, or the environment have been contaminated as a result of the Contractor's work, the Contractor agrees to clean the affected premises at no charge and be responsible for all costs incurred by this clean-up activity.

3.2 DISPOSAL REQUIREMENTS:

A. General

1. Waste shall be disposed in accordance with Section 028100.

2. The Contractor shall perform sampling and analysis using Toxicity Characteristic Leaching Procedure (TCLP) required to assure the proper and legal handling of the waste. Wastes to be characterized include all materials coated with LBP including, but not limited to, concrete, brick, metal, and wood. All removed LBP material/residue shall also be characterized for proper disposal. If any chemical analysis or sampling is performed by or on behalf of the Contractor, its Transporter, or its Treatment Storage and Disposal Facility (TSD), a copy of such analysis must be provided to the Owner's Representative at no additional cost. (Note: Painted metal may be designated as recyclable and disposed of at a scrap metal facility for reuse or resale.)

3. Ensure that the waste disposal Subcontractor warrants and represent possession of all permits and/or licenses required under the Resource Conservation's and Recovery Act (RCRA) as well as any state or local permits or licenses required for removal, repacking, transportation and disposal of hazardous waste.

4. All hazardous waste materials removed hereunder must be lawfully treated and disposed by the waste disposal Subcontractor at an Environmental Protection Agency (USEPA) permitted Treatment Storage and Disposal Facility.

5. All wastes, drums, and other items removed hereunder must be lawfully treated

and disposed of by the Contractor's waste disposal Subcontractor within thirty (30) days after the removal from the Site. Ensure that the waste disposal Subcontractor provides completed shipping documents for all hazardous wastes removed, which contain the information required under 40 CFR Part 262 Subpart B (hereinafter the "Manifest Form") and 6 NYCRR Part 372 as well as all Certificates of Disposal which specify where each component of all wastes removed from the property is ultimately treated or disposed. Such Certificates shall include references to the Manifest Form for the shipment as well as address and USEPA identification numbers for the generator facility.

6. The Contractor is responsible for performing all sampling and analysis requirements specified by the receiving disposal facilities. The Owner has the right to reject any proposed facility, in which case, the Contractor shall not use that facility.

7. Should any problems arise regarding the TSD facility chosen to accept the waste for treatment and disposal that would require the return of waste or should such TSD facility have violated any environmental regulation which would result in regulatory enforcement action, ensure that the waste disposal Subcontractor immediately notifies the Contractor and Owner's Representative in writing of such situation, identifies an alternative TSD and obtains written approval from the Owner's Representative for disposal at such TSD.

8. Ensure that the waste disposal Subcontractor provides completed shipping documents, hereinafter referred to as "Bills of Lading" for all nonhazardous "industrial" waste removed from the property. A Bill of Lading must accompany each waste shipment and must include information regarding the quantity and type of waste, the waste transporter name, and the date of removal from the property. The Owner has the right to reject any proposed waste transporter, in which case, the Contractor shall not use that transporter.

B. Transportation Requirements

1. Ensure that the waste disposal Subcontractor providing waste transportation services possesses a valid Waste Hauler's permit issued pursuant to the New York State Department of Environmental Conservation (NYSDEC) regulations, 6 NYCRR Part 364. In addition, if the waste is to be transported and disposed of out of New York State, permits for those states through which the waste shall be transported and for where it shall be disposed may be required. It is the Contractor's responsibility to ensure that the waste disposal Subcontractor correctly determines which permits are required and to provide such permits for review and approval of the Owner's Representative.

2. Packaging and transporting of all wastes shall be in accordance with the applicable sections of the Department of Transportation (DOT) regulations.

3.3 QUALIFICATIONS:

A. The Contractor and/or Subcontractors involved in any activity which may impact upon lead

paint or other lead-containing materials (i.e., lead paint sampling, lead abatement, and abatement design) shall have demonstrated two years of experience in lead hazard assessment and management, environmental and personal air monitoring, worker protection and training, and lead remediation specification writing.

END OF SECTION 028300

SECTION 079200 - JOINT SEALANTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
1. Nonstaining silicone joint sealants.
2. Immersible joint sealants.
3. Mildew-resistant joint sealants.
4. Polysulfide joint sealants.
5. Butyl joint sealants.
6. Latex joint sealants.

B. Related Requirements:
1. Section 079219 "Acoustical Joint Sealants" for sealing joints in sound-rated construction.
2. Div 32 for sealing joints in paved roads, parking lots, walkways, and curbing.

1.2 ACTION SUBMITTALS

A. Product Data:

1. Joint sealants.
2. Joint-sealant backing materials.

B. Samples for Initial Selection: Manufacturer's standard color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.

C. Samples for Verification: For each type and color of joint sealant required, provide Samples with joint sealants in 1/2-inch- (13-mm-) wide joints formed between two 6-inch- (150-mm-) long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.

D. Joint-Sealant Schedule: Include the following information:

1. Joint-sealant application, joint location, and designation.
2. Joint-sealant manufacturer and product name.
3. Joint-sealant formulation.
4. Joint-sealant color.

1.3 INFORMATIONAL SUBMITTALS

A. Field Quality-Control Reports: For field-adhesion-test reports, for each sealant application tested.

B. Sample warranties.

1.4 CLOSEOUT SUBMITTALS

A. Manufacturers' special warranties.

B. Installer's special warranties.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Authorized representative who is trained and approved by manufacturer.

B. Testing Agency Qualifications: Qualified in accordance with ASTM C1021 to conduct the testing indicated.

1.6 FIELD CONDITIONS

A. Do not proceed with installation of joint sealants under the following conditions:

1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer or are below 40 deg F (5 deg C).
2. When joint substrates are wet.
3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
4. Where contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

1.7 WARRANTY

A. Special Installer's Warranty: Installer agrees to repair or replace joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.

1. Warranty Period: Two years from date of Substantial Completion.

B. Special Manufacturer's Warranty: Manufacturer agrees to furnish joint sealants to repair or replace those joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.

1. Warranty Period: 20 years from date of Substantial Completion.

C. Special warranties specified in this article exclude deterioration or failure of joint sealants from the following:

1. Movement of the structure caused by stresses on the sealant exceeding sealant manufacturer's written specifications for sealant elongation and compression.
2. Disintegration of joint substrates from causes exceeding design specifications.
3. Mechanical damage caused by individuals, tools, or other outside agents.
4. Changes in sealant appearance caused by accumulation of dirt or other atmospheric contaminants.

PART 2 - PRODUCTS

2.1 SOURCE LIMITATIONS

A. Obtain joint sealants from single manufacturer for each sealant type.

2.2 JOINT SEALANTS, GENERAL

A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by joint-sealant manufacturer, based on testing and field experience.

B. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range.

2.3 NONSTAINING SILICONE JOINT SEALANTS

A. Nonstaining Joint Sealants: No staining of substrates when tested in accordance with ASTM C1248.

B. Silicone, Nonstaining, S, NS, 100/50, NT: Nonstaining, single-component, nonsag, plus 100 percent and minus 50 percent movement capability, nontraffic-use, neutral-curing silicone joint sealant; ASTM C920, Type S, Grade NS, Class 100/50, Use NT.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Dow Chemical Company
b. Pecora Corporation.
c. Tremco Incorporated.

C. Silicone, Nonstaining, S, NS, 100/50, T, NT: Nonstaining, single-component, nonsag, plus 100 percent and minus 50 percent movement capability, traffic- and nontraffic-use, neutral-curing silicone joint sealant; ASTM C920, Type S, Grade NS, Class 100/50, Uses T and NT.

1. Manufacturers: Subject to compliance with requirements, provide products by the following:

a. Dow Chemical Company.
b. Pecora Corporation.
c. Tremco Incorporated.

2.4 IMMERSIBLE JOINT SEALANTS

A. Immersible Joint Sealants. Suitable for immersion in liquids; ASTM C1247 ; tested in deionized water unless otherwise indicated.

B. Polysulfide, Immersible, M, NS, 25, T, NT, I: Immersible, multicomponent, nonsag, plus 25 percent and minus 25 percent movement capability, traffic- and nontraffic-use, polysulfide joint sealant; ASTM C920, Type M, Grade NS, Class 25, Uses T, NT, and I.

1. Manufacturers: Subject to compliance with requirements, provide products by the following:

a. Pecora Corporation.

2.5 MILDEW-RESISTANT JOINT SEALANTS

A. Mildew-Resistant Joint Sealants: Formulated for prolonged exposure to humidity with fungicide to prevent mold and mildew growth.

B. Silicone, Mildew Resistant, Acid Curing, S, NS, 25, NT: Mildew-resistant, single-component, nonsag, plus 25 percent and minus 25 percent movement capability, nontraffic-use, acid-curing silicone joint sealant; ASTM C920, Type S, Grade NS, Class 25, Use NT.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   a. Dow Chemical Company.
   b. Pecora Corporation.
   c. Tremco Incorporated.

2.6 BUTYL JOINT SEALANTS

A. Butyl-Rubber-Based Joint Sealants: ASTM C1311.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

   a. Bostik; Arkema.
   b. Pecora Corporation.
   c. Sika Corporation - Building Components.

2.7 LATEX JOINT SEALANTS

A. Acrylic Latex: Acrylic latex or siliconized acrylic latex, ASTM C834, Type OP, Grade NF.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

   a. Pecora Corporation.
   b. Tremco Incorporated.

2.8 JOINT-SEALANT BACKING

A. Sealant Backing Material, General: Nonstaining; compatible with joint substrates, sealants, primers, and other joint fillers; and approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.

B. Cylindrical Sealant Backings: ASTM C1330, Type C (closed-cell material with a surface skin), and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.

C. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint. Provide self-adhesive tape where applicable.

2.9 MISCELLANEOUS MATERIALS

A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.

B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.

C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:

1. Remove 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 porous joint substrate surfaces by brushing, grinding, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:

    a. Concrete.
    b. Masonry.
    c. Unglazed surfaces of ceramic tile.

3. Remove laitance and form-release agents from concrete.

4. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following:

    a. Metal.
    b. Glass.
    c. Porcelain enamel.
    d. Glazed surfaces of ceramic tile.

B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. 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 or primer with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION OF JOINT SEALANTS

A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.

B. Sealant Installation Standard: Comply with recommendations in ASTM C1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

C. Install sealant backings of type indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.

1. Do not leave gaps between ends of sealant backings.
2. Do not stretch, twist, puncture, or tear sealant backings.
3. Remove absorbent sealant backings that have become wet before sealant application, and replace them with dry materials.

D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.

E. Install sealants using proven techniques that comply with the following and at the same time backings are installed:

1. Place sealants so they directly contact and fully wet joint substrates.
2. Completely fill recesses in each joint configuration.
3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

F. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified in subparagraphs below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.

1. Remove excess sealant from surfaces adjacent to joints.
2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
3. Provide concave joint profile in accordance with Figure 8A in ASTM C1193 unless otherwise indicated.

    a. Use masking tape to protect surfaces adjacent to recessed tooled joints.

3.4 FIELD QUALITY CONTROL

A. Field-Adhesion Test Results: Sealants not evidencing adhesive failure from testing or noncompliance with other indicated requirements will be considered satisfactory. Remove sealants that fail to adhere to joint substrates during testing or to comply with other requirements. Retest failed applications until test results prove sealants comply with indicated requirements

B. Testing will not be required if joint-sealant manufacturers submit joint preparation data that are based on previous testing, not older than 24 months, of sealant products for adhesion to, and compatibility with, joint substrates and other materials matching those submitted.

3.5 CLEANING

A. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.6 PROTECTION

A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out, remove, and repair damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

3.7 JOINT-SEALANT SCHEDULE

A. Joint-Sealant Application: Exterior joints in horizontal traffic surfaces.
1. Joint Locations:
    a. Isolation and contraction joints in cast-in-place concrete slabs.
    b. Joints between plant-precast architectural concrete paving units.
    c. Joints between different materials listed above.
    d. Other joints as indicated.

2. Silicone Joint Sealant: Single component, nonsag, traffic grade, neutral curing Single component, pourable, traffic grade, neutral curing.
3. Preformed Joint Sealant: Preformed foam sealant.
4. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.

B. Joint-Sealant Application: Exterior joints in vertical surfaces and horizontal nontraffic surfaces.
1. Joint Locations:
    a. Construction joints in cast-in-place concrete.

b. Joints between architectural concrete units.
c. Control and expansion joints in unit masonry.
d. Joints in glass unit masonry assemblies.
e. Joints between metal panels.
f. Joints between different materials listed above.
g. Perimeter joints between materials listed above and frames of doors windows and louvers.
h. Other joints as indicated.

2. Silicone Joint Sealant: Single component, nonsag, neutral curing, Class 100/50.
3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.

C. Joint-Sealant Application: Interior joints in horizontal traffic surfaces.
1. Joint Locations:
a. Isolation joints in cast-in-place concrete slabs.
b. Control and expansion joints in tile flooring.
c. Other joints as indicated.

2. Silicone Joint Sealant: Single component, nonsag, traffic grade, neutral curing.
3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.

D. Joint-Sealant Application: Interior joints in vertical surfaces and horizontal nontraffic surfaces.
1. Joint Locations:
a. Control and expansion joints on exposed interior surfaces of exterior walls.
b. Perimeter joints of exterior openings where indicated.
c. Tile control and expansion joints.
d. Vertical joints on exposed surfaces of interior unit masonry concrete walls and partitions.
e. Perimeter joints between interior wall surfaces and frames of windows elevator entrances.
f. Other joints as indicated.

2. Joint Sealant: Single component, nonsag, neutral curing, Class 100/50. .
3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.

E. Joint-Sealant Application: Interior joints in vertical surfaces and horizontal nontraffic surfaces.
1. Joint Locations:
a. Perimeter joints between interior wall surfaces and frames of interior doors and windows.
b. Other joints as indicated.
2. Joint Sealant: Latex, paintable.
3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.

F. Joint-Sealant Application: Mildew-resistant interior joints in vertical surfaces and horizontal nontraffic surfaces
1. Joint Sealant Location:
a. Joints between plumbing fixtures and adjoining walls, floors, and counters.
b. Tile control and expansion joints where indicated.
c. Other joints as indicated.

2. Joint Sealant: Mildew resistant, single component, nonsag, neutral curing, Silicone.
3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.

G. Joint-Sealant Application: Interior acoustical joints in vertical surfaces and horizontal nontraffic surfaces.
   1. Joint Location:
      a. Acoustical joints where indicated.
      b. Other joints as indicated.

   2. Joint Sealant: Acoustical.
   3. Joint-Sealant Color: As selected by Architect from manufacturer's full range.

END OF SECTION 079200

SECTION 092216 - NON-STRUCTURAL METAL FRAMING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Non-load-bearing steel framing systems for interior partitions.
2. Suspension systems for interior ceilings and soffits.
3. Grid suspension systems for gypsum board ceilings.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Studs and Runners: Provide documentation that framing members' certification is according to SIFA's "Code Compliance Certification Program for Cold-Formed Steel Structural and Non-Structural Framing Members."

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Fire-Test-Response Characteristics: For fire-resistance-rated assemblies that incorporate non-load-bearing steel framing, provide materials and construction identical to those tested in assembly indicated, according to ASTM E 119 by an independent testing agency.

B. STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated, according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.

C. Horizontal Deflection: For wall assemblies, limited to 1/240 of the wall height based on horizontal loading of 5 lbf/sq. ft..

2.2 FRAMING SYSTEMS

A. Framing Members, General: Comply with ASTM C 754 for conditions indicated.

1. Steel Sheet Components: Comply with ASTM C 645 requirements for metal unless otherwise indicated.
2. Protective Coating: ASTM A 653/A 653M, G40, hot-dip galvanized unless otherwise indicated.

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. ClarkDietrich Building Systems.

2. Marino\WARE.
3. MBA Building Supplies.
4. Architect approved equivalent.

B. Studs and Runners: ASTM C 645.

1. Steel Studs and Runners:
   a. Minimum Base-Metal Thickness: As required by performance requirements for horizontal deflection.
   b. Depth: As indicated on Drawings.

C. Slip-Type Head Joints: Where indicated, provide one of the following:

1. Single Long-Leg Runner System: ASTM C 645 top runner with 2-inch-deep flanges in thickness not less than indicated for studs, installed with studs friction fit into top runner and with continuous bridging located within 12 inches of the top of studs to provide lateral bracing.
2. Double-Runner System: ASTM C 645 top runners, inside runner with 2-inch-deep flanges in thickness not less than indicated for studs and fastened to studs, and outer runner sized to friction fit inside runner.
3. Deflection Track: Steel sheet top runner manufactured to prevent cracking of finishes applied to interior partition framing resulting from deflection of structure above; in thickness not less than indicated for studs and in width to accommodate depth of studs.

D. Firestop Tracks: Top runner manufactured to allow partition heads to expand and contract with movement of structure while maintaining continuity of fire-resistance-rated assembly indicated; in thickness not less than indicated for studs and in width to accommodate depth of studs.

