Elmira Civil War Visitor Center

645 Winsor Ave
Elmira, NY 14902

CONTRACT DOCUMENTS AND TECHNICAL SPECIFICATIONS

PROJECT MANUAL

Prepared by:
AJH Design
111 East 14th Street
Elmira Heights, New York 14903

AJH Design Project No. 25-086

January 2, 2026

TABLE OF CONTENTS
This Table of Contents is for convenience only and is not part of the Contract Documents. The accuracy and completeness of this Table of Contents is not guaranteed, and in case of discrepancy between this Table of Contents, the latter shall govern.

Elmira Civil War Visitor Center
AJH Project #25-086

INVITATION TO BID

The Friends of the Elmira Civil War Prison Camp will receive sealed bids for the Proposed Visitor Center until 4:00 PM prevailing time on Tuesday, January 27th, 2025 at the AJH Design office at 111 E 14th St, Elmira, NY 14903.

The work includes **the construction of a wood-framed visitor center roughly 5,400 sf. The exterior shall consist of wd framed walls and metal board and batten siding. The roof shall be wood scissor truss with a metal roof. Under-slab plumbing shall be run to accommodate future plumbing fixtures.**

All bids are to be submitted on the Bid Forms contained in the Contract Documents.

A copy of the Contract Documents will be available to the public for inspection beginning 9:00 a.m., prevailing time, on January 5th, 2025 at:

AJH Design Office, 111 E 14th St, Elmira, NY 14903, Telephone 607-737-4638 between the hours of 9:00 a.m. and 4:00 p.m. daily (prevailing local time) except Saturday, Sunday, and holidays.

Sets of such documents may be obtained from the AJH design office at the above noted times with notice, for a non-refundable fee of $100.00. Electronic copies of the drawings by email will also be available free of charge. Contractors shall provide an email address and phone number for receipt of addenda.

Requests for Information will be received until Wednesday, January 14th. Responses to RFI's will be returned before End of Day Friday, January 16th.

This will be a single prime Davis-Bacon NYS prevailing wage project.

Proposals shall be sealed in an opaque envelope and addressed to:

Martin Chalk
The Friends of the Elmira Civil War Prison Camp
PO Box 681
Elmira, NY 14902

The proposal envelope must be sealed and clearly marked as the bid for **Proposed Elmira Civil War Visitor Center** with the name and address of the bidder.

Bids may be held by the Friends of the Elmira Civil War Prison Camp for up to 60 days from the date of opening for the purpose of reviewing the bids and investigating the qualifications of bidders prior to awarding the contract. The Friends of the Elmira Civil War Prison Camp reserves the right to reject any or all bids, to waive any irregularities, or to negotiate contract amounts.

Martin Chalk
Board of Directors
The friends of the Elmira Civil War Prison Camp

INSTRUCTIONS TO BIDDERS

1. USE OF SEPARATE BID FORMS

These Contract Documents include a complete set of bidding and Contract forms which are for the convenience of Bidders and are not to be detached from the Contract Documents or filled out, or executed. Separate copies of Bid forms are furnished for that purpose.

2. STATEMENT OF WORK

The Contractor shall furnish all supervision, labor, and materials, machinery, tools and equipment, and services, and complete work in an efficient and workmanlike manner.

3. INTERPRETATIONS OR ADDENDA

No oral interpretation will be made to any Bidder as to the meaning of the Contract Documents or any part thereof. Every request for such an interpretation shall be made in writing to the Owner. Any inquiry received prior to the date fixed for the opening of Bids will be given consideration. Every interpretation made to a Bidder will be in the form of an Addendum to the Contract Documents and when issued will be mailed to each person holding Contract Documents, but it shall be the Bidder's responsibility to make inquiry as to the Addenda issued. All such Addenda shall become part of the Contract Documents and all Bidders shall be bound by such Addenda, whether or not received by the Bidders.

Each bidder must inform himself fully of the conditions relating to the labor under which the work is now being or will be performed. Failure to do so will not relieve a successful Bidder of his obligations to furnish all material and labor necessary to carry out the provisions set forth in his Bid. Insofar as possible, the Contractor, in the carrying out of his work, must employ such methods or means as will not cause any interruption or interference with the work of any other Contractor. The Contractor shall schedule his work in cooperation with other Contractors and their schedules so that efficient and coordinated progress of all work occurs.

4. INSPECTION OF SITE

It is understood and agreed that the Contractor has, by careful examination, satisfied himself as to the nature and location of the work, the conformation of the ground, the character, quality and quantity of the materials to be encountered, the character of equipment and facilities needed preliminary to and during the prosecution of the work, the general and local conditions, and all other matters which can in any way affect the work under this Contract, including unfavorable conditions that may be encountered in the work, whether apparent upon surface inspection or disclosed only in the process of progressing the work. The Owner makes no representation as to the soil conditions to be encountered. No verbal agreement or conversation with any officer, agent or employee of the Owner, either before or after the execution of this Contract, shall affect or modify any of the terms or obligations herein contained.

5. AGREEMENT

The agreement is only to be signed by the winning bidder. The winning bidder will be notified of the award and will be given copies of the agreement to sign and return. Once returned Friends of the Elmira Civil War Prison Camp officials will inspect and sign the agreement upon which the notice to proceed will be given.

6. ALTERNATIVE BIDS

No alternative Bids will be considered unless specifically requested. Provide Add or Deduct to the alternates listed.

7. BIDS

a. All bids must be submitted on forms contained herein and shall be subject to all requirements of the Contract Documents including the INSTRUCTIONS TO BIDDERS. All Bids must be regular in every respect and no interlineations, excisions or special conditions shall be made or included in the Proposal Form by the Bidder.

b. Bid Documents including the Bid, the Bid Guaranty (if required), the Non-Collusion Affidavit and the Statement of Bidder's Qualifications (if requested) shall be enclosed in envelopes (outer and inner) both of which shall be sealed and clearly labeled with the project name, name of Bidder, and date and time of bid opening in order to guard against premature opening of the bid.

c. Any Bid on which there is an alteration of or departure from the Bid form hereto attached may be considered irregular and as such may be rejected as informal.

d. If the Contract is awarded it will be awarded to the Bidder on the basis of the Bid most favorable to the Owner. In most cases the Contract shall be awarded based upon the lowest bid. The Contract will require the completion of work according to the Contract Documents.

e. Each Bidder shall include in his Bid, in the appropriate spaces therefore, the estimated cost of performing the work including all items of overhead, and without credit for salvaged materials.

8. BID GUARANTY

a. The bid for each project shall be accompanied by a Bid Guaranty which shall not be less than five per cent (5%) of the total estimated cost of the work including all items of overhead. At the option of the Bidder, the guaranty may be a certified check, bank draft, or a Bid bond approved by The Friends of the Elmira Civil War Prison Camp. No Bid will be considered unless it is accompanied by the required guaranty. Certified checks or bank drafts must be payable to the order of The Friends of the Elmira Civil War Prison Camp. Cash deposits will not be accepted. The Bid guaranty shall insure the execution of the Agreement and the furnishing of the surety bond or bonds by the successful Bidder, all as required by the Contract Documents.

b. Revised Bids submitted before the opening of Bids, representing an increase in excess of two per cent (2%) of the original Bid, must have the Bid guaranty adjusted accordingly, otherwise the Bid will not be considered.

c. Certified checks or bank drafts, or the amount thereof, and Bid bonds, of unsuccessful Bidders will be returned as soon as practicable after the opening of Bids.

9. COLLUSIVE AGREEMENTS

a. Each bidder submitting a bid for any portion of the work contemplated by the documents on which bidding is based shall execute and attach thereto a certification to the effect that he has not colluded with any other person, firm, or corporation in regard to any bid submitted.

b. Before executing any subcontract, the successful bidder shall submit the name of any proposed subcontractor for prior approval.

10. STATEMENT OF BIDDER'S QUALIFICATIONS (if requested)

Each Bidder shall upon request of the Owner submit on the form furnished for that purpose, a copy of which is included in the Contract Documents, a statement of the Bidder's qualifications, his construction experience, and his organization and equipment available for the work contemplated; and when specifically requested by the Owner, a detailed financial statement. The Owner shall have the right to take such steps as it deems necessary to determine the ability of the Bidder to perform his obligations under the Contract, and the Bidder shall furnish the Owner all such information and data for this purpose as he may request. The right is reserved to reject any Bid where an investigation of the available evidence or information does not satisfy the Owner that the Bidder is qualified to carry out properly the terms of the Contract.

11. CORRECTIONS

Erasures or other changes in the Bid must be explained or noted over the signature of the Bidder.

12. TIME FOR RECEIVING BIDS

a. Bids received prior to the time of opening will be securely kept unopened. The officer whose duty it is to open them will decide when the specified time has arrived, and no Bid received thereafter will be considered; except that when a Bid arrives by mail after the time fixed for opening, but before the reading of other bids is completed, and it is shown to the satisfaction of the Owner that the non-arrival on time was due solely to delay in the mails for which the Bidder was not responsible, such Bid will be received and considered.

b. Bidders are cautioned that, while telegraphic modifications of Bids may be received as provided above, such modifications, if not explicit and if in any sense subject to misinterpretation, shall make the Bid so modified or amended, subject to rejection.

13. OPENING OF BIDS

At the time and place fixed for the opening of Bids, the Owner will cause to be opened and publicly read aloud every Bid received within the time set for receiving Bids, irrespective of any irregularities therein. Bidders and other persons properly interested may be present, in person or by representative.

14. WITHDRAWAL OF BIDS

Bids may be withdrawn on written request dispatched by the Bidder in time for delivery in the normal course of business prior to the time fixed for opening; provided that written confirmation or any telegraphic withdrawal over the signature of the Bidder is placed in the mail and postmarked prior to the time set for Bid. The Bid guaranty of any Bidder withdrawing his Bid in accordance with the foregoing conditions will be returned promptly.

15. AWARD OF CONTRACTS: REJECTION OF BIDS

a. The Contract will be awarded to the responsible Bidder complying with the conditions of the INVITATION FOR BIDS provided such Bid is reasonable and it is to the best interest of the Owner. The Owner, however, reserves the right to reject any and all Bids and to waive any informality in Bids received whenever such rejection or waiver is in its interest. The Bidder to whom the award is made will be notified at the earliest possible date.

b. The Owner reserves the right to consider unqualified to perform the Contract any Bidder who does not habitually perform with his own forces the major portions of his work.

c. The owner must award the contract within 30 days of the bid opening. Bidders have the right to withdraw their bids and receive the full amounts their bid bonds if the owner does not award the bid within 30 days.

16. EXECUTION OF AGREEMENT; PERFORMANCE AND PAYMENT BOND

a. Subsequent to the award within ten days after the prescribed forms are presented for signature, the successful Bidder shall sign and return to the Owner three (3) copies of the Agreement.

b. Having satisfied all conditions of award as set forth elsewhere in these documents, the successful Bidder shall, within the period specified in Paragraph "a" above, furnish a surety bond in a penal sum of not less than the amount of estimated cost of the work including all items of overhead, as set out in the accepted proposal as security for the faithful performance of the Contract, and for the payment of all persons, firms, or corporations to whom the Contractor may become legally indebted for labor, materials, tools, equipment, services of any nature, employed or used by him performing the work. Such bond shall bear the same date as, or date subsequent to, the date of the Agreement. The current power of attorney for the person who signs for any surety company shall be attached to such bond. This bond shall signed by a guaranty or surety company approved by the Owner's attorney.

c. The failure of the successful Bidder to execute such Agreement and to supply the required bond or bonds within seven days after the prescribed form are presented for signature, or

within period as the Owner may grant, based upon reasons, determined sufficient by the Owner, shall continue a default, and the Owner may either award the Contract to the lowest responsible Bidder or re-advertise for Bids, and may charge against the Bidder the difference between the amount for which a Contract for the work is subsequently executed, irrespective of whether the amount thus due exceeds the amount of the Bid Bond. If a favorable Bid is received by re-advertising, the defaulting Bidder shall have no claim for a refund.

17. WAGES AND SALARIES

a. Attention of Bidders is particularly called to the requirements concerning the payment of not less than the prevailing wage and salary rates specified in the Contract Documents and the condition of employment with respect to certain categories and classifications of employees.

b. The rates of pay set forth under New York State Prevailing Wage and Davis-Bacon are the minimum to be paid during the life of the Contract. It is, therefore, the responsibility of Bidders to inform themselves as to the local labor conditions such as the length of the work day and work week, overtime compensation, health and welfare contributions, labor supply and prospective changes or adjustment of rates.

18. EXEMPTIONS FROM SALES AND USE TAXES

The Municipality is exempt from paying State or local sales taxes on any materials, which it purchases. In computing their bids, Bidders shall not include the sales and compensating use taxes of New York State or County in New York State for any supplies or materials to be used by the Contractor for and on behalf of the Owner which are exempt from such taxes.

19. EQUAL EMPLOYMENT OPPORTUNITY

a. Attention of Bidders is particularly called to the requirement for ensuring that employees and applicants for employment are not discriminated against because of their race, creed, color, or natural origin.

b. Special attention is directed to the Affirmative Action requirements presented in this Contract, which shall apply, to the Contractor and any Subcontractor under the terms of this Contract.

20. APPROXIMATE ESTIMATE OF QUANTITIES

The approximate estimates will be used as a basis in determining the lowest Bidder. They are based upon an approximate estimate of the quantities of work to be performed, stated with as much accuracy as is possible in advance and must be understood as being approximate only; and the Contractor must not, at any time, after the execution of this Contract, dispute the accuracy of the estimate, or make any claims whatever against the Owner, its agents, or representatives based upon their alleged accuracy, or claim any misunderstanding in regard to the nature of the conditions, or the amount of work to be done, or the quantities of materials to be furnished under this Contract.

21. PREPARATION OF PROPOSAL

The Bidder shall state in the space allotted for the same on the proposal the gross sum in the manner hereafter described for which he proposes to furnish all material, labor and plant necessary for the completion of the work set forth in the drawings and specifications, together with a unit price for each of the separate items as called for.

Such gross sum shall be the sum of the products obtained by multiplying the quantities shown in the approximate estimates by the respective unit prices bid.

The unit prices and gross sum bid shall be indicated in words and by figures. In the case that the words and figures do not agree, the written words shall govern and the figures shall be disregarded.

The Bidder shall note that this proposal includes a form titled "Non-collusive Certification". This form must be properly filled out and submitted with the sealed bid. No proposal will be considered unless accompanied by this certificate.

22. FEDERAL REQUIREMENTS

The Bidder shall also complete the following federal requirements as part of the Bidding Documents.

1. Certification of Lobbying
2. Prevailing Wage Certifications
3. OSHA Requirements

BID FORM

GENERAL CONSTRUCTION

Proposal for: Project: Proposed Elmira Civil War Visitor Center

From: Name: _____

Address: _____

City/Zip: _____

Phone No. _____ Fax No. _____

Email: _____

To: Marty Chalk
Board of Directors
The Friends of the Elmira Civil War Prison Camp
PO Box 681
Elmira, NY 14902

Date: Tuesday, January 27th, 2026

Time: 2:00 PM

The bidder, in compliance with the invitation to bid, has carefully examined the contract documents, together with all addenda thereto, all as prepared by AJH Design and being familiar with the various conditions affecting the work, agrees to furnish all materials, perform all labor and do all else necessary to complete all Proposed Elmira Civil War Visitor Center work in accordance with the intent of the contract documents for the Total Sum of:

BASE BID #1: Concrete foundation and slab, front & rear sidewalk slab and entry covering, all exterior walls NOT including insulation nor interior gwb, roof, under slab piping with stub up to all future fixtures, power to breaker box. This includes all work depicted in the bid documents and the separate contracts listed below. Please provide cost breakdown as separate line items listed below:

BASE BID #1 TOTAL:

_____

_____ Dollars ($ _____)

CONCRETE WORK:

_____

_____ Dollars ($ _____)

FRAMING & ROUGH CARPENTRY WORK:

_____

_____ Dollars ($ _____)

EXTERIOR SIDING WORK:

_____

_____ Dollars ($ _____)

DOORS & WINDOWS WORK:

_____

_____ Dollars ($ _____)

PLUMBING WORK:

_____

_____ Dollars ($ _____)

ELECTRICAL WORK:

_____

_____ Dollars ($ _____)

PROJECT COMPLETION

In submitting the proposal, it is understood that the unrestricted right is reserved by the Owner to reject any and all proposals, or to waive any informalities or technicalities in said proposal, and it is agreed that this proposal may not be withdrawn for a period of sixty (60) days from the opening thereof.

The undersigned hereby certifies that this proposal is genuine, and not sham or collusive, or made in the interest or in behalf of any person, firm or corporation not herein named; that the undersigned has not directly or indirectly induced or solicited any Bidder to refrain from bidding, and that the undersigned has not in any manner, sought by collusion to secure for himself an advantage over any other Bidder.
We acknowledge the following Addendum(s) and/or Bulletin(s):

Addendum/Bulletin No. _____ Dated _____

Addendum/Bulletin No. _____ Dated _____

Addendum/Bulletin No. _____ Dated _____

Addendum/Bulletin No. _____ Dated _____

The date of this proposal is _____, 2026.

SIGNATURES:

When the bidder is an individual:

_____ _____(seal)
Witness Bidder

When the bidder is a partnership:

_____(seal)

_____ _____(seal)
Witness

_____(seal)

When the bidder is a Corporation:

_____

by: _____
President

Attest: _____
Secretary

(Corporate Seal)

SECTION 00 4114
CERTIFICATE OF NON-COLLUSION

By submission of this proposal, each proposer and each person signing on behalf of any proposer certifies, and in the case of a joint proposal each party thereto certifies as to its own organization, under penalty of perjury, that to the best of knowledge and belief:

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

A proposal shall not be considered for award nor shall any award be made where numbers 1, 2 and 3 above have not been complied with; provided however, that if in any case the proposer cannot make the foregoing certification, the proposer shall so state and shall furnish with the proposal a signed statement which sets forth in detail the reasons therefore. Where numbers 1, 2 and 3 above have not been compiled with, the proposal shall not be considered for award nor shall any award be me made unless the head of the purchasing unit of the subdivision, public department, agency or official thereof to which the proposal is made, or his designee, determines that such disclosure was not made for the purpose of restricting competition.

The fact that a proposer (a) has published price lists, rates, or tariffs covering items being procured, (b) has informed prospective customers of proposed pending publication of new or revised price lists for such items, or (c) has sold the same items to other customers at the same prices being bid, does not constitute, without more, a disclosure within the meaning of subparagraph one.

(Signed)_____

(Title)_____

Subscribed and sworn to before me **Official Seal of Notary**

This_____day of _____2025

_____
Signature of Notary

MUST RETURN WITH BID

GENERAL CONDITIONS – PART I

101. DEFINITIONS

Wherever used in any of the Contract Documents, the following meanings shall be given to the terms herein defined:

a. The term "Contract" means the Contract executed by the Friends of the Elmira Civil War Prison Camp and the Contractor, of which these GENERAL CONDITIONS, PART I & SPECIAL CONDITIONS, PART II, form a part.

b. The term "Owner" means the Friends of the Elmira Civil War Prison Camp which is authorized to undertake this Contract.

c. The term "Contractor" means the person, firm or corporation entering into the Contract with the Owner to perform the work.

d. The term "Project Area" means the Area specified on the Drawings within which the work is to be performed under this Agreement.

e. The term "Architect" means the Architect of the Owner, or anyone acting under him, duly authorized so to act.

f. The term "Contract Documents" means and shall include the following:

Executed Agreement, Addenda (if any), Invitation for Bids, Instructions to Bidders, Signed Copy of Bid, General Conditions Part I through III, Special Conditions, Technical Specifications, and Drawings (as listed in the Schedule of Drawings).

g. The term "Drawings" means the drawings listed in the SCHEDULE OF DRAWINGS.

h. The term "Technical Specifications" means that part of the Contract Documents which describes, outlines and stipulates the manner, methods and materials to be employed in the work.

i. The term "Addendum" or "Addenda" means any changes, revisions or clarifications of the Contract Documents which have been duly issued by the Owner to prospective Bidders prior to time of receiving bids.

102. SUPERINTENDENCE BY CONTRACTOR

a. Except where the Contractor is an individual and gives his personal superintendence to work, the Contractor shall have a competent superintendent, satisfactory to the Architect on the work at all times during working hours with full authority to act for him. The Contractor shall also provide an adequate staff for the proper coordination

and expediting of his work.

b. The Contractor shall not change superintendents on the job except for adequate cause.

c. The Contractor shall schedule the work, such schedule to be approved by the Architect. The Contractor shall be responsible for all work executed by him under the Agreement.

103. SUBCONTRACTS

a. The Contractor shall not execute an agreement, with any subcontractor or permit any subcontractor to perform any work included in this Contract, until he has received written approval of such subcontractor from the Architect.

b. No proposed subcontractor shall be disapproved by the Architect except for cause.

c. The Contractor shall be fully responsible for the acts and omissions of his subcontractors, and of persons either directly or indirectly employed.

d. The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to require compliance by each subcontractor with the applicable provisions of this Contract.

e. Nothing contained in this Contract shall create any contractual relationship between any subcontractor and the Owner.

104. OTHER CONTRACTS

The Owner may award, or may have awarded, other Contracts for additional work, and the Contractor shall cooperate fully with such other Contractors, by scheduling his own work with that to be performed under other Contracts as may be directed by the Architect. The Contractor shall not commit or permit any act which will interfere with the performance of work by any other Contractor as scheduled.

105. PROGRESS SCHEDULE AND NOTICE TO PROCEED

a. Progress Schedule

The Contractor shall promptly submit to the Architect, a carefully considered progress schedule showing the proposed dates of starting and of completing each of the major subdivisions of the work. The schedule shall also show percentage of completion on the first of each month and shall show that all work is to be completed within the Contract time.

b. Notice to Proceed

After execution of the agreement, a Notice to Proceed will be issued to the

Contractor which shall fix the starting and completion dates therefore, in accordance with the Contract time established in the "SPECIAL CONDITIONS" contained herein.

106. PAYMENTS

1a. The Contractor shall periodically, in accordance with the terms of the contract, submit to the Owner a requisition for a progress payment for the work performed and/or materials furnished to the date of the requisition less any amount previously paid to the Contractor. The Owner shall in accordance with the terms of the Contract approve and promptly pay the requisition for the progress payment less an amount necessary to satisfy any claims, liens or judgments against the Contractor which have not been suitably discharged and less any retained amount as hereafter described. The Owner shall retain not more than five percentum of each progress payment to the Contractor except that the Owner may retain in excess of five percentum but not more than ten percentum of each progress payment to the Contractor provided that there are not requirements by the Owner for the Contractor to provide a performance bond and a labor and material bond both in the full amount of the Contract. The Owner shall pay, upon requisition from the Contractor, for materials pertinent to the project which have been delivered to the site or offsite by the Contractor and/or subcontractor and suitably stored and secured as required by the Owner and the Contractor provided, the Owner may limit such payment to materials in short and/or critical supply and materials specially fabricated for the project each as defined in the Contract. When the work or major portions thereof as contemplated by the terms of the Contract are substantially completed, the Contractor shall submit to the Owner a requisition for payment of the remaining amount of the Contract balance. Upon receipt of such requisition the Owner shall approve and promptly pay the remaining amount of the Contract balance less two times the value of any remaining items to be completed and an amount necessary to satisfy any claims, liens or judgments against the Contractor which have not been suitably discharged. As the remaining items of work are satisfactorily completed or corrected, the Owner shall promptly pay, upon receipt of a requisition, for these items less an amount necessary to satisfy any claims, liens or judgments against the Contractor which have not been suitably discharged. Any claims, liens and judgments referred to in this section shall pertain to the project and shall be filed in accordance with the terms of the applicable Contract and/or applicable laws.

1b. As long as any lawful or proper direction concerning the work or material given by the Owner or Architect, or their representatives, shall remain uncomplied with, the Contractor shall not be entitled to have any estimate made for the purpose of payment, nor shall any estimate be rendered on account of work done or material furnished until such lawful or proper direction has been fully and satisfactorily complied with.

2. Payment by Contractors to Subcontractor. Within fifteen calendar days of the receipt of any payment from the Owner, the Contractor shall pay each of his subcontractors and materialmen the proceeds from the payment representing the value of the work

performed and/or materials furnished by the subcontractor and/or materialmen as reflected in the payment from the Owner less an amount necessary to satisfy any claims, liens or judgements against the subcontractor or materialmen which have not been suitably discharged and less any retained amount as hereafter described. The Contractor shall retain not more than five percentum of each payment to the subcontractor and/or materialmen except that the Contractor may retain in excess of five percentum but not more than ten percentum of each payment to the subcontractor provided that prior to entering into a subcontract with the Contractor, the subcontractor is unable or unwilling to provide a performance bond and a labor and material bond both in the full amount of the subcontract at the request of the Contractor. However, the Contractor shall retain nothing from those payments representing proceeds owed the subcontractor and/or materialmen from the Owner's payments to the Contractor for the remaining amounts of the contract balance as provided in subdivision one of this section. Within fifteen calendar days of the receipt of payment from the Contractor, the subcontractor and/or materialmen shall pay each of his subcontractors and materialmen in the same manner as the Contractor has paid the subcontractor. Nothing provided herein shall create any obligation on the part of the Owner or to see the payment of any moneys to any subcontractor or materialmen from any contractor nor shall anything provided herein serve to create any relationship in contract or otherwise, implied or expressed, between the subcontractor or materialman and the Owner.

3. In the event that the terms of payment on a public works project, as provided in this section, are preempted or superseded as a result of the provisions of any federal statute, regulation or rule applicable to the project, the terms of this section shall not apply.

4. Additional Requirements

A. After the final inspection and acceptance by the Architect of all work under the Contract, the Contractor shall prepare his requisition for final payment and submit it to the Architect for approval.

B. There shall be retained from the final payment or from any payments due the Contractor:

(1) All amounts which may be expended by the Owner for work done or materials furnished in carrying out any of the work done under the Contract which the Contractor has failed to do to the satisfaction of the Architect.

C. The Architect shall require with the final payment or with any payments due the Contractor, a Contractor's Certificate and Release and/or receipts from any or all persons performing work and supplying materials or services to the Contractor or any subcontractor, if this is deemed necessary to protect the Owner's interest. The Contractor shall obtain warranties and guarantees required for specific products, equipment or systems, executed in duplicate by responsible sub-contractors,

suppliers, and manufacturers, within ten (10) days after completion of the applicable item of work.

The Contractor shall also submit a set of marked, reproducible Record Drawings together with two (2) sets of black line prints of the reproducible drawings to the Owner. Submit documents with transmittal letter in duplicate, containing date, project title, Contractor's name(s), address and telephone number, list of documents, and signature of Contractor.

D. The Architect shall also require with the final payment, a Maintenance Bond for an amount of not less than 100% of the final Contract cost and for duration of one year from the date of the final payment. Said bond shall insure that repairs are made to any parts of the work which are found to be faulty because of poor materials or workmanship, or for any other reason.

E. The acceptance by the Contractor for the final estimate shall be, and shall operate as, a release to the Owner from all claims and liabilities to the Contractor for anything done and furnished for, or relating to, the work, or for any act, neglect, fault or default of the Owner, or of any person relating to or affecting the work.

107. CHANGES IN THE WORK

a. The Owner may make changes in the scope of the work required to be performed by the Contractor by making additions thereto, or by omitting work therefrom, without invalidating the Contract, and without relieving or releasing the Contractor from any of his obligations under the Contract or any guarantee given by him pursuant to the Contract provisions, and without affecting the validity of the guaranty bonds, and without relieving or releasing the surety or sureties of said bonds provided that the total net amount of the changes does not change the contract amount by more than 25%. All such work shall be executed under the terms of the original Contract unless it is expressly provided otherwise.

b. Except for the purpose of affording protection against any emergency endangering life or property, the Contractor shall make no change in the work, provided any extra or additional work, or supply additional labor, services or materials beyond that actually required for the execution of the Contract, unless in pursuance of a written order from the Architect authorizing the change. No claim for an adjustment of the Contract Price will be valid unless so ordered.

c. If applicable unit prices are contained in the Agreement the Architect shall order the Contractor to proceed with desired changes in the work, the value of such changes to be determined by the measured quantities involved and the applicable unit prices; provided that the net value of all changes does not increase or decrease the original total amount shown in the Agreement by more than twenty-five per cent (25%).

d. If applicable unit prices <u>are not</u> contained in the Agreement or if the total net changes increase or decrease the total Contract Price more than twenty-five per cent (25%)

the Architect shall before ordering the Contractor to proceed with desired changes, request an itemized proposal from him covering the work involved in the change after which the procedure shall be as follows:

1. If the proposal is acceptable the Architect will prepare the change order in accordance herewith for acceptance by the Contractor and

2. If the proposal is not acceptable, and prompt agreement between the two parties cannot be reached, the Architect may order the Contractor to proceed with the work on a cost-plus-limited basis. A cost-plus-limited basis is defined as the net cost of the Contractor's labor, materials and insurance plus fifteen percent (15%) of said net cost to cover overhead and profit, the total cost not to exceed a specified limit.

e. Each change order shall include in its final form:

1. A detailed description of the change in the work;

2. The Contractor's proposal (if any) or a confirmed copy thereof;

3. A definite statement as to the resulting change in the Contract Price and/or time and;

4. The statement that all work involved in the change shall be performed in accordance with Contract requirements except as modified by the change order.