E. Cold-Rolled Channel Bridging: Steel, 0.0538-inch minimum base-metal thickness, with minimum 1/2-inch-wide flanges.
1. Depth: As indicated on Drawings.
2. Clip Angle: Not less than 1-1/2 by 1-1/2 inches, 0.068-inch-thick, galvanized steel.

F. Hat-Shaped, Rigid Furring Channels: ASTM C 645.
1. Minimum Base-Metal Thickness: to suit purpose.
2. Depth: As indicated on Drawings.

G. Resilient Furring Channels: 1/2-inch-deep, steel sheet members designed to reduce sound transmission.
1. Configuration: Asymmetrical or hat shaped.

H. Cold-Rolled Furring Channels: 0.053-inch uncoated-steel thickness, with minimum 1/2-inch-wide flanges.
1. Depth: As indicated on Drawings.
2. Furring Brackets: Adjustable, corrugated-edge-type steel sheet with minimum uncoated-steel thickness of 0.0329 inch.
3. Tie Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.062-inch-diameter wire, or double strand of 0.048-inch-diameter wire.

2.3 SUSPENSION SYSTEMS

A. Basis-of-Design Product: Subject to compliance with requirements, provide USG, Drywall Suspension Systems & Drywall Wall-to-Wall Suspension Systems or an architect's approved equal product.

B. Tie Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.062-inch-diameter wire, or double strand of 0.048-inch-diameter wire.

C. Wire Hangers: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.16 inch in diameter.

D. Carrying Channels: Cold-rolled, commercial-steel sheet with a base-metal thickness of 0.0538 inch and minimum 1/2-inch-wide flanges.

1. Depth: As indicated on Drawings.

E. Grid Suspension System for Gypsum Board Ceilings: ASTM C 645, direct-hung system composed of main beams and cross-furring members that interlock.

1. Suspended ceiling system to be approved for Seismic Category C.

2.4 2.4 AUXILIARY MATERIALS

A. General: Provide auxiliary materials that comply with referenced installation standards.

1. Fasteners for Metal Framing: Of type, material, size, corrosion resistance, holding power, and other properties required to fasten steel members to substrates.

B. Isolation Strip at Exterior Walls: Provide one of the following:
1. Asphalt-Saturated Organic Felt: ASTM D 226/D 226M, Type I (No. 15 asphalt felt), nonperforated.
2. Foam Gasket: Adhesive-backed, closed-cell vinyl foam strips that allow fastener penetration without foam displacement, 1/8 inch thick, in width to suit steel stud size.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and substrates, with Installer present, and including welded hollow-metal frames, cast-in anchors, and structural framing, for compliance with requirements and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Suspended Assemblies: Coordinate installation of suspension systems with installation of overhead structure to ensure that inserts and other provisions for anchorages to building structure have been installed to receive hangers at spacing required to support the Work and that hangers will develop their full strength.

1. Furnish concrete inserts and other devices indicated to other trades for installation in advance of time needed for coordination and construction.

3.3 INSTALLATION, GENERAL

A. Installation Standard: ASTM C 754.
   1. Gypsum Board Assemblies: Also comply with requirements in ASTM C 840 that apply to framing installation.

B. Install framing and accessories plumb, square, and true to line, with connections securely fastened.

C. Install supplementary framing, and blocking to support fixtures, equipment services, heavy trim, grab bars, toilet accessories, furnishings, or similar construction.

D. Install bracing at terminations in assemblies.

E. Do not bridge building control and expansion joints with non-load-bearing steel framing members. Frame both sides of joints independently.

3.4 INSTALLING FRAMED ASSEMBLIES

A. Install framing system components according to spacings indicated, but not greater than spacings required by referenced installation standards for assembly types.

B. Where studs are installed directly against exterior masonry walls or dissimilar metals at exterior walls, install isolation strip between studs and exterior wall.

C. Install studs so flanges within framing system point in same direction.

D. Install tracks (runners) at floors and overhead supports. Extend framing full height to structural supports or substrates above suspended ceilings except where partitions are indicated to terminate at suspended ceilings. Continue framing around ducts that penetrate partitions above ceiling.

   1. Slip-Type Head Joints: Where framing extends to overhead structural supports, install to produce joints at tops of framing systems that prevent axial loading of finished assemblies.
   2. Door Openings: Screw vertical studs at jambs to jamb anchor clips on door frames; install runner track section (for cripple studs) at head and secure to jamb studs.

      a. Install two studs at each jamb unless otherwise indicated.
      b. Install cripple studs at head adjacent to each jamb stud, with a minimum 1/2-inch clearance from jamb stud to allow for installation of control joint in finished assembly.
      c. Extend jamb studs through suspended ceilings and attach to underside of overhead structure.

   3. Other Framed Openings: Frame openings other than door openings the same as required for door openings unless otherwise indicated. Install framing below sills of openings to match framing required above door heads.
   4. Fire-Resistance-Rated Partitions: Install framing to comply with fire-resistance-rated assembly indicated and support closures and to make partitions continuous from floor to underside of solid structure.

      a. Firestop Track: Where indicated, install to maintain continuity of fire-resistance-rated assembly indicated.

   5. Sound-Rated Partitions: Install framing to comply with sound-rated assembly indicated.

E. Direct Furring:
   1. Attach to concrete or masonry with stub nails, screws designed for masonry attachment, or powder-driven fasteners spaced 24 inches o.c.

Installation Tolerance: Install each framing member so fastening surfaces vary not more than 1/8 inch from the plane formed by faces of adjacent framing.

3.5 INSTALLING SUSPENSION SYSTEMS

A. Install suspension system components according to spacings indicated, but not greater than spacing's required by referenced installation standards for assembly types.

B. Isolate suspension systems from building structure where they abut or are penetrated by building structure to prevent transfer of loading imposed by structural movement.

C. Suspend hangers from building structure as follows:

   1. Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structural or suspension system.

      a. Splay hangers only where required to miss obstructions and offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.

   2. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with locations of hangers required to support standard suspension system members, install supplemental suspension members and hangers in the form of trapezes or equivalent devices.

      a. Size supplemental suspension members and hangers to support ceiling loads within performance limits established by referenced installation standards.

   3. Wire Hangers: Secure by looping and wire tying, either directly to structures or to inserts, eye screws, or other devices and fasteners that are secure and appropriate for substrate, and in a manner that will not cause hangers to deteriorate or otherwise fail.
   4. Do not attach hangers to rolled-in hanger tabs of composite steel floor deck.
   5. Do not connect or suspend steel framing from ducts, pipes, or conduit.

D. Fire-Resistance-Rated Assemblies: Wire tie furring channels to supports.

E. Seismic Bracing: Sway-brace suspension systems with hangers used for support.

F. Grid Suspension Systems: Attach perimeter wall track or angle where grid suspension systems meet vertical surfaces. Mechanically join main beam and cross-furring members to each other and butt-cut to fit into wall track.

G. Installation Tolerances: Install suspension systems that are level to within 1/8 inch in 12 feet measured lengthwise on each member that will receive finishes and transversely between parallel members that will receive finishes.

END OF SECTION 092216

TRAUTMAN ASSOCIATES
ABATEMENT AND RENOVATIONS TO
1835 SHERIDAN DRIVE JOB NO. 3077.7
TA PROJECT #25044

SECTION 092900 - GYPSUM BOARD

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Interior gypsum board.
2. Tile backing panels.
3. Texture finishes.

B. Related Requirements:

1. Section 061600 "Sheathing" for gypsum sheathing for exterior walls.
2. Section 079219 "Acoustical Joint Sealants" for acoustical joint sealants installed in gypsum board assemblies.
3. Section 092216 "Non-Structural Metal Framing" for non-structural steel framing and suspension systems that support gypsum board panels.

1.2 ACTION SUBMITTALS

A. Product Data: For the following:

1. Gypsum wallboard.
2. Gypsum board, Type X.
3. Gypsum ceiling board.
4. Abuse-resistant gypsum board.
5. Impact-resistant gypsum board.
6. Glass-mat, water-resistant backing board.
7. Interior trim.
8. Joint treatment materials.
9. Laminating adhesive.
10. Sound-attenuation blankets.
11. Acoustical sealant.

B. Shop Drawings: Show locations and installation of control and expansion joints, including plans, elevations, sections, details of components, and attachments to other work.

C. Samples: For the following products:

1. Trim Accessories: Full-size Sample in 12-inch- (300-mm-) long length for each trim accessory indicated.

1.3 DELIVERY, STORAGE AND HANDLING

A. Store materials inside under cover and keep them dry and protected against weather, condensation, direct sunlight, construction traffic, and other potential causes of damage. Stack panels flat and supported on risers on a flat platform to prevent sagging.

1.4 FIELD CONDITIONS

A. Environmental Limitations: Comply with ASTM C840 requirements or gypsum board manufacturer's written instructions, whichever are more stringent.

B. Do not install paper-faced gypsum panels until installation areas are enclosed and conditioned.

C. Do not install panels that are wet, moisture damaged, and mold damaged.

1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 - PRODUCTS

2.1 SOURCE LIMITATIONS

A. Obtain each type of gypsum panel and joint finishing material from single source with resources to provide products of consistent quality in appearance and physical properties.

2.2 PERFORMANCE REQUIREMENTS

A. Fire-Resistance-Rated Assemblies: For fire-resistance-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E119 by an independent testing agency.

B. STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E90 and classified according to ASTM E413 by an independent testing agency.

2.3 GYPSUM BOARD, GENERAL

A. Size: Provide maximum lengths and widths available that will minimize joints in each area and that correspond with support system indicated.

2.4 INTERIOR GYPSUM BOARD

A. Gypsum Wallboard: ASTM C1396/C1396M.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. American Gypsum.
b. Armstrong Ceiling & Wall Solutions.
c. CertainTeed.
d. USG Corporation.

2. Thickness: 1/2 inch (12.7 mm).
3. Long Edges: Tapered.

B. Gypsum Board, Type X: ASTM C1396/C1396M.

1. Thickness: 5/8 inch (15.9 mm).
2. Long Edges: Tapered.

C. Gypsum Ceiling Board: ASTM C1396/C1396M.

1. Thickness: 1/2 inch (12.7 mm).
2. Long Edges: Tapered.

D. Abuse-Resistant Gypsum Board: ASTM C1396/C1396M gypsum board, tested according to ASTM C1629/C1629M.

1. Core: 5/8 inch (15.9 mm), Type X.
2. Surface Abrasion: ASTM C1629/C1629M, meets or exceeds Level 1 requirements.
3. Indentation: ASTM C1629/C1629M, meets or exceeds Level 1 requirements.
4. Soft-Body Impact: ASTM C1629/C1629M, meets or exceeds Level 1 requirements.
5. Long Edges: Tapered.
6. Mold Resistance: ASTM D3273, score of 10 as rated according to ASTM D3274.

E. Impact-Resistant Gypsum Board: ASTM C1396/C1396M gypsum board, tested according to ASTM C1629/C1629M.

1. Core: As indicated on Drawings 5/8 inch (15.9 mm), Type X.
2. Surface Abrasion: ASTM C1629/C1629M, meets or exceeds Level 2 requirements.
3. Indentation: ASTM C1629/C1629M, meets or exceeds Level 1 requirements.
4. Soft-Body Impact: ASTM C1629/C1629M, meets or exceeds Level 2 requirements.
5. Hard-Body Impact: ASTM C1629/C1629M, meets or exceeds Level 2 requirements according to test in Annex A1.
6. Long Edges: Tapered.
7. Mold Resistance: ASTM D3273, score of 10 as rated according to ASTM D3274.

2.5 TILE BACKING PANELS

A. Glass-Mat, Water-Resistant Backing Board: ASTM C1178/C1178M, with manufacturer's standard edges.
1. Core: 5/8 inch (15.9 mm), Type X.
2. Mold Resistance: ASTM D3273, score of 10 as rated according to ASTM D3274.

2.6 TRIM ACCESSORIES

A. Interior Trim: ASTM C1047.

1. Material: Galvanized or aluminum-coated steel sheet, rolled zinc, plastic, or paper-faced galvanized-steel sheet.
2. Shapes:

a. Cornerbead.
b. Bullnose bead.
c. LC-Bead: J-shaped; exposed long flange receives joint compound.
d. L-Bead: L-shaped; exposed long flange receives joint compound.
e. U-Bead: J-shaped; exposed short flange does not receive joint compound.

f. Expansion (control) joint.
g. Curved-Edge Cornerbead: With notched or flexible flanges.

2.7 JOINT TREATMENT MATERIALS

A. General: Comply with ASTM C475/C475M.

B. Joint Tape:

1. Interior Gypsum Board: Paper.
2. Glass-Mat Gypsum Sheathing Board: 10-by-10 glass mesh.
3. Tile Backing Panels: As recommended by panel manufacturer.

C. Joint Compound for Interior Gypsum Board: For each coat, use formulation that is compatible with other compounds applied on previous or for successive coats.

D. Joint Compound for Tile Backing Panels:

1. Glass-Mat, Water-Resistant Backing Panel: As recommended by backing panel manufacturer.

2.8 AUXILIARY MATERIALS

A. Provide auxiliary materials that comply with referenced installation standards and manufacturer's written instructions.

B. Laminating Adhesive: Adhesive or joint compound recommended for directly adhering gypsum panels to continuous substrate.

C. Steel Drill Screws: ASTM C1002 unless otherwise indicated.

1. Use screws complying with ASTM C954 for fastening panels to steel members from 0.033 to 0.112 inch (0.84 to 2.84 mm) thick.

D. Sound-Attenuation Blankets: ASTM C665, Type I (blankets without membrane facing) produced by combining thermosetting resins with mineral fibers manufactured from glass, slag wool, or rock wool.

1. Fire-Resistance-Rated Assemblies: Comply with mineral-fiber requirements of assembly.

E. Acoustical Sealant: As specified in Section 079219 "Acoustical Joint Sealants."

F. Thermal Insulation: As specified in Section 072100 "Thermal Insulation."

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and substrates including welded hollow-metal frames and support framing, with Installer present, for compliance with requirements and other conditions affecting performance of the Work.

B. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION AND FINISHING OF PANELS, GENERAL

A. Comply with ASTM C840.

B. Install ceiling panels across framing to minimize the number of abutting end joints and to avoid abutting end joints in central area of each ceiling. Stagger abutting end joints of adjacent panels not less than one framing member.

C. Install panels with face side out. Butt panels together for a light contact at edges and ends with not more than 1/16 inch (1.5 mm) of open space between panels. Do not force into place.

D. Locate edge and end joints over supports, except in ceiling applications where intermediate supports or gypsum board back-blocking is provided behind end joints. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Do not make joints other than control joints at corners of framed openings.

E. Form control and expansion joints with space between edges of adjoining gypsum panels.

F. Cover both faces of support framing with gypsum panels in concealed spaces (above ceilings, etc.), except in chases braced internally.

1. Unless concealed application is indicated or required for sound, fire, air, or smoke ratings, coverage may be accomplished with scraps of not less than 8 sq. ft. (0.7 sq. m) in area.
2. Fit gypsum panels around ducts, pipes, and conduits.
3. Where partitions intersect structural members projecting below underside of floor/roof slabs and decks, cut gypsum panels to fit profile formed by structural members; allow 1/4- to 3/8-inch- (6.4- to 9.5-mm-) wide joints to install sealant.

G. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments. Provide 1/4- to 1/2-inch- (6.4- to 12.7-mm-) wide spaces at these locations and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.

H. Attachment to Steel Framing: Attach panels so leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.

I. STC-Rated Assemblies: Seal construction at perimeters, behind control joints, and at openings and penetrations with a continuous bead of acoustical sealant. Install acoustical sealant at both faces of partitions at perimeters and through penetrations. Comply with ASTM C919 and with manufacturer's written instructions for locating edge trim and closing off sound-flanking paths around or through assemblies, including sealing partitions above acoustical ceilings.

J. Install sound attenuation blankets before installing gypsum panels unless blankets are readily installed after panels have been installed on one side.

3.3 INSTALLATION OF INTERIOR GYPSUM BOARD

A. Install interior gypsum board in the following locations:

1. Wallboard Type: As indicated on Drawings.

2. Type X: As indicated on Drawings.
3. Ceiling Type: Ceiling surfaces, unless noted otherwise on Drawings.
4. Abuse-Resistant Type: As indicated on Drawings.
5. Impact-Resistant Type: As indicated on Drawings.
6. Glass-Mat Interior Type: As indicated on Drawings.

B. Single-Layer Application:

1. On ceilings, apply gypsum panels before wall/partition board application to greatest extent possible and at right angles to framing unless otherwise indicated.
2. On partitions/walls, apply gypsum panels vertically (parallel to framing) unless otherwise indicated or required by fire-resistance-rated assembly, and minimize end joints.

    a. Stagger abutting end joints not less than one framing member in alternate courses of panels.
    b. At stairwells and other high walls, install panels horizontally unless otherwise indicated or required by fire-resistance-rated assembly.