108. CLAIMS FOR EXTRA COST

a. If the Contractor claims that any instructions by Drawings or otherwise involve extra cost or extension of time, he shall, within ten days after the receipt of such instructions, and in any event before proceeding to execute the work, submit his protest thereto in writing to the Architect, stating clearly and in detail the basis of his objections. No such claim will be considered unless so made.

b. Any discrepancies which may be discovered between actual conditions and those represented by the Drawings shall at once be reported to the Architect and work shall not proceed, except at the Contractor's risk, until written instructions have been received by him from the Architect.

c. If, on the basis of the available evidence, the Architect determines that an adjustment of the Contract Price and/or time is justifiable, the procedure shall then be as provided for in section - CHANGES IN THE WORK under GENERAL CONDITIONS, PART I.

109. TERMINATION, AND DELAYS

a. Termination of Contract. If the Contractor refuses or fails to execute the work with such diligence as will insure its completion within the time specified in these Contract Documents plus any extension thereof as provided in these Contract Documents, the Architect, by written notice to the Contractor, may terminate the Contractor's right to proceed with the work. Upon such termination, the Owner may take over the work and prosecute the same to completion, by contract or otherwise, and the Contractor and his sureties shall be liable to the Owner for any additional cost incurred by the Owner in its completion of the work. If the Contractor's right to proceed is terminated, the Owner may take possession of and utilize in completing the work such materials, tools, equipment and plant as may be on the site of the work and necessary therefore.

b. The Owner reserves the right to utilize the services of the next lowest available and responsible Bidder if, in the opinion of the Owner, the work or any portion thereof has not progressed at a satisfactory rate, or if any portion of the work is being done in an unsatisfactory manner and the Owner does not wish to terminate the services of the original Contractor, the next lowest available and responsible Bidder shall then progress the remaining work as a supplement to the original Contractor at the direction of the Architect.

c. Architecting Charges. When the work embraced in the Contract is not completed on or before the date as stipulated in TIME FOR COMPLETION under SPECIAL CONDITIONS, architecting and construction review expenses incurred by the Owner upon the work, from the completion date fixed by the above, to the completion date of the work, will be charged to the Contractor. Architecting and construction review expenses will be computed at the rate of two-hundred fifty dollars ($250.00) per day per man for each and every man and day the Architect needs to furnish architecting and construction review or both at the job site.

110. ASSIGNMENT OR NOVATION

In accordance with the provisions of Section 109 of the General Municipal Law, the Contractor is hereby prohibited from assigning, transferring, conveying, subletting or otherwise disposing of this Contract, or of his right, title, or interest therein, or his power to execute this Contract, without the previous consent in writing of the Owner.

111. DISPUTES

a. All disputes arising under this Contract or its interpretation whether involving law or fact or both, or extra work, and all claims for alleged breach of contract shall within (10) ten days of commencement of the dispute, be presented by the Contractor to the Architect for decision. All papers pertaining to claims shall be filed in quadruplicate. Such notice need not detail the amount of the claim but shall state the facts surrounding the claim in sufficient detail to identify the claim together with its character and scope. In the meantime, the Contractor shall proceed with the work as

directed. Any claim not presented within the time limit specified within this paragraph shall be deemed to have been waived, except that if the claim is of a continuing character and notice of the claim is not given within ten (10) days of its commencement, the claim will be considered only for a period commencing ten (10) days prior to the receipt by the Architect of notice thereof.

b. The Contractor shall submit in detail his claim and his proof thereof. Each decision by the Owner will be in writing and will be mailed to the Contractor by registered mail, return receipt requested.

c. If the Contractor does not agree with any decision of the Owner, he shall in no case allow the dispute to delay the work but shall notify the Owner promptly that he is proceeding with the work under protest and he may then accept the matter in question from the final release.

112. TECHNICAL SPECIFICATIONS AND DRAWINGS

Anything mentioned in the Technical Specifications and not shown on the Drawings, or shown on the Drawings and not mentioned in the Technical Specifications, shall be of like effect as if shown on or mentioned in both. In case of difference between Drawings and Technical Specifications, the Technical Specifications shall govern. In case of any discrepancy in Drawings or Technical Specifications, the matter shall be immediately submitted to the Architect, without whose decision said discrepancy shall not be adjusted by the Contractor, save only at his own risk and expense.

113. REQUESTS FOR SUPPLEMENTARY INFORMATION

It shall be the responsibility of the Contractor to make timely requests of the Architect for any additional information not already in his possession which should be furnished by the Architect under the terms of this Contract, and which he will require in the planning and execution of the work. Such requests shall be submitted in writing from time to time as the need is approached, but each shall be filed in ample time to permit appropriate action to be taken by all parties involved so as to avoid delay. The Contractor shall be fully responsible for any delay in his work or of others arising from his failure to comply with the provisions of this Section.

114. PERMITS AND CODES

a. The Contractor shall give all notices required by and comply with, all applicable laws, ordinances and codes of the Municipality and of New York State. All work shall comply with all applicable ordinances, and codes including all written waivers. Before beginning the work, the Contractor shall examine the Drawings and Technical Specifications for compliance with applicable ordinances and codes, and shall immediately report any discrepancy to the Architect. Where the requirements of the Drawings and the Technical Specifications fail to comply with such applicable ordinances or codes, the Architect will adjust the contract by Change Order to conform to such ordinances or codes (unless waivers in writing covering the

difference have been granted by the governing body or department) and make appropriate adjustment in the Contract Price. Should the Contractor fail to observe the foregoing provisions and do work at variance with any applicable ordinance or code including any written waivers (notwithstanding the fact that such methods are in compliance with the Technical Specifications) the Contractor shall correct the methods of doing such work without cost to the Owner but a change order will be issued to cover only the excess cost the Contractor would have been entitled to receive if the change had been made before the Contractor commenced work on the items involved.

b. The Contractor shall, at his own expense, secure and pay to the appropriate department of the Municipality the fees or charges for all permits for water, sidewalks, pavement cuts, and repaving of streets and sidewalks and all other permits necessary.

c. The Contractor shall comply with the applicable laws and ordinances governing the disposal of materials, debris, rubbish and trash on or off the Project Area, and shall commit no trespass on any public or private property in any operation due to or connected with the Project.

115. CARE OF WORK

a. The Contractor shall be responsible for all damages to person or property that occur as a result of his fault or negligence in connection with the prosecution of the work and shall be responsible for the proper care and protection of all work performed until completion and final acceptance, whether or not the same has been covered in whole or in part by payments made by the Owner.

b. In an emergency affecting the safety of life or property, on or adjoining the site, the Contractor shall act, either at his own discretion or as instructed by the Architect, to prevent such threatened loss or injury. Any compensation claimed by the Contractor on account of such emergency work will be determined by the Architect as provided in the section entitled, CHANGES IN THE WORK under GENERAL CONDITIONS, PART I.

c. The Contractor shall avoid damaging sidewalks, street, curbs, pavement, utilities or any other property (except that which is to be replaced or removed) either on or adjacent to the site. He shall repair, at his own expense and in a manner satisfactory to the Architect, any damage thereto caused by his operations.

116. ACCIDENT PREVENTION

a. The Contractor shall exercise proper precaution at all times for the protection of persons and property and shall be responsible for all damages to persons or property, either on or off the site, which occur as a result of his fault or negligence in connection with the prosecution of the work. The safety provisions of applicable laws and buildings and construction codes shall be observed and the Contractor shall

take or cause to be taken such additional safety and health measures as the Architect may determine to be reasonably necessary. Machinery, equipment and all hazards shall be guarded in accordance with the safety provisions of the "Manual of Accident Prevention in Construction" published by the Associated General Contractors of America, Inc., to the extent that such provisions are not in conflict with applicable local laws.

b. The Contractor shall maintain an accurate record of all cases of death, occupational disease, and injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment on work under the Contract. The Contractor shall promptly furnish the Architect with reports concerning these matters.

c. The Contractor shall indemnify and save harmless the Owner, the Architect, and each of their officers, agents or employees from any claims for damages resulting from personal injury and/or death suffered or alleged to have been suffered by any person as a result of any work conducted under this Contract.

117. SANITARY FACILITIES

The Contractor shall furnish, install and maintain ample sanitary facilities for the workmen. As the needs arise, a sufficient number of enclosed temporary toilets shall be conveniently placed as required by the sanitary codes of the Municipality and State Governments. Drinking water shall be provided from an approved source, so piped or transported as to keep it safe and fresh and served from single service containers or satisfactory types of sanitary drinking stands or fountains. All such facilities and services shall be furnished in strict accordance with existing and governing health regulations.

118. USE OF PREMISES

a. The Contractor shall confine his equipment, storage of materials and operations to the limits prescribed by ordinances or permits, or as may be directed by the Architect and shall not unreasonably encumber the Project Area.

b. The Contractor shall comply with all reasonable instructions of the Architect and the ordinances and codes of the Municipality regarding signs, advertising, traffic, fires, explosives, danger signals, barricades, and fire prevention.

119. REMOVAL OF DEBRIS, CLEANING, ETC.

All rubbish and debris found on the Project Area at the start of the work as well as that resulting from the construction activities or deposited on the site by others during the duration of the Contract shall be removed and legally disposed of by the Contractor who shall keep the Project Area and public rights-of-way reasonably clear at all times. Upon completion of the work, the Contractor shall remove all temporary construction, equipment, trash and debris of all kinds leaving the entire Project Area

in a neat condition.

120. REVIEW BY OWNER

The Owner, its authorized representatives and agents, shall at all times, have access to and be permitted to observe and review all work, materials, equipment, payrolls, personnel records, employment conditions, and other relevant data and records pertaining to this Contract, provided, however, that all instructions and approvals with respect to the work will be given to the Contractor only by the Owner through its authorized representatives or agents.

121. FINAL INSPECTION

When the work on the project is substantially completed, the Contractor shall notify the Architect in writing that the work will be ready for final inspection on a definite date which shall be stated in such notice. The notice shall bear the signed concurrence of the representative of the Architect having charge of inspection and shall be given at least ten (10) days prior to the date stated for final inspection. If the Architect determined that the work on the project is as represented, it will make the arrangements necessary to have final inspection commenced on the date stated in such notice, or as soon thereafter as is practicable.

122. DEDUCTION FOR UNCORRECTED WORK

If the Architect deems it not expedient to require the Contractor to correct work not done in accordance with the Contract Documents an equitable deduction from the Contract Price will be made by agreement between the Contractor and the Architect, and subject to settlement, in case of dispute, as herein provided.

123. INSURANCE

The Contractor shall comply with insurance requirements of AIA Document A201, as set forth herein:

a. Contractor's Liability Insurance

(1) The Contractor shall purchase from and maintain in a company or company lawfully authorized to do business in the jurisdiction in which the Project is located such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations under the Contract and for which the Contractor may be legally liable, whether such operation be by the Contractor or by the Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

- Claims under workers' or workmen's compensation, disability benefits, or other similar employee benefits acts which are applicable to the Work to be performed;

- Claims for damage because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;

- Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's or Subcontractor's employees;

- Claims for damages insured by usual personal injury liability coverage which are sustained (1) by a person as a result of an offense directly or indirectly related to the employment of such person by the Contractor, or (2) by another person;

- Claims for damages, other than to the Work itself because of injury to or destruction of tangible property, including loss of use resulting therefrom;

- Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle; and

- Claims involving contractual liability insurance applicable to the Contractor's obligation under Section 127a-h.

(2) The insurance required by Section 123a. (1) shall be written for not less than limits of liability specified in the Contract Documents or required by law, whichever coverage is greater. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from date of commencements of the Work until the date of final payment and termination of any coverage required to be by maintained after final payment.

(3) Certificates of Insurance acceptable to the Owner shall be filed with the Owner prior to the commencement of work. These Certificates and the insurance policies required under this Section 121 shall contain a provision that coverages afforded under the policies shall not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner by certified mail.

If any of the foregoing insurance coverages are required to remain in force after final payment and are reasonably available, an additional certificate evidencing continuation of such coverage shall be submitted prior to the final payment under Section 121. Information concerning reduction of coverage shall be furnished by the contractor with reasonable promptness in accordance with the Contractor's information and belief.

b. Owner's Liability Insurance

The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance. Optionally, the Owner's may purchase and maintain other insurance for self-protection against claims which may arise from operations under the Contract. The Contractor shall not be responsible for purchasing and maintaining this optional Owner's liability insurance unless specifically required by the Contact

Documents. **The Owner's Protective Liability shall include the Friends of the Elmira Civil War Prison Camp.**

c. Property Insurance

(1) Unless otherwise provided, the Owner shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Projects is located, property insurance in amount of the initial Contract Sum as well as subsequent modification thereto for the entire Work at the site on a replacement cost basis without voluntary deductibles. Such property insurance shall be maintained, unless otherwise proved in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made or until no person or entity other than the Owner has an insurable interest in the property required by this section, whichever is earlier. The insurance shall include interest of the Owner, the Contractor, Subcontractors, and Sub-subcontractors in the Work.

(2) Property insurance shall be on all-risk policy form and shall insure against the perils of fire and extended coverage and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, false-work, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's services and expenses required as a result of such insured loss. Coverage for other perils shall not be required unless otherwise provided in the Contract Documents.

(3) If the Owner does not intend to purchase such property insurance required by the Contract and with all of the coverages in the amount described above, the Owner shall so inform the Contractor in writing prior to commencement of the Work. The Contractor may then affect insurance which will protect the interests of the Contractor, Subcontractors, and Sub-subcontractors in the Work, and by appropriate Change in Work, the cost thereof shall be charged to the Owner. If the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain insurance as described above, without so notifying the Contractor, then the Owner shall bear all reasonable costs properly attributable thereto.

(4) If the property insurance requires minimum deductibles and such deductibles are identified in the Contract Documents, the Contractor shall pay costs and covered because of such deductibles. If the Owner or insurer increases the required minimum deductibles above the amounts so identified or if the Owner elects to purchase this insurance with voluntary deductibles amounts, the Owner shall be responsible for payment of the additional costs not covered because of such increase or voluntary deductibles. If deductibles are not identified in the Contract Documents, the Owner pay costs not covered because of deductibles.

(5) Unless otherwise provided in the Contract Documents, this property insurance shall

cover portions of the Work stored off the site after written approval of the Owner at the value established in the approval, and also portions of the Work in transit.

(6) Boiler and Machinery Insurance. The Owner shall purchase and maintain boiler and machinery insurance required by the Contract Documents or by law, which shall specifically cover such insured objects during installation and until final acceptance by the Owner; this insurance shall include interests of the Owner, Contractor, Subcontractors, and Sub-subcontractors in the Work, and the Owner and Contractor shall named insured.

(7) Loss of use insurance. The Owner, at the Owner's option, may purchase and maintain such insurance as will insure the Owner against loss of use of the Owner's property due to fire other hazards, however caused. The Owner waives all rights of action against the Contractor for loss of use of the Owner's property, including consequential losses due to fire and other hazards however caused.

(8) If the Contractor requests in writing that insurance for risks other than those described therein or for special hazards be included in the property insurance policy, the Owner shall, if possible include such insurance, and the cost thereof shall be charged to the Contractor by appropriate Change Order.

(9) If during the Project Construction period the Owner insures properties, real or personal or both, adjoining to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project drawing the construction period, the Owner shall waive all rights in accordance with the terms of Section 123.c.(11) for damages caused by fire or other perils covered by this separate property insurance. All separate policies shall provide this waiver of subrogation by endorsement or otherwise.

(10) Before an exposure to loss may occur, the Owner shall file with the Contractor a copy of each policy that includes insurance coverages required by Section 123c. Each policy shall contain all generally applicable conditions, definitions, exclusions and endorsements related to this Project. Each policy shall contain a provision that the policy will not be canceled or allowed to expire until at least 30 days' written notice has been given to the Contractor.

(11) Waivers of Subrogation. The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents and employees, each of the other, and (2) the Architect, Architect's consultants, separate contractors described in Article 6, if any, and any of their subcontractors, sub-subcontractors, agents and employees, for damages caused by fire other perils to the extent covered by property insurance obtained pursuant to Section 123c. or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by the Owner as fiduciary. The Owner or Contractor, as appropriate, shall require of the Architect, Architect's consultants, separate contractors described in Article 6, if any and the subcontractors, sub-subcontractors, agents, and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though the person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had insurable interest in the property damaged.

(12) A loss insured under Owner's property insurance shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insures, as their interests may appear, subject to requirements of any applicable mortgage clause and of Section 123.c.(14). The Contractor shall pay Subcontractors their just shares insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractor to make payments to their Sub-subcontractors in similar manner.

(13) If required in writing by a party in interest, the Owner as fiduciary shall, upon occurrence of any insured loss, give bond for proper performance of the Owner's duties. The cost of required bonds shall be charged against proceeds received as fiduciary. The Owner shall deposit in a separate account proceeds so received, which the Owner shall distribute in accordance with such agreements as the parties in interest may reach, or in accordance with an arbitration award in which case the procedure shall be provided as Paragraph 4.5.[1] If after such loss no other special agreement is made, replacement of damaged property shall be covered by appropriate Change Order.

(14) The Owner as fiduciary shall have power to adjust an settle a loss with insurers unless one of the parties in interest shall object in writing within five days after occurrence of loss to the Owner's exercise of this power, if such objection be made, arbitrators shall be chosen as provided in Paragraph 4.5.[2] The Owner as fiduciary shall, in that case, make settlement with insurers in accordance with directions of such arbitrators. If distribution of insurance proceeds by arbitration is required, the arbitrators will direct such distribution.

To fullest extent permitted by law, the Owner shall indemnify and fold harmless the Contractor, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages losses and expenses, including but not limited to attorneys fees, arising out of or resulting from performance of the Work in the affected area if in fact the material is asbestos or polycholorinated biphenyl (PCB) and has not been rendered harmless, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including loss of use resulting therefrom, but only to the extent caused whole or in part by negligent acts or missions of the Owner, anyone directly or indirectly employed by the Owner or anyone for whose acts the Owner may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by party indemnified hereunder. Such obligation shall not be construed to be negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in Subparagraph 101.4.

The limits and types of insurance shall be indicated in Exhibit A with samples of AIA Document G612, Part B and Certificate of Insurance.

In addition, the policies shall contain the following provisions:

1. The presence of the Owner's architects or their representative on the site of the work shall not invalidate the policy or insurance.

2. The policy shall not be invalidated by reason of any violation of any of the terms of any policy issued to the Contractor.

All insurance required to be procured and maintained as foresaid must be procured from Insurance Companies approved by the Owner and authorized to do business in New York State.

If any item any of the above required insurance policies should be canceled, terminated or modified so that the insurance is not in effect as required above, then, if the Owner shall so direct the Contractor shall suspend performance of work covered in the Contract. If said work is so suspended, no extension of time shall be due on account thereof. If said work is not suspended then the Owner may at its operation, obtain insurance affording coverage equal to that above required the cost of such insurance to be payable by the Contractor to the Owner.

The Owner, at his own cost and expense, may procure and maintain such insurance as will, in its opinion, protect it and others from contingent liability for damages because of bodily injury, including death, and property damage which may arise from operations under this Contract.

Neither the procurement nor the maintenance of any type of insurance by the Owner

or the Contractor shall in any way be construed or be deemed to limit, discharge, waive or release the Contractor from any of the obligations and risks imposed upon him by the Contract or to be a limitation on the nature or extent of such obligations and risks.

"The Contractor agrees to indemnify and save harmless the Owner, agents and employees, from and against all loss or expense (including costs and attorney's fees) by reason of liability imposed by law upon the Owner, for damages because of bodily injury, including death resulting there from, sustained by any person or persons or on account of damage to property, including loss of use thereof, whether caused by or contributed to by said Owner, its agents, employees, or others."

124. GENERAL GUARANTY

Neither the final certificates of payment nor any provision in the Contract Documents nor partial or entire use or occupancy of the premises by the Owner shall constitute an acceptance of work not done in accordance with the Contract or relieve the Contractor of liability in respect to any express warranties or responsibility for failure to comply with terms of Contract Documents. The Architect will give notice of observed noncompliance with reasonable promptness.

125. RISK OF LOSS

The Owner assumes no responsibility for the conditions of the Project Area nor for its continuance in the condition existing at the time of issuance of the Invitation for Bids thereafter. No adjustment of Contract Price or allowance for any change in conditions which may occur after the Invitation for Bids has been issued, will be made.

126. LIVE UTILITIES AND OTHER PROPERTY

a. The Contractor shall assume all responsibility for damage attributable to him to any property upon, or passing through, the Project Area, but excluded from the work or not owned by the Owner, such as utility lines, surface improvements, or like items.

b. If disconnections of underground utility services are required to be made in public thoroughfares, the Contractor shall comply with all local requirements and regulations respecting the barricading of streets, the removal and restoration of pavement, and other pertinent matters.

3. The Contractor shall develop and make all detail surveys necessary for construction, including slope stakes, batter boards, stakes for pile locations and other working points, lines and elevations. It will be the Contractor=s responsibility to engage competent workmen to payout the details of the construction work. No separate payment will be made for this time of work, the cost of such work is to be included in the various unit prices of the lump sum price bid for the construction project. The

Contractor shall have the responsibility to carefully preserve bench marks, reference points and stakes, and in the case of destruction thereof by the Contractor or resulting from his negligence, the Contractor shall be charged with the expense and damage resulting therefrom and shall be responsible for any mistakes that may be caused by the unnecessary loss or of such bench marks, references points and stakes.

127. RISKS ASSUMED BY THE CONTRACTOR

a. The Contractor solely assumes the following distinct and several risks whether they arise from acts or omissions, (whether negligent or not and whether supervisory or otherwise) of the Contractor, the Owner, the Architect, or his consultants, and each of their officers, agents or employees, of third persons or from any other cause, including unforeseen obstacles and difficulties which may be encountered in the prosecution of the work covered by the Contract, whether such risks are within or beyond the control of the Contractor and whether such risks involve a legal duty, primary or otherwise, imposed upon the Owner, the Architect or his consultants, except that the Contractor shall not be responsible for risks which arise from affirmative acts of the Owner, the Architect or his consultants committed with intent to cause the loss, damage and injuries herein below set forth:(1) The risk of loss or damage, direct or indirect, of whatever nature, to the work covered by the Contract or to any plant, equipment, tools, material or property furnished, used, installed or received by the Owner or by the Contractor or any subcontractor, materialman or workman or workmen performing services or furnishing materials for the work covered hereunder. In the event of such loss or damage, the Contractor shall forth with repair, replace and/or make good any such loss or damage without cost to the Owner.

(2) The risk of claims, just or unjust by third persons against the Contractor, the Owner, Architect, or his consultants, and each of their officers, agents or employees, on account of bodily injury (including wrongful death) and property damage (direct or consequential), and loss or damage of any kind whatsoever arising or alleged to arise out of or as a result of the work covered by the Contract (whether actually caused by or resulting from the performance of the Contract) or out of or in connection with the Contractor's operations or presence at or in the vicinity of the construction site, whether such claims are made and whether such injury, damage and loss is sustained at any time both before and after the final acceptance by the Owner of all work covered by the Contract.

b. The Contractor shall indemnify and save harmless the Owner, Architect and his consultants, and each of their officers, agents or employees, against all claims described above and for all costs and expenses incurred by them in the defense, settlement or satisfaction thereof, including attorneys' fees and court costs. If so directed, the Contractor shall at his own expense, defend against such claims.

c. The Contractor's obligations under this Section 127 shall not be deemed waived, limited or discharged by the enumeration or procurement of any insurance for

liability for damages.

d. Neither the final acceptance of the work to be performed hereunder, nor the making of any payment shall release the Contractor from his obligations under this Section 127. The enumeration elsewhere in the Contract of particular risks assumed by the Contractor or particular claims for which he is responsible shall not be deemed to limit the effect of the provisions of this Section 127 or to imply that he assumes or is responsible for only risks or claims of the type enumerated; and neither the enumeration in this Section 127 nor the enumeration elsewhere in the Contract of particular risks assumed by the Contractor or particular claims for which he is responsible shall be deemed to limit the risks which the Contractor would assume or the claims for which he would be responsible in the absence of such enumeration.

e. The obligations of the Contractor under this Section 127 shall not extend to the liability of the Architect or his consultants, their officers, agents or employees for property damage or bodily injuries arising out of the rendering of or the failure to render professional services by such insured or indemnitee, including:

(1) The preparation or approval of maps, plans, opinions, reports, surveys, designs or specifications and

(2) Supervisory, inspection or architecting services.

f. The obligations of the Contractor under this Section 127 shall not extend to the liability of the Owner, Architect, their consultants, officers, agents ad employees for property damage or bodily injury arising out of the sole negligence of the indemnitee.

g. It is intended by this Section 127 that the Contractor's responsibility to indemnify the Owner, Architect, his consultants and their officers, agents or employees, is in addition to all other obligations of the Contractor set forth in the Contract Documents and should this Section 127 be deemed inconsistent for any reason then this Section 127 will supersede in those instances.

h. No provision of this Contract which, directly or indirectly, imposes upon the Contractor the responsibility, in whole or in part, for preventing injury to person or damage to property, or which specified in whole or in part the means to be used by the Contractor to prevent such injury or damage or which imposes upon the Contractor directly or indirectly, the risk or loss or damage and/or liability for or the obligation to hold the Owner, the Architect, his consultants, or their officers, agents and employees harmless as to such injury and damage, shall create or give to third parties, any claim or right of action against the Contractor, Owner, Architect, his consultants or their officers, agents or employees beyond such as may legally exist irrespective of such provision or provisions.

128. RESPONSIBILITIES OF THE ARCHITECT

The Architect shall decide questions which may arise as to the quality and acceptability of materials furnished, work performed, rate of progress of work, interpretation of Drawings and Specifications and all questions as to the acceptable fulfillment of the Agreement on the part of the Contractor. The duties and responsibilities of the Architect as set forth herein shall not be extended except through written consent of the Architect and the Owner.

a. Observation of the Work: All materials and each part or detail of the work shall be subject at all times to observation by the Architect and the Owner, and the Contractor will be held strictly to the intent of the Contract Documents in regard to the Contract. Observations may be made at the site or at the source of material supply, whether mill, plant or shop. The Architect shall be allowed access to all parts of the work and shall be furnished with such information and assistance by the Contractor as is required to make his observations and construction review.

b. Acceptability of Work: The Architect's decision as to the acceptability or adequacy of the work shall be final and binding upon the Contractor. The Contractor agrees to abide by the Architect's decision relative to the performance of the work.

c. Architect's Decisions: All claims of the Owner or the Contractor shall be presented to the Architect for decision which shall be final.

d. Where a Shop Drawing or sample is required by the Specifications, no related Work shall be commenced until the submittal has been reviewed by the Architect.

e. Architect's review of Shop Drawings or samples shall not relieve Contractor from responsibility for any deviations from the Contract Documents unless Contractor has in writing called Architect's attention to such deviation at the time of submission and Architect has given written concurrence and approval to the specific deviation, nor shall any concurrence or approval by Architect relieve Contractor from responsibility for errors or omissions in the Shop Drawings.

129. REJECTED WORK AND MATERIALS

Any defective work whether the result of poor workmanship, use of defective materials, damage through carelessness or any other cause shall be removed at the Contractor's expense within ten days after written notice is given by the Owner, and the work shall be re-executed by the Contractor. The fact that the Architect may have previously overlooked such defective work shall not constitute an acceptance of any part of it.

130. CHARACTER OF WORKMEN

The Contractor shall at all times be responsible for the conduct and discipline of his employees and/or any Subcontractor or persons employed by Subcontractors. All

workmen must have sufficient knowledge, skill and experience to perform properly the work assigned to them. Any foreman or workman employed by the Contractor or subcontractor who does not perform his work in a skillful manner or appears to be incompetent or to act in a disorderly or intemperate manner shall, at the written request of the Owner, be discharged immediately and shall not be employed again in any portion of the work without the approval of the Owner.

131. SHOP DRAWINGS

The Contractor shall provide electronic (or a min. of 3 hard) copies of all shop drawings, setting schedules and such other drawings as may be necessary for the prosecution of the work in the shop and in the field as required by the Drawings, Specifications or the Architect's instructions. Deviations from the Drawings and Specifications shall be called to the attention of the Architect at the time of the first submission of shop drawings and other drawings for consideration. The Architect's review of any drawings shall not release the Contractor from responsibility for such deviations. Shop drawings shall be submitted according to a schedule prepared jointly by the Contractor and the Architect.

a. Contractor's Certification: When submitted for the Architect's review, shop drawings shall bear the Contractor's certification that he has reviewed, checked and approved the shop drawings, that they are in harmony with the requirements of the Project and with the provisions of the Contract Documents, and that he has verified all field measurements and construction criteria, materials, catalog numbers and similar data. Contractor shall also certify that the work represented by the shop drawings is recommended by the Contractor and the Contractor's guaranty will fully apply.

c. Architect will review with reasonable promptness Shop Drawings and samples, but Architect's review shall be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents and shall not extend to means, methods, sequences, techniques or procedures of construction or to safety precautions or programs incident thereto. The review of a separate item as such will not indicate approval of the assembly in which the item functions. Contractor shall make any corrections required by Architect and shall return the required number of corrected copies of Shop Drawings and resubmit new samples for review. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Architect on previous submittals. Contractor's stamp of approval on any Shop Drawing or sample shall constitute a representation to Owner and Architect that Contractor has either determined and verified all quantities, dimensions, field construction criteria, materials, catalog numbers, and similar data or assumes full responsibility for doing so, and that Contractor has reviewed or coordinated each Shop Drawing or sample with the requirements of the Work and the Contract Documents.

132. EXEMPTION FROM SALES AND COMPENSATING USE TAXES OF NEW YORK STATE AND OF CITIES AND COUNTIES

The Owner is exempt from payment of sales and compensating use taxes of New York State, and of cities, and counties, on all supplies and materials which are to become an integral component part of a structure, building, or real property, 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 a subcontractor or to supplies or materials not incorporated into the complete project.

The above exemption does not, however, apply to tools, machinery, equipment or other property purchased by, leased by or to the Contractor or a subcontractor or to supplies or materials not incorporated into the completed Project. The Contractor and his subcontractors shall be responsible for and pay 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.

It shall be the Contractor's responsibility to comply with all requirements of New York State.

133. O.S.H.A. REQUIREMENTS

It is the Contractors responsibility to meet the minimum guidelines of the Occupational Safety and Health Act, in particular, Part 1926, the Safety and Health Regulations for construction. The Village of Johnson City has the authority to issue a Stop Work Order if the applicable O.S.H.A. regulations are violated. The Stop Work Order will remain in effect until such violations of the O.S.H.A. regulations are violated. The Stop Work Order will remain in effect until such violations of the O.S.H.A. regulations have been rectified.

SPECIAL CONDITIONS - PART II

201. PROJECT AREA

645 Winsor Ave, Elmira, NY 14902

202. TIME FOR COMPLETION

The work which the Contractor is required to perform under this Contract shall be commenced at the time stipulated by the Owner in the "Notice to Proceed" to the Contractor and shall be fully completed within 120 calendar days after Notice to Proceed. See project dates below:

Bid Due Date:	01/27/2026
Construction Start Date:	02/04/2026
Construction End Date:	06/04/2026

203. RESPONSIBILITIES OF CONTRACTOR

Except as otherwise specifically stated in the Contract Documents and Technical Specifications, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, heat, power, transportation, superintendence, temporary construction of every nature, charges, levies, fees or other expenses incurred and all other services and facilities of every nature whatsoever necessary for his performance of the Contract within the specified time.

204. COMMUNICATIONS

a. All Notices, demands, requests, instructions, approvals, proposals and claims must be in writing.

b. Any notice to or demand upon the Contractor shall be sufficiently given, if delivered at the office of the Contractor stated on the signature page of the Agreement or at such other office as the Contractor may from time to time designate in writing to the Owner, or if deposited in the United States mail in a sealed, postage-prepaid envelope, or delivered with charges prepaid to any telegraph company for transmission, in each case addressed to such office.

c. All papers required to be delivered to the Owner shall, unless otherwise specified in writing to the Contractor, be delivered to the Friends of the Elmira Civil War Prison Camp, 645 Winsor Ave, Elmira, NY 14902, and any notice to or demand upon the Friends of the Elmira Civil War Prison Camp shall be sufficiently given if so delivered, or if deposited in the United States mail in a sealed, postage-prepaid envelope or delivered with charges prepared to any telegraph company for transmission to said Friends of the Elmira Civil War

Prison Camp at such address, or to any other representatives of the Friends of the Elmira Civil War Prison Camp or to such other address as the Friends of the Elmira Civil War Prison Camp may subsequently specify in writing to the Contractor for such purpose.

d. Any such notice shall be deemed to have been as of the time of actual delivery of (in the case of mailing) when the same should have been received in due course of post, or in the case of telegrams, at the time of actual receipt, as the case may be.

205. WORK NOT INCLUDED IN CONTRACT

The following are not included in the Contract:

a. Work noted on the drawings or mentioned in the Technical Specifications, or both, as not being a part of the Contract.
b. There shall be no HVAC work as part of the Contract

206. CONTRACT DOCUMENTS AND DRAWINGS

The Owner will furnish the Contractor without charge two (2) copies of the Contract Documents including drawings. Additional copies requested by the Contractor will be furnished at cost.

207. EXISTING UTILITIES; UTILITY SERVICES

The Contractor shall notify all utility customers before interrupting their service. A permanent, first-class replacement of the cutout portion of the original service connection shall be installed and inspected by the owner of the utility before backfilling.

The Contractor shall protect all utilities and subsurface structures encountered in the work. Because he may encounter some utilities and subsurface structures not shown on the plans, the Contractor shall proceed with caution in executing this work. Insofar as feasible, the Contractor shall not disturb existing utilities but shall support and sustain them. The Contractor shall repair all damage to any utilities including service connections encountered in the course of the work, regardless of character, function, condition, size, location, materials, construction, ownership, or interference with the alignment of any work to be built, whether such existing utilities, structures, or service connections are shown or not shown.

The Contractor is held responsible for all damage to all utility or other underground or surface structures, whether or not they are shown on the Contract Drawings, and he shall pay all costs for protecting them or for repairing and/or replacing them if they are damaged.

208. CARE OF PUBLIC AND PRIVATE PROPERTY

The Contractor shall take all necessary precautions to prevent damage to structures above and below ground and to protect and preserve property within and adjacent to the work.

Special care shall be exercised to minimize injury to trees and any damaged branches shall be properly pruned and all wounds covered with approved tree paint. This repair work shall be done on a daily basis without exception. Roots may be cut and removed up to 25 per cent of the estimated root area. Where more than 25 per cent may be required, the Engineer shall decide whether the tree shall be removed. When it becomes absolutely necessary to remove a tree, it will be completely removed including stump.

209. TEMPORARY SERVICE

The Contractor shall notify concerned property owners at least forty eight (48) hours in advance of his intention to open a trench, or for any reason whereby any public service might be interrupted. The Contractor shall again notify each property owner affected at least three hours in advance of his contemplated operation.

In the event that it is necessary to install temporary services, the Contractor shall cooperate fully with the utility company concerned. All work done in this regard for the convenience of the Contractor's operations shall be at his own expense.

210. MATERIAL

Unless otherwise indicated on the plans all material incorporated in the work shall be new and of the specified grade or better; it shall be neatly stored and protected, if necessary, until its incorporation in the work. Rejected material shall be immediately removed from the work.

When requested by the Engineer, the Contractor shall submit samples for laboratory inspection, or shall submit certificates from the Manufacturer that the material conforms to specifications.

211. CONSTRUCTION REVIEW

The Owner's representatives assigned to the Project for construction review shall have the authority to reject unsuitable material and to require the reinstallation of work improperly installed. These representatives do not have the authority to modify or relax any provisions of the plans. The acceptance of any work by the Engineer or his representatives during the course of construction is not in any way a final acceptance and does not relieve the Contractor of any responsibility for his work should any inferior workmanship or material become evident.

212. REFERENCE SPECIFICATIONS

When in these specifications reference is made to American Society of Testing Materials (ASTM), American National Standards Institute (ANSI), American Concrete Institute (ACI), American Institute of Steel Construction (AISC), American Iron and Steel Institute (AISI), American Welding Society (AWS), or Association of Official Agricultural Chemists (AOAC) specifications or standards, reference is made to the current edition of the noted specifications or standard revised to date of receipt of bids.

215. ENVIRONMENTAL CONSERVATION

No work shall be done before 7:00 a.m. or after 6:00 p.m., local time on a working day, on Sundays, or on legal holidays, except as necessary for the proper care and protection of work already performed, or during emergencies. The Contractor shall observe local ordinances regarding working hours.

The Contractor shall make every effort to minimize noise caused by his operations. Equipment shall be equipped with silencers or mufflers designed to operate with the least possible noise. The Contractor shall not permit the use of loud, abusive, obnoxious or profane language by his employees or by the employees of his subcontractors. The Contractor shall observe local ordinances regarding noise standards.

The Contractor shall minimize the introduction of noxious fumes into the air. Motor equipment shall be kept in repair and equipped with anti-pollution devices to cut down on exhaust emissions. The Contractor shall take active measures to control dust and air-borne debris resulting from his operations. Burning as a method of clearing or disposal will not be permitted.

The Contractor shall conduct his operations to minimize damage to natural watercourses, and shall not permit petroleum products or excessive amounts of silt, clay, or mud to enter any drainage system. The bed of natural watercourses shall be restored to normal gradient and cross section after being disturbed.

The Contractor shall not dispose of debris, refuse, or sanitary wastes in an open dump or in a natural watercourse, whether on public or private property, or in such places that undesirable wastes can eventually be exposed or carried to a natural watercourse.

The Contractor shall restrict his operations as nearly as possible to the immediate site. Unnecessary cutting of vegetation adjacent to the site is prohibited. Every effort shall be made to minimize erosion during and after construction and the site shall be returned to its original condition, except where improvements are indicated or required.
The Contractor shall not erect, or permit the erection of advertising signs. Only minimal identification and direction signs shall be permitted on the site. Unnecessary or obnoxious

posters, pictures, signs, symbols, drawings or writing on work, material or equipment, resulting from vandalism or other causes, shall be covered or removed by the Contractor.

The Contractor shall take affirmative action to prevent the misuse of our natural environment, wasting of our natural resources, or destruction of natural values

216. SPECIAL NOTES - PROHIBITION OF USE OF LEAD-BASED PAINT AND ELIMINATION OF LEAD-BASED PAINT HAZARD:

The Contractor shall comply with the Lead-Based Paint Poisoning Prevention Act as reads below:

A. Purpose.

This subpart A implements the provisions of 42 CFR Part 90, which are applicable to Federal agencies and which prohibit use of lead-based paint in residential structures constructed or rehabilitated by the Federal Government or with Federal assistance.

B. Definitions.

(a) "Lead-based paint", as defined in section 501(3), of the Lead-Based Paint Poisoning Prevention Act (84 Stat. 2080; 42 U.S.C. 4841 (3)), means any paint containing more than 1 percent lead by weight (calculated as lead metal) in the total nonvolatile content of liquid paints or in the dried film of paint already applied.

(b) "Applicable surfaces" means all interior surfaces and those exterior surfaces, such as stairs, decks, porches, railings, windows, and doors, which are readily accessible to children under 7 years of age (42 CFR 90.2 (g)).

(c) "Residential structure" means any house, apartment, or structure intended for human habitation, including any institutional structure where persons reside, such as an orphanage, boarding school dormitory, day care center or extended care facility (42 CFR 90.2(f)), and including nursing homes, intermediate care facilities, college housing, hospitals, group practice facilities, and community facilities.

(d) "Federally assisted construction or rehabilitation" means work financed with any form of Federal financial assistance, including grants, loans, advances, or proceeds of a HUD-guaranteed loan or a HUD - insured mortgage. For purposes of this part, "rehabilitation" and "rehabilitated" also include routine maintenance work which is financed by any of the foregoing forms of Federal financial assistance.

(e) "Health hazard" means cracking, scaling, peeling, and loose lead-based paint on applicable surfaces.

(f) "HUD-associated properties" means residential structures (as defined above when they are being constructed, purchased, leased, rehabilitated (as defined above), modernized, or improved, with any form of Federal financial assistance whether grant, loan, advance, or proceeds of a HUD-guaranteed loan or a HUD-insured mortgage.

C. Applicability.

(a) No office of the Department of Housing and Urban Development shall, in the construction or rehabilitation of any residential structure, use or permit the use of lead-based paint on applicable surfaces.

(b) The use of lead-based paint on applicable surfaces of any residential structure undergoing federally assisted construction or rehabilitation under any program under the jurisdiction of the Department of Housing and Urban Development is prohibited. Every Contract and Subcontract including painting, pursuant to which such federally assisted construction or rehabilitation is performed shall include appropriate provisions prohibiting such use of lead-based paint. Such provisions shall include any provisions necessary for the enforcement of that prohibition.

217. SPECIAL NOTES - NATIONAL HISTORIC PRESERVATION ACT OF 1966

The Contractor agrees to contribute to the preservation and enhancement of structures and objects of historical, architectural or archaeological significance when such items are found and/or unearthed during the course of project construction and to consult with the State Historic Preservation Officer for recovery of the items. (Reference: National Historic Preservation Act of 1966 (80 Stat 915, 16 USC 470) and Executive Order No. 11593 of May 31, 1971.)

218. SPECIAL NOTES - CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT:

The Clean Air Act, as amended (42 USC 1857) and Executive Order 11288; and the Federal Water Pollution Control Act, as amended (33 USC 1251); and all applicable standards, orders, and regulations issued pursuant thereto. The Grantee agrees to report all violations thereof to the Environmental Protection Agency and to HUD and specifically to comply with the following:

(1) For the purpose of this paragraph, the term "facility" means (a) any building, installation, structure, location or site or operations, (b) owned, leased, or supervised (c) by the Grantee or its Contractors and latter's subcontractors (d) for the construction, supply and service contracts entered into by the Grantee for the purpose of accomplishing this project.

(2) The Grantee agrees to comply with the Clean Air Act and the Federal Water Pollution Control Act during the accomplishment of this project and specifically agrees to the following:

(a) That any facility to be utilized in the accomplishment of this project is not listed on the Environmental Protection Agency's list of Violating Facilities pursuant to 40 CFR, Part 15.20;

(b) that in the event a facility utilized in the accomplishment of this project becomes listed on the EPA List, the Government may, inter alia, cancel, terminate for default, or suspend for such failure, in whole or in part, the Agreement;

(c) that it will comply with all other requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act, as amended, relating to inspection monitoring, entry, reports, and information, as well as all other requirements specified in Section 114 and Section 308, respectively, and all regulations and guidelines issued thereunder;

(d) that it will promptly notify the Government of the receipt of any notice from the Director, Office of Federal Activities, Environmental Protection Agency, indicating that any facility utilized or to be utilized in the accomplishment of this project is under consideration for listing on the EPA List of Violating Facilities; and

(e) that it will insert in any of its contracts and require insertion in subcontracts entered into for the purpose of accomplishing this project, unless otherwise exempted pursuant to the EPA regulations implementing the Clean Air Act and the Federal Water Pollution Control Act (CFR 40, Part 15.5e) provisions which shall include the criteria and requirements set forth in this paragraph, including this subparagraph (e).

219. RECORD MAINTENANCE:

The Grantee shall establish, maintain and preserve, and require each of its contractors and subcontractors to establish, maintain and preserve property management, project performance, financial management payrolls and reporting documents and systems, and such other books, records and other data pertinent to the Project as the Government may require. While such records shall be retained for a period of three years following receipt of final payment by the Grantee, detailed exceptions are stated in 13 CFR 309.9.

DOCUMENT 00 84 00

PREVAILING WAGE RATES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. New York State Department of Labor Prevailing Wage Rates.

1. Bidders are to conform to requirements as to conditions of employment to be observed and minimum wage rates to be paid under this contract.

2. The following wage rates, as well as updates, and supplements pertain to this project.

B. Davis-Bacon requirements

1. Bidders are to conform to requirements as to conditions of employment to be observed and minimum wage rates to be paid under this contract.

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): Effective December 30th, 2024
Labor Law Section 220-i(6) prohibits contractors from bidding on public work and prohibits both contractors and subcontractors from commencing work on private and public projects subject to prevailing wage requirements. This section requires contractors to submit their Certificate of Registration with their bid materials. Each Certificate of Registration will have a unique registration number. Failure to provide proof of registration, as required by Labor Law Section 220-i, as a minimum qualification will result in the bidder being deemed non-responsive. There is a public database of registered contractors and subcontractors available online 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-subcontractor-registry-landing

*Electronic Certified Payroll (LL 220-K): Effective December 31st, 2025
Effective December 31, 2025, all contractors and subcontractors who perform public work, or covered private work subject to the prevailing wage, will be required to submit certified payrolls electronically to the Bureau of Public Work and Prevailing Wage Enforcement. Additional information about the electronic certified payroll submission system will be made available on the Department's Website at https://dol.ny.gov/Electronic-Payroll

Payrolls and Payroll Records

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

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

Paid Holidays

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

Overtime

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

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

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

Supplemental Benefits

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

Effective Dates

When you review the schedule for a particular occupation, your attention should be directed to the dates above the column of rates. These are the dates for which a given set of rates is effective. The rate listed is valid until the next effective rate change or until the new annual determination which takes effect on July 1 of each year.

All contractors and subcontractors are required to pay the current prevailing rates of wages and supplements. If you have any questions please contact the Bureau of Public Work or visit the New York State Department of Labor website (www.labor.ny.gov) for current wage rate information.

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

Chemung County General Construction

Boilermaker — 10/01/2025

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:	07/01/2025	01/01/2026 Additional
Boilermaker	$ 39.35	$ 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: $ 33.52*

*NOTE: $32.03 of this amount is for every Hour "Paid"

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
1st Term at 12 Months
Terms 3-8 at 6 Months
Per Hour:
1st 65%
3rd 70% 4th 75% 5th 80% 6th 85% 7th 90% 8th 95%

Supplemental Benefits per hour:

All Terms $ 33.52**

**NOTE: $32.03 of this amount is for every Hour "Paid"

12-7

Broadband — 10/01/2025

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-TELEDATA

Per Hour:	07/01/2025	08/04/2025
Field Tech Install/Repair	$ 51.31	$ 52.85

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: EXLCUDES work within ten (10) feet of High Voltage (600 Volts and over) transmission lines for this work, please see LINEMAN

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 10/01/2025

JOB DESCRIPTION Carpenter - Building **DISTRICT** 2

ENTIRE COUNTIES
Chemung, Cortland, Schuyler, Steuben, Tompkins

PARTIAL COUNTIES
Allegany: Only the Township of Alfred.

WAGES

Per hour:	07/01/2025	01/01/2026	07/01/2026 Additional	07/01/2027 Additional
Carpenter	$ 31.59	$ 32.09	$ 3.50*	$ 4.00*
Floor Coverer	31.59	32.09	3.50*	4.00*
Carpet Layer	31.59	32.09	3.50*	4.00*
Dry-Wall	31.59	32.09	3.50*	4.00*
Diver-Wet Day	61.25	61.25	0.00	4.00*
Diver -Dry Day	32.59	33.09	3.50*	4.00*
Diver Tender	32.59	33.09	3.50*	4.00*

*To be allocated at a later date

NOTE ADDITIONAL AMOUNTS PAID FOR THE FOLLOWING WORK LISTED BELOW (per hour worked):
- Pile Drivers/Dock Builders shall receive $0.25 per hour over the journeyworker's rate of pay when performing piledriving/dock building work.
- Certified welders shall receive $1.00 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 (Effective 7/1/2026 premium increases to $3.00/hr and will include premium when AWS certification is required).
- 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 his regular hourly rate plus $1.50 per hour.
- 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 $.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 $.75 per foot
  101' and deeper additional $1.00 per foot
- Diver rates applies to all hours worked on dive day.

SHIFT WORK
On Agency/Owner mandated shift work, the following rates will be applicable:
1st Shift - Regular Rate
2nd Shift - Premium of 7% of base wage per hour (Effective 7/1/2026 premium increases to 10%)
3rd Shift - Premium of 14% of base wage per hour (Effective 7/1/2026 premium increases to 15%)
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:

	07/01/2025	01/01/2026
Journeyworker	$ 23.39	$ 23.39

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

HOLIDAY
Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE
Note: Any holiday which occurs on Sunday shall be observed the following Monday. If Christmas falls on a Saturday, it shall be observed on the prior Friday.

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

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

Supplemental Benefits per hour:

$ 12.55	$ 12.55	$ 15.15	$ 15.15

NOTE ADDITIONAL AMOUNTS PAID TO APPRENTICES FOR THE FOLLOWING WORK LISTED BELOW (per hour worked):
- Pile Driving/Dock Builder apprentices shall receive an additional $0.25 per hour worked when performing piledriving/dock building work.
- Certified Welders shall receive $1.00 per hour over the apprentices rate of pay when the apprentice is required to be certified and performs DOT or ABS specified welding work (Effective 7/1/2026 premium increases to $3.00/hr and will include premium when AWS certification is required).
- 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.

2-277B-CS

Carpenter - Building / Heavy&Highway 10/01/2025

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:	07/01/2025	07/01/2026 Additional	07/01/2027 Additional
Carpenter - ONLY for Artificial Turf/Synthetic Sport Surface	$ 37.94	$ 2.25*	$ 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	$ 27.34

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:

$19.10	$19.69	$21.83	$22.42

2-42AtSS

Carpenter - Heavy&Highway 10/01/2025

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

ENTIRE COUNTIES
Broome, Cayuga, Chemung, Cortland, Delaware, Jefferson, Lewis, Onondaga, Oswego, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Yates

WAGES

Per hour	07/01/2025	07/01/2026 Additional	07/01/2027 Additional
Carpenter	$ 39.52	$ 2.00*	$ 4.42*
Piledriver	39.52	2.00*	4.42*
Dockbuilder	39.52	2.00*	4.42*
Diver-Wet Day	64.52	2.00*	4.42*
Diver-Dry Day	40.52	2.00*	4.42*
Diver-Tender	40.52	2.00*	4.42*

*To be allocated at a later date.

NOTE ADDITIONAL AMOUNTS PAID FOR THE FOLLOWING WORK LISTED BELOW (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:
- Divers and Tenders shall receive one and one half (1 1/2) times their regular diver and tender rate of pay for Effluent and Slurry diving.
- Divers and tenders being paid at the specified rate for Effluent and Slurry diving shall have all overtime rates based on the specified rate plus the appropriate overtime rates (one and one half or two times the specified rate for Slurry and Effluent divers and 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' and 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
  - Over 201' additional $1.25 per foot
- Diver rates applies to all hours worked on dive day.

SHIFT WORK
When project owner mandates a single irregular work shift, the Journeyworkers and Apprentices will receive an additional $4.00 per hour. A single irregular work shift can start any time from 5:00 p.m. to 1:00 a.m.

SUPPLEMENTAL BENEFITS
Per hour:

Journeyworker	$ 27.31

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

HOLIDAY
Paid: See (5, 6) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE
- 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.
- The employee must work their scheduled workday before and their scheduled workday after the holiday to receive holiday pay.

REGISTERED APPRENTICES
CARPENTER/PILEDRIVER/DOCKBUILDER APPRENTICES
Wages per hour (1300 hour terms at the following percentage of journeyworker's base wage):

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

Supplemental Benefits per hour:

$ 19.07	$ 19.66	$ 21.75	$ 22.34

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.

2-277HH-Bro

Electrician 10/01/2025

JOB DESCRIPTION Electrician **DISTRICT** 2

ENTIRE COUNTIES
Chemung, Steuben

PARTIAL COUNTIES
Allegany: Only the townships of Allen, Almond, Alfred, Andover, Birdsall, Burns, Granger, Grove, Hume, Independence, Ward, Wellsville, West Almond, Willing, and that portion of Amity, Angelica, Belfast, Caneadea, and Scio that lie east of the Genesee River.
Schuyler: Only the Townships of Dix, Montour, Orange, Reading and Tyrone.
Tioga: Only the Townships of Barton and Nichols.

WAGES

Per hour:	07/01/2025
Electrician (Base wage)	$ 43.40
Audio,Sound,Teledata	43.40

ADDITIONAL AMOUNTS FOR SPECIFIC TYPES OF JOBSITE CONDITIONS (amount subject to any overtime premiums):
Additional $1.00 per hour for high work defined as work being done more than 35' above the floor where electricians are working on Tooth Picks, Structural Steel, Temporary Platforms, Swinging Scaffolds and Boatswain Chairs.
Additional $1.00 per hour for work in shafts 25' deep and in tunnels 50' long under construction.
Additional $2.00 per hour for work inside or on Towers, Smoke Stacks and Wind Turbine Generators over 100' high.
Additional $2.00 per hour for work in hazardous locations requiring supplied air (other than Class A) and any other type of respiratory equipment required for Class B or Class C as defined in OSHA Standards.
Additional $3.00 per hour for work in hazardous locations requiring Class A supplied air as defined in OSHA Standards.

SHIFT WORK
When shift work is mandated in the job specifications or by the contracting agency, the following journeyworker hourly rates apply. The starting hours of a shift may be adjusted up to two (2) hours in order to meet the needs of the contracting agency.

Between the hours of 8:00AM and 4:30PM	$ 43.40
Between the hours of 4:30PM and 1:00AM	48.83
Between the hours of 12:30AM and 9:00AM	54.25

SUPPLEMENTAL BENEFITS
Per hour:
Journeyworker
$ 22.57 plus $ 7.85* plus 3% of hourly wage
*Subject to SAME PREMIUM as overtime work

OVERTIME PAY
See (B, *E, Q) on OVERTIME PAGE
*Work performed on Saturday shall be paid at one and one-half of the hourly rate for the first ten hours, then two times the hourly rate therafter.

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 23) on HOLIDAY PAGE
When the holiday falls on Saturday, it shall be recognized and celebrated as such on the Friday before and when the holiday falls on Sunday, it shall be recognized and celebrated as such on the following Monday (December 24th excluded).

REGISTERED APPRENTICES
WAGES: One year terms at the following percent of Journeyworker's wage.

1st	2nd	3rd	4th	5th
50%	55%	65%	75%	85%

ADDITIONAL AMOUNTS FOR SPECIFIC TYPES OF JOBSITE CONDITIONS (amount subject to any overtime premiums):
Additional $1.00 per hour for high work defined as work being done more than 35' above the floor where electricians are working on Tooth Picks, Structural Steel, Temporary Platforms, Swinging Scaffolds and Boatswain Chairs.
Additional $2.00 per hour for work inside or on Towers, Smoke Stacks and Wind Turbine Generators over 100' high.
Additional $1.00 per hour for work in shafts 25' deep and in tunnels 50' long under construction.
Additional $3.00 per hour for work in hazardous locations requiring Class A supplied air as defined in OSHA Standards.
Additional $2.00 per hour for work in hazardous locations requiring supplied air (other than Class A) and any other type of respiratory equipment required for Class B or Class C as defined in OSHA Standards.

SUPPLEMENTAL BENEFITS per hour:
07/01/2025

1st term	$13.42 plus 3% of hourly wage
2nd term	$18.45 plus $4.32* plus 3% of hourly wage

3rd term	$19.37 plus $5.10* plus 3% of hourly wage
4th term	$20.28 plus $5.89* plus 3% of hourly wage
5th term	$21.20 plus $6.67* plus 3% of hourly wage

*Subject to SAME PREMIUM as overtime work

2-139

Elevator Constructor — 10/01/2025

JOB DESCRIPTION Elevator Constructor **DISTRICT** 5

ENTIRE COUNTIES
Chemung, Livingston, Monroe, Ontario, Schuyler, Seneca, Steuben, Wayne, Yates

WAGES
Per hour worked: 07/01/2025

Elevator Constructor	$ 61.52
Helper	49.22

SUPPLEMENTAL BENEFITS
Per hour:

$ 40.035

*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
850 hours terms at the following percentage of journeyman's wage.

1st	2nd	3rd	4th	5th	6th	7th	8th
50*	55%	65%	65%	70%	70%	80%	80%

*Zero benefits paid for first term.