3. On Z-shaped furring members, apply gypsum panels vertically (parallel to framing) with no end joints. Locate edge joints over furring members.
4. Fastening Methods: Apply gypsum panels to supports with steel drill screws.

C. Multilayer Application:

1. On partitions/walls, apply gypsum board indicated for base layers and face layers vertically (parallel to framing) with joints of base layers located over stud or furring member and face-layer joints offset at least one stud or furring member with base-layer joints unless otherwise indicated or required by fire-resistance-rated assembly. Stagger joints on opposite sides of partitions.
2. On Z-shaped furring members, apply base layer vertically (parallel to framing) and face layer either vertically (parallel to framing) or horizontally (perpendicular to framing) with vertical joints offset at least one furring member. Locate edge joints of base layer over furring members.
3. Fastening Methods: Fasten base layers and face layers separately to supports with screws.

D. Laminating to Substrate: Where gypsum panels are indicated as directly adhered to a substrate (other than studs, joists, furring members, or base layer of gypsum board), comply with gypsum board manufacturer's written instructions and temporarily brace or fasten gypsum panels until fastening adhesive has set.

E. Curved Surfaces:

1. Install panels horizontally (perpendicular to supports) and unbroken, to extent possible, across curved surface plus 12-inch- (300-mm-) long straight sections at ends of curves and tangent to them.
2. For double-layer construction, fasten base layer to studs with screws 16 inches (400 mm) o.c. Center gypsum board face layer over joints in base layer, and fasten to studs with screws spaced 12 inches (300 mm) o.c.

3.4 INSTALLATION OF TILE BACKING PANELS

A. Glass-Mat, Water-Resistant Backing Panels: Comply with manufacturer's written installation instructions and install at showers, tubs, locations indicated to receive tile, and where indicated on Drawings. Install with 1/4-inch (6.4-mm) gap where panels abut other construction or penetrations.

B. Where tile backing panels abut other types of panels in same plane, shim surfaces to produce a uniform plane across panel surfaces.

3.5 INSTALLATION OF TRIM ACCESSORIES

A. General: For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.

B. Control Joints: Install control joints according to ASTM C840 and in specific locations approved by Architect for visual effect.

C. Interior Trim: Install in the following locations:

1. Cornerbead: Use at outside corners unless otherwise indicated.
2. Bullnose Bead: Use where indicated on Drawings.
3. LC-Bead: Use at exposed panel edges.
4. L-Bead: Use where indicated on Drawings.
5. U-Bead: Use at exposed panel edges.
6. Curved-Edge Cornerbead: Use at curved openings.

3.6 FINISHING OF GYPSUM BOARD

A. General: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.

B. Prefill open joints, rounded or beveled edges, and damaged surface areas.

C. Apply joint tape over gypsum board joints, except for trim products specifically indicated as not intended to receive tape.

D. Gypsum Board Finish Levels: Finish panels to levels indicated below and according to ASTM C840:

1. Level 1: Ceiling plenum areas, concealed areas, and where indicated.
2. Level 2: Panels that are substrate for tile.
3. Level 3: Where indicated on Drawings.
4. Level 4: At panel surfaces that will be exposed to view unless otherwise indicated.

    a. Primer and its application to surfaces are specified in Section 099123 "Interior Painting."

E. Glass-Mat Gypsum Sheathing Board: Finish according to manufacturer's written instructions for use as exposed soffit board.

3.7 PROTECTION

A. Protect adjacent surfaces from drywall compound and promptly remove from floors and other non-drywall surfaces. Repair surfaces stained, marred, or otherwise damaged during drywall application.

B. Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.

C. Remove and replace panels that are wet, moisture damaged, and mold damaged.

1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.

2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION 092900

TRAUTMAN ASSOCIATES
ABATEMENT AND RENOVATIONS TO
1835 SHERIDAN DRIVE JOB NO. 3077.7
TA PROJECT #25044

SECTION 095113 - ACOUSTICAL PANEL CEILINGS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Acoustical panels.
2. Metal suspension system.
3. Metal edge moldings and trim.

1.2 ACTION SUBMITTALS

A. Product Data:

1. Acoustical panels.
2. Metal suspension system.
3. Metal edge moldings and trim.

B. Samples: For each exposed product and for each color and texture specified, 6 inches in size.

1.3 INFORMATIONAL SUBMITTALS

A. Qualification Data: For testing agency.

B. Product Test Reports: For each acoustical panel ceiling, for tests performed by manufacturer and witnessed by a qualified testing agency.

C. Evaluation Reports: For each acoustical panel ceiling suspension system, from ICC-ES.

D. Field quality-control reports.

1.4 CLOSEOUT SUBMITTALS

A. Maintenance Data: For finishes to include in maintenance manuals.

1.5 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials, from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Acoustical Ceiling Units: Full-size panels equal to 2 percent of quantity installed.
2. Suspension-System Components: Quantity of each exposed component equal to 2 percent of quantity installed.
3. Hold-Down Clips: Equal to 2 percent of quantity installed.
4. Impact Clips: Equal to 2 percent of quantity installed.

1.6 QUALITY ASSURANCE

A. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.

1. Build mockup of typical ceiling area as indicated on Drawings.
2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver acoustical panels, suspension-system components, and accessories to Project site and store them in a fully enclosed, conditioned space where they will be protected against damage from moisture, humidity, temperature extremes, direct sunlight, surface contamination, and other causes.

B. Before installing acoustical panels, permit them to reach room temperature and a stabilized moisture content.

1.8 FIELD CONDITIONS

A. Environmental Limitations: Do not install acoustical panel ceilings until spaces are enclosed and weathertight, wet-work in spaces is complete and dry, work above ceilings is complete, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.

1. Pressurized Plenums: Operate ventilation system for not less than 48 hours before beginning acoustical panel ceiling installation.

PART 2 - PRODUCTS

2.1 SOURCE LIMITATIONS

A. Source Limitations for Ceiling System: Obtain each type of acoustical ceiling panel and its supporting suspension system from single source from single manufacturer.

2.2 PERFORMANCE REQUIREMENTS

A. Surface-Burning Characteristics: Comply with ASTM E84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Flame-Spread Index: Class A in accordance with ASTM E1264.
2. Smoke-Developed Index: 50 or less.

B. Fire-Resistance Ratings: Comply with ASTM E119; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Indicate design designations from UL or from the listings of another qualified testing agency.

2.3 ACOUSTICAL PANELS (ACT-1)

A. Basis-of-Design Product: Subject to compliance with requirements, provide Armstrong Ceiling & Wall Solutions CANYON or Architect approved equivalent.

B. Acoustical Panel Standard: Provide manufacturer's standard panels in accordance with ASTM E1264 and designated by type, form, pattern, acoustical rating, and light reflectance unless otherwise indicated.

C. Classification: Provide panels as follows:

1. Surface Texture: Smooth.
2. Composition: Mineral Fiber.
3. Color: White.
4. Size: 24" x 24".
5. Edge Profile: Beveled Tegular for 15/16" for interface with PRELUDE XL 15/16" Exposed Tee as manufactured by Armstrong World Ind. Inc.
6. Noise Reduction Coefficient (NRC): ASTM C 423; Classified with UL label on product carton 0.65
7. Ceiling Attenuation Class (CAC): ASTM C 1414; Classified with UL label on product carton 35
8. Sabin: N/A
9. Articulation Class (AC):
10. Flame Spread: ASTM E 1264; Class A (UL)
11. Light Reflectance (LR) White Panel: ASTM E 1477; 0.80
12. Dimensional Stability: HUMIGUARD Plus
13. Recycle Content: Post-Consumer - 1% Pre-Consumer - 43%
14. Material Ingredient Transparency: Health Product Declaration (HPD); Declare Label
15. Life Cycle Assessment: Third Party Certified Environment Product Declaration (EPD)

D. Antimicrobial Treatment: Manufacturer's standard broad spectrum, antimicrobial formulation that inhibits fungus, mold, mildew, and gram-positive and gram-negative bacteria and showing no mold, mildew, or bacterial growth when tested in accordance with ASTM D3273, ASTM D3274, or ASTM G21 and evaluated in accordance with ASTM D3274 or ASTM G21.

2.4 METAL SUSPENSION SYSTEM (ACT-1)

A. Basis-of-Design Product: Subject to compliance with requirements, provide Armstrong World Industries, Inc; 15/16 Prelude, Tegular Edge or Architect approved equivalent.

B. Metal Suspension-System Standard: Provide manufacturer's standard, direct-hung, metal suspension system and accessories according to ASTM C 635/C 635M and designated by type, structural classification, and finish indicated.

C. Wide-Face, Capped, Double-Web Steel Suspension System: Main and cross runners roll formed from cold-rolled steel sheet; prepainted, electrolytically zinc coated, or hot-dip galvanized, G30 coating designation; with prefinished 15/16-inch- wide metal caps on flanges.

1. Structural Classification: Heavy-duty system.
2. End Condition of Cross Runners: butt-edge type.
3. Face Design: Flat, flush.
4. Cap Material: Cold-rolled steel or aluminum.
5. Cap Finish: Painted white.

2.5 METAL EDGE MOLDINGS AND TRIM

A. Basis-of-Design Product: Subject to compliance with requirements, provide Armstrong World Industries, Inc; or Architect approved equivalent.

B. Roll-Formed, Sheet-Metal Edge Moldings and Trim: Type and profile indicated or, if not indicated, manufacturer's standard moldings for edges and penetrations that comply with seismic design requirements; formed from sheet metal of same material, finish, and color as that used for exposed flanges of suspension-system runners.

1. Edge moldings shall fit acoustical panel edge details and suspension systems indicated and match width and configuration of exposed runners unless otherwise indicated.
2. For lay-in panels with reveal edge details, provide stepped edge molding that forms reveal of same depth and width as that formed between edge of panel and flange at exposed suspension member.

2.6 ACOUSTICAL SEALANT

A. Acoustical Sealant: As specified in Section 079219 "Acoustical Joint Sealants."

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, including structural framing to which acoustical panel ceilings attach or abut, with Installer present, for compliance with requirements specified in this and other Sections that affect ceiling installation and anchorage and with requirements for installation tolerances and other conditions affecting performance of acoustical panel ceilings.

B. Examine acoustical panels before installation. Reject acoustical panels that are wet, moisture damaged, or mold damaged.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Measure each ceiling area and establish layout of acoustical panels to balance border widths at opposite edges of each ceiling. Avoid using less-than-half-width panels at borders unless otherwise indicated, and comply with layout shown on reflected ceiling plans.

B. Layout openings for penetrations centered on the penetrating items.

3.3 INSTALLATION OF ACOUSTICAL PANEL CEILINGS

A. Install acoustical panel ceilings in accordance with ASTM C636/C636M and manufacturer's written instructions.

1. Fire-Rated Assembly: Install fire-rated ceiling systems in accordance with tested fire-rated design.

B. Suspend ceiling hangers from building's structural members and as follows:

1. Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structure or of ceiling suspension system.
2. Splay hangers only where required and, if permitted with fire-resistance-rated ceilings, to miss obstructions; offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.
3. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with location of hangers at spacings required to support standard suspension-system members, install supplemental suspension members and hangers in form of trapezes or equivalent devices.
4. Secure wire hangers to ceiling-suspension members and to supports above with a minimum of three tight turns. Connect hangers directly to structure or to inserts, eye screws, or other devices that are secure and appropriate for substrate and that will not deteriorate or otherwise fail due to age, corrosion, or elevated temperatures.
5. Secure flat, angle, channel, and rod hangers to structure, including intermediate framing members, by attaching to inserts, eye screws, or other devices that are secure and appropriate for both the structure to which hangers are attached and the type of hanger involved. Install hangers in a manner that will not cause them to deteriorate or fail due to age, corrosion, or elevated temperatures.
6. Do not support ceilings directly from permanent metal forms or floor deck. Fasten hangers to cast-in-place hanger inserts, postinstalled mechanical or adhesive anchors, or power-actuated fasteners that extend through forms into concrete.
7. When steel framing does not permit installation of hanger wires at spacing required, install carrying channels or other supplemental support for attachment of hanger wires.
8. Do not attach hangers to steel deck tabs.
9. Do not attach hangers to steel roof deck. Attach hangers to structural members.
10. Space hangers not more than 48 inches o.c. along each member supported directly from hangers unless otherwise indicated; provide hangers not more than 8 inches from ends of each member.
11. Size supplemental suspension members and hangers to support ceiling loads within performance limits established by referenced standards.

C. Install edge moldings and trim of type indicated at perimeter of acoustical ceiling area and where necessary to conceal edges of acoustical panels.

1. Apply acoustical sealant in a continuous ribbon concealed on back of vertical legs of moldings before they are installed.
2. Screw attach moldings to substrate at intervals not more than 16 inches o.c. and not more than 3 inches from ends. Miter corners accurately and connect securely.
3. Do not use exposed fasteners, including pop rivets, on moldings and trim.

D. Install suspension-system runners so they are square and securely interlocked with one another. Remove and replace dented, bent, or kinked members.

E. Install acoustical panels with undamaged edges and fit accurately into suspension-system runners and edge moldings. Scribe and cut panels at borders and penetrations to provide precise fit.

1. Arrange directionally patterned acoustical panels as follows:

   a. As indicated on reflected ceiling plans.

2. For square-edged panels, install panels with edges fully hidden from view by flanges of suspension-system runners and moldings.
3. For reveal-edged panels on suspension-system runners, install panels with bottom of reveal in firm contact with top surface of runner flanges.

4. For reveal-edged panels on suspension-system members with box-shaped flanges, install panels with reveal surfaces in firm contact with suspension-system surfaces and panel faces flush with bottom face of runners.
5. Protect lighting fixtures and air ducts in accordance with requirements indicated for fire-resistance-rated assembly.

F. Install Turf Switchblades with magnetic connector directly to ceiling grid per manufacturer recommendations.

3.4 ERECTION TOLERANCES

A. Suspended Ceilings: Install main and cross runners level to a tolerance of 1/8 inch in 12 feet, non-cumulative.

B. Moldings and Trim: Install moldings and trim to substrate and level with ceiling suspension system to a tolerance of 1/8 inch in 12 feet, non-cumulative.

3.5 CLEANING

A. Clean exposed surfaces of acoustical panel ceilings, including trim, edge moldings, and suspension-system members. Comply with manufacturer's written instructions for cleaning and touchup of minor finish damage.

B. Remove and replace ceiling components that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

END OF SECTION 095113

TRAUTMAN ASSOCIATES
ABATEMENT AND RENOVATIONS TO
1835 SHERIDAN DRIVE JOB NO. 3077.7
TA PROJECT #25044

SECTION 099000–INTERIOR AND HIGH PERFORMANCE PAINTS AND COATINGS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Interior paint and coating healthcare systems including surface preparation.

B. Interior high-performance paint and coatings systems including surface preparation.

C. Exterior paint and coating systems including surface preparation.

1.2 RELATED SECTIONS

A. Section 04 20 00 - Unit Masonry: Concrete Masonry Units (CMU).

B. Section 05 50 00 - Metal Fabrications.

1.3 REFERENCES

A. MSDS/EDS for specific VOCs (calculated per 40 CFR 59.406). VOCs may vary by base and sheen.

1.4 SUBMITTALS

A. Submit under provisions of Section 01 30 00 - Administrative Requirements.

B. Product Data: For each paint system indicated, including.
1. Product characteristics.
2. Surface preparation instructions and recommendations.
3. Primer requirements and finish specification.
4. Storage and handling requirements and recommendations.
5. Application methods.
6. Cautions for storage, handling and installation.

C. Selection Samples: Submit a complete set of color chips that represent the full range of manufacturer's products, colors and sheens available.

D. Verification Samples: For each finish product specified, submit samples that represent actual product, color, and sheen.

E. Coating Maintenance Manual: Upon conclusion of project, the Contractor or paint manufacturer/supplier shall furnish a coating maintenance manual, such as Sherwin-Williams, "Custodian Project Color and Product Information" report or equal. Manual shall include an Area Summary with finish schedule, Area Detail designating where each product/color/finish was used, product data pages, Material Safety Data Sheets, care and cleaning instructions, touch-up procedures, and color samples of each color and finish used. "

F. Only submit complying products based on project requirements (i.e. LEED). One must also comply with the regulations regarding VOCs (CARB, OTC, SCAQMD, LADCO). To ensure compliance with district regulations and other rules, businesses that perform coating activities should contact the local district in each area where the coating will be used.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: A firm or individual experienced in applying paints and coatings similar in

material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance.

B. Paint exposed surfaces. If a color of finish, or a surface is not specifically mentioned, Architect will select from standard products, colors and sheens available.

C. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels unless indicated.

D. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
1. Finish surfaces for verification of products, colors and sheens.
2. Finish area designated by Architect.
3. Provide samples that designate primer and finish coats.
4. Compatibility and Adhesion: Check after one week of drying and curing by testing in accordance with ASTM D3359; Adhesion by tape test. If coating system is incompatible, additional surface preparation up to and including complete removal may be required.
5. Do not proceed with remaining work until the Architect approves the mock-up.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Delivery: Deliver manufacturer's unopened containers to the work site. Packaging shall bear the manufacturer's name, label, and the following list of information.
1. Product name, and type (description).
2. Application and use instructions.
3. Surface preparation.
4. VOC content.
5. Environmental handling.
6. Batch date.
7. Color number.

B. Storage: Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

C. Store materials in an area that is within the acceptable temperature range, per manufacturer's instructions. Protect from freezing.

D. Handling: Maintain a clean, dry storage area, to prevent contamination or damage to the coatings.

1.7 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.

1.8 EXTRA MATERIALS

A. Furnish extra paint materials from the same production run as the materials applied and in the quantities described below. Package with protective covering for storage and identify with labels describing contents. Deliver extra materials to Owner.

B. Furnish Owner with an additional one percent of each material and color, but not less than 1 gal (3.8 l) or 1 case, as appropriate.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Basis of Design: Subject to compliance with requirements, provide all products by a single-source manufacturer.
   1. Sherwin Williams
   2. Architect approved equivalent.

2.2 APPLICATIONS/SCOPE

A. Interior Paint and Coating Healthcare Systems:
   1. Concrete: Non-vehicular floors.
   2. Masonry: Concrete masonry units, including split-face, scored, and smooth block.
   3. Metal: Structural steel, joists, trusses, beams, partitions and similar items.
   4. Drywall: Drywall board, Gypsum board.

B. High Performance Interior Paint and Coating Systems:
   1. Masonry: Concrete masonry units, including split-face, scored, and smooth block.

C. Exterior Paint and Coating Systems:
   1. Metal: Miscellaneous iron, ornamental iron, ferrous metal.

2.3 PAINT MATERIALS - GENERAL

A. Paints and Coatings:
   1. Unless otherwise indicated, provide factory-mixed coatings. When required, mix coatings to correct consistency in accordance with manufacturer's instructions before application. Do not reduce, thin, or dilute coatings or add materials to coatings unless such procedure is specifically described in manufacturer's product instructions.
   2. For opaque finishes, tint each coat including primer coat and intermediate coats, one-half shade lighter than succeeding coat, with final finish coat as base color. Or follow manufactures product instructions for optimal color conformance.

B. Primers: Where the manufacturer offers options on primers for a particular substrate, use primer categorized as "best" by the manufacturer.

C. Coating Application Accessories: Provide all primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials required, per manufacturer's specifications.

D. Color: Refer to Finish Schedule for paint colors, and as selected.

E. LEED Requirements: LEED V4 and V4.1 EQ Credit: Indoor Environmental Quality-Low Emitting Materials.

2.4 INTERIOR PAINT AND COATING

A. Masonry CMU: Concrete, Split Face, Scored, Smooth, High Density, Low Density, and Fluted.
   1. Latex Systems:
      a. Semi-Gloss Finish Scuff Resistant Waterbase Enamel.
         1) 1st Coat: S-W PrepRite Block Filler, B25W25 (75-125 sq ft/gal).
         2) 2nd Coat: Sherwin-Williams Scuff Tuff Int. Waterbased Enamel, Semi-Gloss, S26-50 Series:
         3) 3rd Coat: Sherwin-Williams Scuff Tuff Int. Waterbased Enamel, Semi-Gloss, S26-50 Series (4 mils wet, 1.2 mils dry per coat).

B. Metal: Structural Steel Columns, Joists, Trusses, Beams, Miscellaneous and Ornamental Iron, Structural Iron, and Ferrous Metal.
   1. Alkyd Systems; Waterbased:
      a. Semi-Gloss Finish:
         1) 1st Coat: S-W Pro Industrial Pro-Cryl Universal Primer, B66-1310 Series (5.0 mils wet, 2.0 mils dry).
         2) 2nd Coat: S-W Pro Industrial Waterbased Alkyd Urethane Enamel Semi-Gloss, B53-1150 Series.
         3) 3rd Coat: S-W Pro Industrial Waterbased Alkyd Urethane Enamel Semi-Gloss, B53-1150 Series (4.0-5.0 mils wet, 1.4 - 1.7 mils dry per coat).
   2. Dryfall Waterborne Topcoat:
      a. Flat Finish:
         1) 1st Coat: S-W Pro Industrial Pro-Cryl Universal Primer, B66-1310 Series (5.0 mils wet, 2.0 mils dry).
         2) 2nd Coat: S-W Pro Industrial Waterborne Acrylic Dryfall, B42-181 Series.
         3) 3rd Coat: S-W Pro Industrial Waterborne Acrylic Dryfall, B42-181 Series (6.0 mils wet, 1.7 mils dry per coat).

C. Drywall: Walls, Ceilings, Gypsum Board and similar items.
   1. Latex Systems:
      a. Semi-Gloss Finish Scuff Resistant Waterbase Enamel:
         1) 1st Coat: Sherwin-Williams ProMar 200 Zero VOC Interior Latex Primer, B28W2600 (4 mils wet, 1.5 mils dry per coat).
         2) 2nd Coat: Sherwin-Williams Scuff Tuff Int. Waterbased Enamel, Semi-Gloss, S26-50 Series:
         3) 3rd Coat: Sherwin-Williams Scuff Tuff Int. Waterbased Enamel, Semi-Gloss, S26-50 Series: (4 mils wet, 1.2 mils dry per coat).
      b. Flat Finish Scuff Resistant Waterbase Enamel:
         1) 1st Coat: Sherwin-Williams ProMar 200 Zero VOC Interior Latex Primer, B28W2600 (4 mils wet, 1.5 mils dry per coat).
         2) 2nd Coat: Sherwin-Williams Scuff Tuff Int. Waterbased Enamel, Matte, S23-50 Series
         3) 3rd Coat: Sherwin-Williams Scuff Tuff Int. Waterbased Enamel, Matte, S23-50 Series (4 mils wet, 1.4 mils dry per coat).

2.5 HIGH PERFORMANCE INTERIOR PAINT AND COATING SYSTEMS

A. Masonry CMU: Concrete, Split Face, Scored, Smooth, High Density, Low Density, Fluted, and Stucco.
   1. Epoxy System; Waterbased: (Wet Environment)
      a. Gloss Finish:
         1) 1st Coat: S-W Heavy Duty Block Filler, B42W46 (18.0-34.0 mils wet, 10.0-18.0 mils wet).
         2) 2nd Coat: S-W Pro Industrial Waterbased Catalyzed Epoxy Gloss, B73-300 Series.
         3) 3rd Coat: S-W Pro Industrial Waterbased Catalyzed Epoxy Gloss, B73-300 Series (5.0-10.0 mils wet, 2.0-4.0 mils dry per coat).

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared; notify Architect of unsatisfactory conditions before proceeding. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

B. Proceed with work only after conditions have been corrected and approved by all parties, otherwise application of coatings will be considered as an acceptance of surface conditions.

C. Previously Painted Surfaces: Verify that existing painted surfaces do not contain lead based paints, notify Architect immediately if lead based paints are encountered.

3.2 SURFACE PREPARATION

A. General: Surfaces shall be dry and in sound condition. Remove oil, dust, dirt, loose rust, peeling paint or other contamination to ensure good adhesion.
   1. Prior to attempting to remove mildew, it is recommended to test any cleaner on a small, inconspicuous area prior to use. Bleach and bleaching type cleaners may damage or discolor existing paint films. Bleach alternative cleaning solutions are advised.
   2. Remove mildew before painting by washing with a solution of 1 part liquid household bleach and 3 parts of warm water. Apply solution and scrub the mildewed area. Allow solution to remain on the surface for 10 minutes. Rinse thoroughly with clean water and allow surface to dry before painting. Wear protective glasses or goggles, waterproof gloves, and protective clothing. Quickly wash off any of the mixture that comes in contact with your skin. Do not add detergents or ammonia to the bleach/water solution.
   3. Remove items including but not limited to thermostats, electrical outlets, switch covers and similar items prior to painting. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.
   4. No exterior painting should be done immediately after a rain, during foggy weather, when rain is predicted, or when the temperature is below 50 degrees F (10 degrees C), unless products are designed specifically for these conditions. On large expanses of metal siding, the air, surface and material temperatures must be 50 degrees F (10 degrees F) or higher to use low temperature products.

B. Aluminum: Remove all oil, grease, dirt, oxide and other foreign material by cleaning per SSPC-SP1, Solvent Cleaning.

C. Block (Cinder and Concrete): Remove all loose mortar and foreign material. Surface must be free of laitance, concrete dust, dirt, form release agents, moisture curing membranes, loose cement, and hardeners. Concrete and mortar must be cured at least 30 days at 75 degrees F (24 degrees C). The pH of the surface should be between 6 and 9 unless the products are designed to be used in high pH environments. On tilt-up and poured-in-place concrete, commercial detergents and abrasive blasting may be necessary to prepare the surface. Fill bug holes, air pockets, and other voids with a cement patching compound.

D. Concrete, SSPC-SP13 or NACE 6: This standard gives requirements for surface preparation of concrete by mechanical, chemical, or thermal methods prior to the application of bonded protective coating or lining systems. The requirements of this standard are applicable to all types of cementitious surfaces including cast-in-place concrete floors and walls, precast slabs, masonry walls, and shotcrete surfaces. An acceptable prepared concrete surface should be free of contaminants, laitance, loosely adhering concrete, and dust, and should provide a sound, uniform substrate suitable for the application of protective coating or lining systems.

E. Cement Composition Siding/Panels: Remove all surface contamination by washing with an appropriate cleaner, rinse thoroughly and allow to dry. Existing peeled or checked paint should be scraped and sanded to a sound surface. Pressure clean, if needed, with a minimum of 2100 psi pressure to remove all dirt, dust, grease, oil, loose particles, laitance, foreign material, and peeling or defective coatings. Allow the surface to dry thoroughly. The pH of the surface should be between 6 and 9 unless the products are designed to be used in high pH environments.

F. Copper and Stainless Steel: Remove all oil, grease, dirt, oxide and other foreign material by cleaning per SSPC-SP 2, Hand Tool Cleaning.

G. Exterior Composition Board (Hardboard): Some composition boards may exude a waxy material that must be removed with a solvent prior to coating. Whether factory primed or unprimed, exterior composition board siding (hardboard) must be cleaned thoroughly and primed with an alkyd primer.

H. Drywall - Exterior: Must be clean and dry. All nail heads must be set and spackled. Joints must be taped and covered with a joint compound. Spackled nail heads and tape joints must be sanded smooth and all dust removed prior to painting. Exterior surfaces must be spackled with exterior grade compounds.

I. Drywall - Interior: Must be clean and dry. All nail heads must be set and spackled. Joints must be taped and covered with a joint compound. Spackled nail heads and tape joints must be sanded smooth and all dust removed prior to painting.

J. Galvanized Metal: Clean per SSPC-SP1 using detergent and water or a degreasing cleaner to remove greases and oils. Apply a test area, priming as required. Allow the coating to dry at least one week before testing. If adhesion is poor, Brush Blast per SSPC-SP16 is necessary to remove these treatments.

K. Plaster: Must be allowed to dry thoroughly for at least 30 days before painting unless the products are designed to be used in high pH environments. Room must be ventilated while drying; in cold, damp weather, rooms must be heated. Damaged areas must be repaired with an appropriate patching material. Bare plaster must be cured and hard. Textured, soft, porous, or powdery plaster should be treated with a solution of 1 pint household vinegar to 1 gallon of water. Repeat until the surface is hard, rinse with clear water and allow to dry.

L. Steel: Structural, Plate, And Similar Items: Should be cleaned by one or more of the surface preparations described below. These methods are used throughout the world for describing methods for cleaning structural steel. Visual standards are available through the Society of Protective Coatings. A brief description of these standards together with numbers by which they can be specified follow.

1. Solvent Cleaning, SSPC-SP1: Solvent cleaning is a method for removing all visible oil, grease, soil, drawing and cutting compounds, and other soluble contaminants. Solvent cleaning does not remove rust or mill scale. Change rags and cleaning solution frequently so that deposits of oil and grease are not spread over additional areas in the cleaning process. Be sure to allow adequate ventilation.
2. Hand Tool Cleaning, SSPC-SP2: Hand Tool Cleaning removes all loose mill scale, loose rust, and other detrimental foreign matter. It is not intended that adherent mill scale, rust, and paint be removed by this process. Before hand tool cleaning, remove visible oil, grease, soluble welding residues, and salts by the methods outlined in SSPC-SP1.
3. Power Tool Cleaning, SSPC-SP3: Power Tool Cleaning removes all loose mill scale, loose rust, and other detrimental foreign matter. It is not intended that adherent mill scale, rust, and paint be removed by this process. Before power tool cleaning, remove visible oil, grease, soluble welding residues, and salts by the methods outlined in SSPC-SP1.
4. White Metal Blast Cleaning, SSPC-SP5 or NACE 1: A White Metal Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP1 or other agreed upon methods.
5. Commercial Blast Cleaning, SSPC-SP6 or NACE 3: A Commercial Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter, except for staining. Staining shall be limited to no more than 33 percent of each square inch of surface area and may consist of light shadows, slight streaks, or minor discoloration caused by stains of rust, stains of mill scale, or stains of previously applied paint. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP1 or other agreed upon methods.
6. Brush-Off Blast Cleaning, SSPC-SP7 or NACE 4: A Brush-Off Blast Cleaned surface, when

viewed without magnification, shall be free of all visible oil, grease, dirt, dust, loose mill scale, loose rust, and loose paint. Tightly adherent mill scale, rust, and paint may remain on the surface. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP 1 or other agreed upon methods.

7. Power Tool Cleaning to Bare Metal, SSPC-SP11: Metallic surfaces that are prepared according to this specification, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxide corrosion products, and other foreign matter. Slight residues of rust and paint may be left in the lower portions of pits if the original surface is pitted. Prior to power tool surface preparation, remove visible deposits of oil or grease by any of the methods specified in SSPC-SP1, Solvent Cleaning, or other agreed upon methods.
8. Near-White Blast Cleaning, SSPC-SP10 or NACE 2: A Near White Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter, except for staining. Staining shall be limited to no more than 5 percent of each square inch of surface area and may consist of light shadows, slight streaks, or minor discoloration caused by stains of rust, stains of mill scale, or stains of previously applied paint. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP1 or other agreed upon methods.
9. High- and Ultra-High Pressure Water Jetting for Steel and Other Hard Materials: SSPC-SP12 or NACE 5: This standard provides requirements for the use of high- and ultra-high pressure water jetting to achieve various degrees of surface cleanliness. This standard is limited in scope to the use of water only without the addition of solid particles in the stream.
10. Water Blasting, SSPC-SP12/NACE No. 5: Removal of oil grease dirt, loose rust, loose mill scale, and loose paint by water at pressures of 2,000 to 2,500 psi at a flow of 4 to 14 gallons per minute.

M. Vinyl Siding, Architectural Plastics, EIFS and Fiberglass: Clean vinyl siding thoroughly by scrubbing with a warm, soapy water solution. Rinse thoroughly. Do not paint vinyl siding with any color darker than the original color unless the paint system features Sherwin-Williams VinylSafe technology. Painting with darker colors that are not Sherwin-Williams VinylSafe may cause siding to warp. Follow all painting guidelines of the vinyl manufacturer when painting. Only paint properly installed vinyl siding. Deviating from the manufacturer's painting guidelines may cause the warranty to be voided.

N. Stucco: Must be clean and free of any loose stucco. If recommended procedures for applying stucco are followed, and normal drying conditions prevail, the surface may be painted in 30 days. The pH of the surface should be between 6 and 9 unless the products are designed to be used in high pH environments such as Loxon.

O. Wood: Must be clean and dry. Prime and paint as soon as possible. Knots and pitch streaks must be scraped, sanded, and spot primed before a full priming coat is applied. Patch all nail holes and imperfections with a wood filler or putty and sand smooth.

3.3 INSTALLATION

A. Apply all coatings and materials with the manufacturer's specifications in mind. Mix and thin coatings according to manufacturer's recommendations.

B. Do not apply to wet or damp surfaces. Wait at least 30 days before applying to new concrete or masonry. Or follow manufacturer's procedures to apply appropriate coatings prior to 30 days. Test new concrete for moisture content. Wait until wood is fully dry after rain or morning fog or dew.

C. Apply coatings using methods recommended by manufacturer.

D. Uniformly apply coatings without runs, drips, or sags, without brush marks, and with consistent sheen.

E. Apply coatings at spreading rate required to achieve the manufacturers recommended dry film thickness.

F. Regardless of number of coats specified, apply as many coats as necessary for complete hide, and uniform appearance.

G. Inspection: The coated surface must be inspected and approved by the Architect just prior to the application of each coat.