Supplemental Benefits per hour:

$ 40.035*

*Add 6% of regular hourly rate for all hours worked

5-27

Glazier — 10/01/2025

JOB DESCRIPTION Glazier **DISTRICT** 5

ENTIRE COUNTIES
Broome, Chemung, Chenango, Delaware, Otsego, Schuyler, Steuben, Tioga, Tompkins

WAGES
Per hour: 07/01/2025

Glazier	$ 30.00

SUPPLEMENTAL BENEFITS
Per hour:

Journeyman	$ 33.15

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
1000 hour terms

Appr. 1st term	$ 20.00

Appr. 2nd term	21.00
Appr. 3rd term	22.00
Appr. 4th term	23.00
Appr. 5th term	24.00
Appr. 6th term	25.00
Appr. 7th term	26.00
Appr. 8th term	27.00

Supplemental Benefits per hour:

Appr. 1st term	$ 13.27
Appr. 2nd term	13.27
Appr. 3rd term	19.27
Appr. 4th term	19.27
Appr. 5th term	20.27
Appr. 6th term	20.27
Appr. 7th term	21.27
Appr. 8th term	21.27

5-677z3

Insulator - Heat & Frost — 10/01/2025

JOB DESCRIPTION Insulator - Heat & Frost **DISTRICT** 7

ENTIRE COUNTIES
Broome, Cayuga, Chemung, Chenango, Cortland, Herkimer, Jefferson, Lewis, Madison, Oneida, Onondaga, Oswego, Otsego, Schuyler, Seneca, St. Lawrence, Tioga, Tompkins

WAGES
Per hour: 07/01/2025

Asbestos Installer	$ 43.25
Insulation Installer	43.25
(On mechanical systems only)	

SHIFT WORK
The following rates will apply on all contracting agency-mandated shifts worked:

1st Shift	$ 43.25
2nd Shift	49.74
3rd Shift	51.90

SUPPLEMENTAL BENEFITS
Per hour:

Journeyworker	$ 27.34

OVERTIME PAY
See (*B1, **K, P) on OVERTIME PAGE
*NOTE: First 10 hours on Saturday.
**NOTE: Holidays that fall on Sunday are subject to double time.

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (2*,4,6,28) on HOLIDAY PAGE
*Triple time for Labor Day if worked.

REGISTERED APPRENTICES
WAGES per hour: One (1) year terms at the following percentage of Journeyworker's wage.

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

SUPPLEMENTAL BENEFITS per hour:

$ 24.09	$ 24.09	$ 27.34	$ 27.34

7-30-Syracuse

Ironworker — 10/01/2025

JOB DESCRIPTION Ironworker **DISTRICT** 5

ENTIRE COUNTIES

Chemung, Livingston, Monroe, Ontario, Yates

PARTIAL COUNTIES
Allegany: Only the Townships of Birdsall, Burns and Grove.
Genesee: Only the Townships of Batavia, Bergen, Bethany, Byron, Elba, LeRoy, Oakfield, Pavillion, Stafford.
Orleans: Only the Townships of Albion, Barre, Carlton, Clarendon, Gaines, Kendall, Murray, and Village of Holley.
Schuyler: Only the Townships of Dix, Orange, Reading and Tyron.
Steuben: Only the Townships of Addison, Avoca, Bath , Bradford, Cameron, Campbell, Caton, Cohocton, Corning, Dansville, Erwin, Hornby, Lindley, Prattsburg, Pulteney, Rathbone, Thurston, Tuscarora, Urbana, Wayland, Wayne, Wheeler, Woodhull.
Wayne: Only the Townships of Arcadia, Lyons, Macedon, Marion, Ontario, Palmyra, Sodus, Walworth, Willamson and Village of Newark.
Wyoming: Only the Townships of Castile, Covington, Middlebury, Perry.

WAGES

Per hour:	07/01/2025
Structural	$ 35.75
Reinforcing	35.75
Ornamental	35.75
Fence Erector	35.75
Welder	35.75
Sheeter	36.00
Stone Derrick Man	35.75
Mach. Mov./Rigger	35.75
Precast Concrete Erector	35.75
Window/Curtainwall Erector	35.75
Pre-Engineered Building	35.75

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:

Journeyman	$ 32.65

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
One year terms at the following rates.

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

Supplemental Benefits per hour:

Appr. 1st year	$ 13.98
Appr. 2nd year	21.79
Appr. 3rd year	22.90
Appr. 4th year	24.02

5-33.1

Laborer - Building 10/01/2025

JOB DESCRIPTION Laborer - Building **DISTRICT** 2

ENTIRE COUNTIES
Broome, Chemung, Cortland, Schuyler, Steuben, Tioga, Tompkins

PARTIAL COUNTIES
Chenango: Entire County except the Townships of Sherburne, Columbus and New Berlin.
Delaware: Only the Townships of Sidney, Masonville, Walton, Tompkins, Deposit, Hancock, and Colchester.

WAGES
Per hour:

GROUP #1: Basic Laborer - excavation, concrete vibrator, power-driven buggie, demolition (including acetylene torch work) that is customarily done by a laborer

GROUP #2: Air Tool Operators, Mason Tenders

GROUP #3: Blaster, Rock Drill (compressor driven)

GROUP #4: Asbestos, Hazardous, Toxic Waste, Lead and Mold Remediation

	07/01/2025	07/01/2026 Additional
GROUP #1	$ 30.00	$ 1.25*
GROUP #2	31.00	1.25*
GROUP #3	32.00	1.25*
GROUP #4	32.00	1.25*

*To be allocated at a later date.

IMPORTANT NOTES:
- Laborer tasks on Renewable Energy and Green Energy construction work shall be paid at the appropriate Heavy & Highway rates.
- Wage and supplement rates for the operation of forklift and skid steer may be found under the classification "Operating Engineer".

SUPPLEMENTAL BENEFITS
Per hour:

Journeyworker	$ 20.20

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

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE
When a holiday falls on Sunday, it shall be observed on the following Monday.

REGISTERED APPRENTICES
WAGES: 1000 hour terms at the following percentage of Journeyworker's wage.

1st	2nd	3rd	4th
70%	80%	85%	90%

SUPPLEMENTAL BENEFITS per hour:

1st term	$ 15.85
2nd term	17.10
3rd term	17.98
4th term	18.85

2-785b

Laborer - Heavy&Highway **10/01/2025**

JOB DESCRIPTION Laborer - Heavy&Highway **DISTRICT** 2

ENTIRE COUNTIES
Broome, Chemung, Cortland, Schuyler, Steuben, Tioga, Tompkins

PARTIAL COUNTIES
Chenango: Entire County except the Townships of Sherburne, Columbus, and New Berlin.
Delaware: Only the Townships of Sidney, Masonville, Walton, Tompkins, Deposit, Hancock and Colchester.

WAGES
Per hour:

GROUP A: Drill Helper, Flagman, Outboard and Hand Boats.

GROUP B: Basic Rate, Bull Float (where used for strike off only), 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, Installation of Bridge Drainage Pipe, Pipe Layers, Vibrator Type Rollers, Tamper, Drill Doctor, Water Pump Operators (1-1/2" & 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, and Air Tool Operators, Wrecking Laborer.

GROUP C: Drilling equipment - only where a separate air compressor unit supplies power, Acetylene Torch Operators, Asphalt Raker, Powder Man, Tail or Screw Operator on Asphalt Paver.

GROUP D: Blasters, Form Setters (slab steel forms on highways, roads, streets & airport runways), Stone or Granite Curb Setters.

GROUP E: Hazardous Waste defined as when an employee performs hazardous waste removal, lead abatement and removal, asbestos abatement and removal work on State and/or Federally designated waste site and were relevant State and/or Federal regulations require employees to use or wear required forms of personal protection.

	07/01/2025	07/01/2026 Additional	07/01/2027 Additional
GROUP A	$ 38.06	$ 3.40*	$ 4.20*
GROUP B	38.26	3.40*	4.20*
GROUP C	38.46	3.40*	4.20*
GROUP D	38.66	3.40*	4.20*
GROUP E	43.26	3.40*	4.20*

*To be allocated at a later date.

IMPORTANT NOTES:
- Laborer tasks on Renewable Energy and Green Energy construction work shall be paid at the appropriate Heavy & Highway rates.
- Wage and supplement rates for the operation of forklift and skid steer may be found under the classification "Operating Engineer".
- When an employee is required by the employer and/or by the material data safety sheets of a product, during its application, to wear a half or full-face replaceable cartridge respirator for more than (2) hours, then in such case said employee(s) will be paid the Group E rate for the shift.

SHIFT WORK
A single irregular work shift starting any time between 5:00 PM and 1:00 AM on governmental mandated night work shall be paid an additional $5.00 per hour.

SUPPLEMENTAL BENEFITS
Per hour:

Journeyworker $ 26.35

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

HOLIDAY
Paid: See (5, 6) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE
- If Holiday falls on Sunday, it will be celebrated on Monday. If the Holiday falls on Saturday, it will be celebrated on Saturday.
- An Employee must work the scheduled working day before and the scheduled working day after a holiday to receive holiday pay.

REGISTERED APPRENTICES
WAGES: 1000 hour terms at the following percentage of Journeyworker's GROUP B wage:

1st	2nd	3rd	4th
70%	80%	90%	95%

SUPPLEMENTAL BENEFITS per hour:
All terms $ 26.35

2-785h

Laborer - Tunnel 10/01/2025

JOB DESCRIPTION Laborer - Tunnel **DISTRICT** 2

ENTIRE COUNTIES
Broome, Chemung, Cortland, Schuyler, Steuben, Tioga, Tompkins

PARTIAL COUNTIES
Chenango: Entire County except the Townships of Sherburne, Columbus, and New Berlin.
Delaware: Only the Townships of Sidney, Masonville, Walton, Tompkins, Deposit, Hancock and Colchester.

WAGES
Per hour:

GROUP A: Change House Man

GROUP B: Miners and all Machine Men, Safety Miner, All Shaft work, Caisson work, Drilling, Blow Pipe, all Air Tools, Tugger, Scaling, Nipper, Guniting pot to nozzle, Bit Grinder, Signal Man (top and bottom), Concrete Man, Shield Driven Tunnels, mixed face and soft ground, liner plate tunnels in free air.

GROUP C: Blaster

GROUP D: Hazardous waste removal work on a State and/or Federally designated waste site where relevant State and/or Federal regulations require employees to use or wear required forms of personal protection.

	07/01/2025	07/01/2026 Additional	07/01/2027 Additional
Group A	$ 41.24	$ 3.40*	$ 4.20*
Group B	41.44	3.40*	4.20*
Group C	44.24	3.40*	4.20*
Group D	46.24	3.40*	4.20*

*To be allocated at a later date

IMPORTANT NOTES:
- When an employee is required by the employer and/or by the material data safety sheets of a product, during its application, to wear a half or full face replaceable cartridge respirator for more then (2) hours, then in such case said employee(s) will be paid the Group D rate for the shift.

SHIFT WORK
A single irregular work shift starting any time between 5:00 PM and 1:00 AM on governmental mandated night work shall be paid an additional $5.00 per hour.

SUPPLEMENTAL BENEFITS
Per hour:

Journeyworker $ 26.35

OVERTIME PAY
See (B, E, Q) on OVERTIME PAGE
- If Holiday falls on Sunday, it will be celebrated on Monday. If the Holiday falls on Saturday, it will be celebrated on Friday.

HOLIDAY
Paid: See (5, 6) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE
If the holiday falls on Saturday, it will be celebrated on Friday. If the holiday falls on Sunday, it will be celebrated on Monday

REGISTERED APPRENTICES
WAGES: 1000 hour terms at the following percentage of Group B wage

1st	2nd	3rd	4th
70%	80%	90%	95%

SUPPLEMENTAL BENEFITS per hour:

All Terms $ 26.35

2-785T

Lineman Electrician 10/01/2025

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:	07/01/2025	05/04/2026	05/03/2027	05/01/2028
Group A:				
Lineman, Technician	$ 61.56	$ 64.37	$ 66.84	$ 69.47
Crane, Crawler Backhoe	61.56	64.37	66.84	69.47
Welder, Cable Splicer	61.56	64.37	66.84	69.47
Group B:				
Digging Mach. Operator	$ 55.40	$ 57.93	$ 60.16	$ 62.52
Group C:				
Tractor Trailer Driver	$ 52.33	$ 54.71	$ 56.81	$ 59.05
Groundman, Truck Driver	49.25	51.50	53.47	55.58
Equipment Mechanic	49.25	51.50	53.47	55.58
Group D:				
Flagger	$ 33.86	$ 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	$ 61.56	$ 64.37	$ 66.84	$ 69.47
Crane, Crawler Backhoe	61.56	64.37	66.84	69.47
Cable Splicer	67.72	70.81	73.52	76.42
Certified Welder, Pipe Type Cable	$ 64.64	$ 67.59	$ 70.18	$ 72.94
Group B:				
Digging Mach. Operator	$ 55.40	$ 57.93	$ 60.16	$ 62.52
Group C:				
Tractor Trailer Driver	$ 52.33	$ 54.71	$ 56.81	$ 59.05
Groundman, Truck Driver	49.25	51.50	53.47	55.58
Equipment Mechanic	49.25	51.50	53.47	55.58
Group D:				
Flagger	$ 33.86	$ 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 switching structures, maintenance projects, railroad catenary install/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	$ 62.94	$ 65.81	$ 68.34	$ 71.03
Crane, Crawler Backhoe	62.94	65.81	68.34	71.03
Cable Splicer	69.23	72.39	75.17	78.13
Certified Welder, Pipe Type Cable	66.09	69.10	71.76	74.58

Group B:				
Digging Mach. Operator	$ 56.65	$ 59.23	$ 61.51	$ 63.93
Group C:				
Tractor Trailer Driver	$ 53.50	$ 55.94	$ 58.09	$ 60.38
Groundman, Truck Driver	50.35	52.65	54.67	56.82
Equipment Mechanic	50.35	52.65	54.67	56.82
Group D:				
Flagger	$ 34.62	$ 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	$ 64.18	$ 67.10	$ 69.68	$ 72.43
Crane, Crawler Backhoe	64.18	67.10	69.68	72.43
Group B:				
Digging Mach. Operator	$ 57.76	$ 60.39	$ 62.71	$ 65.19
Group C:				
Tractor Trailer Driver	$ 54.55	$ 57.04	$ 59.23	$ 61.57
Groundman, Truck Driver	51.34	53.68	55.74	57.94
Equipment Mechanic	51.34	53.68	55.74	57.94
Group D:				
Flagger	$ 35.30	$ 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:

	07/01/2025	05/04/2026	05/03/2027	05/01/2028
Group A	$ 31.90*	$ 32.90*	$ 34.40*	$ 35.90*
Group B	$ 27.90*	$ 28.90*	$ 30.40*	$ 31.90*
Group C	$ 27.70*	$ 28.50*	$ 29.70*	$ 30.90*
Group D	$ 27.65*	$ 28.40*	$ 29.53*	$ 30.66*

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

OVERTIME PAY

See (B, E, Q, X) on OVERTIME PAGE. NOTE: Double time for all emergency work designated by the Dept. of Jurisdiction.
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:

	07/01/2025	05/04/2026	05/03/2027	05/01/2028
All terms:	$ 27.65*	$ 28.40*	$ 29.53*	$ 30.66*

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

6-1249a

Lineman Electrician - Teledata 10/01/2025

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:	07/01/2025
Cable Splicer	$ 40.81
Installer, Repairman	$ 38.73
Teledata Lineman	$ 38.73
Tech., Equip. Operator	$ 38.73
Groundman/Flagger	$ 20.53

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	$ 5.77 *plus 3% of the hour wage paid

*The 3% is based on the hourly wage paid, straight time rate or premium 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 10/01/2025

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:	07/01/2025	05/04/2026	05/03/2027	05/01/2028
Group A:				
Lineman, Technician	$ 52.86	$ 55.31	$ 57.40	$ 59.64
Crane, Crawler Backhoe	52.86	55.31	57.40	59.64
Certified Welder	55.50	58.08	60.27	62.62
Group B:				
Digging Machine	$ 47.57	$ 49.78	$ 51.66	$ 53.68
Group C:				
Tractor Trailer Driver	$ 44.93	$ 47.01	$ 48.79	$ 50.69
Groundman, Truck Driver	42.29	44.25	45.92	47.71
Equipment Mechanic	42.29	44.25	45.92	47.71
Group D:				
Flagger	$ 31.72	$ 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 worked:

	07/01/2025	05/04/2026	05/03/2027	05/01/2028
Group A	$ 31.90*	$ 32.90*	$ 34.40*	$ 35.90*
Group B	$ 27.90*	$ 28.90*	$ 30.40*	$ 31.90*
Group C	$ 27.70*	$ 28.50*	$ 29.70*	$ 30.90*
Group D	$ 27.65*	$ 28.40*	$ 29.53*	$ 30.66*

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

OVERTIME PAY

See (B, E, Q, X) on OVERTIME PAGE. NOTE: Double time for all emergency work designated by the Dept. of Jurisdiction.
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:

	07/01/2025	05/04/2026	05/03/2027	05/01/2028
All terms:	$ 27.65*	$ 28.40*	$ 29.53*	$ 30.66*

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

6-1249a-LT

Lineman Electrician - Tree Trimmer — 10/01/2025

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:	07/01/2025	01/04/2026	01/03/2027
Tree Trimmer	$ 33.18	$ 34.67	$ 36.23
Equipment Operator	29.35	30.67	32.05
Equipment Mechanic	29.35	30.67	32.05
Truck Driver	23.85	24.93	26.05
Groundman	19.64	20.53	21.45
Flagger	15.50	16.20	16.93

SUPPLEMENTAL BENEFITS
Per hour:

	07/01/2025	01/04/2026	01/03/2027
Journeyworker	$ 10.98*	$ 11.23*	$ 11.48*

* Plus 4.5% of the hourly wage paid. The 4.5% is based on straight time rate or premium 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 — 10/01/2025

JOB DESCRIPTION Mason - Building **DISTRICT** 5

ENTIRE COUNTIES
Chemung, Schuyler, Steuben

PARTIAL COUNTIES
Allegany: Only the Townships of Alfred, Almond, Andover and Burns.

WAGES
Per Hour: 07/01/2025

Building:
Bricklayer, Cement $ 33.26
Mason, Plasterer, Stone
Mason, Tuck Pointer

SUPPLEMENTAL BENEFITS
Per hour:
Journeyman $ 31.66

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:

One year terms at the following wage:

1st	2nd	3rd	4th
$ 20.29	$ 25.28	$ 27.36	$ 29.93

Supplemental benefits per hour:

1st	2nd	3rd	4th
$ 26.92	$27.82	$ 29.69	$ 31.05

5-3b - Co - Z2

Mason - Heavy&Highway 10/01/2025

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: 07/01/2025
Heavy & Highway:
Cement Mason $ 38.63
Bricklayer 38.63

SUPPLEMENTAL BENEFITS
Per hour:

Journeyman $ 26.28

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 Journeyman's wage:

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

Supplemental benefits per hour:

1st term	$ 15.40
2nd term	$ 24.62

3rd term	$ 25.04
4th term	$ 25.45

5-3h

Mason - Tile Finisher — 10/01/2025

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

ENTIRE COUNTIES
Broome, Chemung, Chenango, Cortland, Delaware, Otsego, Schuyler, Steuben, Tioga, Tompkins

PARTIAL COUNTIES
Allegany: Towns of Alfred, Almond, Andover and Burns in Allegany County

WAGES

Wages	
Per hour:	07/01/2025
Building:	
Marble, Slate, Terrazzo and Tile Finisher	$ 32.45

SUPPLEMENTAL BENEFITS
Per hour:

Journeyman	$ 23.52

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:

One year terms at the following wage:

1st	2nd	3rd
$ 19.47	$ 22.72	$ 25.96

Supplemental benefits per hour:

1st	2nd	3rd
$ 15.12	$ 15.72	$ 20.37

5-3TF - Z4

Mason - Tile Setter — 10/01/2025

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

ENTIRE COUNTIES
Broome, Chemung, Chenango, Cortland, Delaware, Otsego, Schuyler, Steuben, Tioga, Tompkins

PARTIAL COUNTIES
Allegany: Towns of Alfred, Almond, Andover and Burns.

WAGES

Wages	
Per Hour:	07/01/2025
Building:	
Marble, Slate, Terrazzo and Tile Setter	$ 34.69

SUPPLEMENTAL BENEFITS
Per hour:

Journeyman	$ 27.06

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:

One year terms at the following wage:

1st	2nd	3rd	4th
$ 20.81	$ 24.28	$ 27.75	$ 31.22

Supplemental benefits per hour:

1st	2nd	3rd	4th
$ 15.59	$ 16.26	$ 25.70	$ 26.38

5-3TS - Z4

Millwright 10/01/2025

JOB DESCRIPTION Millwright **DISTRICT** 6

ENTIRE COUNTIES
Chemung, Cortland, Livingston, Monroe, Ontario, Orleans, Schuyler, Steuben, Tompkins, Wayne, Wyoming

WAGES
Per hour: 07/01/2025

Building	$ 37.89
Heavy & Highway	41.39

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 perform Certified Welding.
- On Building projects, 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.
- H/H work performed on hazardous waste sites where employees are required to wear protective gear shall receive an additional $2.00 per hour over the Millwright H/H rate for all hours worked on the day protective gear was worn.
- 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:

Journeyworker	$ 27.29

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

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE
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 (Bldg)	1.50
Hazardous Waste (H/H)	2.00
Machinist	2.00
Underground (500' and below)	1.00

SUPPLEMENTAL BENEFITS per hour:

Appr. 1st year	$ 11.95
Appr. 2nd year	22.69
Appr. 3rd year	24.22
Appr. 4th year	25.76

6-1163

Millwright 10/01/2025

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:	07/01/2025
Millwright - Power Generation	$ 47.00

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 perform Certified Welding.
- 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	$ 11.95
Appr. 2nd year	23.50
Appr. 3rd year	25.15

Appr. 4th year 26.80

6-1163Power

Operating Engineer - Building **10/01/2025**

JOB DESCRIPTION Operating Engineer - Building **DISTRICT** 7

ENTIRE COUNTIES
Allegany, Chemung, Livingston, Monroe, Ontario, Schuyler, Steuben, Wayne, Yates

PARTIAL COUNTIES
Genesee: Only that portion of the county that lies east of a line drawn down the center of Route 98, and the entirety of the City of Batavia.

WAGES
---In the event that equipment listed below is operated by robotic control, the classification covering the operation will be the same as if manually operated.
---If a second employee is required by the employer for operation of any covered machine, they shall be an Engineer Class 3.

CLASS A1*: All Cranes (A1 Includes Boom Trucks, Cableway, Cherry Picker, Derrick, Dragline, Dredge, Overhead Crane, Pile Driver, Tower Crane**, Truck Crane, Whirlies).

CLASS 1: Air Tugger; All terrain telescoping material handler; Barber Green and similar type machines; Clamshell; Dragline Shovel and similar machines over three-eighths cu. yd. capacity (Factory rating); Carrier mounted Backhoes that swing 360 degrees; Big Generator Plant Hoist (on steel erection); Bridge Crane (all types); Caisson auger and similar type machine; Dredge; Excavator all purpose hydraulically operated; Forklift (with Factory rating of 15' or more of lift); Hoist (on steel erection); Hydraulic/Krupp Drill; Mucking Machines; Remote controlled Excavator with attachments (Brokk type or similar); Ross Carrier (and similar type); Three-Drum Hoist (when all three drums are in use).

CLASS 2: A-Frame Truck; Backfilling Machine; Backhoe (tractor mounted); Belt Crete (and similar type machines); Bituminous spreading machine (3/8 yd. capacity or less factory rating); Bulldozer; Carry-all type Scraper; Compressors (four (4) not to exceed 2000 CFM combined capacity) or (three (3) or less with more than 1200 CFM but not to exceed 2000 CFM); Concrete Mixer; Concrete Placer; Concrete Pump; Mini Locomotives (all types); Elevating Grader; Elevator; Fine Grade and Finish Rollers; Fine Grade Machines (all kinds); Forklift with factory rating of less than 15' of lift; Front End Loader; Gunite Pumping Machine; High Pressure Boiler; Hoist (1 or 2 drums); Maintenance Engineer (Mechanic); Mechanical Slurry Machine (all kinds); Mega Mixers and similar type machines; Motor Grader; Pavement Grinder; Post Hole Digger; Pumps (regardless of motive power) no more than four (4) in number not to exceed twenty (20) inches in total capacity (not to include single electric pumps up to and including four (4) inches); Shot Crete Pumping Machine; Side Boom; Tractor; Skid Steer Loader (including attachments); Stoner Crusher; Tournadozer and similar types; Tournapull and similar types; Trenching Machines; Welder; Well Drill; Well Point System.

CLASS 3: Compressors - any combination (Not to exceed three (3) pieces of equipment or not to exceed 1200 CFM combined capacity); Fireman; Longitudinal Float; Mechanical Heater; Pumps (regardless of motive power, no more than three (3) in number, not to exceed twelve (12) inches total capacity); Roller (fill and grade); Rubber Tired Tractor; Welding Machine (except gas driven up to 300 amp); Mechanical Conveyor (over 12 ft. in length); Junior Engineers/Oilers.

Per hour:	07/01/2025
CLASS A1*	$ 47.64
CLASS 1	43.14
CLASS 2	42.34
CLASS 3	39.64

Additional $2.50 per hour if work requires Personal Protective Equipment for hazardous waste site activities with a level C or over rating.

(*) TONNAGE PREMIUMS:
All cranes up to 64 tons capacity - A1 rate
All cranes 65 ton to 110 ton capacity - A1 rate plus $ 1.50
All cranes 111 ton to 199 ton capacity - A1 rate plus $ 2.00
All cranes 200 ton to 399 ton capacity - A1 rate plus $ 3.00
All cranes 400 ton to 599 ton capacity - A1 rate plus $ 4.00
All cranes 600 ton to 799 ton capacity - A1 rate plus $ 5.00
All cranes 800 ton to 999 ton capacity - A1 rate plus $ 6.00
All cranes 1000 ton capacity and over - A1 rate plus $ 7.00

(**) Tower Cranes - A1 rate plus $2.50 (no tonnage premiums)

SUPPLEMENTAL BENEFITS
Per hour:

Journeyworker	$ 35.61

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

1st year	60% of CLASS 3 rate
2nd year	65% of CLASS 3 rate
3rd year	75% of CLASS 2 rate
4th year	80% of CLASS 1 rate

Additional $2.50 per hour if work requires Personal Protective Equipment for hazardous waste site activities with a level C or over rating.

SUPPLEMENTAL BENEFITS per hour: Same as Journeyworker

7-158-832B

Operating Engineer - Building - Excavating & Paving — 10/01/2025

JOB DESCRIPTION Operating Engineer - Building - Excavating & Paving **DISTRICT** 7

ENTIRE COUNTIES
Allegany, Chemung, Livingston, Monroe, Ontario, Schuyler, Steuben, Wayne, Yates

PARTIAL COUNTIES
Genesee: Only that portion of the county that lies east of a line drawn down the center of Route 98, and the entirety of the City of Batavia.

WAGES
NOTE: The following rates apply to "Site Work" which may include site preparation, grading, underground work, athletic fields, paving, skateboard parks and all other work outside the footprint of any building.

This wage schedule does not cover Hazardous Waste Removal work, See Heavy/Highway schedule (7-158-832H)

CLASS A: All terrain Telescoping Material Handler; Asphalt Paver; Automatic Fine Grader; Backhoe (except tractor mounted-rubber tired); Blacktop Plant (automated); Cableway; Caisson Auger; Central Mix Concrete Plant (automated); Cherry Picker (over 5 ton capacity); Crane; Cranes and Derricks (steel erection); Dragline; Dual Drum Paver; Excavator (all purpose-hydraulically operated); Front End Loader (4 cu. yd. and over); Hoist (two or three drum); Hydro-Axe; Hydraulic/Krupp Drill; Pile Driver; Power Grader (with elevating loader attachment); Quarry Master (or equivalent); Remote controlled Excavator with attachments; Shovel; Slip Form Paver (if a second man is needed, he shall be an Oiler); Tractor Drawn Belt-Type Loader; Truck Crane; Tunnel Shovel.

CLASS B: Articulated off-road Material Hauler; Backhoe (tractor mounted-rubber tired); Bituminous Spreader and Mixer; Blacktop Plant (non-automated); Boring Machine; Cage Hoist; Central Mix Plant (non-automated) and all Concrete Batching Plants; Cherry Picker (5 tons and under); Compressor (4 or less exceeding 2,000 c.f.m. combined capacity); Concrete Paver (over 16'); Concrete Pump; Crusher; Drill Rigs (tractor mounted); Front-end Loader (under 4 cu. yd.); Hi-pressure Boiler (15 lbs. and over); Hoist (one drum); Kolman Plant Loader and similar type loaders (if Employer requires another man to clean the screen or to maintain the equipment, he shall be an Oiler); Maintenance Engineer; Maintenance Grease Man; Mechanical Slurry Machine; Mixer for stabilized base (self-propelled); Monorail Machine; Plant Engineer; Power Broom; Power Grader; Pump Crete, Ready Mix Concrete Plant; Road Widener; Roller (all above sub-grade); Side Boom; Skid Steer Loader (including attachments); Tractor Scraper; Tractor with Dozer and/or Pusher; Trencher; Vacuum Truck; Winch.

CLASS C: Compressors (4 not to exceed 2,000 c.f.m. combined capacity) or (3 or less with more than 1,200 c.f.m. but not to exceed 2,000 c.f.m.); Compressors (any size but subject to other provisions for compressors), Dust Collectors, Generators, Welding Machines (four of any type or combination); Concrete Pavement Spreaders and Finishers; Conveyor; Drill (core); Drill (well); Electric Pump used in conjunction with Well Point Systems; Farm Tractor with accessories; Fine Grade Machine; Fork Lift; Gunite Machine; Hammers (Hydraulic self-propelled); Locomotive; Post Hole Digger and Post Driver; Pumps (regardless of motive power, not more than 4 in number not to exceed 20" in total capacity); Submersible Electric Pumps (when used in lieu of well Points); Tractor with towed accessories; Vibrator Compactor; Vibro Tamp; Well Point.

CLASS D: Compressor (any size, but subject to other provisions for compressors), Dust Collectors, Generator, Welding machines (three or less of any type or combination); Concrete Mixer (16' and under); Concrete Saw (self-propelled); Form Tamper; Mulching Machine; Power Heaterman; Pumps (regardless of motive power no more than 3 in number not to exceed 12" in total capacity); Revinius Widener; Steam Cleaner; Tractor.

CLASS E: Junior Engineer/Oiler

Per hour:	07/01/2025
CLASS A	$ 41.26
CLASS B	40.79
CLASS C	40.10

CLASS D 36.61
CLASS E 35.38

SUPPLEMENTAL BENEFITS
Per hour:

Journeyworker $ 35.26

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

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

7-158-832BEX

Operating Engineer - Heavy&Highway 10/01/2025

JOB DESCRIPTION Operating Engineer - Heavy&Highway **DISTRICT** 7

ENTIRE COUNTIES
Allegany, Chemung, Livingston, Monroe, Ontario, Schuyler, Steuben, Wayne, Yates

PARTIAL COUNTIES
Genesee: Only that portion of the county that lies east of a line drawn down the center of Route 98, and the entirety of the City of Batavia.

WAGES
NOTE:
---In the event that equipment listed below is operated by robotic control, the classification covering the operation will be the same as if manually operated.
---If a second employee is required by the employer for operation of any covered machine, they shall be an Engineer Class C.

CLASS A1*: All Cranes that require a NYS Crane License (Boom Truck, Cherry Picker, Derrick, Dragline, Overhead Crane (Gantry or Straddle Type), Pile Driver, Tower Crane (including self erecting)**, Truck Crane).

CLASS A: Asphalt Curb Machine (self-propelled, slipform); Asphalt Paver; Automated Concrete Spreader (CMI type); Automatic Fine Grader; Backhoe (except tractor mounted, rubber tired); Backhoe Excavator, Full Swing (CAT 212 or similar type); Back Filling Machine; Belt Placer (CMI type); Blacktop Plant (automated); Blacktop Roller; Bulldozer (being operated with active GPS); Cableway; Caisson Auger; Central Mix Concrete Plant (automated); Concrete Curb Machine (self-propelled, slipform); Concrete Pump; Cranes - Listed in A1 that do not require a NYS Crane License; Directional Boring/Drilling Machine; Dredge; Dual Drum Paver; Excavator (all purpose-hydraulic, Gradall or similar); Front End Loader (4 cu. yd. & over); Head Tower (Sauerman or equal); Hoist (two or three drum); Holland Loader; Maintenance Engineer; Mine Hoist; Mucking Machine or Mole; Pavement Breaker (SP Wertgen; PB-4 and similar type); Profiler/Milling Machine (over 105 h.p.); Power Grader; Quad 9; Quarry Master (or equivalent); Scraper; Shovel; Side Boom; Slip Form Paver; Tractor Drawn Belt-Type Loader; Truck or Trailer Mounted Chipper (self-feeder); Tug Operator (manned rented equipment excluded); Tunnel Shovel.

CLASS B: Backhoe (tractor mounted, rubber tired); Bituminous Recycler Machine; Bituminous Spreader and Mixer; Blacktop Plant (non-automated); Blast or Rotary Drill (truck or tractor mounted); Boring Machine; Bridge Deck Finishing Machine; Brokk; Cage Hoist; Central Mix Plant (non-automated) and All Concrete Batching Plants; Concrete Paver (over 16'); Crawler Drill (self-contained); Crusher; Diesel Power Unit; Drill Rigs (truck or tractor mounted); Front End Loader (under 4 cu. yd.); Greaseman - Lubrication Engineer; HiPressure Boiler (15 lbs & over); Hoist (one drum); Hydro-Axe; Kolman Plant Loader & similar type loaders; Locomotive; Material Handling Knuckle Boom; Mini-Excavator (under 18,000lbs); Mixer (for stabilized base, self-propelled); Monorail Machine; Profiler/Milling Machine (105 h.p. and under); Plant Engineer; Prentice Loader; Pug Mill; Pump Crete; Ready Mix Concrete Plant; Refrigeration Equipment (for soil stabilization); Road Widener; Roller (all above subgrade); Sea Mule; Self-contained ride-on Rock Drill (excluding Air-Track type drill); Skidder; Tractor with Dozer and/or Pusher; Trencher; Tugger Hoist; Vacuum Machine (mounted or towed); Vermeer Saws (ride-on, any size or type); Welder; Winch and Winch Cat; Work Boat Operator including L.C.M.'s.

CLASS C: "A" Frame Winch Hoist (On Truck); Aggregate Plant; Articulated Heavy Hauler; Asphalt or Concrete Grooving Machine (ride-on); Ballast Regulator (ride-on); Bituminous Heater (self-propelled); Boat (powered); Boiler (used in conjunction with production); Cement & Bin Operator; Compressors***; Concrete Pavement Spreader and Finisher; Concrete Paver or Mixer (16' & under); Concrete Saw (self-propelled); Conveyor; Deck Hand; Directional Boring/Drilling Machine Locator; Drill (Core); Drill (Well); Dust Collectors***; Electric Pump When Used in Conjunction with Well Point System; Farm Tractor with accessories; Fine Grade Machine; Fireman; Fork Lift; Form Tamper; Generators***; Grout Pump; Gunite Machine; Hammers (hydraulic self-propelled); Heaters***; Hydra-Spiker (ride-on); Hydraulic Pump (jacking system); Hydro-Blaster (water); Light Plants***; Mulching Machine; Oiler; Parapet Concrete or Pavement Grinder; Post Hole Digger (excluding hand-held); Post Driver; Power Broom (towed); Power Heaterman; Power Sweeper; Pumps***; Revinius Widener; Roller (subgrade & fill); Scarifier (ride-on); Shell Winder; Skid Steer Loader (Bobcat or similar); Span Saw (ride-on); Steam Cleaner; Tamper (ride-on); Tie Extractor (ride-on); Tie Handlers (ride-on); Tie Inserters (ride-on); Tie Spacers (ride-on); Tire Repair; Track Liner (ride-on); Tractor; Tractor (with towed accessories); Vacuum Machine (self-propelled); Vibratory Compactor; Vibro Tamp; Welding Machines***; Well Point.

***CLASS C NOTE: Considered Hands-Off(unmanned). Includes only operation and maintenance of the equipment.

Per hour: 07/01/2025

CLASS A1*	$ 58.38
CLASS A	55.38
CLASS B	54.68
CLASS C	51.81

(*) TONNAGE PREMIUMS:
All cranes up to 64 ton capacity - A1 rate
All cranes 65 ton to 110 ton capacity - A1 rate plus $ 1.50
All cranes 111 ton to 199 ton capacity - A1 rate plus $ 2.00
All cranes 200 ton to 399 ton capacity - A1 rate plus $ 3.00
All cranes 400 ton to 599 ton capacity - A1 rate plus $ 4.00
All cranes 600 ton to 799 ton capacity - A1 rate plus $ 5.00
All cranes 800 ton to 999 ton capacity - A1 rate plus $ 6.00
All cranes 1000 ton capacity and over - A1 rate plus $ 7.00

(**) Tower Cranes - A1 rate plus $3.00 (no tonnage premiums apply)

- Cranes in Luffer Configuration - A1 rate plus $ 5.00.
- Cranes with external ballast (Tray or Wagon) - A1 rate plus $ 5.00.

Additional $2.50 per hour for hazardous waste removal work on a State and/or Federally designated waste site which requires employees to wear Level C or above forms of personal protection.

SHIFT WORK
Additional $2.50 per hour for all employees who work a single irregular work shift starting from 5:00 PM to 1:00 AM that is mandated by the Contracting Agency.

SUPPLEMENTAL BENEFITS
Per hour:

Journeyworker	$ 36.03

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

HOLIDAY

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

NOTE: If a holiday falls on Sunday, it will be celebrated on Monday.

REGISTERED APPRENTICES
WAGES: (1000) hour terms at the following percentage of Journeyworker's CLASS B wage.

1st term	60%
2nd term	70%
3rd term	80%
4th Term	90%

Additional $2.50 per hour for hazardous waste removal work on a State and/or Federally designated waste site which requires employees to wear Level C or above forms of personal protection.

SUPPLEMENTAL BENEFITS per hour: Same as Journeyworker

7-158-832H

Operating Engineer - Survey Crew — 10/01/2025

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

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

PARTIAL COUNTIES
Dutchess: The northern portion of the county from the northern boundary line of the City of Poughkeepsie, north.
Genesee: Only the portion of the county that lies east of a line down the center of Route 98 to include all area that lies within the City of Batavia.

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

Per hour:
SURVEY CLASSIFICATIONS:

Party Chief - One who directs a survey party.
Instrument Person - One who operates the surveying instruments.
Rod Person - One who holds the rods and assists the Instrument Person.

	07/01/2025
Party Chief	$ 52.91
Instrument Person	48.67
Rod Person	36.29

Additional $3.00/hr. for Tunnel Work
Additional $2.50/hr. for Hazardous Work Site

SUPPLEMENTAL BENEFITS
Per hour worked:

Journeyman	$ 30.10

OVERTIME PAY
See (B, E, P, *X) on OVERTIME PAGE
*Note: $25.10/Hr. Only for "ALL" premium hours paid when worked.

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

REGISTERED APPRENTICES
WAGES: 1000 hour terms based on the Percentage of Rod Persons Wage:

	07/01/2025
0-1000	60%
1001-2000	70%
2001-3000	80%

SUPPLEMENTAL BENEFIT per hour worked:

0-1000	$ 21.88 / PHP $18.03
1001-2000	24.90 / " 20.45
2001-3000	27.93/ " 22.93

NOTE: PHP is premium hours paid when worked.

12-158-545 D.H.H.

Operating Engineer - Survey Crew - Consulting Engineer — 10/01/2025

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

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

PARTIAL COUNTIES
Dutchess: The northern portion of the county from the northern boundary line of the City of Poughkeepsie, north.
Genesee: Only the portion of the county that lies east of a line down the center of Route 98 to include all area that lies within the City of Batavia.

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.
Instrument Person - One who operates the surveying instruments.
Rod Person - One who holds the rods and assists the Instrument Person.

	07/01/2025
Party Chief	$ 52.91
Instrument Person	48.67
Rod Person	36.29

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

SUPPLEMENTAL BENEFITS
Per hour worked:

Journeyman	$ 30.10

OVERTIME PAY
See (B, E, Q, *X) on OVERTIME PAGE
*Note: $25.10/Hr. Only for "ALL" premium hours paid when worked.

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

REGISTERED APPRENTICES
WAGES: 1000 hour terms based on percentage of Rod Persons Wage:

	07/01/2025
0-1000	60%
1001-2000	70%
2001-3000	80%

SUPPLEMENTAL BENEFIT per hour worked:

0-1000	$ 21.88 / PHP $18.03
1001-2000	$ 24.90 / " 20.45
2001-3000	$ 27.93 / " 22.93

NOTE: PHP is premium hours paid when worked.

12-158-545 DCE

Operating Engineer - Tunnel — 10/01/2025

JOB DESCRIPTION Operating Engineer - Tunnel **DISTRICT** 7

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

PARTIAL COUNTIES
Dutchess: Northern part of Dutchess, to the northern boundary line of the City of Poughkeepie, then due east to Route 115 to Bedell Road, then east along Bedell Road to VanWagner Road, then north along VanWagner Road to Bower Road, then east along Bower Road to Rte. 44 east to Rte. 343, then along Rte. 343 east to the northern boundary of the Town of Dover Plains and east along the northern boundary of the Town of Dover Plains, to the borderline of the State of Connecticut.
Genesee: Only that portion of the county that lies east of a line drawn down the center of Route 98 and the entirety of the City of Batavia.

WAGES
CLASS A: Automatic Concrete Spreader (CMI Type); Automatic Fine Grader; Backhoe (except tractor mounted, rubber tired); Belt Placer (CMI Type); Blacktop Plant (automated); Cableway; Caisson Auger; Central Mix Concrete Plant (automated); Concrete Curb Machine (self-propelled slipform); Concrete Pump (8" or over); Dredge; Dual Drum Paver; Excavator; Front End Loader (4 cu. yd & over); Gradall; Head Tower (Sauerman or Equal); Hoist (shaft); Hoist (two or three Drum); Log Chipper/Loader (self-feeder); Maintenance Engineer (shaft and tunnel); any Mechanical Shaft Drill; Mine Hoist; Mining Machine(Mole and similar types); Mucking Machine or Mole; Overhead Crane (Gantry or Straddle Type); Pile Driver; Power Grader; Remote Controlled Mole or Tunnel Machine; Scraper; Shovel; Side Boom; Slip Form Paver (If a second man is needed, they shall be an Oiler); Tripper/Maintenance Engineer (shaft & tunnel); Tractor Drawn Belt-Type Loader; Tug Operator (manned rented equipment excluded); Tunnel Shovel.

CLASS B: Automated Central Mix Concrete Plant; Backhoe (topside); Backhoe (track mounted, rubber tired); Backhoe (topside); Bituminous Spreader and Mixer, Blacktop Plant (non-automated); Blast or Rotary Drill (truck or tractor mounted); Boring Machine; Cage Hoist; Central Mix Plant(non-automated); all Concrete Batching Plants; Compressors (4 or less exceeding 2,000 c.f.m. combined capacity); Concrete Pump; Crusher; Diesel Power Unit; Drill Rigs (tractor mounted); Front End Loader (under 4 cu. yd.); Grayco Epoxy Machine; Hoist (One Drum); Hoist (2 or 3 drum topside); Knuckle Boom material handler; Kolman Plant Loader & similar type Loaders (if employer requires another person to clean the screen or to maintain the equipment, they shall be an Oiler); L.C.M. Work Boat Operator; Locomotive; Maintenance Engineer (topside); Maintenance Grease Man; Mixer (for stabilized base-self-propelled); Monorail Machine; Plant Engineer; Personnel Hoist; Pump Crete; Ready Mix Concrete Plant; Refrigeration Equipment (for soil stabilization); Road Widener; Roller (all above sub-grade); Sea Mule; Shotcrete Machine; Shovel (topside); Tractor with Dozer and/or Pusher; Trencher; Tugger Hoist; Tunnel Locomotive; Vacuum Machine (mounted or towed); Welder; Winch; Winch Cat.

CLASS C: A Frame Truck; All Terrain Telescoping Material Handler; Ballast Regulator (ride-on); Compressors (4 not to exceed 2,000 c.f.m. combined capacity; or 3 or less with more than 1200 c.f.m. but not to exceed 2,000 c.f.m.); Compressors ((any size, but subject to other provisions for compressors), Dust Collectors, Generators, Pumps, Welding Machines, Light Plants (4 or any type combination)); Concrete Pavement Spreaders and Finishers; Conveyor; Drill (core); Drill (well); Electric Pump used in conjunction with Well Point System; Farm Tractor with Accessories; Fine Grade Machine; Fork Lift; Grout Pump (over 5 cu. ft.); Gunite Machine; Hammers (hydraulic-self-propelled); Hydra-Spiker (ride-on); Hydra-Blaster (water); Hydro-Blaster; Motorized Form Carrier; Post Hole Digger and Post Driver; Power Sweeper; Roller grade & fill); Scarifer (ride-on); Span-Saw (ride-on); Submersible Electric Pump (when used in lieu of well points); Tamper (ride-on); Tie-Extractor (ride-on), Tie Handler (ride-on), Tie Inserter (ride-on), Tie Spacer (ride-on); Track Liner (ride-on); Tractor with towed accessories; Vibratory Compactor; Vibro Tamp, Well Point.

CLASS D: Aggregate Plant; Cement & Bin Operator; Compressors (3 or less not to exceed 1,200 c.f.m. combined capacity); Compressors ((any size, but subject to other provisions for compressors), Dust Collectors, Generators, Pumps, Welding Machines, Light Plants (3 or less or any type or combination)); Concrete Saw (self-propelled); Form Tamper; Greaseman; Hydraulic Pump (jacking system); Junior Engineer; Light Plants; Mulching Machine; Oiler; Parapet Concrete or Pavement Grinder; Power Broom (towed); Power Heaterman (when used for production); Revinius Widener; Shell Winder; Steam Cleaner; Tractor.

Per hour:	07/01/2025
CLASS A	$ 58.44
CLASS B	57.22
CLASS C	54.43
CLASS D	51.42

Additional $5.00 per hour for Hazardous Waste Work on a state or federally designated hazardous waste site where the Operating Engineer is in direct contact with hazardous material and when personal protective equipment is required for respiratory, skin and eye protection.

CRANES:
Crane 1: All cranes, including self-erecting.
Crane 2: All Lattice Boom Cranes and all cranes with a manufacturer's rating of fifty (50) ton and over.
Crane 3: All hydraulic cranes and derricks with a manufacturer's rating of forty nine (49) ton and below, including boom trucks.

Crane 1	$ 62.44
Crane 2	61.44
Crane 3	60.44

SUPPLEMENTAL BENEFITS
Per hour:
$ 25.90
+ 10.10*

* This portion of the benefits subject to SAME PREMIUM as shown for overtime wages.

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

HOLIDAY
Paid: See (5, 6) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE
NOTE: If a holiday falls on Sunday, it shall be observed on Monday.

REGISTERED APPRENTICES
WAGES:(1000) hours terms at the following percentage of Journeyworker's Class B wage.

1st term	60%
2nd term	65%
3rd term	70%
4th term	75%

SUPPLEMENTAL BENEFITS per hour: Same as Journeyworker

7-158-832TL.

Painter 10/01/2025

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:	07/01/2025	05/01/2026

		Additional
Bridge	$ 46.19	$ 2.50
Tunnel	46.19	
Tank*	44.19	

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:

$ 31.51

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 — 10/01/2025

JOB DESCRIPTION Painter **DISTRICT** 2

ENTIRE COUNTIES
Chemung, Schuyler

PARTIAL COUNTIES
Steuben: Only the Townships of Addison, Bath, Bradford, Cameron, Campbell, Caton, Corning, Erwin, Hornby, Lindley, Rathbone and Thurston

WAGES
Per hour:

	07/01/2025	05/01/2026 Additional
Painter	$ 26.13	$ 2.25*
Taper, Paperhangers, and Vinyl hangers	27.44	2.31*

*To be allocated at a later date.

ADDITIONAL AMOUNTS FOR SPECIFIC TYPES OF JOBSITE CONDITIONS (amount subject to any overtime premiums):
- Additional $ 1.00 per hour for Spray Work (does not apply to application of water-based coatings to walls)
- Additional $ 1.00 per hour for Swing Chair or Swing Scaffold
- Additional $ 2.00 per hour for Steeplejack
- Additional $ 1.00 per hour for Sand Blasting
- Additional $ 1.00 per hour for Acid or High Pressure Wash
- Additional $ 1.25 per hour for Structural Steel (buildings) defined as new or old construction where ceilings, walls or the steel itself is to be painted from open trusses which require climbing or crawling without the support of solid scaffolding or scaffolding starting at the floor or ground level.
- Additional $ 1.25 per hour for Epoxy-brush or roll (solvent base only)

- Additional $ 2.00 per hour for Drywall Machine Operator

NOTE - SEE BRIDGE PAINTER RATES FOR BRIDGES & TANKS

SUPPLEMENTAL BENEFITS
Per hour:
Journeyworker $ 24.03

OVERTIME PAY
See (B, E2, F, R) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE
A Holiday that falls on a Sunday will be celebrated on Monday, a holiday that falls on a Saturday will be celebrated on Friday.

REGISTERED APPRENTICES
WAGES:

Painter: 750 hour terms at the Painter Apprentice wage rate:

1st	2nd	3rd	4th	5th	6th	7th	8th
$ 18.00	$ 18.50	$ 19.00	$ 19.50	$ 20.00	$ 21.00	$ 22.00	$ 23.00

Taper: 750 hour terms at the following Journeyworker Taper Apprentice wage rate:

1st	2nd	3rd	4th	5th	6th
$ 20.00	$ 20.50	$ 21.00	$ 21.50	$ 22.00	$ 23.00

ADDITIONAL AMOUNTS FOR SPECIFIC TYPES OF JOBSITE CONDITIONS (amount subject to any overtime premiums):
- Additional $ 1.00 per hour for Spray Work (does not apply to application of water-based coatings to walls)
- Additional $ 1.00 per hour for Swing Chair or Swing Scaffold
- Additional $ 2.00 per hour for Steeplejack
- Additional $ 1.00 per hour for Sand Blasting
- Additional $ 1.00 per hour for Acid or High Pressure Wash
- Additional $ 1.25 per hour for Structural Steel (buildings) defined as new or old construction where ceilings, walls or the steel itself is to be painted from open trusses which require climbing or crawling without the support of solid scaffolding or scaffolding starting at the floor or ground level.
- Additional $ 1.25 per hour for Epoxy-brush or roll (solvent base only)
- Additional $ 2.00 per hour for Drywall Machine Operator

SUPPLEMENTAL BENEFITS per hour:
Painter/Decorator:

1st	2nd	3rd	4th	5th	6th	7th	8th
$ 6.10	$ 7.10	$ 8.10	$ 9.20	$ 11.00	$ 11.00	$ 13.00	$ 13.64

Taper/Drywall Finisher:

1st	2nd	3rd	4th	5th	6th
$ 6.10	$ 7.10	$ 8.10	$ 10.00	$ 13.00	$ 13.73

2-178 E

Painter - Metal Polisher 10/01/2025

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

	07/01/2025
Metal Polisher	$ 40.33
Metal Polisher*	41.43
Metal Polisher**	44.33

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

SUPPLEMENTAL BENEFITS
Per Hour: 07/01/2025

Journeyworker:
All classification $ 13.44

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:

	07/01/2025
1st year	$ 20.17
2nd year	22.18
3rd year	24.20
1st year*	$ 20.56
2nd year*	22.62
3rd year*	24.74
1st year**	$ 22.67
2nd year**	24.68
3rd year**	26.70

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

Supplemental benefits:
Per hour:

1st year	$ 8.94
2nd year	8.94
3rd year	8.94

8-8A/28A-MP

Plumber — 10/01/2025

JOB DESCRIPTION Plumber **DISTRICT** 6

ENTIRE COUNTIES
Chemung, Cortland, Onondaga, Schuyler, Tompkins

PARTIAL COUNTIES
Madison: Only the Townships of Sullivan, Cazenovia and DeRuyter.
Seneca: Only the Townships of Covert and Lodi.
Steuben: Only the Townships of Addison, Bath, Bradford, Campbell, Caton, Corning, Erwin, Hornby, Lindley, Pulteney, Rathbone, Thurston, Tuscarora, Urbana and Wayne.
Tioga: Only the Townships of Barton, Berkshire, Candor, Nichols, Richford, Spencer and Tioga.

WAGES
Per hour:

	07/01/2025	05/01/2026 Additional
Plumber, Steamfitter, Pipefitter, Welder, HVAC, Refrigeration.	$ 48.26	$ 4.50*

* To be allocated at a later date.

SHIFT WORK
SINGLE IRREGULAR WORK SHIFT: Additional 15% premium added to the wage rate above for a single irregular work shift starting between 4:30PM and 7:00AM.

SUPPLEMENTAL BENEFITS
Per hour:

Journeyworker	$ 28.15*

*NOTE: $10.27 of the supplemental benefits are paid at the same premium as shown for overtime work performed at semi-conductor manufacturer and/or fabrication plants.

OVERTIME PAY
Time and one half for the 9th & 10th hours Monday thru Friday and first 10 hours on Saturday. All other overtime hours are double time.

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE
NOTE: If a holiday falls on Saturday, the holiday will be observed on the preceding Friday. If a holiday falls on Sunday, it will be observed on the following Monday.

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

1st	2nd	3rd	4th	5th
55%	60%	70%	75%	85%

SUPPLEMENTAL BENEFITS per hour*:

1st	$ 15.87
2nd	24.67
3rd	25.30
4th	25.89
5th	26.90

*NOTE: Below is the portion of supplemental benefits paid at overtime premiums for work performed at semi-conductor manufacturer and/or fabrication plants:

1st	n/a
2nd	$ 8.58
3rd	8.77
4th	9.14
5th	9.71

6-81-SF

Roofer 10/01/2025

JOB DESCRIPTION Roofer **DISTRICT** 2

ENTIRE COUNTIES
Broome, Chemung, Chenango, Delaware, Otsego, Schoharie, Schuyler, Steuben, Tioga, Tompkins

WAGES

Per hour:	07/01/2025
Roofer, Waterproofer	$ 30.33
	+ 1.02*

*This amount is paid for all hours worked, whether regular or premium hours.

NOTE ADDITIONAL PREMIUMS PAID FOR THE FOLLOWING WORK LISTED BELOW (amount not subject to overtime premiums):
- On days where more than one shift is worked on the job, the hours worked after 4:30 PM and before 6:30 AM will be paid an additional $1.90 per hour premium. This premium is not for use in emergency repair situations.
- Premium of $1.25 per hour will be paid for the application, rip-off or handling of pitch products. The premium will be paid for pitch that is showing, covered or buried on the roof.
- Premium of $1.25 per hour will be paid for asbestos abatement requiring a half face respirator.

SUPPLEMENTAL BENEFITS
Per hour:

Journeyworker	$ 23.99

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:

Hours per term	
0-667 Hrs.	$ 21.24 + 0.71*
668-1335 Hrs.	22.76 + 0.76*
1336-2002 Hrs.	24.27 + 0.81*
2003-2669 Hrs.	25.79 + 0.86*
2670-3336 Hrs.	27.30 + 0.92*
3337-4000 Hrs.	28.82 + 0.97*

*This amount is paid for all hours worked, whether regular or premium hours.

NOTE ADDITIONAL PREMIUMS PAID FOR THE FOLLOWING WORK LISTED BELOW (amount not subject to overtime premiums):
- On days where more than one shift is worked on the job, the hours worked after 4:30 PM and before 6:30 AM will be paid an additional $1.90 per hour premium. This premium is not for use in emergency repair situations.
- Premium of $1.25 per hour will be paid for the application, rip-off or handling of pitch products. The premium will be paid for pitch that is showing, covered or buried on the roof.
- Premium of $1.25 per hour will be paid for asbestos abatement requiring a half face respirator.

Supplemental Benefits:	
0-667 Hrs.	$ 19.93
668-1335 Hrs.	20.62
1336-2002 Hrs.	21.29
2003-2669 Hrs.	21.96
2670-3336 Hrs.	22.65
3337-4000 Hrs.	23.32

2-203elmi

Sheetmetal Worker 10/01/2025

JOB DESCRIPTION Sheetmetal Worker **DISTRICT** 2

ENTIRE COUNTIES
Allegany, Broome, Chemung, Delaware, Otsego, Schuyler, Steuben, Tioga, Tompkins

WAGES
Per hour:

	07/01/2025	05/01/2026 Additional	05/01/2027 Additional
Sheetmetal Worker	$ 39.74 + 0.99*	$ 4.00**	$ 4.00**

NOTE: Ten cents ($0.10) per hour additional premium to be paid when working polyresin fiberglass.
*Amount is paid for every hour worked (amount not subject to overtime premium)
**To be allocated at a later date

SUPPLEMENTAL BENEFITS
Per hour:

Journeyworker: $ 22.41

OVERTIME PAY
See (*B1, Q) on OVERTIME PAGE
*On Saturday, time and one half of the hourly rate for the first ten (10) hours, then two (2) times the hourly wage rate for all hours after ten (10) hours worked.

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE
Note: Holidays are observed on the Holiday, not on the day that it is locally observed.