3.4 PROTECTION

A. Protect finished coatings from damage until completion of project.

B. Touch-up damaged coatings after substantial completion, following manufacturer's recommendation for touch up or repair of damaged coatings. Repair any defects that will hinder the performance of the coatings.

END OF SECTION

SECTION 230593 - TESTING, ADJUSTING, AND BALANCING FOR HVAC

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. Balancing Air Systems:

    a. Constant-volume air systems.

2. Testing, adjusting, and balancing existing systems and equipment.
3. Sound tests.
4. Vibration tests.
5. Duct leakage tests.
6. Control system verification.

1.3 DEFINITIONS

A. AABC: Associated Air Balance Council.

B. BAS: Building automation systems.

C. NEBB: National Environmental Balancing Bureau.

D. TAB: Testing, adjusting, and balancing.

E. TABB: Testing, Adjusting, and Balancing Bureau.

F. TAB Specialist: An independent entity meeting qualifications to perform TAB work.

G. TDH: Total dynamic head.

1.4 PREINSTALLATION MEETINGS

A. TAB Conference: Conduct a TAB conference at Project site with the Architect, Construction Manager, Commissioning Authority, and Engineer after approval of the TAB strategies and procedures plan to develop a mutual understanding of the details. Provide a minimum of 14 days' advance notice of scheduled meeting time and location.

1. Minimum Agenda Items:

    a. The Contract Documents examination report.
    b. The TAB plan.
    c. Needs for coordination and cooperation of trades and subcontractors.
    d. Proposed procedures for documentation and communication flow.

1.5 ACTION SUBMITTALS

A. Qualification Data: Within 60 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. Contract Documents Examination Report: Within 60 days of Contractor's Notice to Proceed, submit the Contract Documents review report as specified in Part 3.

C. Strategies and Procedures Plan: Within 60 days of Contractor's Notice to Proceed, submit TAB strategies and step-by-step procedures as specified in "Preparation" Article.

D. System Readiness Checklists: Within 60 days of Contractor's Notice to Proceed, submit system readiness checklists as specified in "Preparation" Article.

E. Examination Report: Submit a summary report of the examination review required in "Examination" Article.

F. Certified TAB reports.

G. Sample report forms.

H. 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.

1.6 QUALITY ASSURANCE

A. TAB Specialists Qualifications: The balancing agency shall be an independent contractor certified by NEBB, or TABB and shall have no affiliation with a mechanical contracting or sheet metal company and shall have at least one Professional Engineer registered in the State in which the services are to be performed.

1. TAB Field Supervisor: Employee of the TAB specialist and certified by AABC, NEBB, or, TABB.
2. TAB Technician: Employee of the TAB specialist and certified by AABC, NEBB, or, TABB as a TAB technician.

B. Instrumentation Type, Quantity, Accuracy, and Calibration: Comply with requirements in ASHRAE 111, Section 4, "Instrumentation."

C. ASHRAE Compliance: Applicable requirements in ASHRAE 62.1, Section 7.2.2 - "Air Balancing."

D. ASHRAE/IESNA Compliance: Applicable requirements in ASHRAE/IESNA 90.1, Section 6.7.2.3 - "System Balancing."

1.7 FIELD CONDITIONS

A. Owner Occupancy: Owner may occupy the site, existing building, and/or completed areas of building before Substantial Completion. Cooperate with Owner during TAB operations to minimize conflicts with Owner's operations.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 TAB SPECIALISTS

3.2 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, gage 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 ceiling plenums and underfloor air plenums used for supply, return, or relief air to verify that they are properly separated from adjacent areas. Verify that penetrations in plenum walls are sealed and fire-stopped if required.

F. Examine equipment performance data including fan and pump 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.

G. Examine system and equipment installations and verify that field quality-control testing, cleaning, and adjusting specified in individual Sections have been performed.

H. Examine test reports specified in individual system and equipment Sections.

I. 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.

J. Examine operating safety interlocks and controls on HVAC equipment.

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.

3.3 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. Ceilings are installed.
i. Windows and doors are installed.
j. Suitable access to balancing devices and equipment is provided.

3.4 GENERAL PROCEDURES FOR TESTING AND BALANCING

A. Perform testing and balancing procedures on each system according to the procedures contained in AABC's "National Standards for Total System Balance" or ASHRAE 111 or NEBB's "Procedural Standards for Testing, Adjusting, and Balancing of Environmental Systems", SMACNA's "HVAC Systems - Testing, Adjusting, and Balancing" and in this Section.

B. Cut insulation, ducts, pipes, and equipment cabinets 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. Install and join new insulation that matches removed materials. Restore insulation, coverings, vapor barrier, and finish according to Section 230700 "HVAC 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.

3.5 GENERAL PROCEDURES FOR BALANCING AIR SYSTEMS

A. Prepare test reports for both fans and outlets. Obtain manufacturer's outlet factors and recommended testing procedures. Cross-check the summation of required outlet volumes with required fan volumes.

B. Prepare schematic diagrams of systems' "as-built" duct layouts.

C. For variable-air-volume systems, develop a plan to simulate diversity.

D. Determine the best locations in main and branch ducts for accurate duct-airflow measurements.

E. Check airflow patterns from the outdoor-air louvers and dampers and the exhaust-air dampers through the supply-fan discharge and mixing dampers.

F. Locate start-stop and disconnect switches, electrical interlocks, and motor starters.

G. Verify that motor starters are equipped with properly sized thermal protection.

H. Check dampers for proper position to achieve desired airflow path.

I. Check for airflow blockages.

J. Check condensate drains for proper connections and functioning.

K. Check for proper sealing of air-handling-unit components.

L. Verify that air duct system is sealed as specified in Section 233113 "Metal Ducts."

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 and relief-air dampers for proper position that simulates minimum outdoor-air conditions.
    b. Where duct conditions allow, measure airflow by Pitot-tube traverse. If necessary, perform multiple Pitot-tube traverses to obtain total airflow.
    c. Where duct conditions are not suitable for Pitot-tube traverse measurements, a coil traverse may be acceptable.
    d. If a reliable Pitot-tube traverse or coil traverse is not possible, measure airflow at terminals and calculate the total airflow.

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 Record Documents 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 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, rpms, 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 SOUND TESTS

A. After the systems are balanced and construction is Substantially Complete, measure and record sound levels at 5 locations as designated by the Architect.

B. Instrumentation:

1. The sound-testing meter shall be a portable, general-purpose testing meter consisting of a microphone, processing unit, and readout.
2. The sound-testing meter shall be capable of showing fluctuations at minimum and maximum levels, and measuring the equivalent continuous sound pressure level (LEQ).
3. The sound-testing meter must be capable of using 1/3 octave band filters to measure mid-frequencies from 31.5 Hz to 8000 Hz.
4. The accuracy of the sound-testing meter shall be plus or minus one decibel.

C. Test Procedures:

1. Perform test at quietest background noise period. Note cause of unpreventable sound that affects test outcome.
2. Equipment should be operating at design values.
3. Calibrate the sound-testing meter prior to taking measurements.
4. Use a microphone suitable for the type of noise levels measured that is compatible with meter. Provide a windshield for outside or in-duct measurements.
5. Record a set of background measurements in dBA and sound pressure levels in the eight un-weighted octave bands 63 Hz to 8000 Hz (NC) with the equipment off.
6. Take sound readings in dBA and sound pressure levels in the eight un-weighted octave bands 63 Hz to 8000 Hz (NC) with the equipment operating.
7. Take readings no closer than 36 inches from a wall or from the operating equipment and approximately 60 inches from the floor, with the meter held or mounted on a tripod.
8. For outdoor measurements, move sound-testing meter slowly and scan area that has the most exposure to noise source being tested. Use A-weighted scale for this type of reading.

D. Reporting:

1. Report shall record the following:

a. Location.

b. System tested.
c. dBA reading.
d. Sound pressure level in each octave band with equipment on and off.

2. Plot sound pressure levels on NC worksheet with equipment on and off.

3.8 VIBRATION TESTS

A. After systems are balanced and construction is Substantially Complete, measure and record vibration levels on equipment having motor horsepower equal to or greater than 10.

B. Instrumentation:

1. Use portable, battery-operated, and microprocessor-controlled vibration meter with or without a built-in printer.
2. The meter shall automatically identify engineering units, filter bandwidth, amplitude, and frequency scale values.
3. The meter shall be able to measure machine vibration displacement in mils of deflection, velocity in inches per second, and acceleration in inches per second squared.
4. Verify calibration date is current for vibration meter before taking readings.

C. Test Procedures:

1. To ensure accurate readings, verify that accelerometer has a clean, flat surface and is mounted properly.
2. With the unit running, set up vibration meter in a safe, secure location. Connect transducer to meter with proper cables. Hold magnetic tip of transducer on top of the bearing, and measure unit in mils of deflection. Record measurement, then move transducer to the side of the bearing and record in mils of deflection. Record an axial reading in mils of deflection by holding nonmagnetic, pointed transducer tip on end of shaft.
3. Change vibration meter to velocity (inches per second) measurements. Repeat and record above measurements.
4. Record CPM or rpm.
5. Read each bearing on motor, fan, and pump as required. Track and record vibration levels from rotating component through casing to base.

D. Reporting:

1. Report shall record location and the system tested.
2. Include horizontal-vertical-axial measurements for tests.
3. Verify that vibration limits follow Specifications, or, if not specified, follow the General Machinery Vibration Severity Chart or Vibration Acceleration General Severity Chart from the AABC National Standards. Acceptable levels of vibration are normally "smooth" to "good."
4. Include in report General Machinery Vibration Severity Chart, with conditions plotted.

3.9 DUCT LEAKAGE TESTS

A. Witness the duct pressure testing performed by Installer.

B. Verify that proper test methods are used and that leakage rates are within specified tolerances.

C. Report deficiencies observed.

3.10 CONTROLS VERIFICATION

A. In conjunction with system balancing, perform the following:

1. Verify temperature control system is operating within the design limitations.
2. Confirm that the sequences of operation are in compliance with Contract Documents.
3. Verify that controllers are calibrated and function as intended.
4. Verify that controller set points are as indicated.
5. Verify the operation of lockout or interlock systems.
6. Verify the operation of valve and damper actuators.
7. Verify that controlled devices are properly installed and connected to correct controller.
8. Verify that controlled devices travel freely and are in position indicated by controller: open, closed, or modulating.
9. Verify location and installation of sensors to ensure that they sense only intended temperature, humidity, or pressure.

B. Reporting: Include a summary of verifications performed, remaining deficiencies, and variations from indicated conditions.

3.11 TOLERANCES

A. Set HVAC system's airflow rates and water flow rates within the following tolerances:

1. Supply, Return, and Exhaust Fans and Equipment with Fans: 0% to +5%.
2. Air Outlets and Inlets: 0% to +5%.

B. Maintaining pressure relationships as designed shall have priority over the tolerances specified above.

3.12 PROGRESS REPORTING

A. Initial Construction-Phase Report: Based on examination of the Contract Documents as specified in "Examination" Article, prepare a report on the adequacy of design for systems balancing devices. Recommend changes and additions to systems balancing devices to facilitate proper performance measuring and balancing. Recommend changes and additions to HVAC systems and general construction to allow access for performance measuring and balancing devices.

B. Status Reports: Prepare biweekly progress reports to describe completed procedures, procedures in progress, and scheduled procedures. Include a list of deficiencies and problems found in systems being tested and balanced. Prepare a separate report for each system and each building floor for systems serving multiple floors.

3.13 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. Fan curves.
2. Manufacturers' test data.
3. Field test reports prepared by system and equipment installers.
4. 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.
15. Test conditions for fans and pump performance forms including the following:

    a. Settings for outdoor-, return-, and exhaust-air dampers.
    b. Conditions of filters.

c. Cooling coil, wet- and dry-bulb conditions.
d. Face and bypass damper settings at coils.
e. Fan drive settings including settings and percentage of maximum pitch diameter.
f. Inlet vane settings for variable-air-volume systems.
g. Settings for supply-air, static-pressure controller.
h. Other system operating conditions that affect performance.

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, return, and exhaust airflows.
2. Water and steam flow rates.
3. Duct, outlet, and inlet sizes.
4. Pipe and valve sizes and locations.
5. Terminal units.
6. Balancing stations.
7. Position of balancing devices.

E. Air-Handling-Unit Test Reports: For air-handling units with coils, include the following:

1. Unit Data:

a. Unit identification.
b. Location.
c. Make and type.
d. Model number and unit size.
e. Manufacturer's serial number.
f. Unit arrangement and class.
g. Discharge arrangement.
h. Sheave make, size in inches, and bore.
i. Center-to-center dimensions of sheave and amount of adjustments in inches.
j. Number, make, and size of belts.
k. Number, type, and size of filters.

2. Motor Data:

a. Motor make, and frame type and size.
b. Horsepower and rpm.
c. Volts, phase, and hertz.
d. Full-load amperage and service factor.
e. Sheave make, size in inches, and bore.
f. Center-to-center dimensions of sheave and amount of adjustments in inches.

3. Test Data (Indicated and Actual Values):

a. Total airflow rate in cfm.
b. Total system static pressure in inches wg.
c. Fan rpm.
d. Discharge static pressure in inches wg.
e. Filter static-pressure differential in inches wg.

f. Preheat-coil static-pressure differential in inches wg.
g. Cooling-coil static-pressure differential in inches wg.
h. Heating-coil static-pressure differential in inches wg.
i. Outdoor airflow in cfm.
j. Return airflow in cfm.
k. Outdoor-air damper position.
l. Return-air damper position.
m. Vortex damper position.

F. Fan Test Reports: For supply, return, and exhaust fans, include the following:

1. Fan Data:

a. System identification.
b. Location.
c. Make and type.
d. Model number and size.
e. Manufacturer's serial number.
f. Arrangement and class.
g. Sheave make, size in inches, and bore.
h. Center-to-center dimensions of sheave and amount of adjustments in inches.

2. Motor Data:

a. Motor make, and frame type and size.
b. Horsepower and rpm.
c. Volts, phase, and hertz.
d. Full-load amperage and service factor.
e. Sheave make, size in inches, and bore.
f. Center-to-center dimensions of sheave, and amount of adjustments in inches.
g. Number, make, and size of belts.

3. Test Data (Indicated and Actual Values):

a. Total airflow rate in cfm.
b. Total system static pressure in inches wg.
c. Fan rpm.
d. Discharge static pressure in inches wg.
e. Suction static pressure in inches wg.

G. Round, Flat-Oval, and Rectangular Duct Traverse Reports: Include a diagram with a grid representing the duct cross-section and record the following:

1. Report Data:

a. System and air-handling-unit number.
b. Location and zone.
c. Traverse air temperature in deg F.
d. Duct static pressure in inches wg.
e. Duct size in inches.

f. Duct area in sq. ft..
g. Indicated airflow rate in cfm.
h. Indicated velocity in fpm.
i. Actual airflow rate in cfm.
j. Actual average velocity in fpm.
k. Barometric pressure in psig.

H. Instrument Calibration Reports:

1. Report Data:

a. Instrument type and make.
b. Serial number.
c. Application.
d. Dates of use.
e. Dates of calibration.

3.14 VERIFICATION OF TAB REPORT

A. The TAB specialist's test and balance engineer shall conduct the inspection in the presence of Construction Manager.

B. Construction Manager shall randomly select measurements, documented in the final report, to be rechecked. Rechecking shall be limited to 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 testing and balancing shall be considered incomplete and shall be rejected.

E. If TAB work fails, 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.
2. If the second final inspection also fails, Owner may contract the services of another TAB specialist to complete TAB work according to the Contract Documents and deduct the cost of the services from the original TAB specialist's final payment.

F. Prepare test and inspection reports.

3.15 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 230593

SECTION 233113 METAL DUCTS

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. Single-wall rectangular ducts and fittings.
2. Sheet metal materials.
3. Duct liner.
4. Sealants and gaskets.

B. Related Sections:
1. Division 23 Section "Testing, Adjusting, and Balancing for HVAC"
2. Division 23 Section "Air Duct Accessories"

1.3 PERFORMANCE REQUIREMENTS

A. Airstream Surfaces: Surfaces in contact with the airstream shall comply with requirements in ASHRAE 62.1.

1.4 SUBMITTALS

A. Product Data: For each type of the following products:

1. Liners and adhesives.
2. 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 of ducts.
5. Dimensions of main 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. Locations for duct accessories, including dampers, turning vanes, and access doors and panels.

C. Field quality-control reports.

PART 2 - PRODUCTS

2.1 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.

B. Transverse Joints: Select joint types and fabricate according to 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."

C. Longitudinal Seams: Select seam types and fabricate according to 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."

D. Elbows, Transitions, Offsets, Branch Connections, and Other Duct Construction: Select types and fabricate according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Chapter 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."

2.2 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 shall be free of pitting, seam marks, roller marks, stains, discolorations, and other imperfections.