REGISTERED APPRENTICES
WAGES per hour:
Indentured after 05/01/2025 (1-year Terms):

1st	2nd	3rd	4th	5th
$ 23.84 +0.60*	$ 25.83 +0.65*	$ 27.82 +0.70*	$ 31.79 +0.79*	$ 33.78 +0.84*

Indentured prior to 05/01/2025 (Half Year Terms):

1st	2nd	3rd	4th	5th	6th	7th	8th
$ 23.84 +0.60*	$ 23.84 +0.60*	$ 25.83 +0.65*	$ 27.82 +0.70*	$ 29.81 +0.75*	$ 31.79 +0.79*	$ 33.78 +0.84*	$ 35.77 +0.89*

*Amount is paid for every hour worked (amount not subject to overtime premium)

SUPPLEMENTAL BENEFITS per hour:
Indentured after 05/01/2025:

1st	2nd	3rd	4th	5th
$ 2.12	$ 18.64	$ 18.72	$ 18.88	$ 22.17

Indentured prior to 05/01/2025:

1st	2nd	3rd	4th	5th	6th	7th	8th
$ 2.12	$ 2.12	$ 18.64	$ 18.72	$ 18.80	$ 18.88	$ 18.97	$ 19.05

Sprinkler Fitter — 10/01/2025

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	07/01/2025
Sprinkler Fitter	$ 45.06

SUPPLEMENTAL BENEFITS

Per hour	
Journeyworker	$ 29.41

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
Wages per hour

One Half Year terms at the following wage.

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
$ 23.28	$ 25.98	$ 28.15	$ 30.31	$ 31.94	$ 34.64	$ 36.81	$ 38.97	$ 41.14	$ 43.30

Supplemental Benefits per hour

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
$ 9.57	$ 9.57	$ 21.49	$ 21.49	$ 21.74	$ 21.74	$ 21.74	$ 21.74	$ 21.74	$ 21.74

1-669

Teamster - Building / Heavy&Highway — 10/01/2025

JOB DESCRIPTION Teamster - Building / Heavy&Highway **DISTRICT** 7

ENTIRE COUNTIES
Chemung, Livingston, Monroe, Ontario, Schuyler, Wayne

PARTIAL COUNTIES
Genesee: Only in the townships of Oakfield, Elba, Batavia, Byron, Alexander, Bethany, Pavilion, Leroy, Stafford, and Bergen.
Orleans: Only in the townships of Gaines, Carlton, Barre, Kendall, Murray, Clarendon, and Albion.
Steuben: Only the Townships of: Addison, Avoca, Bath, Bradford, Cameron, Campbell, Caton, Corning, Erwin, Hornby, Howard, Lindley, Pulteney, Rathbone, Thurston, Tuscarora, Urbana, Wayland, Wayne, Wheeler, and Woodhull.
Tioga: Only from Nichols/Smithboro towards the City of Elmira (west).
Wyoming: Only in the townships of Attica, Orangeville, Wethersfield, Eagle, Genesee Falls, Castile, Ganesville, Perry, Warsaw, Middlebury, Covington, and Pike.

WAGES
GROUP #1: Warehousemen*, Yardmen*, Truck helpers, Pickups, Panel trucks, Flatboy material trucks (straight jobs), Single Axle dump trucks, Dumpsters, Material Checkers/Receivers*, Greasers, Tiremen, Mechanics Helpers/Parts Chasers.
GROUP #2: Tandems and Batch Trucks, Mechanics.
GROUP #3: Semi-trailers, Low-Boy trucks, Asphalt distributor trucks, and Agitator, Mixer trucks and Dumpcrete type vehicles, Truck mechanic, Fuel trucks.
GROUP #4: Articulated off-road material hauler, Specialized earth moving equipment, Euclid type, or similar off-highway equipment, where not self-loaded, 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-loaded.

*NOTE - Applies when a temporary warehouse structure is built/utilized specifically for a public work project.

Per hour:	07/01/2025	07/01/2026

GROUP #1	$ 31.39	$ 33.59
GROUP #2	31.44	33.64
GROUP #3	31.49	33.69
GROUP #4	31.64	33.84
GROUP #5	31.79	33.99

Additional $1.50 per hour for hazardous waste removal work on a City, County, State and/or Federal Designated waste site and regulations require employee to use or wear personal protection.

SUPPLEMENTAL BENEFITS
Per hour:

Journeyworker	$ 27.77	$ 27.94

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

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

7-118

Teamster - Building / Heavy&Highway — 10/01/2025

JOB DESCRIPTION Teamster - Building / Heavy&Highway **DISTRICT** 7

ENTIRE COUNTIES
Chemung, Livingston, Monroe, Ontario, Schuyler, Wayne

PARTIAL COUNTIES
Genesee: Only in the townships of Oakfield, Elba, Batavia, Byron, Alexander, Bethany, Pavilion, Leroy, Stafford, and Bergen.
Orleans: Only in the townships of Gaines, Carlton, Barre, Kendall, Murray, Clarendon, and Albion.
Steuben: Only the Townships of: Addison, Avoca, Bath, Bradford, Cameron, Campbell, Caton, Corning, Erwin, Hornby, Howard, Lindley, Pulteney, Rathbone, Thurston, Tuscarora, Urbana, Wayland, Wayne, Wheeler, and Woodhull.
Tioga: Only from Nichols/Smithboro towards the City of Elmira (west).
Wyoming: Only in the townships of Attica, Orangeville, Wethersfield, Eagle, Genesee Falls, Castile, Ganesville, Perry, Warsaw, Middlebury, Covington, and Pike.

WAGES
*NOTE - THIS RATE APPLIES ONLY TO MILLING OPERATIONS (ASPHALT or CONCRETE) WHEN MATERIALS ARE TO BE REMOVED FROM THE PROJECT SITE.

Per hour:	07/01/2025	07/01/2026
Teamster - Mill Rate	$ 27.50	$ 28.50

SUPPLEMENTAL BENEFITS
Per hour:

Journeyworker	$ 12.96	$ 13.17

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

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

7-118-Mill

Welder — 10/01/2025

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 07/01/2025

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

Chemung County Residential

Electrician - Residential — 10/01/2025

JOB DESCRIPTION Electrician - Residential **DISTRICT** 2

ENTIRE COUNTIES
Chemung, Steuben

PARTIAL COUNTIES
Allegany: Only the Townships of Allen, Almond, Alfred, Andover, Birdsall, Burns, Granger, Grove, Hume, Independence, Ward, Wellsville, West Almond, Willing, and that portion of Amity, Angelica, Belfast, Caneadea, and Scio that lie east of the Genesse River.
Schuyler: Only the Townships of Dix, Montour, Orange, Reading and Tyrone.
Tioga: Only the Townships of Barton and Nichols.

WAGES
IMPORTANT NOTE: Residential Electrician only applies to projects involving the construction, alteration, or repair of single-family houses or apartment buildings of no more than four stories in height. This includes all incidental items such as site work, parking areas, utilities, streets, and sidewalks.

Per hour:

	07/01/2025
Residential Electrician	$ 34.72

SHIFT WORK
When shift work is mandated in the job specifications or by the contracting agency, the following journeyworker hourly rates apply. The starting hours of a shift may be adjusted up to two (2) hours in order to meet the needs of the contracting agency.

Between the hours of 8:00AM and 4:30PM	$ 34.72
Between the hours of 4:30PM and 1:00AM	39.06
Between the hours of 12:30AM and 9:00AM	43.40

SUPPLEMENTAL BENEFITS
Per hour:

07/01/2025	$ 7.08 plus 18% of the hourly wage
01/01/2026	$ 7.24 plus 18% of the hourly wage

OVERTIME PAY
See (B, H) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE
When a dated Holiday falls on a Saturday, Friday shall be the day celebrated as such, and when falling on a Sunday, Monday shall be the day celebrated as such.

2-139 r

Mason - Residential — 10/01/2025

JOB DESCRIPTION Mason - Residential **DISTRICT** 5

ENTIRE COUNTIES
Chemung, Schuyler, Steuben

PARTIAL COUNTIES
Allegany: Allegany: Only the Townships of Alfred, Almond, Andover and Burns

WAGES
Wages

Per hour:	07/01/2025
Residential:	
Bricklayer, Cement	$ 29.32
Mason, Plasterer, Stone	
Mason, Tuck Pointer	

One or two family residences, one to two story masonry or brick apartments, townhouses, row houses or garden-type residences, one to two story group homes, group residences, senior living facilities or similar projects and the masonry portion of wood-frame buildings primarily used for residences not exceeding four stories.

SUPPLEMENTAL BENEFITS
Per hour:

Journeyman $ 18.04

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:

One year terms at the following wage:

1st	2nd	3rd	4th
$ 18.13	$ 22.52	$ 24.21	$ 26.39

Supplemental benefits per hour:

1st	2nd	3rd	4th
$ 13.41	$ 14.23	$ 16.14	$ 17.48

5-3B - Z5R

Mason - Tile Finisher - Residential — 10/01/2025

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

ENTIRE COUNTIES
Chemung, Schuyler, Steuben

PARTIAL COUNTIES
Allegany: Allegany: Only the Townships of Alfred, Almond, Andover and Burns.

WAGES
Wages
Per hour: 07/01/2025
Residential:
Marble, Slate, Terrazzo and Tile Finisher $ 25.82

One or two family residences, one to two story masonry or brick apartments, townhouses, row houses or garden-type residences, one to two story group homes, group residences, senior living facilities or similar projects and the masonry portion of wood-frame buildings primarily used for residences not exceeding four stories.

SUPPLEMENTAL BENEFITS
Per hour:

Journeyman $ 14.93

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:

One year terms at the following wage:

1st	2nd	3rd
$ 15.49	$ 18.07	$ 20.66

Supplemental benefits per hour:

1st	2nd	3rd
$ 12.91	$ 13.41	$ 13.89

5-3TF - Z5R

Mason - Tile Setter - Residential 10/01/2025

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

ENTIRE COUNTIES
Chemung, Schuyler, Steuben

PARTIAL COUNTIES
Allegany: Allegany: Only the Townships of Alfred, Almond, Andover and Burns.

WAGES

Wages Per hour:	07/01/2025
Residential:	
Marble, Slate, Terrazzo and Tile Setter	$ 29.46

One or two family residences, one to two story masonry or brick apartments, townhouses, row houses or garden-type residences, one to two story group homes, group residences, senior living facilities or similar projects and the masonry portion of wood-frame buildings primarily used for residences not exceeding four stories.

SUPPLEMENTAL BENEFITS
Per hour:

Journeyman	$ 16.09

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

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
$ 17.68	$ 20.62	$ 23.57	$ 26.51

Supplemental benefits per hour:

1st	2nd	3rd	4th
$ 13.85	$ 14.42	$ 14.97	$ 15.53

5-3TS - Z5R

Sprinkler Fitter - Residential 10/01/2025

JOB DESCRIPTION Sprinkler Fitter - Residential **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
IMPORTANT NOTE: "Residential fire protection work" is applicable to one or two family dwellings, all multiple family dwelling units which are permitted to have a single exterior up to and including four stories, townhouses with units stacked vertically up to and including four stories and group residential care facilities and protective care homes (sheltered housing), not to include nursing homes or ambulatory care facilities.

Per hour	07/01/2025
Sprinkler Fitter	$ 35.39

SUPPLEMENTAL BENEFITS
Per hour

Journeyworker $ 29.41

OVERTIME PAY
See (B, H) 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.

1-669r

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

Wage and Hour Division

Davis-Bacon Wage Determination Conformance Request Guide, September 2021

This guide is intended as general information only and does not carry the force of legal opinion. The Department of Labor is providing this information as a public service. The information contained is of a general nature and should not be construed as legal advice.

September 28, 2021

Wage and Hour Division Davis-Bacon Wage Determination Conformance Request Guide, September 2021

What are the Davis-Bacon and Related Acts?

The Davis-Bacon and Related Acts (DBRA) require payment of local prevailing wages to construction workers performing work on federally funded construction projects. The Davis-Bacon Act (DBA) applies to each federal government or District of Columbia contract in excess of $2,000 for the construction, alteration, or repair (including painting and decorating) of public buildings or public works and requires that contractors and subcontractors pay their laborers and mechanics employed under such contracts no less than the locally prevailing wages and fringe benefits for corresponding work on similar projects in the area. The DBA's prevailing wage provisions also apply to "Related Acts," under which federal agencies assist construction projects through grants, loans, loan guarantees, and insurance. Examples of Related Acts include the Federal-Aid Highway Acts, the Housing and Community Development Act of 1974, and the Federal Water Pollution Control Act. The Wage and Hour Division (WHD) of the U.S. Department of Labor administers the DBRA.

What is a Davis-Bacon prevailing wage?

The Davis-Bacon prevailing wage is the combination of the basic hourly wage rate and any fringe benefits rate listed for a specific classification of workers in the applicable Davis-Bacon wage determination. The contractor's prevailing wage obligation may be met by either paying each laborer and mechanic the applicable prevailing wage entirely as cash wages or by a combination of cash wages and employer-provided bona fide fringe benefits.

What is a wage determination?

A wage determination is the list of basic hourly wage rates and fringe benefit rates for each classification of laborers and mechanics ("labor classification") in a predetermined geographic area for a particular type of construction. WHD conducts surveys of local wages to determine the prevailing wage rates that are included in wage determinations.

There are two types of wage determinations: general determinations and project determinations.

General Wage Determinations

A general wage determination reflects wage rates determined by WHD to be prevailing in a specific geographic area for a certain type of construction and does not expire.

General Davis-Bacon wage determinations are published online at www.sam.gov and are available for contracting agencies to incorporate into covered contracts and for contractors to post at the job site of covered projects.

Project Wage Determinations

A project wage determination is issued at the request of a contracting agency and is applicable to the named project only. These typically expire 180 calendar days from the date of issuance.

Project Wage Determinations must be requested by the agency by submitting SF-308. While uncommon, if you believe you may need a project wage determination, please consult with WHD.

What are the types of construction represented in wage determinations?

Wage determinations are issued for four types of construction categories: building, residential highway, and heavy.

Building construction includes the construction, alteration, or repair of sheltered enclosures with walk-in access for the purpose of housing persons, machinery, equipment, or supplies and the associated installation of utilities and equipment, as well as incidental grading and paving.

Residential construction includes the construction, alteration, or repair of single family houses, townhouses, and apartment buildings of no more than four stories in height and all incidental work, such as site work, parking areas, utilities, streets, and sidewalks.

Highway construction includes the construction, alteration, or repair of roads, streets, highways, runways, parking areas and most other paving work not incidental to building, residential, or heavy construction.

Heavy construction includes projects that cannot be classified as Building, Residential, or Highway. Heavy construction is often further distinguished on the basis of the characteristic of particular projects, such as dredging, water and sewer lines, dams, major bridges, and flood control projects.

For more information, please refer to All Agency Memoranda (AAM) 130 and 131.

How do I read a wage determination?

An understanding of the wage determination helps contracting officers and contractors identify and understand the wages and benefits required to be paid to laborers and mechanics on the contract. The following is a brief guide for reading a wage determination:

1. Identify the geographic area. Typically, the state and the county or counties covered by the wage determination are noted at the top of the wage determination. It is critical to use the correct wage determination for the geographic area where the project will be performed.
2. Identify the construction type. The construction type will be listed at the top of the wage determination (Building, Residential, Highway or Heavy).
3. Identify the proper labor classification(s). Labor classifications, not individual tasks, are listed on wage determinations. It is, therefore, vital to understand the scope of the project and the labor classifications that are necessary for the work to be performed.
4. Understand the labor classification identifier. The labor classification identifier provides information about how the prevailing wage was calculated:

   Those that begin with "SU" denote a prevailing wage that is not based exclusively on union wage rates.

   Example: For identifier **SULA2018-007 05/13/2018**

   SU = the prevailing wage rate is based on a weighted average of survey data
   LA = the state, in this example, Louisiana
   2018 = the year of the survey
   007 = internal number used for producing the wage determination
   05/13/2018 = the survey completion date for the labor classifications and rates under that identifier

   Those that begin with "UAVG" indicate that while no single union rate prevailed for those labor classifications, the average is based upon only union wage data.

   Example: For identifier **UAVG-OH-0010 08/29/2014**

   UAVG = the prevailing wage rate is a weighted union average rate
   OH = the state, in this example, Ohio
   0010 = internal number used for producing the wage determination
   08/29/2014 = the survey completion date for the labor classifications and rates under that identifier

   Those that begin with anything other than "SU" or "UAVG" indicate that a CBA-based rate prevailed.

   Example: For identifier **PLUM0198-005 07/01/2020**

   PLUM = the prevailing wage rate is based on a Plumbers union collective bargaining agreement.
   0198 = the local union (or district council where applicable)
   005 = internal number used in producing the wage determination
   07/01/2020 = the effective date of the most current negotiated (CBA) rate

5. Understand the labor classification as well as wage rates and fringe benefits. On a wage determination, several labor classifications may be listed under a labor classification identifier indicating that these separate labor classifications are based on the same survey or CBA. Each labor classification has a wage rate and employer-provided bona fide fringe benefits rate listed with it on the wage determination.

   Example:

```
BRMA0003-004 02/01/2021
                                      Rates          Fringes
TILE FINISHER.....................$ 42.57           32.00
TILE SETTER.......................$ 54.69           35.79
```

6. Note other relevant information including the application and effect of executive orders related to hourly minimum wages. Some wage determinations may include requirements based on Executive Orders. For example, Executive Order 13658 requires a minimum wage for workers on covered federal contracts. An Executive Order may be referenced at the top of the determination or after the labor classifications.

What is a conformance?

In limited circumstances, when there is no appropriate labor classification on the applicable general wage determination, WHD may add or "conform" a new class of laborer or mechanic and a wage rate to a published wage determination for a specific contract. A conformance may only be granted when certain criteria are met.

First, a conformance is granted by WHD **only when the type of work needed for a project is *not* performed by a labor classification *already* listed on the applicable wage determination.**

Second, the purpose of the conformance process is not to create new construction classifications but to determine the prevailing wage for standard construction classifications when they are missing from the applicable wage determination, often as the result of low participation in a Davis-Bacon wage survey. Therefore, the conformed labor classification must be one that is actually used in the area by the construction industry.

Finally, if WHD grants a conformance, the wage rate selected will be one that bears a "reasonable relationship" to the existing wage rates on the applicable wage determination. As explained in AAM 213, this generally involves a comparison of the proposed wage rate, including any fringe benefits, to the wage rates for similar labor classifications on the wage determination.

How do I know if I need a conformance?

Understanding the wage determination is key to determining whether you need a conformance. Compare labor classifications on the wage determination with the anticipated work to be performed. Conversation between the contracting agency, contractors and WHD will help identify any potential missing labor classifications. ***Typically, the labor classifications***

listed on the wage determination include the work being performed on a Davis-Bacon covered contract.

The scope of work performed by a labor classification will depend on local area practice. Therefore, if it is unclear whether a labor classification on the wage determination performs the work in question, it may be helpful to consult WHD and/or local construction industry stakeholders.

When the type of worker that performs the work needed on your project is listed on the general wage determination, you should not request a conformance.

When do I need to request a conformance?

Only after reviewing the wage determination and identifying a missing labor classification needed to perform the work on the project should you seek a conformance. ***Please note, wanting to pay a lower wage rate rather than the prevailing wage listed is not grounds for a conformance request.*** Laborers and mechanics are required to be paid the prevailing wage for the labor classification of work actually performed.

The following examples discuss whether a conformance is needed in common scenarios involving the types of work performed on federal contracts. Please note that, in some instances, the scope of work performed by these labor classifications may differ based on local practice, and a different conformance outcome may be warranted. When determining whether a conformance is required, it is important to review the applicable wage determinations and, if needed, consult WHD and/or local stakeholders.

Examples:

Broadband: A large infrastructure contract has been funded to promote rural broadband and Davis-Bacon applies due to the funding source.

Q: Do you need to seek a conformance?

A: No, "broadband" is not a labor classification. Typically, a broadband infrastructure project will include the labor classifications for power equipment operators, general laborers, and electricians; if the necessary labor classifications are listed on the wage determination, you do not need to seek a conformance.

Weatherization Carpenter: A large infrastructure contract has been funded to provide weatherization services to residential homes and Davis-Bacon prevailing wage rates apply due to the funding source. Such work is typically performed by carpenters and the wage determination contains a carpenter classification.

Q: Do you need to seek a conformance because the work is called weatherization?

A: No, the required work is typically performed by carpenters, a labor classification included on the wage determination.

Window Seal Worker: The project requires that windows be sealed to create a sound barrier. The wage determination lists a glazier classification.

Q: Do you need to seek a conformance?

A: No, sealing windows is incidental to window repair and window installation, which is covered by the glazier classification.

Mechanical Insulator: The project requires that the mechanical system of a large industrial facility be insulated to prevent heat damage. The wage determination lists the Heat and Frost Insulator classification.

Q: Do you need to seek a conformance?

A: No, the work to be performed typically falls under the Heat and Frost Insulator classification listed on the wage determination.

Bricklayer: The project requires a decorative masonry wall. The wage determination includes a bricklayer classification with a prevailing wage rate based on a union collective bargaining agreement. The contractor is not party to the union agreement.

Q: Do you need to seek a conformance?

A: No, the prevailing rate for the needed labor classification that is listed on the wage determination applies regardless of the union/non-union affiliation of the contractor.

Low-voltage Wiring: The project includes installing audio and video cables throughout a building. The wage determination includes an electrician classification with a union prevailing wage, but does not include a low-voltage electrician classification. The local electrical union identified on the wage determination does not perform low-voltage electrical work.

Q: Do you need to seek a conformance?

A: Yes, the work at issue does not fall within a published labor classification on the wage determination.

Boilermaker: An industrial project includes the retrofitting of a coal fired generator to burn clean fuel. The wage determination does not include a boilermaker classification and this work is not within the scope of work of any other labor classification on the wage determination.

Q: Do you need to seek a conformance?

A: Yes, the work at issue does not fall within a published labor classification on the wage determination.

How do I request a conformance?

If you have identified that a conformance is likely required, WHD recommends the following steps for contracting agencies:

1. Work with the contractors and other affected parties to help develop the conformance request.

   Provide the conformance request form (SF-1444 or similar) to the contractor. Instructions on how to complete the form are printed on the form. The SF-1444 can be downloaded from www.sam.gov. (See Resources below)

   As part of the conformance request, you will need to provide information about the work to be performed on the project, the requested labor classification, the duties to be performed by that labor classification and a recommended wage rate. It may be helpful to consider the input of affected parties, including the prime contractor, subcontractor, union representatives, and workers.

2. Ensure the request meets the conformance criteria to ensure that:

   - The type of work to be performed is not performed by a labor classification already listed on the applicable wage determination;
   - The requested labor classification is one actually used in the area by the construction industry; and
   - The recommended wage rate bears a "reasonable relationship" to other wage rates in the wage determination, specifically those from the same category of classifications and sector of industry as the proposed classification. (See AAM 213 for further guidance on the "reasonable relationship" analysis).

3. Submit conformance request for WHD review and approval, including the following:

   - The applicable wage determination;
   - The completed SF-1444 (or similar), including all required signatures;
   - A written detailed description of the work to be performed by the requested classification; and
   - Any related documentation and agency recommendation.

   Email the completed SF-1444 (or similar) and supporting materials to: DBAConformance@dol.gov.

What happens after I submit the conformance request to the Wage and Hour Division?

Once you have submitted your conformance request, WHD staff conducts a thorough review of the requested conformance before final approval or denial. Generally, the process includes the following steps:

1. The conformance request is received by WHD and assigned to a WHD analyst.
2. The WHD analyst works with the requesting contracting officer to ensure that the request includes all necessary information.
3. The WHD analyst reviews the conformance request and:
    - Confirms that the wage determination does not include the requested labor classification;
    - Researches the local area practice, if necessary, to verify the appropriate labor classification; and
    - Determines whether the proposed wage rate bears a "reasonable relationship" to the existing wage rates in the applicable wage determination.
4. The WHD supervisor reviews and finalizes a written response to the conformance request.
5. The Contracting Officer that submitted the request is sent the written response approving or denying the conformance.

Resources:

General

General DBRA information:

- https://www.dol.gov/agencies/whd/government-contracts/construction
- https://www.dol.gov/agencies/whd/government-contracts/construction/faq.

Forms:

- Download Form SF-1444: Request for Authorization of Additional Classification and Rate. Use this form to request a conformance from WHD.
- Download Form SF-308: Request for Wage Determination and Response to Request. Use this form to request a project wage determination.

Applicable Regulations:

- 29 C.F.R. § 5.5(a)(1)(ii): Provides regulatory criteria for a conformance and sets forth conformance procedures.

Guidance:

- AAM 130 and 131: Provide guidance on the categories of construction for which WHD issues WDs.
- AAM 213: Provides guidance on the application of the DBRA requirement that wage rates for additional or "conformed" classifications bear a "reasonable relationship" to the wage rates in that wage determination.

Contact WHD:

WHD is here to help ensure that contracting agencies and contractors understand how to comply with the Davis-Bacon Act requirements and to ensure that federal construction dollars are used to pay laborers and mechanics the wages they are entitled to under the law.

- For specific questions related to wage determinations or conformances, please email bcwd-office@dol.gov
- Submit conformance requests to DBAConformance@dol.gov

"General Decision Number: NY20250005 08/08/2025

Superseded General Decision Number: NY20240005

State: New York

Construction Types: Building, Heavy and Highway

Counties: Chemung and Schuyler Counties in New York.

BUILDING CONSTRUCTION PROJECTS FOR CHEMUNG COUNTY ONLY (does not include single family homes and apartments up to and including 4 stories); HEAVY CONSTRUCTION PROJECTS FOR CHEMUNG COUNTY, HIGHWAY CONSTRUCTION PROJECTS FOR CHEMUNG AND SCHUYLER COUNTIES

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least $17.75 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2025.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least $13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2025.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at http://www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/03/2025
1	02/07/2025
2	02/28/2025
3	03/14/2025
4	03/28/2025
5	05/16/2025
6	05/23/2025
7	06/06/2025
8	06/13/2025
9	06/20/2025
10	07/04/2025
11	07/25/2025
12	08/08/2025

ASBE0030-001 05/01/2025

	Rates	Fringes
Asbestos/Insulator Worker includes application of all materials, protective coverings, coatings and finishings to all types of mechanical systems. Also the application of firestopping material to openings and penetrations in walls, floors, ceilings, curtain walls and all lead abatement	$ 43.25	27.29
HAZARDOUS MATERIAL HANDLER SCOPE OF WORK: DUTIES LIMITED TO preparation, wetting, stripping, removal, scrapping, vacuuming, bagging, and disposing of all insulation materials, whether they contain asbestos or not from mechanical system	$ 38.50	25.04

BOIL0007-001 01/01/2025

	Rates	Fringes
BOILERMAKER	$ 39.35	33.18

BRNY0003-003 07/01/2024

CORNING CHAPTER

	Rates	Fringes
BUILDING CONSTRUCTION Bricklayers, Cement Masons, Stone Masons, Pointers, Caulkers and Cleaners	$ 33.26	28.61
Marble Mason, Tile Layers and Terrazzo Workers	$ 34.24	24.61
Marble, Tile and Terrazzo Finishers	$ 33.44	19.58
CEMENT MASON/CONCRETE FINISHER		

HEAVY AND HIGHWAY
CONSTRUCTION.....$ 37.88 24.10

CARP0277-016 07/01/2025

	Rates	Fringes
CARPENTER (BUILDING CONSTRUCTION)		
CHEMUNG COUNTY		
Carpenter	$ 31.59	23.24
Millwrights & Piledrivers	$ 31.59	23.24
CARPENTER (HEAVY & HIGHWAY CONSTRUCTION)		
CHEMUNG COUNTY	$ 39.52	27.16
CARPENTER (HIGHWAY CONSTRUCTION)		
SCHUYLER COUNTY	$ 39.52	27.16

ELEC0139-001 06/01/2025

CHEMUNG COUNTY

	Rates	Fringes
ELECTRICIAN	$ 43.40	31.72

ELEC0241-003 06/01/2025

SCHUYLER COUNTY (Townships of Catharine, Cayuta and Hector)

	Rates	Fringes
ELECTRICIAN	$ 44.50	31.89

ELEC1249-003 05/05/2025

	Rates	Fringes
ELECTRICIAN (LINE CONSTRUCTION: LIGHTING AND TRAFFIC SIGNAL Including any and all Fiber Optic Cable necessary for Traffic Signal Systems, Traffic Monitoring systems and Road Weather information systems)		
Flagman	$ 31.72	7%+27.65
Groundman (Truck Driver)	$ 42.29	7%+27.70
Groundman Truck Driver (tractor trailer unit)	$ 47.57	7%+27.70
Lineman & Technician	$ 52.86	7%+31.90
Mechanic	$ 42.29	7%+27.70

FOOTNOTE:

a. New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day, plus President's Day, Good Friday, Decoration Day, Election Day for the President of the United States and Election Day for the Governor of the State of New York, provided the employee works the day before or the day after the holiday.