B. Galvanized Sheet Steel: Comply with ASTM A 653/A 653M.

1. Galvanized Coating Designation: G90 (Z275).
2. Finishes for Surfaces Exposed to View: Mill phosphatized.

2.3 DUCT LINER

A. Fibrous-Glass Duct Liner: Comply with ASTM C 1071, NFPA 90A, or NFPA 90B; and with NAIMA AH124, "Fibrous Glass Duct Liner Standard."

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

    a. CertainTeed Corporation; Insulation Group.
    b. Johns Manville.
    c. Knauf Insulation.
    d. Owens Corning.

B. Insulation Pins and Washers:

1. Cupped-Head, Capacitor-Discharge-Weld Pins: Copper- or zinc-coated steel pin, fully annealed for capacitor-discharge welding, 0.106-inch- (2.6-mm-) or 0.135-inch- (3.5-mm-) diameter shank, length to suit depth of insulation indicated with integral 1-1/2-inch (38-mm) galvanized carbon-steel washer.
2. Insulation-Retaining Washers: Self-locking washers formed from 0.016-inch- (0.41-mm-) thick galvanized steel, aluminum, or stainless steel; with beveled edge sized as required to hold insulation securely in place but not less than 1-1/2 inches (38 mm) in diameter.

C. Shop Application of Duct Liner: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Figure 7-11, "Flexible Duct Liner Installation."

1. Adhere a single layer of indicated thickness of duct liner with at least 90 percent adhesive coverage at liner contact surface area. Attaining indicated thickness with multiple layers of duct liner is prohibited.
2. Apply adhesive to transverse edges of liner facing upstream that do not receive metal nosing.
3. Butt transverse joints without gaps, and coat joint with adhesive.
4. Fold and compress liner in corners of rectangular ducts or cut and fit to ensure butted-edge overlapping.
5. Do not apply liner in rectangular ducts with longitudinal joints, except at corners of ducts, unless duct size and dimensions of standard liner make longitudinal joints necessary.

2.4 SEALANT AND GASKETS

A. General Sealant and Gasket Requirements: Surface-burning characteristics for sealants and gaskets shall be a maximum flame-spread index of 25 and a maximum smoke-developed index of 50 when tested according to UL 723; certified by an NRTL.

B. Flanged Joint Sealant: Comply with ASTM C 920.

1. General: Single-component, acid-curing, silicone, elastomeric.
2. Type: S.
3. Grade: NS.
4. Class: 25.

5. Use: O.

C. Flange Gaskets: Butyl rubber, neoprene, or EPDM polymer with polyisobutylene plasticizer.

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 according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible" unless otherwise indicated.

C. Install round and flat-oval ducts in maximum practical lengths.

D. Install ducts with fewest possible joints.

E. Install factory- or shop-fabricated fittings for changes in direction, size, and shape and for branch connections.

F. Unless otherwise indicated, install ducts vertically and horizontally, and parallel and perpendicular to building lines.

G. Install ducts close to walls, overhead construction, columns, and other structural and permanent enclosure elements of building.

H. Install ducts with a clearance of 1 inch (25 mm), plus allowance for insulation thickness.

I. Route ducts to avoid passing through transformer vaults and electrical equipment rooms and enclosures.

J. Where ducts pass through non-fire-rated interior partitions and exterior walls and are exposed to view, cover the opening between the partition and duct or duct insulation with sheet metal flanges of same metal thickness as the duct. Overlap openings on four sides by at least 1-1/2 inches (38 mm).

K. Where ducts pass through fire-rated interior partitions and exterior walls, install fire dampers. Comply with requirements in Division 23 Section "Air Duct Accessories" for fire and smoke dampers.

L. Protect duct interiors from moisture, construction debris and dust, and other foreign materials. Comply with SMACNA's "IAQ Guidelines for Occupied Buildings Under Construction," Appendix G, "Duct Cleanliness for New Construction Guidelines."

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 the 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 to the following seal classes according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible":

1. All Ducts: Seal Class A (All Transverse joints, longitudinal seams, and duct wall penetrations)
2. Seal Class is intentionally more stringent than standard SMACNA duct sealing requirements.
3. The maximum leakage allowed in cfm/sf is to be referenced against the seal class listed above and the definitions of seal class from Table 4-1 of the SMACNA HVAC Air Duct Leakage Test Manual.

Seal Class	Leakage Class Allowed
A	6
B	12
C	24

3.4 CONNECTIONS

A. Make connections to equipment with flexible connectors complying with Division 23 Section "Air Duct Accessories."

B. Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible" for branch, outlet and inlet, and terminal unit connections.

3.5 PAINTING

A. Paint interior of metal ducts that are visible through registers and grilles and that do not have duct liner. Apply one coat of flat, black, latex paint over a compatible galvanized-steel primer. Paint materials and application requirements are specified in Division 09 painting Sections.

3.6 FIELD QUALITY CONTROL

A. Perform tests and inspections.

B. Leakage Tests:

1. Comply with SMACNA's "HVAC Air Duct Leakage Test Manual." Submit a test report for each test.
2. Test the following systems:

    a. Indoor ducts with a pressure class higher than 3-Inch wg, ducts in risers, and supply ducts upstream of terminal units (e.g. VAV boxes, reheat coils, etc.):
        1) Test representative duct sections totaling no less than 25 percent of total installed duct area for each designated pressure class.
        2) If any of the representative duct sections fail leak testing, then an additional representative duct section totaling no less that 25 percent of total installed duct area shall be tested.
        3) If any section of the second 25 percent fails, then the entire system shall be leak tested.
    b. Outdoor ducts, product-conveying exhaust ducts, and pressurization-critical exhaust ducts:
        1) Test 100 percent of total installed duct area for each designated pressure class.
    c. Leakage test requirements are intentionally more stringent that standard SMACNA requirements.
3. Disassemble, reassemble, and seal segments of systems to accommodate leakage testing and for compliance with test requirements.
4. Test for leaks before applying external insulation.
5. Conduct tests at static pressures equal to maximum design pressure of system or section being tested. If static-pressure classes are not indicated, test system at maximum system design pressure. Do not pressurize systems above maximum design operating pressure.
6. Give seven days' advance notice for testing.

C. Duct System Cleanliness Tests:

1. Visually inspect duct system to ensure that no visible contaminants are present.
2. Test sections of metal duct system, chosen randomly by Owner, for cleanliness according to "Vacuum Test" in NADCA ACR, "Assessment, Cleaning and Restoration of HVAC Systems."

    a. Acceptable Cleanliness Level: Net weight of debris collected on the filter media shall not exceed 0.75 mg/100 sq. cm.

D. Duct system will be considered defective if it does not pass tests and inspections.

E. Prepare test and inspection reports.

3.7 DUCT CLEANING

A. Clean new and existing duct system(s) before testing, adjusting, and balancing.

B. Use service openings for entry and inspection.

1. Create new openings and install access panels appropriate for duct static-pressure class if required for cleaning access. Provide insulated panels for insulated or lined duct. Patch insulation and liner as recommended by duct liner manufacturer. Comply with Division 23 Section "Air Duct Accessories" for access panels and doors.
2. Disconnect and reconnect flexible ducts as needed for cleaning and inspection.
3. Remove and reinstall ceiling to gain access during the cleaning process.

C. Particulate Collection and Odor Control:

1. When venting vacuuming system inside the building, use HEPA filtration with 99.97 percent collection efficiency for 0.3-micron-size (or larger) particles.
2. When venting vacuuming system to outdoors, use filter to collect debris removed from HVAC system, and locate exhaust downwind and away from air intakes and other points of entry into building.

D. Clean the following components by removing surface contaminants and deposits:

1. Air outlets and inlets (registers, grilles, and diffusers).
2. Supply, return, and exhaust fans including fan housings, plenums (except ceiling supply and return plenums), scrolls, blades or vanes, shafts, baffles, dampers, and drive assemblies.
3. Air-handling unit internal surfaces and components including mixing box, coil section, air wash systems, spray eliminators, condensate drain pans, humidifiers and dehumidifiers, filters and filter sections, and condensate collectors and drains.
4. Coils and related components.
5. Return-air ducts, dampers, actuators, and turning vanes except in ceiling plenums and mechanical equipment rooms.
6. Supply-air ducts, dampers, actuators, and turning vanes.
7. Dedicated exhaust and ventilation components and makeup air systems.

E. Mechanical Cleaning Methodology:

1. Clean metal duct systems using mechanical cleaning methods that extract contaminants from within duct systems and remove contaminants from building.
2. Use vacuum-collection devices that are operated continuously during cleaning. Connect vacuum device to downstream end of duct sections so areas being cleaned are under negative pressure.
3. Use mechanical agitation to dislodge debris adhered to interior duct surfaces without damaging integrity of metal ducts, duct liner, or duct accessories.

4. Clean fibrous-glass duct liner with HEPA vacuuming equipment; do not permit duct liner to get wet. Replace fibrous-glass duct liner that is damaged, deteriorated, or delaminated or that has friable material, mold, or fungus growth.
5. Clean coils and coil drain pans according to NADCA 1992. Keep drain pan operational. Rinse coils with clean water to remove latent residues and cleaning materials; comb and straighten fins.
6. Provide drainage and cleanup for wash-down procedures.
7. Antimicrobial Agents and Coatings: Apply EPA-registered antimicrobial agents if fungus is present. Apply antimicrobial agents according to manufacturer's written instructions after removal of surface deposits and debris.

3.8 DUCT SCHEDULE

A. Duct Pressure Class Schedule:

Air System	**Pressure Class**
Ducts Connected to Fan Coil Units	2-inch wg
Ducts Connected to Air-Handling Units	3-inch wg

B. Intermediate Reinforcement:

1. Galvanized-Steel Ducts: Galvanized steel or carbon steel coated with zinc-chromate primer.

C. Liner:

1. Supply Air Ducts: Fibrous glass, Type I, 1 inch thick.
2. Return Air Ducts: Fibrous glass, Type I, 1 inch thick.

END OF SECTION 233113

SECTION 233300 - AIR DUCT ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:
   1. Manual volume dampers.

1.3 ACTION SUBMITTALS

A. Product data

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. Control-damper installations.
      b. Wiring Diagrams: For power, signal, and control wiring.

1.4 INFORMATIONAL SUBMITTALS

A. Coordination Drawings: Reflected ceiling plans, drawn to scale, on which ceiling-mounted access panels and access doors required for access to duct accessories are shown and coordinated with each other, using input from Installers of the items involved.

B. Field quality-control reports.

1.5 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For air duct accessories to include in 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. Fusible Links: Furnish 1 for each damper requiring fusible links installed

PART 2 - PRODUCTS

2.1 ASSEMBLY DESCRIPTION

A. Comply with NFPA 90A, "Installation of Air Conditioning and Ventilating Systems," and with NFPA 90B, "Installation of Warm Air Heating and Air Conditioning Systems."

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 MATERIALS

A. Galvanized Sheet Steel: Comply with ASTM A 653/A 653M.

1. Galvanized Coating Designation: G90.
2. Exposed-Surface Finish: Mill phosphatized.

2.3 MANUAL VOLUME DAMPERS

A. Standard, Steel, Manual Volume Dampers:

1. Manufacturers: provide products by one of the following:

a. Greenheck Fan Corporation
b. Nailor Industries Inc.
c. Ruskin Company.

2. Standard leakage rating, with linkage outside airstream.
3. Suitable for horizontal or vertical applications.
4. Frames:

a. Frame: Hat-shaped, 16 gauge, 5 inch deep, galvanized sheet steel.
b. Mitered and welded corners.
c. Flanges for attaching to walls and flangeless frames for installing in ducts.

5. Blades:

a. Single blade up to 12” high, multi blade over 12” high

b. Parallel- or opposed-blade design.
c. Stiffen damper blades for stability.
d. Galvanized, V-blade, 16 gauge but not less than two gauges more than the duct gauge

6. Blade Axles: Galvanized steel, ½ inch diameter.
7. Bearings:

a. Stainless-steel sleeve.
b. Dampers in ducts with pressure classes of 2-inch wg or more and on all dampers over 12 inch diameter shall have continuous rod axles full length of damper blades and bearings at both ends of operating shaft.

8. Tie Bars and Brackets: Galvanized steel.
9. Include elevated platform for insulated duct mounting.
10. Damper handles:

a. Cast alloy body and core
b. Heavy stamped handle
c. Locking
d. Hex locking nut and acorn nut
e. Basis of design: Duro Dyne, Specline or approved equal

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install duct accessories according to applicable details in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible" for metal 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. Provide volume dampers at points on supply, return, and exhaust systems where branches extend from larger ducts. Dampers shall be provided as necessary to achieve a NEBB certified air balance.
1. Install stainless steel volume dampers in stainless steel ducts.

D. Set dampers to fully open position before testing, adjusting, and balancing.

E. Install test holes at fan inlets and outlets and elsewhere as indicated.

3.2 FIELD QUALITY CONTROL

A. Tests and Inspections:

1. Operate dampers to verify full range of movement.

2. Verify all dampers are secured and handles can be correctly fastened to hold damper in place

END OF SECTION 233300

SECTION 233713.13 - AIR DIFFUSERS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Rectangular and square ceiling diffusers.

B. Related Requirements:

   1. Section 233300 "Air Duct Accessories" for fire and smoke dampers and volume-control dampers not integral to diffusers.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

PART 2 - PRODUCTS

2.1 RECTANGULAR AND SQUARE CEILING DIFFUSERS

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. Titus
   2. Price
   3. Or equal

B. Devices shall be specifically designed for variable-air-volume flows.

C. Material: Aluminum

D. Finish: Refer to Architect

E. Face Size: 24x24

F. Face Style: Four cone

G. Mounting: Surface

H. Pattern: Adjustable

I. Dampers: Radial opposed blade

J. Accessories:

1. Equalizing grid.
2. Plaster ring.
3. Safety chain.
4. Wire guard.
5. Sectorizing baffles.
6. Operating rod extension.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install diffusers level and plumb.

B. Ceiling-Mounted Outlets and Inlets: Drawings indicate general arrangement of ducts, fittings, and accessories. Air outlet and inlet locations have been indicated to achieve design requirements for air volume, noise criteria, airflow pattern, throw, and pressure drop. Make final locations where indicated, as much as practical. For units installed in lay-in ceiling panels, locate units in the center of panel. Where architectural features or other items conflict with installation, notify Architect for a determination of final location.

C. Install diffusers with airtight connections to ducts and to allow service and maintenance of dampers, air extractors, and fire dampers.

3.2 ADJUSTING

A. After installation, adjust diffusers to air patterns indicated, or as directed, before starting air balancing.

END OF SECTION 233713.13

SECTION 260519 - LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

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. Copper building wire rated 600 V or less.
2. Connectors, splices, and terminations rated 600 V and less.

B. Related Requirements:

1. Section 260523 "Control-Voltage Electrical Power Cables" for control systems communications cables and Classes 1, 2, and 3 control cables.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1.4 INFORMATIONAL SUBMITTALS

A. Field quality-control reports.

PART 2 - PRODUCTS

2.1 COPPER BUILDING WIRE

A. Description: Flexible, insulated and uninsulated, drawn copper current-carrying conductor with an overall insulation layer or jacket, or both, rated 600 V or less.

B. 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. General Cable Technologies Corporation.
3. Southwire Company.
4. WESCO.

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. Type XHHW-2: Comply with UL 44.

2.2 CONNECTORS AND SPLICES

A. 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.

B. 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. 3M Electrical Products.
2. Emerson Electric Co. (Automation Solutions - Appleton - O-Z/Gedney).
3. Ideal Industries, Inc.
4. ILSCO.

C. Jacketed Cable Connectors: For steel and aluminum jacketed cables, zinc die-cast with set screws, designed to connect conductors specified in this Section.

PART 3 - EXECUTION

3.1 CONDUCTOR MATERIAL APPLICATIONS

A. Branch Circuits: Copper. 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 Crawlspaces: THHN/THWN-2, Type MC Cable, or single conductor(s) in raceway.

B. Branch Circuits Concealed in Ceilings, Walls, and Partitions: THHN/THWN-2, Type MC Cable, or single conductor(s) in raceway.

3.3 INSTALLATION OF CONDUCTORS AND CABLES

A. Conceal cables in finished walls, ceilings, and floors unless otherwise indicated.

B. Complete raceway installation between conductor and cable termination points according to Section 260533 "Raceways and Boxes 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 260529 "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 lighting fixtures and devices: Install conductor at each luminaire or switching device with at least 12 inches of slack.

3.5 IDENTIFICATION

A. Identify and color-code conductors and cables according to Section 260553 "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 FIELD QUALITY CONTROL

A. Perform tests and inspections.

1. After installing conductors and cables and before electrical circuitry has been energized, test service entrance and feeder conductors for compliance with requirements.

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.

3. Follow-up Infrared Scanning: Perform an additional follow-up infrared scan of each switch 11 months after date of Substantial Completion.