ELEC1249-004 05/05/2025

	Rates	Fringes
ELECTRICIAN (Line Construction)		
Overhead and underground distribution and maintenance work and all overhead and underground transmission line work including any and all fiber optic ground wire, fiber optic shield wire or any other like product by any other name manufactured for the dual purpose of ground fault protection and fiber optic capabilities :		
Flagman	$ 35.34	7%+27.65
Groundman digging machine operator	$ 55.40	7%+27.90
Groundman truck driver (tractor trailer unit)	$ 49.25	7%+27.70
Groundman Truck driver	$ 49.25	7%+27.70
Lineman and Technician	$ 61.56	7%+31.90
Mechanic	$ 49.25	7%+27.70
Substation:		
Cable Splicer	$ 63.14	7%+29.40
Flagman	$ 35.34	7%+27.65
Ground man truck driver	$ 49.25	7%+27.70
Groundman digging machine operator	$ 55.40	7%+27.90
Groundman truck driver (tractor trailer unit)	$ 49.25	7%+27.70
Lineman & Technician	$ 61.56	7%+31.90
Mechanic	$ 49.25	7%+27.70
Switching structures; railroad catenary installation and maintenance, third rail type underground fluid or gas filled transmission conduit and cable installations (including any and all fiber optic ground product by any other name manufactured for the dual purpose of ground fault protection and fiber optic capabilities), pipetype cable installation and maintenance jobs or projects, and maintenance bonding of rails; Pipetype cable installation		
Cable Splicer	$ 64.59	7%+38.40
Flagman	$ 35.34	7%+27.65
Groundman Digging Machine Operator	$ 55.40	7%+27.90
Groundman Truck Driver (tractor-trailer unit)	$ 49.25	7%+27.70
Groundman Truck Driver	$ 49.25	7%+27.70
Lineman & Technician	$ 61.56	7%+31.90

Mechanic.....$ 49.25 7%+27.70

FOOTNOTE:

a. PAID HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, Good Friday, Independence Day, Labor Day, Thanksgiving Day, Christmas Day, and Election Day for the President of the United States and Election Day for the Governor of New York State, provided the employee works two days before or two days after the holiday.

ELEC1249-008 01/01/2025

	Rates	Fringes
ELECTRICIAN (Line Construction)		
TELEPHONE, CATV FIBEROPTICS CABLE AND EQUIPMENT		
Cable splicer	$ 40.81	3%+5.77
Groundman	$ 20.53	3%+5.77
Installer Repairman-Teledata		
Lineman/Technician-Equipment Operator	$ 38.73	3%+5.77
Tree Trimmer	$ 31.45	3%+10.48

a. New Year's Day, President's Day, Good Friday, Decoration Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, Day after Thanksgiving, Christmas Day.

ELEV0062-001 01/01/2025

CHEMUNG COUNTY:

	Rates	Fringes
ELEVATOR MECHANIC	$ 58.44	38.435+a+b

FOOTNOTE:
a.Vacation: 6%/under 5 years based on regular hourly rate for all hours worked. 8%/over 5 years based on regular hourly rate for all hours worked.
b. PAID HOLIDAYS: New Year's Day; Memorial Day; Independence Day; Labor Day; Veterans' Day; Thanksgiving Day; the Friday after Thanksgiving Day; and Christmas Day.

ENGI0158-024 07/01/2025

	Rates	Fringes
Operating Engineer:		
EXCAVATING AND PAVING		
GROUP 1	$ 41.26	34.85+a
GROUP 2	$ 40.79	34.85+a
GROUP 3	$ 40.10	34.85+a
GROUP 4	$ 36.61	34.85+a
MASTER MECHANIC	$ 43.26	34.85+a
HEAVY AND HIGHWAY		
GROUP 1	$ 55.38	35.75+a
GROUP 2	$ 54.68	35.75+a

GROUP 3	$ 51.80	35.75+a
GROUP 4	$ 61.38	35.75+a
GROUP 5	$ 59.88	35.75+a
GROUP 6	$ 58.38	35.75+a
GROUP 7	$ 56.81	35.75+a
TUNNEL AND SHAFT		
GROUP 1	$ 58.43	35.00+a
GROUP 2	$ 57.21	35.00+a
GROUP 3	$ 54.42	35.00+a
GROUP 4	$ 51.41	35.00+a
MASTER MECHANIC	$ 60.84	35.00+a

For EXCAVATION AND PAVING:

FOOTNOTE:

a. PAID HOLIDAYS: New Year's Day; Memorial Day; Independence Day; Labor Day; Thanksgiving Day; Christmas Day, regardless of the day of the week on which the holiday may fall, provided the employee works either on the work day immediately preceding the holiday or on the scheduled work day immediately following the holiday.

EXCAVATION AND PAVING CLASSIFICATIONS

GROUP 1: Asphalt paver; automatic fine grader; backhoe (except tractor mounted, rubber tired); blacktop plant (automated); cableway; caisson auger; central mix concrete plant (automated); cherry picker- over 5 ton capacity; crane; cranes and derricks (steel erection); dragline; dual drum paver; front end loader (4 cu. yd. and over); hoist,(Tow or 3 drum); pile driver; power grader with elevation loader attachment; quarry master (or equivalent); shovel; slip form paver; tractor drawn belt-type loader; truck crane tunnel shovel; excavator, all purpose hydraulically operated

GROUP 2: Backhoe (tractor mounted, rubber tired); bituminous spreader and mixer; blacktop plant (non automated); boring machine; cage hoist; central mix plant (non automated) and all concrete batching plants; cherry picker, 5 tons and under; compressor (4 or less) exceeding 2000 CFM combined capacity; concrete paver over 16s; concrete pump; crusher; drill rigs (tractor mounted); front end loader (under 4 cu. yds); hi- pressure boiler (15 lbs and over); hoist (one drum); Kolman plant loader and similar type loaders; maintenance engineer; maintenance grease man; mechanical slurry machine; mixer for stabilized base self propelled; monorail machine; plant engineer; power broom; power grader; pump crete; ready mix concrete plant; road widener; roller (all above sub-grade); side boom; tractor scraper; tractor with dozer and or pusher; trencher; winch

GROUP 3: Compressors (4 not to exceed 2000 CFM combined capacity; or 3 or less with more than 1200 CFM but not to exceed 2000 CFM); compressors (any size but subject to other provisions for compressors); dust collectors; generators; welding machines (4 of any type or combination); concrete pavement spreaders and finishers; conveyor; drill (core); drill (well); electric pump used in conjunction with well point systems; farm tractor with accessories; fine grade machine; fork lift; gunite machine; hammers-hydraulic-self propelled; locomotive; post hole digger and post driver; pumps (regardless of motive power, not more than 4 in number not to exceed 20"" in total

capacity); submersible electric pumps when used in lieu of well points, tractor with towed accessories; vibratory compactor; vibro tamp; well point

GROUP 4: Compressor (any size, but subject to other provisions for compressors); dust collectors; generators; welding machines (3 or less of any type or combination); concrete mixer (16s and under), concrete saw-self propelled; fireman; form tamper; mulching machine; power heaterman; pumps regardless of motive power no more than 3 in number not to exceed 12"" in total capacity; revinius widener; steam cleaner; tractor

GROUP 5: Master Mechanic

For HEAVY AND HIGHWAY CONSTRUCTION:

FOOTNOTE:

b. PAID HOLIDAYS: New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day provided the employee works the working day before and the working day after the holiday

POWER EQUIPMENT OPERATOR CLASSIFICATIONS (HEAVY/HIGHWAY):

GROUP 1: Asphalt Curb Machine, Self Propelled, Slipform, Automated Concrete Spreader (CMI Type), Automatic Fine Grader, Backhoe (Except Tractor Mounted, Rubber Tired), Backhoe Excavator Full Swing (CAT 212 or similar type), Back Filling Machine, Belt Placer (CMI Type), Blacktop Plant (Automated), Boom truck , Cableway, Caisson Auger, Central Mix Concrete Plant (Automated), Concrete Curb Machine, Self Propelled, Slipform, Concrete Pump, Crane, Cherry Picker, Derricks (steel erection), Dragline, Overhead Crane (Gantry or Straddle type), Pile Driver, Truck Crane, Directional Drilling Machine, Dredge, Dual Drum Paver, Excavator (All Purpose Hydraulically Operated) (Gradall or Similar), Front End Loader (4 cu. yd. and Over), Head Tower (Sauerman or Equal), Hoist (Two or Three Drum), Holland Loader, Maintenance Engineer, Mine Hoist, Mucking Machine or Mole Pavement Breaker(SP) Wertgen; PB-4 and similar type, Power Grader, Profiler (over 105 H.P.) Quad 9, Quarry Master (or equivalent), Scraper, Fireman, Fork Lift, Form Tamper, Grout Pump, Gunite Machine, Hammers (Hydraulic self-propelled), Hydra-Spiker, ride-on, Hydraulic Pump (jacking system), Hydro-Blaster (Water), Mulching Machine, Oiler, Parapet Concrete or Pavement, Shovel, Side Boom, Slip Form Paver, Tractor Drawn, BeltType Loader, Truck or Trailer Mounted Log , Chipper (Self Feeder), Tug Operator (Manned Rented Equipment Excluded), Tunnel Shovel

GROUP 2: Asphalt Paver, Backhoe (Tractor Mounted, Rubber Tired), Bituminous Recycler Machine, Bituminous Spreader and Mixer, Blacktop Plant (NonAutomated), Blast or Rotary Drill (Truck or Tractor Mounted), Boring Machine, Cage Hoist, Central Mix Plant (NonAutomated) and All Concrete Batching Plants, Cherry Picker (5 tons capacity and under), Concrete Paver (Over 16S), Crawler Drill, Self-contained, Crusher, Diesel Power Unit, Drill Rigs, Tractor Mounted, Front End Loader (Under 4 cu. yd.), Greaseman/Lubrication Engineer, HiPressure Boiler (15 lbs. and over), Hoist (One Drum), Hydro-Axe, Kolman Plant Loader and Similar Type Loaders, L.C.M. Work Boat Operator, Locomotive Mixer (for

stabilized base selfpropelled), Monorail Machine, Plant Engineer, Profiler (105 H.P. and under), Grinder, Post Hole Digger and Post Driver, Power Broom (towed), Power Heaterman, Power Sweeper, Revinius Widener, Roller (Grade and Fill), Scarifier, ride-on, Shell Winder, Skid steer loader (Bobcat or similar), Span-Saw, ride-on, Steam Cleaner, Pug Mill, Pump Crete Ready Mix Concrete Plant Refrigeration Equipment (for soil stabilization)Road Widener, Roller (all above subgrade), Sea Mule, Self-contained Ride-on Rock Drill, Excluding Air-Track Type Drill, Skidder, Tractor with Dozer and/or Pusher, Trencher. Tugger Hoist, Vermeer saw (ride on, any size or type), Winch, Winch Cat

GROUP 3: A Frame Winch Hoist on Truck , Articulated Heavy Hauler, Aggregate Plant, Asphalt or Concrete Grooving, Machine (ride on), Ballast Regulator, Ride-on Boiler (used in conjunction with production), Bituminous Heater, self-propelled, Boat (powered), Cement and Bin Operator, Compressors, Dust Collectors, Generators, Pumps, Welding Machines, Light Plants, Heaters (hands-off equipment), Concrete Pavement Spreader and Finisher, Concrete Paver or Mixer (16S and under), Concrete Saw (self-propelled), Conveyor, Deck Hand, Directional Drill Machine Locator, Drill, (Core), Drill, (Well,) Farm Tractor with accessories, Fine Grade Machine, Tamper, ride-on, Tie Extractor, ride-on, Tie Handler, ride-on, Tie Inserter, ride-on, Tie Spacer, ride-on, Tire Repair, Track Liner, ride-on, Tractor, Tractor (with towed accessories), Vibratory Compactor, Vibro Tamp, Well Point

GROUP 4: Tower Cranes

GROUP 5: Cranes 50 tons and over

GROUP 6: Cranes 49 tons and below

GROUP 7: Master Mechanic

For TUNNEL AND SHAFT:

FOOTNOTE:

b. PAID HOLIDAYS: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day, regardless of the day of the week on which the Holiday may fall, provided the employee works the working day before and the working day after the holiday

TUNNEL AND SHAFT CLASSIFICATIONS

GROUP 1: Automated concrete spreader (CMI or equivalent); automated fine grade machine (cmi); backhoe; belt placer (cmi or similar); blacktop spreader (automated); cableway; caisson auger; central mix plant (automated); cherry picker (5 tons); concrete curb machine (self-propelled slipform); concrete pump; crane; crane shaft; crane underground; cranes and derricks (steel erection); dragline; dredge; dual drum paver; excavator (all purpose-hydraulicly operated gradall or similar); fork lift (factory rated 15' and over); front end loader (4cu yd and over); head tower (sauerman or equal); hoist; shaft; hoist (two or three drum); holland loader; maintenance engineer (shaft and tunnel); mine hoist; mining machine (mole and similar

types); mucking machine or mose; overhead crane (gantry or straddle type); pile driver; power grader; Quad 9, quarry master (or equivalent); scraper; shovel; side boom; slip form paver; tripper/maintenance engineer (shaft and tunnel); tractor drawn belt-type loader; truck crane; truck or trailer mounted log chipper (self feeder); tug operator (manned rented equipment excluded); tunnel shovel

GROUP 2: Automated central mix concrete plant; backhoe (topside); backhoe (tractor mounted,rubber tired); bituminous spreader and mixer; blacktop plant (non automated); blast or rotary drill (truck or tractor mounted); boring machine; cage hoist; central mix plant (non automated) and all concrete batching plants; cherry picker (5 tons capacity and under); compressors (4 or less exceeding 2000 CFM combined capacity); concrete paver (over 16s); concrete pump; crane (topside); crusher; diesel power unit; drill rigs, tractor mounted; front end loader (under 4 cu. yds); grayco epoxy machine; hi-pressure boiler (15 lbs and over); hoist (one drum); hoist (two or three drum) (topside); kolman plant loader and similar type loaders; L.C.M. work boat operator; locomotive; maintenance engineer (topside); maintenance greaseman; mixer (for stabilized base self-propelled); monorial machine; plant engineer; personnel hoist; pump crete; ready mix concrete plant; refrigeration equipment (from soil stabilization); road widener; roller (all above sub-grade); sea mule; shotcrete machine; shovel (topside); tractor with dozer and/or pusher; trencher; tugger hoist; tunnel locomotive; welder; winch; winch cat

GROUP 3: ""A"" frame truck; ballast regulator (ride on); compressors (4 not to exceed 2000 cfm combined capacity; or 3 or less with more than 1200 cfm but not to exceed 2000 cfm); compressors (any size but subject to other provisions for compressors; dust collectors; generators; pumps; welding machines; light plants (4 of any type or combination); concrete pavement spreaders and finishers; conveyor; drill (core); drill (well); electric pump used in conjunction with well point system; farm tractor with accessories; fine grade machine; fork lift (under 15 ft); ground pump over 5 cu. ft (manufacturers rating); gunite machine; hammers (hydraulic self propelled); hydra-spiker (ride on); hydra blaster (water); hydra blaster; motorized form carrier; post hole digger and post driver; power sweeper; roller (grade and fill); scarifer (ride on); span saw (ride on); submersible electric pump (when used in lieu of well points); tamper (ride on); tie extractor (ride on); tie handler (ride on); tie inserter (rider on); tie spacer (ride on); track liner (ride on); tractor with towed accessories; vibratory compactor; vibro tamp; well point aggregate plant; boiler (used in conjunction with production); cement and bin operator; compressors (3 or less not to exceed 1200 cfm combined capacity); compressors (any size; but subject to other provisions for compressors); dust collectors; generators; pumps; welding machines; light plants (3 or less of any type or combination); concrete paver or mixer (16s and under); concrete saw (self propelled); fireman; form tamper; greaseman; hydraulic pump (jacking system); junior engineer; light plants; mulching machine; oiler; parapet concrete or pavement grinder; power broom (towed); power heaterman (when used for production); revinius widener; shell winder; steam cleaner; tractor

GROUP 4: Crane, friction or lattice type with boom length 200 feet and over

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ENGI0158-037 07/01/2025

	Rates	Fringes
Power equipment operators:		
BUILDING CONSTRUCTION		
GROUP 1	$ 43.14	35.20+a
GROUP 2	$ 42.34	35.20+a
GROUP 3	$ 39.64	35.20+a
GROUP 4	$ 39.64	35.20+a
GROUP 5	$ 47.64	35.20+a
GROUP 6	$ 49.64	35.20+a
GROUP 7	$ 50.64	35.20+a
GROUP 8	$ 50.14	35.20+a

FOOTNOTE:

a. PAID HOLIDAYS: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day, provided the employee works on the work day immediately preceding the holiday or on the scheduled work day immediately following the holiday.

BUILDING CONSTRUCTION CLASSIFICATIONS

GROUP 1: Air Tugger, All terrain telescoping material handler, Clamshell, Dragline, Shovel and similar machines over three eighths cu.yd. capacity (Fact. rating);Carrier mounted backhoes that swing 360 degrees Big Generator Plant Hoist (on steel erection) Bridge Crane (all types), Cableway, Caisson auger and similar type machine, Crane, Derrick, Dredge, Excavator all purpose hydraulically operated, Forklift (with Factory rating of Fifteen ft. or more of lift),Hoist (on steel erection), Hydraulic/Krupp Drill Type Mucking Machines, Remote controlled excavator with attachments (Brokk type or similar), Ross Carrier (and similar type), Three-Drum Hoist(when all three drums are in use)

GROUP 2: A-Frame Truck, Backfilling Machine, Backhoe -tractor mounted, Barber Green and similar type machines, Belt Crete and similar type machines, Bituminous spreading machine 3/8 yd. capacity or less(Factory Rating), Bulldozer, Carry-all type scraper, Compressors: Four (4) not to exceed 2000 CFM combined capacity; or three (3) or less with more than1200 CFM but not to exceed 2000 CFM, Concrete Mixer, Concrete Placer, Concrete Pump, Dinky Locomotives (all types), Elevating Grader, Elevator Fine Grade and Finish, Rollers, Fine Grade Machines(all kinds), Forklift with Factory rating of less than fifteen(15) feet of lift, Front End Loader, Gunite Pumping Machine, High Pressure Boiler, Hoist (1 or 2 drums), Maintenance Engineer (Mechanic), Mechanical Slurry Machine (all kinds), Mega Mixers and similar type machines, Motor Grader, Post Hole Digger, Pumps (regardless of motive power) no more than four (4) in number not to exceed twenty (20) inches in total capacity, Shot Crete Pumping Machine, Side Boom Tractor, Skid Steer Loader with Attachments, Stone Crusher Tournadozer and similar types Tournapull and similar types, Trenching Machines, Well Drill, WellPoint System EXCEPTION: Single electric pumps up

to and including four (4) inches need not be manned.

GROUP 3: Any combination (Not to exceed three (3) pieces of equipment) Compressors three (3) or less, or not to exceed 1200 CFM combined capacity, Fireman, Longitudinal Float, Mechanical Heater Pumps (regardless of motive power) No more than three (3) in number, not to exceed twelve (12) inches total capacity, Roller (Fill and Grade)Rubber Tired Tractor Welding Machine or Mechanical Conveyor (over 12ft. in length) EXCEPTION: Single gasoline driven welding machine up to 300amps need not be manned.

GROUP 4: Oilers

GROUP 5: Cranes up to and including 25 tons

GROUP 6: Cranes 25-250 tons

GROUP 7: Cranes 251 and over tons

GROUP 8: Tower Cranes

IRON0033-002 07/01/2025

CHEMUNG; SCHUYLER (Twps. of Dix, Orange, Reding and Tryon).

	Rates	Fringes
Ironworkers:		
Sheeter	$ 36.00	30.80
Structural, ornamental, rodman, machinery mover-rigger, fence erector, pre-cast concrete erector, reinforcing, stone derrickman	$ 35.75	30.80

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* IRON0060-010 07/01/2025

SCHUYLER COUNTY (Townships of Catharine, Cayuta, Hector and Montour)

	Rates	Fringes
IRONWORKER		
Structural, Ornamental, Reinforcing, Pre-cast Concret Erector, Machinery Mover & Rigger, Fence Erector, Stone Derrickman Welder, Sheeter, Sheeter Bucker-up	$ 37.16	30.68

LABO0785-016 07/01/2024

SCHUYLER (Twps. of Catherine - including the Village of Odessa):

	Rates	Fringes
Laborers:		
HEAVY & HIGHWAY:		
GROUP 1	$ 35.56	25.60+a
GROUP 2	$ 35.76	25.60+a

GROUP 3.....$ 35.96 25.60+a
GROUP 4.....$ 36.16 25.60+a
GROUP 5.....$ 38.76 25.60+a

FOOTNOTE:

a. PAID HOLIDAYS: New Year's Day; Memorial Day; Independence Day; Labor Day; Thanksgiving Day; Christmas Day, provided the employee works the working day before and the working day after the holiday.

GROUP 1: Laborers; Flaggers; Outboard and hand boats

GROUP 2: Bull float; Chain Saw; Concrete Aggregate Bin; Concrete Bootman; Gin Buggy; Hand or Machine Vibrator; Jackhammer; Mason Tender; Mortar Mixer; Pavement Breaker; Handlers of all Steel Mesh; Small generators for Laborers' Tools; Installation of Bridge Drainage Pipe; Pipelayers; Vibrator type Rollers; Tampers; Drill Doctor; Tail or Screw Operator on Asphalt Paver; Water Pump Operator (1-1/2"" and single diaphram); Nozzle (asphalt, gunnite, seeding and sandblasting); 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 Laborers

GROUP 3: All Rock or Drill Machine Operators (except quarry master and similar type); Acetylene Torch Operator; Asphalt Raker; Powderman

GROUP 4: Blasters; Form Setters; Stone or Granite Curb Setters

GROUP 5: Toxic waste removal

LABO0785-021 07/01/2022

	Rates	Fringes
LABORER		
CHEMUNG AND SCHUYLER (Except Catherine township):		
HEAVY & HIGHWAY (ZONE III)		
GROUP 1	$ 33.00	22.51+a
GROUP 2	$ 33.20	22.51+a
CHEMUNG AND SCHUYLER (Except Catherine township):		
HEAVY & HIGHWAY		
GROUP 1-(ZONE III)	$ 33.00	22.51+a
GROUP 2 (ZONE III)	$ 33.20	22.51+a
CHEMUNG COUNTY: BUILDING:		
General Laborer	$ 22.10	19.65+a
Toxic Waste	$ 23.60	19.65+a

FOOTNOTE:

a. PAID HOLIDAYS: New Year's Day; Memorial Day; Independence Day; Labor Day; Thanksgiving Day; Christmas Day, provided the employee works the working day before and the working day after the holiday.

LABORER CLASSIFICATIONS

GROUP 1: Laborers; Flaggers; Outboard and Hand Boats; Bull Float; Chain Saw; Concrete Aggregate Bin; Concrete bootman; Gin Buggy; Hand or Machine Vibrator; Jackhammer; Mason Tender; Mortar Mixer; Pavement Breaker; Handlers of all Steel Mesh; Small Generators for laborers' tool; Installation of Bridge Drainage Pipe; Pipelayers; Vibrator type Rollers; Tamper; drill Doctor; Tail or Screw Operator on Asphalt Paver; Water Pump Operators (1- 1/2"" and single diaphram); Nozzle (asphalt, gunnite, seeding and sandblasting); 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 Laborers

GROUP 2: All Rock or Drill Machine Operators (except quarry master and similar type); Acetylene Torch Operator; Asphalt Raker; Powderman; Blasters; Form Setters; Stone or Granite Curb Setters

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PAIN0004-016 05/01/2025

	Rates	Fringes
Painters:		
Bridges	$ 42.06	30.59
Painters	$ 26.13	23.78
Paper or Vinyl Hangers	$ 27.44	23.78
Sand Blasting/Steam Cleaning, Acid or High Pressure Water	$ 27.13	23.78
Spray Work/Spray Epoxy, Swing Chair or Swing Scaffold	$ 27.13	23.78
Steeplejack	$ 28.13	23.78
Structural Steel, Epoxy Brush or Roll	$ 27.38	23.78

PAIN0677-003 05/01/2025

	Rates	Fringes
GLAZIER	$ 30.00	31.95

PLUM0267-003 05/01/2019

REMAINING TOWNSHIPS

	Rates	Fringes
Plumber, Pipefitter, Steamfitter (Including HVAC work)	$ 35.51	24.57

ROOF0203-002 06/01/2023

	Rates	Fringes
ROOFER	$ 30.50	19.84

SFNY0669-001 04/01/2025

	Rates	Fringes
SPRINKLER FITTER	$ 45.06	29.41

SHEE0112-004 05/01/2023

	Rates	Fringes
Sheet metal worker	$ 35.94	20.89

TEAM0529-001 05/01/2025

	Rates	Fringes
TRUCK DRIVER		
GROUP 1	$ 25.96	15.91+a
GROUP 2	$ 26.03	15.91+a
GROUP 3	$ 26.52	15.91+a

FOOTNOTES:

a. PAID HOLIDAYS: New Year's day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day, provided the employee works the working day before and the working day after the holiday.

TRUCK DRIVERS CLASSIFICATIONS:

GROUP 1: Flat Bed Truck (Single Axle); Dump Trucks (Under 10 yds Single Axle); Stake Body Truck (Single Axle); Dumpster (Single Axle)

GROUP 2: Dump Truck (Over 10 yds); Transit Mix (Under 5 yds); Transit Mix (Over 5 yds); Flat or Stake Body (Tandem); A-Frame/Winch Trucks; Dry Batch Truck; Truck Mounted Sweeper and Vac Trucks; Dumpster (Tandem)

GROUP 3: Euclid-Type; Off Highway Equipment-Back or Double Bottom Dump Trucks (Over 20 Tons); Straddle Trucks; Pusher; Articulate Dumped Trucks; Low Boy Trailers; Semi Trailers; Asphalt Distributors; Fuel Truck

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO

is available at
https://www.dol.gov/agencies/whd/government-contracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

Union Rate Identifiers

A four-letter identifier beginning with characters other than ""SU"", ""UAVG"", ?SA?, or ?SC? denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The ""SU"" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007

6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

?SU? wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The ""SA"" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

a) a survey underlying a wage determination
b) an existing published wage determination
c) an initial WHD letter setting forth a position on a wage determination matter
d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

Branch of Wage Surveys
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210.

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END OF GENERAL DECISION"

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Work covered by the Contract Documents.
2. Use of premises.
3. Owner's occupancy requirements.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. Project Identification: Proposed Elmira Civil War Visitor Center

1. Project Location: 645 Winsor Ave, Elmira, NY 14902

B. Owner: The Friends of the Elmira Civil War Prison Camp, 645 Winsor Ave, Elmira, NY 14902

1. Owner's Representative: Martin Chalk, Board of Directors

C. A/E: AJH Design, 111 E 14th St, Elmira Heights, New York 14903.

D. The Work consists of the following:

1. BASE BID #1: Concrete foundation and slab, front & rear sidewalk slab and entry covering, all exterior wall not including insulation nor interior gwb, roof, under slab piping with stub up to all future fixtures, power to breaker box.

1.3 USE OF PREMISES

A. General: Contractor shall have limited use of the project site for construction operations as directed by the representative of the Friends of the Elmira Civil War Prison Camp.

B. Use of Existing Building: Maintain existing building in a weathertight condition throughout construction period. Repair damage caused by construction operations. Protect building and its occupants during construction period.

1.4 QUALITY ASSURANCE

A. All work described in these specifications or on the drawings and all work necessary to completely finish the work as described or as shown is to be executed in a thoroughly substantial and workmanlike manner. All work shall be done by persons who are thoroughly experienced in their particular trade or craft.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

SECTION 01 20 00
PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Schedule of Values.

B. Applications for payments.

C. Change procedures.

D. Defect assessment.

E. Alternates.

F. Schedule of Alternates.

1.2 RELATED REQUIREMENTS

A. Section 01 30 00 - Administrative Requirements: General submittal procedures.

B. Section 01 60 00 - Product Requirements: Substitution limitations and procedures.

C. Section 01 70 00 - Execution and Closeout Requirements: Project record documents.

1.3 SCHEDULE OF VALUES

A. Submit printed schedule on Form: AIA G703 - Continuation Sheet for G702.

B. Submit Schedule of Values within 15 days after date of Owner-Contractor Agreement established in Notice to Proceed.

C. Format: Utilize the Table of Contents of this Project Manual. Identify each line item with number and title of the specification Section. Identify site mobilization and bonds and insurance.