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 260519

SECTION 260529 - HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

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. Conduit and cable support devices.
   2. Mounting, anchoring, and attachment components, including powder-actuated fasteners, mechanical expansion anchors, concrete inserts, clamps, through bolts, toggle bolts, and hanger rods.

1.3 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 the following:
      a. Clamps.
      b. Hangers.
      c. Fasteners.
      d. Anchors.

   2. Include rated capacities and furnished specialties and accessories.

B. Shop Drawings: Signed and sealed by a qualified professional engineer. For fabrication and installation details for electrical hangers and support systems.

   1. Hangers. Include product data for components.
   2. Equipment supports.

1.4 INFORMATIONAL SUBMITTALS

A. Coordination Drawings: Reflected ceiling plan(s) and other details, drawn to scale, on which the following items are shown and coordinated with each other, using input from installers of the items involved:

   1. Suspended ceiling components.
   2. Ductwork, piping, fittings, and supports.
   3. Structural members to which hangers and supports will be attached.

4. Size and location of initial access modules for acoustical tile.
5. Items penetrating finished ceiling, including the following:

    a. Luminaires.
    b. Security Cameras

B. Welding certificates.

1.5 QUALITY ASSURANCE

A. Welding Qualifications: Qualify procedures and personnel according to AWS D1.1/D1.1M.

B. Welding Qualifications: Qualify procedures and personnel according to the following:

1. AWS D1.1/D1.1M.

PART 2 - PRODUCTS

2.1 SUPPORT, ANCHORAGE, AND ATTACHMENT COMPONENTS

A. Conduit and Cable Support Devices: Steel hangers, clamps, and associated fittings, designed for types and sizes of raceway or cable to be supported.

B. 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, provide products by one of 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) Eaton (B-line).
        2) Hilti, Inc.
        3) 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. Hanger Rods: Threaded steel.

PART 3 - EXECUTION

3.1 APPLICATION

A. Comply with the following standards for application and installation requirements of hangers and supports, except where requirements on Drawings or in this Section are stricter:

1. NECA 1.
2. NECA 101
3. NECA 102.
4. NECA 105.
5. NECA 111.

B. Comply with requirements for raceways and boxes specified in Section 260533 "Raceways and Boxes for Electrical Systems."

C. Maximum Support Spacing and Minimum Hanger Rod Size for Raceways: Space supports for EMT, IMC, RMC, and MC Cabling as required by NFPA 70. Minimum rod size shall be 1/4 inch in diameter.

D. Spring-steel clamps designed for supporting single conduits without bolts may be used for 1-1/2-inch and smaller raceways serving branch circuits and communication systems above suspended ceilings, and for fastening raceways to trapeze supports.

3.2 SUPPORT INSTALLATION

A. Comply with NECA 1 and NECA 101 for installation requirements except as specified in this article.

B. Raceway Support Methods: In addition to methods described in NECA 1, EMT and RMC may be supported by openings through structure members, according to 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.

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 Wood: Fasten with lag screws or through bolts.
2. To Masonry: Approved expansion anchor fasteners on solid masonry units.

3. To Existing Concrete: Expansion anchor fasteners.
4. Instead of expansion anchors, powder-actuated driven threaded studs provided with lock washers and nuts may be used in existing standard-weight concrete 4 inches thick or greater. Do not use for anchorage to lightweight-aggregate concrete or for slabs less than 4 inches thick.
5. To Steel: Beam clamps (MSS SP-58, Type 19, 21, 23, 25, or 27), complying with MSS SP-69.
6. To Light Steel: Sheet metal screws.

E. Drill holes for expansion anchors in concrete at locations and to depths that avoid the need for reinforcing bars.

END OF SECTION 260529

SECTION 260533 - RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS

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 conduits and fittings.
2. Boxes, enclosures, and cabinets.

1.3 DEFINITIONS

A. GRC: Galvanized Rigid Steel conduit.

B. EMT: Electrical Metallic Tubing conduit.

1.4 ACTION SUBMITTALS

A. Product Data: For surface raceways, wireways and fittings, hinged-cover enclosures, and cabinets.

B. Sustainable Design Submittals:

C. Shop Drawings: For custom enclosures and cabinets. Include plans, elevations, sections, and attachment details.

1.5 INFORMATIONAL SUBMITTALS

A. Coordination Drawings: Conduit routing plans, drawn to scale, on which the following items are shown and coordinated with each other, using input from installers of items involved:

1. Structural members in paths of conduit groups with common supports.
2. HVAC and plumbing items and architectural features in paths of conduit groups with common supports.

PART 2 - PRODUCTS

2.1 METAL CONDUITS AND FITTINGS

A. Metal 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. Republic Conduit.
    b. Southwire Company.
    c. Western Tube and Conduit Corporation.
    d. Wheatland Tube Company.

2. Listing and Labeling: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
3. GRC: Comply with ANSI C80.1 and UL 6.
4. EMT: Comply with ANSI C80.3 and UL 797.

B. Metal Fittings:

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. Atkore International (Allied Tube & Conduit).
    b. Emerson Electric Co. (Automation Solutions - Appleton - O-Z/Gedney).
    c. Western Tube and Conduit Corporation.
    d. Wheatland Tube Company.

2. Comply with NEMA FB 1 and UL 514B.
3. Listing and Labeling: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
4. Fittings, General: Listed and labeled for type of conduit, cable, location, and use.
5. Fittings for EMT:

    a. Material: Steel.
    b. Type: compression.

6. Expansion Fittings: steel to match conduit type, complying with UL 651, rated for environmental conditions where installed, and including flexible external bonding jumper.

2.2 BOXES, ENCLOSURES, AND CABINETS

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. Eaton (Crouse-Hinds).
2. Hubbell Incorporated (Raco Taymac Bell).
3. nVent (Hoffman).

B. General Requirements for Boxes, Enclosures, and Cabinets: Boxes, enclosures, and cabinets installed in wet locations shall be listed for use in wet locations.

C. Sheet Metal Outlet and Device Boxes: Comply with NEMA OS 1 and UL 514A.

D. Luminaire Outlet Boxes: Nonadjustable, designed for attachment of luminaire weighing 50 lb. Outlet boxes designed for attachment of luminaires weighing more than 50 lb shall be listed and marked for the maximum allowable weight.

E. Small Sheet Metal Pull and Junction Boxes: NEMA OS 1.

F. Box extensions used to accommodate new building finishes shall be of same material as recessed box.

G. Device Box Dimensions: 4 inches square by 2-1/8 inches deep.

H. Gangable boxes are prohibited.

PART 3 - EXECUTION

3.1 RACEWAY APPLICATION

A. Indoors: Apply raceway products as specified below unless otherwise indicated:

1. Exposed, Not Subject to Physical Damage: EMT.
2. Exposed, Not Subject to Severe Physical Damage: EMT.
3. Concealed in Ceilings and Interior Walls and Partitions: EMT.
4. Damp or Wet Locations: GRC.
5. Boxes and Enclosures: NEMA 250, Type 1, except use NEMA 250, Type 4 stainless steel in institutional and commercial kitchens and damp or wet locations.

B. Minimum Raceway Size: 1/2-inch trade size.

C. Raceway Fittings: Compatible with raceways and suitable for use and location.

1. Rigid Steel Conduit: Use threaded rigid steel conduit fittings unless otherwise indicated. Comply with NEMA FB 2.10.
2. EMT: Use compression, steel fittings. Comply with NEMA FB 2.10.

D. Install surface raceways only where indicated on Drawings.

3.2 INSTALLATION

A. Comply with requirements in Section 260529 "Hangers and Supports for Electrical Systems" for hangers and supports.

B. Comply with NECA 1 and NECA 101 for installation requirements except where requirements on Drawings or in this article are stricter. Comply with NFPA 70 limitations for types of raceways allowed in specific occupancies and number of floors.

C. Keep raceways at least 6 inches away from parallel runs of flues and steam or hot-water pipes. Install horizontal raceway runs above water and steam piping.

D. Complete raceway installation before starting conductor installation.

E. Arrange stub-ups so curved portions of bends are not visible above finished slab.

F. Install no more than the equivalent of three 90-degree bends in any conduit run except for control wiring conduits, for which fewer bends are allowed. Support within 12 inches of changes in direction.

G. Make bends in raceway using large-radius preformed ells. Field bending shall be according to NFPA 70 minimum radii requirements. Use only equipment specifically designed for material and size involved.

H. Conceal conduit within finished walls, ceilings, and floors unless otherwise indicated. Install conduits parallel or perpendicular to building lines.

I. Support conduit within 12 inches of enclosures to which attached.

J. Stub-Ups to Above Recessed Ceilings:

1. Use EMT, or RMC for raceways.
2. Use a conduit bushing or insulated fitting to terminate stub-ups not terminated in hubs or in an enclosure.

K. Threaded Conduit Joints, Exposed to Wet, Damp, Corrosive, or Outdoor Conditions: Apply listed compound to threads of raceway and fittings before making up joints. Follow compound manufacturer's written instructions.

L. Terminate threaded conduits into threaded hubs or with locknuts on inside and outside of boxes or cabinets. Install bushings on conduits up to 1-1/4-inch trade size and insulated throat metal bushings on 1-1/2-inch trade size and larger conduits terminated with locknuts. Install insulated throat metal grounding bushings on service conduits.

M. Install raceways square to the enclosure and terminate at enclosures with locknuts. Install locknuts hand tight plus 1/4 turn more.

N. Do not rely on locknuts to penetrate nonconductive coatings on enclosures. Remove coatings in the locknut area prior to assembling conduit to enclosure to assure a continuous ground path.

O. Cut conduit perpendicular to the length. For conduits 2-inch trade size and larger, use roll cutter or a guide to make cut straight and perpendicular to the length.

P. Install pull wires in empty raceways. Use polypropylene or monofilament plastic line with not less than 200-lb tensile strength. Leave at least 12 inches of slack at each end of pull wire. Cap underground raceways designated as spare above grade alongside raceways in use.

Q. 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.

R. 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.

S. Horizontally separate boxes mounted on opposite sides of walls so they are not in the same vertical channel.

T. Locate boxes so that cover or plate will not span different building finishes.

U. Support boxes of three gangs or more from more than one side by spanning two framing members or mounting on brackets specifically designed for the purpose.

V. Fasten junction and pull boxes to or support from building structure. Do not support boxes by conduits.

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 260533

SECTION 260553 - IDENTIFICATION FOR ELECTRICAL SYSTEMS

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. Color and legend requirements for raceways and conductors.
2. Labels.
3. Cable ties.

1.3 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 electrical identification products.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Comply with ASME A13.1.

B. Comply with NFPA 70.

C. Comply with 29 CFR 1910.144 and 29 CFR 1910.145.

D. Adhesive-attached labeling materials, including label stocks, laminating adhesives, and inks used by label printers, shall comply with UL 969.

E. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes.

1. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.

2.2 COLOR AND LEGEND REQUIREMENTS

A. Raceways and Cables Carrying Circuits at 600 V or Less:

1. Black letters on an orange field.
2. Legend: Indicate voltage and system or service type.

B. Color-Coding for Phase- and Voltage-Level Identification, 600 V or Less: Use colors listed below for ungrounded feeder and branch-circuit conductors.

1. Color shall be factory applied or field applied for sizes larger than No. 8 AWG if authorities having jurisdiction permit.
2. Colors for 208/120-V Circuits:

    a. Phase A: Black.
    b. Phase B: Red.
    c. Phase C: Blue.

3. Color for Neutral: White.
4. Color for Equipment Grounds: Green.

C. Equipment Identification Labels:

1. Black letters on a white field.

2.3 LABELS

A. Self-Adhesive Wraparound Labels: Preprinted, 3-mil-thick, polyester flexible label with acrylic pressure-sensitive adhesive.

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. Ideal Industries, Inc.
    c. Panduit Corp.

2. Self-Lamination: Clear; UV-, weather- and chemical-resistant; self-laminating, protective shield over the legend. Labels sized such that the clear shield overlaps the entire printed legend.
3. Marker for Labels: Machine-printed, permanent, waterproof, black ink recommended by printer manufacturer.

2.4 CABLE TIES

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. HellermannTyton.
2. Ideal Industries, Inc.
3. 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 according to ASTM D638: 12,000 psi.
3. Temperature Range: Minus 40 to plus 185 deg F.
4. Color: Black, except where used for color-coding.

C. Plenum-Rated Cable Ties: Self-extinguishing, UV stabilized, one piece, and self-locking.

1. Minimum Width: 3/16 inch.
2. Tensile Strength at 73 Deg F according to ASTM D638: 7000 psi.
3. UL 94 Flame Rating: 94V-0.
4. Temperature Range: Minus 50 to plus 284 deg F.
5. Color: Black.

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 each 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. System Identification for Raceways and Cables under 600 V: Identification shall 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.

G. Elevated Components: Increase sizes of labels, signs, and letters to those appropriate for viewing from the floor.

H. Self-Adhesive Wraparound Labels: Secure tight to surface at a location with high visibility and accessibility.

I. Self-Adhesive Labels:

1. On each item, install unique designation label that is consistent with wiring diagrams, schedules, and operation and maintenance manual.
2. Unless otherwise indicated, provide a 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 inches high.

J. Self-Adhesive Vinyl Tape: Secure tight to surface at a location with high visibility and accessibility.

1. Field-Applied, Color-Coding Conductor Tape: Apply in half-lapped turns for a minimum distance of 6 inches where splices or taps are made. Apply last two turns of tape with no tension to prevent possible unwinding.

K. Cable Ties: General purpose, for attaching tags, except as listed below:

1. Outdoors: UV-stabilized nylon.
2. 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, 600 V or Less, for Branch Circuits, More Than 20 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-foot maximum intervals in straight runs, and at 25-foot maximum intervals in congested areas.

D. Equipment Identification Labels:

1. Indoor Equipment: Self-adhesive label Laminated acrylic.

END OF SECTION 260553

SECTION 260923 - LIGHTING CONTROL DEVICES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Indoor occupancy and vacancy sensors.
   2. Switchbox-mounted occupancy sensors.
   3. Conductors and cables.

B. Related Requirements:
   1. Section 262726 "Wiring Devices" for wall-box dimmers, non-networkable wall-switch occupancy sensors, and manual light switches.

1.2 ACTION SUBMITTALS

A. Product Data:

   1. For each type of product.

B. Shop Drawings:

   1. Show installation details for the following:

      a. Occupancy sensors.
      b. Vacancy sensors.

   2. Interconnection diagrams showing field-installed wiring.
   3. Include diagrams for power, signal, and control wiring.

1.3 INFORMATIONAL SUBMITTALS

A. Sample Warranty: For manufacturer's warranties.

1.4 WARRANTY

A. Special Extended Warranty: Manufacturer and Installer warrant that installed lighting control devices perform in accordance with specified requirements and agree to repair or replace, including labor, materials, and equipment, devices that fail to perform as specified within extended warranty period.

   1. Failures include, but are not limited to, the following:
      a. Faulty operation of lighting control devices.

   2. Extended Warranty Period: Four year(s) from date of Substantial Completion.

2.1 INDOOR OCCUPANCY AND VACANCY SENSORS

A. Approved Manufacturers:
   1. Cooper Lighting Solutions
   2. Acuity Brands
   3. Leviton

B. General Requirements for Sensors:

   1. Ceiling-mounted, indoor occupancy and vacancy sensors.
   2. Dual technology – PIR and Ultrasonic.
   3. 120V Line-Voltage Rated.
   4. Hardwired connection to switch.
   5. Listed and labeled in accordance with NFPA 70, by a qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.
   6. Operation:

      a. Occupancy Sensor: Unless otherwise indicated, turn lights on when coverage area is occupied, and turn them off when unoccupied; with a time delay for turning lights off, adjustable over a minimum range of 1 to 15 minutes.
      b. Vacancy Sensor: Unless otherwise indicated, lights are manually turned on and sensor turns lights off when the room is unoccupied; with a time delay for turning lights off, adjustable over a minimum range of 1 to 15 minutes.
      c. Combination Sensor: Unless otherwise indicated, sensor must be programmed to turn lights on when coverage area is occupied and turn them off when unoccupied, or to turn off lights that have been manually turned on; with a time delay for turning lights off, adjustable over a minimum range of 1 to 15 minutes.

   7. Sensor Output: Sensor is powered from the 120V lighting circuit.
   8. Power: Line voltage.
   9. Power Ratings: Dry contacts rated for 20 A LED load at 120 and 277 V(ac).
   10. Mounting:

      a. Sensor: Suitable for mounting in any position in a standard device box or outlet box.
      b. Time-Delay and Sensitivity Adjustments: Integral to sensor via dial knobs or dip-switch.

   11. Indicator: Digital display, or LED indicators to show when motion is detected during testing and normal operation of sensor.
   12. Bypass Switch: Override the "on" function in case of sensor failure.
   13. Automatic Light-Level Sensor: Adjustable from 2 to 200 fc (21.5 to 2152 lx); turn lights off when selected lighting level is present.

C. Dual-Technology Type: Ceiling mounted; detect occupants in coverage area using PIR and ultrasonic detection methods. The technology or combination of technologies that control on-off functions is selectable in the field by operating controls on unit.

1. Sensitivity Adjustment: Separate for each sensing unit.
2. Detector Sensitivity: Detect occurrences of 6 inch (150 mm) minimum movement of any portion of a human body that presents a target of not less than 36 sq. inch (23 200 sq. mm) and detect a person of average size and weight moving not less than 12 inch (305 mm) in either a horizontal or a vertical manner at an approximate speed of 12 inch/s (305 mm/s).
3. Detection Coverage (Standard Room): Detect occupancy anywhere within a circular area of 1000 sq. ft. (93 sq. m) when mounted on a 96 inch (2440 mm) high ceiling.
4. Detection Coverage (Room, Wall Mounted): Detect occupancy anywhere within a 180-degree pattern centered on the sensor over an area of 2000 sq. ft. (220 sq. m) when mounted 48 inch (1200 mm) above finished floor.

2.2 SWITCHBOX-MOUNTED OCCUPANCY SENSORS

A. Approved Manufacturers:
1. Cooper Lighting Solutions
2. Acuity Brands
3. Leviton

B. General Requirements for Sensors: Automatic-wall-switch occupancy sensor with manual on-off switch, suitable for mounting in a single gang switchbox using hardwired connection.

1. Listed and labeled in accordance with NFPA 70, by a qualified electrical testing laboratory recognized by authorities having jurisdiction and marked for intended location and application.
2. Occupancy Sensor Operation: Unless otherwise indicated, turn lights on when coverage area is occupied, and turn lights off when unoccupied; with a time delay for turning lights off, adjustable over a minimum range of 1 to 15 minutes.
3. Operating Ambient Conditions: Dry interior conditions, 32 to 120 deg F (0 to 49 deg C).
4. Switch Rating: Not less than 1200 VA LED load at 120 V, 1200 VA LED load at 277 V.

C. Wall-Switch Sensor:

1. Standard Range: 180-degree field of view, field adjustable from 180 to 40 degrees; with a minimum coverage area of 900 sq. ft. (84 sq. m).
2. Sensing Technology: Dual technology - PIR and ultrasonic.
3. Switch Type: SP, field-selectable automatic "on," or manual "on," automatic "off."
4. Capable of controlling load in three-way application.
5. Voltage: Dual voltage - 120 and 277 V.
6. Ambient-Light Override: Concealed, field-adjustable, light-level sensor from 10 to 150 fc (108 to 1600 lx). The switch prevents the lights from turning on when the light level is higher than the set point of the sensor.
7. Concealed, field-adjustable, "off" time-delay selector at up to 30 minutes.
8. Concealed, "off" time-delay selector at 30 seconds and 5, 10, and 20 minutes.
9. Adaptive Technology: Self-adjusting circuitry detects and memorizes usage patterns of the space and helps eliminate false "off" switching.
10. Color: White.
11. Faceplate: Color matched to switch.

2.3 CONDUCTORS AND CABLES

A. Power Wiring to sensors Not smaller than No. 12 AWG. Comply with requirements in Section 260519 "Low-Voltage Electrical Power Conductors and Cables."

PART 3 - EXECUTION

3.1 INSTALLATION OF SENSORS

A. Coordinate layout and installation of ceiling-mounted devices with other construction that penetrates ceilings or is supported by them, including light fixtures, HVAC equipment, smoke detectors, fire-suppression systems, and partition assemblies.

B. Install and aim sensors in locations to achieve not less than 90 percent coverage of areas indicated. Do not exceed coverage limits specified in manufacturer's instructions.

3.2 INSTALLATION OF WIRING

A. Wiring Method: Comply with Section 260519 "Low-Voltage Electrical Power Conductors and Cables." Minimum conduit size is 1/2 inch (13 mm).

B. Wiring within Enclosures: Separate power-limited and nonpower-limited conductors in accordance with conductor manufacturer's instructions.

C. Size conductors in accordance with lighting control device manufacturer's instructions unless otherwise indicated.

D. Splices, Taps, and Terminations: Make connections only on numbered terminal strips in junction, pull, device, and outlet boxes; terminal cabinets; and equipment enclosures.

3.3 IDENTIFICATION

A. Identify components and power and control wiring in accordance with Section 260553 "Identification for Electrical Systems.

B. Label time switches and contactors with a unique designation.

3.4 FIELD QUALITY CONTROL

A. Field tests must be witnessed by authorities having jurisdiction

B. Tests and Inspections:

1. Operational Test: After installing time switches and sensors, and after electrical circuitry has been energized, start units to confirm proper unit operation.
2. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

C. Nonconforming Work:

1. Lighting control devices will be considered defective if they do not pass tests and inspections.
2. Remove and replace defective units and retest.

D. Prepare test and inspection reports.

E. Manufacturer Services:

1. Engage factory-authorized service representative to support field tests and inspections.

3.5 ADJUSTING

A. Occupancy Adjustments: When requested within 12 months from date of Substantial Completion, provide on-site assistance in adjusting lighting control devices to suit actual occupied conditions. Provide up to two visits to Project during other-than-normal occupancy hours for this purpose.

1. For occupancy and motion sensors, verify operation at outer limits of detector range. Set time delay to suit Owner's operations.
2. For daylighting controls, adjust set points and deadband controls to suit Owner's operations.
3. Align high-bay occupancy sensors using manufacturer's laser aiming tool.

END OF SECTION 260923

SECTION 262726 - WIRING DEVICES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. General-use switches, dimmer switches.
2. General-use switches, dimmer with integral vacancy sensor.

1.2 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.3 ACTION SUBMITTALS

A. Product Data:
1. Dimmer switches.

B. Samples:
1. One for each kind of dimmer switch and cover plate accessory specified, in each finish and color specified.

C. Field Quality-Control Submittals:

1. Field quality-control reports.

1.4 INFORMATIONAL SUBMITTALS

A. Manufacturers' Instructions: Record copy of official installation and testing instructions issued to Installer by manufacturer for the following:

1. Dimmers switches.

B. Sample warranties.

1.5 CLOSEOUT SUBMITTALS

1.6 MAINTENANCE MATERIAL SUBMITTALS

A. Extra Stock Items: Furnish extra materials to Owner that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Additional Dimmer and Dimmer/Vacancy Sensor Switches: Ten of each kind.

1.7 WARRANTY FOR DEVICES

A. Special Manufacturer Extended Warranty: Manufacturer warrants that devices perform in accordance with specified requirements and agrees to provide repair or replacement of devices that fail to perform as specified within extended warranty period.

1. Extended Warranty Period: Five years from date of Substantial Completion; full coverage for labor, materials, and equipment.

PART 2 - PRODUCTS

2.1 DIMMER SWITCHES

A. General Use Dimmer Switch:

1. Approved Manufacturers:
   a. Cooper Lighting Solutions
   b. Acuity Brands
   c. Leviton

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 EOYX and UL 1472 Type I dimmer.

   b. Line voltage rated dimming control, 120V(ac).

4. Options:

   a. Device Color: White
   b. Switch Style: Rocker or Push button.
   c. Dimming Control Style: Slide.

5. Accessories:

   a. Cover Plate: 0.060 inch (1.5 mm) thick, high-impact thermoplastic (nylon) with smooth finish and color matching wiring device; from same manufacturer as wiring device.
   b. Securing Screws for Cover Plate: Metal with head color matching wallplate finish.

B. General Use Dimmer Switch with Integral Vacancy Sensor:

1. Approved Manufacturers:
   a. Cooper Lighting Solutions
   b. Acuity Brands
   c. Leviton

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 EOYX and UL 1472 Type I dimmer.

   b. General Requirements for Sensors:
      1) Wall-mounted, indoor dimmer switch with integral vacancy sensor.
      2) Dual technology – PIR and Ultrasonic.
      3) 120V Line-Voltage Rated.
      4) Hardwired connection to light fixtures and additional ceiling sensors.
      5) Listed and labeled in accordance with NFPA 70, by a qualified electrical testing laboratory recognized by authorities having jurisdiction and marked for intended location and application.
      6) Operation:
         a) Vacancy Sensor: Unless otherwise indicated, lights are manually turned on and sensor turns lights off when the room is unoccupied; with a time delay for turning lights off, adjustable over a minimum range of 1 to 15 minutes.

4. Options:

   a. Device Color: White
   b. Switch Style: Rocker or Push button.
   c. Dimming Control Style: Slide.

5. Accessories:

   a. Cover Plate: 0.060 inch (1.5 mm) thick, high-impact thermoplastic (nylon) with smooth finish and color matching wiring device; from same manufacturer as wiring device.
   b. Securing Screws for Cover Plate: Metal with head color matching wallplate finish.

PART 3 - EXECUTION

3.1 INSTALLATION OF SWITCHES

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. 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 260553 "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.

D. Interfaces with Other Work:

1. Coordinate installation of new products with existing conditions.

3.2 FIELD QUALITY CONTROL OF SWITCHES

A. Field tests and inspections must be witnessed by authorities having jurisdiction.

B. Tests and Inspections:

1. Perform tests and inspections in accordance with manufacturers' instructions.

C. Nonconforming Work:

1. Unit will be considered defective if it does not pass tests and inspections.
2. Remove and replace defective units and retest.

D. Assemble and submit test and inspection reports.

E. Manufacturer Services:

1. Engage factory-authorized service representative to support field tests and inspections.

3.3 SYSTEM STARTUP FOR SWITCHES

A. Engage a factory-authorized service representative to perform startup service.

1. Complete installation and startup checks for dimmer switches in accordance with manufacturer's instructions.

3.4 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 262726

SECTION 265119 - LED INTERIOR LIGHTING

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 LED luminaires:

B. Related Requirements:

1. Section 260923 "Lighting Control Devices" for automatic control of lighting, including occupancy sensors and vacancy sensors.

1.3 DEFINITIONS

A. CCT: Correlated color temperature.

B. CRI: Color Rendering Index.

C. Fixture: See Fixture Schedule.

D. IP: International Protection or Ingress Protection Rating.

E. LED: Light-emitting diode.

F. Lumen: Measured output of lamp and luminaire, or both.

G. Luminaire: Complete lighting unit, including lamp, reflector, and housing.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Arrange in order of luminaire designation.
2. Include data on features, accessories, and finishes.
3. Include physical description and dimensions of luminaires.
4. Include emergency lighting units, including batteries and chargers.
5. Include life, output (lumens, CCT, and CRI), and energy-efficiency data.
6. Photometric data and adjustment factors based on laboratory tests IES LM-79 and IES LM-80.

a. Manufacturers' Certified Data: Photometric data certified by manufacturer's laboratory with a current accreditation under the National Voluntary Laboratory Accreditation Program for Energy Efficient Lighting Products.

B. Shop Drawings: For nonstandard or custom luminaires.

1. Include plans, elevations, sections, and mounting and attachment details.
2. Include details of luminaire 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 wiring.

C. Product Schedule: For luminaires and lamps. Use same designations indicated on Drawings.

1.5 INFORMATIONAL SUBMITTALS

A. Coordination Drawings: Reflected ceiling plan(s) and other details, drawn to scale, on which the following items are shown and coordinated with each other, using input from installers of the items involved:

1. Luminaires.
2. Suspended ceiling components.
3. Partitions and millwork that penetrate the ceiling or extend to within 12 inches of the plane of the luminaires.
4. Structural members to which equipment and or luminaires will be attached.
5. Initial access modules for acoustical tile, including size and locations.
6. Items penetrating finished ceiling, including the following:

a. Other luminaires.
b. Air outlets and inlets.
c. Speakers.
d. Sprinklers.
e. Access panels.
f. Ceiling-mounted projectors.

B. Qualification Data: For testing laboratory providing photometric data for luminaires.

C. Product Certificates: For each type of luminaire.

D. Sample warranty.

1.6 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For luminaires and lighting systems to include in operation and maintenance manuals.

1. Provide a list of all lamp types used on Project; use ANSI and manufacturers' codes.

1.7 QUALITY ASSURANCE

A. Luminaire Photometric Data Testing Laboratory Qualifications: Luminaire manufacturer's laboratory that is accredited under the NVLAP for Energy Efficient Lighting Products.

B. Provide luminaires from a single manufacturer for each luminaire type.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Protect finishes of exposed surfaces by applying a strippable, temporary protective covering before shipping.

1.9 WARRANTY

A. Warranty: Manufacturer and Installer agree to repair or replace components of luminaires that fail in materials or workmanship within specified warranty period.

B. Warranty Period: Five year(s) from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Ambient Temperature: 41 to 104 deg F.

1. Relative Humidity: Zero to 95 percent.

2.2 LUMINAIRE 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. Factory-Applied Labels: Comply with UL 1598. Include recommended lamps. Locate labels where they will be readily visible to service personnel, but not seen from normal viewing angles when lamps are in place.

1. Label shall include the following lamp characteristics:

a. "USE ONLY" and include specific lamp type.
b. Lamp diameter, shape, size, wattage, and coating.
c. CCT and CRI.

C. Recessed luminaires shall comply with NEMA LE 4.

D. NRTL Compliance: Luminaires for hazardous locations shall be listed and labeled for indicated class and division of hazard by an NRTL.

2.3 MATERIALS

A. Metal Parts:

1. Free of burrs and sharp corners and edges.
2. Sheet metal components shall be steel unless otherwise indicated.
3. Form and support to prevent warping and sagging.

B. Steel:

1. ASTM A36/A36M for carbon structural steel.
2. ASTM A568/A568M for sheet steel.

C. Stainless Steel:

1. 1. Manufacturer's standard grade.
2. 2. Manufacturer's standard type, ASTM A240/240M.

D. Galvanized Steel: ASTM A653/A653M.

E. Aluminum: ASTM B209.

2.4 METAL FINISHES

A. Variations in finishes are unacceptable in the same piece. Variations in finishes of adjoining components are acceptable if they are within the range of approved Samples and if they can be and are assembled or installed to minimize contrast.

2.5 LUMINAIRE SUPPORT

A. Comply with requirements in Section 260529 "Hangers and Supports for Electrical Systems" for channel and angle iron supports and nonmetallic channel and angle supports.

B. Wires: ASTM A641/A641M, Class 3, soft temper, zinc-coated steel, 12 gage.

C. Rod Hangers: 3/16-inch minimum diameter, cadmium-plated, threaded steel rod.

D. Hook Hangers: Integrated assembly matched to luminaire, line voltage, and equipment with threaded attachment, cord, and locking-type plug.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Examine roughing-in for luminaire to verify actual locations of luminaire and electrical connections before luminaire installation.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Comply with NECA 1.

B. Install luminaires level, plumb, and square with ceilings and walls unless otherwise indicated.

C. Install lamps in each luminaire.

D. Supports:

1. Sized and rated for luminaire weight.
2. Able to maintain luminaire position after cleaning and relamping.
3. Provide support for luminaire without causing deflection of ceiling or wall.
4. Luminaire-mounting devices shall be capable of supporting a horizontal force of 100 percent of luminaire weight and a vertical force of 400 percent of luminaire weight.

E. Flush-Mounted Luminaires:

1. Secured to outlet box.
2. Attached to ceiling structural members at four points equally spaced around circumference of luminaire.
3. Trim ring flush with finished surface.

F. Wall-Mounted Luminaires:

1. Attached to structural members in walls.
2. Do not attach luminaires directly to gypsum board.

G. Ceiling-Grid-Mounted Luminaires:

1. Secure to any required outlet box.
2. Secure luminaire to the luminaire opening using approved fasteners in a minimum of four locations, spaced near corners of luminaire.
3. Use approved devices and support components to connect luminaire to ceiling grid and building structure in a minimum of four locations, spaced near corners of luminaire.

H. Comply with requirements in Section 260519 "Low-Voltage Electrical Power Conductors and Cables" for wiring connections.

3.3 IDENTIFICATION

A. Identify system components, wiring, cabling, and terminals. Comply with requirements for identification specified in Section 260553 "Identification for Electrical Systems."

3.4 FIELD QUALITY CONTROL

A. Perform the following tests and inspections:

1. Operational Test: After installing luminaires, switches, and accessories, and after electrical circuitry has been energized, test units to confirm proper operation.
2. Test for Emergency Lighting: Interrupt power supply to demonstrate proper operation. Verify transfer from normal power to battery power and retransfer to normal.

B. Luminaire will be considered defective if it does not pass operation tests and inspections.

C. Prepare test and inspection reports.

3.5 ADJUSTING

A. Occupancy Adjustments: When requested within 12 months of date of Substantial Completion, provide on-site assistance in adjusting the direction of aim of luminaires to suit occupied conditions. Make up to two visits to Project during other-than-normal hours for this purpose. Some of this work may be required during hours of darkness.

1. During adjustment visits, inspect all luminaires. Replace lamps or luminaires that are defective.
2. Parts and supplies shall be manufacturer's authorized replacement parts and supplies.

END OF SECTION 265119