D. Provide 1% of contract value for execution of closeout documents.

E. Include within each line item, a direct proportional amount of Contractor's overhead and profit.

F. Revise schedule to list approved Change Orders, with each Application For Payment.

1.4 APPLICATIONS FOR PAYMENTS

A. Payment Period: Submit at intervals stipulated in the Agreement.

B. Form to be used: AIA G702 and G703.

C. Content and Format: Use data from approved Schedule of Values for listing items in Application for Payment.

D. Submit three copies of each Application for Payment.

E. Include the following with the application:

1. Transmittal letter as specified for Submittals in Section 01 30 00.

F. Substantiating Data: When Architect/Engineer requires substantiating information, submit data justifying dollar amounts in question. Include with Application for Payment:

1. Partial release of liens from major Subcontractors and vendors.
2. Project record documents for review by Architect/Engineer which will be returned to the Contractor.
3. Affidavits attesting to off-site stored products.

1.5 CHANGE PROCEDURES

A. Change Order Forms: AIA G701 Change Order.

B. Submit name of the individual authorized to receive change documents and who will be responsible for informing others in Contractor's employ or subcontractors of changes to the Contract Documents.

C. For minor changes not involving an adjustment to the Contract Sum/Price or Contract Time, Architect will issue supplemental instructions directly to Contractor.

D. For other required changes, Architect will issue a document instructing Contractor to proceed with the change, for subsequent inclusion in a Change Order.
   1. The document will describe the required changes and will designate method of determining any change in Contract Sum or Contract Time.
   2. Promptly execute the change.

E. The Architect/Engineer may issue a Proposal Request that includes a detailed description of a proposed change with supplementary or revised drawings and specifications, a change in Contract Time for executing the change. Contractor shall prepare and submit a fixed price quotation within 10 days.

F. Contractor may propose a change by submitting a request for change to Architect/Engineer, describing the proposed change and its full effect on the Work, with a statement describing the reason for the change, and the effect on the Contract Sum/Price and Contract Time with full documentation. Document any requested substitutions in accordance with Section 01 60 00.

G. Computation of Change in Contract Amount: As specified in the Agreement and Conditions of the Contract.
   1. Stipulated Sum/Price Change Order: Based on Proposal Request and Contractor's price quotation.
   2. Construction Change Directive: Architect/Engineer may issue directive, on AIA Form G713 Construction Change Directive signed by Owner, instructing contractor to proceed with change in the Work, for subsequent inclusion in a Change Order. Document will describe changes in the Work, and designate method of determining any change in Contract Sum/Price or Contract Time. Promptly execute change.
   3. Time and Material Change Order: Submit itemized account and supporting data after completion of change, within time limits indicated in Conditions of the Contract. Architect/Engineer will determine change allowable in Contract Sum/Price and Contract Time as provided in Contract Documents.
      a. Maintain daily detailed records of work completed on Time and Material basis. Provide full information required for evaluation of proposed changes, and to substantiate costs for changes in the Work. Daily Time and Material tickets must be validated and signed by the Owner's Representative to be acceptable for issuance of the change order.

H. Substantiation of Costs: Provide full information for change in cost or time with sufficient data to allow evaluation of quotation.

I. Execution of Change Orders: Architect/Engineer will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.

J. Correlation of Contractor Submittals:
   1. After execution of Change Order, promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum/Price.
   2. Promptly revise progress schedules to reflect any change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.
   3. Promptly enter changes in Project Record Documents.

1.6 DEFECT ASSESSMENT

A. Replace the Work, or portions of the Work, not conforming to specified requirements.

B. If, in the opinion of the Architect/Engineer, it is not practical to remove and replace the Work, the Architect/Engineer will direct appropriate remedy of adjusted payment.

C. The defective Work may remain, but unit sum/price will be adjusted to new sum/price at discretion of Architect/Engineer and Owner.

D. Defective Work will be partially repaired to instructions of Architect/Engineer and Owner, and price will be adjusted to new sum/price at discretion of Architect/Engineer and Owner.

E. Authority of Architect/Engineer to assess defects and identify payment adjustments, is final.

F. Non-Payment for Rejected Products: Payment will not be made for rejected products for any of the following:
   1. Products wasted or disposed of in a manner that is not acceptable.
   2. Products determined as unacceptable before or after placement.
   3. Products not completely unloaded from transporting vehicle.
   4. Products placed beyond lines and levels of require Work.
   5. Products remaining on hand after completion of the Work.
   6. Loading, hauling and disposing of rejected products.

END OF SECTION

DOCUMENT 01 31 00

PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
   1. General coordination procedures.
   2. Coordination drawings
   3. Requests for Information (RFIs).

B. Related Requirements:
   1. Division 01 Section "Closeout Procedures" for coordinating closeout of the Contract.

1.3 DEFINITIONS

A. RFI: Request from Owner, Architect, or Contractor seeking information required by or clarifications of the Contract Documents.

1.4 INFORMATIONAL SUBMITTALS

A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
   1. Name, address, and telephone number of entity performing subcontract or supplying products.
   2. Number and title of related Specification Section(s) covered by subcontract.
   3. Drawing number and detail references, as appropriate, covered by subcontract.

B. Key Personnel Names: Within 15 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home, office, and cellular telephone numbers and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.
   1. Post copies of list in project meeting room, in temporary field office, on Project Web site, and by each temporary telephone. Keep list current at all times.

1.5 GENERAL COORDINATION PROCEDURES

A. Coordination: the contractor shall coordinate its construction operations with those of other contractors and entities to ensure efficient and orderly installation of each part of the Work. The contractor shall coordinate its operations with operations, included in different sections and other contractors that depend on each other for proper installation, connection, and operation.

1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
2. Coordinate installation of different components with other contractors to ensure maximum performance and accessibility for required maintenance, service, and repair.
3. Make adequate provisions to accommodate items scheduled for later installation.

B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
1. Preparation of Contractor's construction schedule.
2. Preparation of the schedule of values.
3. Installation and removal of temporary facilities and controls.
4. Delivery and processing of submittals.
5. Progress meetings.
6. Preinstallation conferences.
7. Project closeout activities.
8. Startup and adjustment of systems.

D. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.
1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. See other Sections for disposition of salvaged materials that are designated as Owner's property.

1.6 SUBMITTAL PROCEDURES

A. Number of Copies of Submittals:
1. Electronic Documents: Submit one electronic copy in PDF format; an electronically-marked up file will be returned. Create PDFs at native size and right-side up; illegible files will be rejected.
2. Submit a minimum of three and a maximum of six (6) opaque reproductions. If additional copies are required, provide three (3) opaque reproductions and one reproducible copy. Architect/Engineer will retain one copy.
3. Documents for Project Closeout: Make one reproduction of submittal originally reviewed.

1.7 SHOP DRAWING PROCEDURES:

A. Prepare accurate, drawn-to-scale, original shop drawing documentation by interpreting the Contract Documents and coordinating related Work.

B. Generic, non-project specific information submitted as shop drawings do not meet the requirements for shop drawings.

C. General
1. Transmit each submittal with cover form provided by Architect.

2. Sequentially number the transmittal form. Revise submittals with original number and a sequential alphabetic suffix.
3. Identify Project, Contractor, Subcontractor or supplier; pertinent drawing and detail number, and specification section number, as appropriate on each copy.
4. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract Documents.
5. Deliver submittals to Architect at business address.
6. Schedule submittals to expedite the Project, and coordinate submission of related items.
7. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor.
8. Identify variations from Contract Documents and Product or system limitations that may be detrimental to successful performance of the completed Work.
9. When revised for resubmission, identify all changes made since previous submission.
10. Distribute reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with requirements.
11. Submittals not requested, or incomplete, will not be recognized or processed.

D. Product data
1. Product Data: Submit to for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.
2. Mark each copy to identify applicable products, models, options, and other data.
3. Supplement manufacturers' standard data to provide information specific to this Project.
4. Indicate product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
5. After review distribute in accordance with Submittal Procedures article above and provide copies for record documents described in Section 01 70 00.

E. Shop drawings
1. Shop Drawings: Submit for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.
2. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
3. After review distribute in accordance with Submittal Procedures article above and provide
4. copies for record documents described in Section 01 70 00.

F. Samples
1. Samples: Submit for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.
2. Samples For Selection as Specified in Product Sections:
    a. Submit to Architect/Engineer for aesthetic, color, or finish selection.
    b. Submit samples of finishes from full range of manufacturers' standard colors, in custom colors selected, textures, and patterns for Architect/Engineer selection.
3. Submit samples to illustrate functional and aesthetic characteristics of Products, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
4. Include identification on each sample, with full Project information.
5. Submit number of samples specified in individual specification sections; Architect/Engineer will retain one sample.
6. Reviewed samples which may be used in the Work are indicated in individual specification sections.
7. Samples will not be used for testing purposes unless specifically stated in specification
8. section.
9. After review distribute in accordance with Submittal Procedures article above and provide copies for record documents described in Section 01 70 00.

G. Design Data
   1. Submit for Architect/Engineer's knowledge as contract administrator or for Owner.
   2. Submit for information for limited purpose of assessing conformance with information given and design concept expressed in Contract Documents.

H. Test Reports
   1. Submit for Architect/Engineer's knowledge as contract administrator or for Owner.
   2. Submit test reports for information for limited purpose of assessing conformance with information given and design concept expressed in Contract Documents.

I. Certificates
   1. When specified in individual specification sections, submit certification by manufacturer, installation/application subcontractor, or Contractor to Architect/Engineer, in quantities specified for Product Data.
   2. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
   3. Certificates may be recent or previous test results on material or Product, but must be
   4. acceptable to Architect/Engineer.

J. Manufacturer's Instructions
   1. When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, adjusting, and finishing.
   2. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

K. Architect's Action
   1. Except for submittals for the record or information, where action and return is required, the Architect or his consultant will review each submittal, mark to indicate action taken, and return
      a. Compliance with specified characteristics is the Contractor's responsibility.
   2. Action Stamp: The Architect will stamp each submittal with a uniform, action stamp. The Architect will mark the stamp appropriately to indicate the action taken, as follows:
      a. Final Unrestricted Release: When the Architect marks a submittal "Reviewed" the Work covered by the submittal may proceed provided it complies with requirements of the Contract Documents. Final payment depends on that compliance.
      b. Final-But-Restricted Release: When the Architect marks a submittal "Reviewed as Noted," the Work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the Contract Documents. Final payment depends on that compliance.
      c. Returned for Re-submittal: When the Architect marks a submittal " Revise and Resubmit," do not proceed with Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal according to the notations; resubmit without delay. Repeat if necessary to obtain different action mark.
      d. Do not use, or allow others to use, submittals marked " Revise and Resubmit" at the Project Site or elsewhere where Work is in progress.
      e. Rejected: When the Architect marks a submittal “Rejected,” do not proceed with any Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Prepare a new submittal conforming to the product characteristics specified by the contract documents; resubmit without delay. Repeat if necessary to obtain different action mark.

f. Submit Specified Item: When submittal is marked “Submit Specified Item”, the Contractor shall immediately resubmit the specified item.

3. Other Action: Where a submittal is primarily for information or record purposes, special processing or other activity, the submittal will be returned marked “Action Not Required”.

1.8 ELECTRONIC SUBMITTAL PROCEDURES

A. Using the electronic cover sheet provide by the Architect in Excel format, fill out the information required for the submittal. Each submittal must be provided with the submittal cover sheet.

B. Convert/print cover sheet to a PDF format.

C. Combine PDF cover sheet with product submittal. Cover sheets are to precede the product submittal information.

D. If shop drawings are over 11" x 17" in size, hard copies are to be provided.

E. Electronic submittals shall be delivered by email or transferred by other approved electronic transfer

1.9 REQUESTS FOR INFORMATION (RFIs)

A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI.
1. Architect will return RFIs submitted to Architect by other entities controlled by Contractor with no response.
2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.

B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
1. Project name.
2. Project number.
3. Date.
4. Name of Contractor.
5. Name of Architect.
6. RFI number, numbered sequentially.
7. RFI subject.
8. Specification Section number and title and related paragraphs, as appropriate.
9. Drawing number and detail references, as appropriate.
10. Field dimensions and conditions, as appropriate.
11. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
12. Contractor's signature.
13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
    a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.

C. RFI Forms: Software-generated form with substantially the same content as indicated above, acceptable to Architect.
1. Attachments shall be electronic files in Adobe Acrobat PDF format.

D. Architect's Action: Architect will review each RFI, determine action required, and respond. Allow seven working days for Architect's response for each RFI.
   1. The following Contractor-generated RFIs will be returned without action:
      a. Requests for approval of submittals.
      b. Requests for approval of substitutions.
      c. Requests for approval of Contractor's means and methods.
      d. Requests for coordination information already indicated in the Contract Documents.
      e. Requests for adjustments in the Contract Time or the Contract Sum.
      f. Requests for interpretation of Architect's actions on submittals.
      g. Incomplete RFIs or inaccurately prepared RFIs.
   2. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt of additional information.
   3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Division 01 Section "Contract Modification Procedures."
      a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architecting writing within 10 days of receipt of the RFI response.

E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly. Software log with not less than the following:
   1. Project name.
   2. Name and address of Contractor.
   3. Name and address of Architect.
   4. RFI number including RFIs that were returned without action or withdrawn.
   5. RFI description.
   6. Date the RFI was submitted.
   7. Date Architect's response was received.

F. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven days if Contractor disagrees with response.

   1. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
   2. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.

1.10 PROJECT MEETINGS

A. General: Architect will schedule and conduct meetings and conferences at project site unless otherwise indicated.
   1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting.
   2. Minutes: Architect will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Contractor.

B. Preconstruction Conference: Architect will schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Contractor, but no later than 15 days after execution of the Agreement.
   1. Review responsibilities and personnel assignments.

2. Attendees: Authorized representatives of Owner, Owner's Commissioning Authority, Architect, Engineer, Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
3. Agenda: Discuss items of significance that could affect progress, including the following:
    a. Tentative construction schedule.
    b. Phasing.
    c. Critical work sequencing and long-lead items.
    d. Designation of key personnel and their duties.
    e. Lines of communications.
    f. Procedures for processing field decisions and Change Orders.
    g. Procedures for RFIs.
    h. Procedures for testing and inspecting.
    i. Procedures for processing Applications for Payment.
    j. Distribution of the Contract Documents.
    k. Submittal procedures.
    l. Preparation of record documents.
    m. Use of the premises and existing building.
    n. Work restrictions.
    o. Working hours.
    p. Owner's occupancy requirements.
    q. Responsibility for temporary facilities and controls.
    r. Procedures for moisture and mold control.
    s. Procedures for disruptions and shutdowns.
    t. Construction waste management and recycling.
    u. Parking availability.
    v. Office, work, and storage areas.
    w. Equipment deliveries and priorities.
    x. First aid.
    y. Security.
    z. Progress cleaning.
4. Minutes: Architect will record and distribute meeting minutes.

C. Progress Meetings: Architect will conduct progress meetings at weekly intervals.
1. Attendees: In addition to representatives of Owner, Owner's Commissioning Authority, Architect and Engineer, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
    a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the contract time.
        1) Review schedule for next period.
    b. Review present and future needs of each entity present, including the following:
        1) Interface requirements.
        2) Sequence of operations.
        3) Status of submittals.

4) Deliveries.
5) Off-site fabrication.
6) Access.
7) Site utilization.
8) Temporary facilities and controls.
9) Progress cleaning.
10) Quality and work standards.
11) Status of correction of deficient items.
12) Field observations.
13) Status of RFIs.
14) Status of proposal requests.
15) Pending changes.
16) Status of Change Orders.
17) Pending claims and disputes.
18) Documentation of information for payment requests.

3. Minutes: Architect will record and distribute the meeting minutes to each party present and to parties requiring information.
   a. Schedule Updating: Revise Contractor's construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 013300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.

1.2 DEFINITIONS

A. Action Submittals: Written and graphic information that requires Architect’s responsive action.

B. Informational Submittals: Written information that does not require Architect's responsive action. Submittals may be rejected for not complying with requirements.

1.3 SUBMITTAL PROCEDURES

A. General: Electronic copies of CAD Drawings of the Contract Drawings will not be provided by Architect for Contractor's use in preparing submittals.

B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.

C. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.

1. Initial Review: Allow 10 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
3. Resubmittal Review: Allow 10 days for review of each resubmittal.

D. Deviations: Highlight, encircle, or otherwise specifically identify deviations from the Contract Documents on submittals.

E. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form.

F. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.

PART 2 - PRODUCTS

2.1 ACTION SUBMITTALS

A. General: Prepare and submit Action Submittals required by individual Specification Sections.

B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.

1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
2. Mark each copy of each submittal to show which products and options are applicable.
3. Include the following information, as applicable:

    a. Manufacturer's written recommendations.
    b. Manufacturer's product specifications.
    c. Manufacturer's catalog cuts.
    d. Mill reports.
    e. Compliance with specified referenced standards.
    f. Testing by recognized testing agency.

4. Submit Product Data before or concurrent with Samples.
5. Number of Copies: Submit five copies of Product Data, unless otherwise indicated. Architect will return four copies. Mark up and retain one returned copy as a Project Record Document.

C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.

1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:

    a. Dimensions.
    b. Identification of products.
    c. Fabrication and installation drawings.
    d. Roughing-in and setting diagrams.
    e. Schedules.
    f. Design calculations.
    g. Compliance with specified standards.
    h. Notation of coordination requirements.
    i. Notation of dimensions established by field measurement.
    j. Relationship to adjoining construction clearly indicated.
    k. Seal and signature of professional architect if specified.

2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 11 by 17 inches but no larger than 30 by 40 inches.

3. Number of Copies: Electronic submission of submittals is allowed and preferred. Otherwise, submit three opaque copies of each submittal, unless copies are required for operation and maintenance manuals. Architect will retain two copies; remainder will be returned.

2.2 INFORMATIONAL SUBMITTALS

A. General: Prepare and submit Informational Submittals required by other Specification Sections.

1. Number of Copies: Submit three copies of each submittal, unless otherwise indicated. Architect will not return copies.
2. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
3. Test and Inspection Reports: Comply with requirements specified in Section "Quality Requirements."

B. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

C. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.

D. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.

E. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.

F. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.

G. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.

H. Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.

I. Schedule of Tests and Inspections: Comply with requirements specified in Section "Quality Requirements."

J. Design Data: Prepare written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

K. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer. Include the following, as applicable:

1. Preparation of substrates.
2. Required substrate tolerances.
3. Sequence of installation or erection.
4. Required installation tolerances.
5. Required adjustments.
6. Recommendations for cleaning and protection.

L. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.

M. Material Safety Data Sheets (MSDSs): Submit information directly to Owner; do not submit to Architect.

1. Architect will not review submittals that include MSDSs and will return the entire submittal for resubmittal.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.

B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ARCHITECT'S ACTION

A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.

B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or modifications required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:

C. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.

D. Partial submittals are not acceptable, will be considered nonresponsive, and will be returned without review.

E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION 013300

SECTION 01 40 00

QUALITY REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Quality control and control of installation.

B. Tolerances

C. References.

D. Manufacturers' field services.

E. Examination.

F. Preparation.

1.2 QUALITY CONTROL AND CONTROL OF INSTALLATION

A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.

B. Comply with manufacturers' instructions, including each step in sequence.

C. When manufacturers' instructions conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.

D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

E. Perform Work by persons qualified to produce required and specified quality.

F. Verify field measurements are as indicated on Shop Drawings or as instructed by manufacturer.

G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

1.3 TOLERANCES

A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.

B. Comply with manufacturers' tolerances. When manufacturers' tolerances conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.

C. Adjust products to appropriate dimensions; position before securing products in place.

1.4 REFERENCES

A. For products or workmanship specified by association, trade, or other consensus standards, comply with requirements of standard, except when more rigid requirements are specified or are required by applicable codes.

B. Conform to reference standard by date of building permit issued.

C. When specified reference standards conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.

D. Neither contractual relationships, duties, nor responsibilities of parties in Contract nor those of Architect/Engineer shall be altered from Contract Documents by mention or inference otherwise in reference documents.

1.5 MANUFACTURERS' FIELD SERVICES

A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment as applicable, and to initiate instructions when necessary.

B. Submit qualifications of observer to Architect/Engineer 10 days in advance of required observations. Observer subject to approval of Architect/Engineer and Owner.

C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify existing site conditions and substrate surfaces are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions.

B. Verify existing substrate is capable of structural support or attachment of new Work being applied or attached.

C. Examine and verify specific conditions described in individual specification sections.

D. Verify utility services are available, of correct characteristics, and in correct locations.

3.2 PREPARATION

A. Clean substrate surfaces prior to applying next material or substance.

B. Seal cracks or openings of substrate prior to applying next material or substance.

C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying new material or substance in contact or bond.

END OF SECTION

DOCUMENT 01 50 00

TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Temporary Utilities:
1. Temporary electricity.
2. Temporary lighting for construction purposes.
3. Temporary heating.
4. Temporary ventilation.
5. Telephone service.
6. Temporary water service.
7. Temporary sanitary facilities.

B. Construction Facilities:
1. Vehicular access.
2. Parking.
3. Progress cleaning and waste removal.
4. Snow removal.
5. Field offices.

C. Temporary Controls:
1. Removal of utilities, barriers and controls.
2. Barriers.
3. Exterior Enclosures.
4. Security.
5. Noise control.
6. Pest control.
7. Pollution control.
8. Rodent control.

D. Removal of utilities, facilities, and controls.

1.2 TEMPORARY ELECTRICITY

A. The contractor shall be responsible for providing temporary electric power as require to complete the work. Provide temporary service panel and disconnect to a location within the project area.

B. Contractor shall be responsible to provide temporary power to contractor’s field office.

C. Coordinate work with local power provider.

D. Provide flexible power cords as required for portable construction tools and equipment.

E. Owner shall pay use charges associated with temporary power. Exercise measures to conserve energy.

F. Owner shall pay electric utility service provider charges.

1.3 TEMPORARY LIGHTING FOR CONSTRUCTION PURPOSES

A. Provide and maintain incandescent lighting for construction operations to achieve minimum lighting level of 2 watt/sq. ft.

B. Provide power cords from temporary power source to lighting conductors, pigtails, and lamps for required lighting.

C. Maintain lighting and provide routine repairs.

1.4 TEMPORARY HEATING

A. The contractor shall provide temporary heat to maintain minimum ambient temperature of 50 degrees F in areas where construction is in progress, unless indicated otherwise in product sections.

B. The contractor will pay cost of temporary heat energy source. Exercise measures to conserve energy.

C. Enclose building prior to activating temporary heat in accordance with Enclosures article in the is section.

D. Prior to operation of permanent equipment, the contractor is to verify installation is approved for operation, equipment is lubricated and filters are in place. Gain Architect's approval of permanent equipment. The contractor shall pay for replacement of filters and worn or consumed parts.

1.5 TEMPORARY VENTILATION

A. The contractor shall provide adequate means of mechanical ventilation and off-gassing. Ventilate enclosed areas to achieve curing of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.

1.6 TELEPHONE SERVICE

A. The Contractor shall provide, maintain, and pay for cellular telephone service for the project Foreman at time of project mobilization.

1.7 TEMPORARY WATER SERVICE

A. The contractor shall provide "T" and shut-off valve connection for temporary hose bib connection to existing water source.

B. The contractor shall provide temporary water hoses: Provide ¾ inch, heavy-duty, abrasion-resistant, flexible rubber hoses.

C. Owner will pay cost of temporary water. Exercise measures to conserve energy.

1.8 TEMPORARY SANITARY FACILITIES

A. The contractor shall provide and maintain one portable sanitary facility with paper products and hand sanitizer. Existing facility use is not permitted. Provide facilities at time of project mobilization. Maintain supply of sanitary products.

B. The contractor shall clean the temporary facility to a sanitary condition weekly.

1.9 VEHICULAR ACCESS AND PARKING

A. Use of existing parking facilities by construction personnel will be permitted at designated locations only.

B. Use of designated existing on-site streets and driveways used for construction traffic is not permitted.

C. Tracked vehicles not allowed on paved areas.

D. Repair existing and permanent facilities damaged by use, to original and/or specified condition.

E. Comply with regulations relating to use of streets and sidewalks, access to emergency facilities, and access for emergency vehicles.

F. Coordinate access and haul routes with governing authorities and Owner.

G. Provide and maintain access to fire hydrants and control valves, free of obstructions.

H. Provide means of removing mud from vehicle wheels before entering streets.

I. Permanent Pavements and Parking Facilities:
   1. Prior to Substantial Completion, bases for permanent parking areas may be used for construction traffic.
   2. Avoid traffic loading beyond paving design capacity.

J. Maintenance:
   1. Maintain traffic and parking areas in sound condition free of excavated material, construction equipment, product, mud, and ice.
   2. Maintain existing and permanent paved areas used for construction; promptly repair breaks, potholes, low areas, standing water, and other deficiencies, to maintain paving and drainage in original, or specified, condition.

K. Removal, Repair:
   1. Remove temporary materials and construction when permanent paving is usable.
   2. Remove underground work and compacted materials to depth of 2 feet; fill and grade site as specified.
   3. Repair existing and permanent facilities damaged by use, to original and/or specified condition.

1.10 PROGRESS CLEANING AND WASTE REMOVAL

A. Contractor shall provide and pay for dumpster service. Dumpsters shall be located at the site, accessible to building and roads.

B. Remove debris and rubbish from pipe chases, plenums, attics and other closed or remote spaces, prior to enclosing spaces.

C. Collect and remove waste materials, debris, and rubbish from site weekly and dispose off-site.

D. General Contractor to provide waste removal facilities and services as required to maintain the site in clean and orderly condition.

E. Maintain areas free of waste materials, debris, and rubbish. Maintain site in clean and orderly condition.

F. Provide containers with lids. Remove trash from site weekly or when dumpster is full.

G. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure unless otherwise approved by the authorities having jurisdiction.

H. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

I. Contractors shall collect waste from construction areas and elsewhere, and load to dumpsters daily. Comply with requirements of NFPA 241 for removal of combustible waste material and debris.

J. Load legally acceptable construction debris to the Dumpster (from this project only). Cost of all disposal fees shall be the responsibility of the contactor.

K. Dumpsters shall remain on the project until project completion, or as directed by Architect.

L. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.

1.11 SNOW REMOVAL

A. The contractor shall provide snow removal within the limits of the construction area.

B. Maintain snow and ice conditions to provide safe site conditions and to prevent excess water, dirt, and debris from damaging new construction.

1.12 FIELD OFFICES

A. Field offices shall be weathertight, with lighting, electrical outlets, heating, cooling equipment, and equipped with sturdy furniture.

B. Construction:
   1. Structurally sound, secure, weather tight enclosures for office and storage spaces.

2. Fire Extinguishers: Appropriate type fire extinguisher at each office and each storage area.

C. Environmental Control:

1. Heating, Cooling, and Ventilating for Offices: Automatic equipment to maintain comfort conditions. 68 degrees F heating and 76 degrees F cooling.
2. Storage Spaces: Heating and ventilation as needed to maintain products in accordance with Contract Documents; lighting for maintenance and inspection of products.

D. Storage Areas and Sheds: Size to storage requirements for products of individual Sections, allow for access and orderly provision for maintenance and for inspection of products to requirements of Section 01 60 00.

E. Preparation: Fill and grade sites for temporary structures sloped for drainage away from buildings.

F. Removal: At completion of Work remove buildings, foundations, utility services and debris.

G. Restore areas.

1.13 BARRIERS

A. The contractor shall be responsible for the provision of temporary barriers at the locations of trenching and excavations required to complete the work. The contractor shall be responsible for the provision of temporary barriers at the perimeter of the entire building excavation.

B. Provide barriers to prevent unauthorized entry to construction areas, and to protect existing facilities and adjacent properties from damage from construction operations and demolition.

C. The contractor shall provide barricades and covered walkways required by authorities having jurisdiction for public rights-of-way and for public access to existing building.

D. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

E. Exterior barricades shall be a minimum of 6’-0” high portable chain link or opaque fabric fence, securely attached to posts at 5’-0” o.c. maximum.

1.14 EXTERIOR ENCLOSURES

A. The contractor shall be responsible for proper enclosure of all openings.

B. Provide temporary insulated weather tight closure of exterior openings to accommodate acceptable working conditions and protection for Products, to allow for temporary heating and maintenance of required ambient temperatures identified in individual specification sections, and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.

1.15 SECURITY

A. Security Program:
   1. Protect Work, existing premises and Owner's operations from theft, vandalism, and unauthorized entry.

B. Entry Control:
   1. Restrict entrance of persons and vehicles into project site and existing facilities.
   2. Allow entrance only to authorized persons with proper identification.
   3. Owner will control entrance of persons and vehicles related to Owner's operations.

1.16 NOISE CONTROL

A. Provide methods, means, and facilities to minimize noise from affecting Owner’s operations. Should work requiring excessive noise be required schedule work to be completed during off-hours of Owners operation.

1.17 PEST CONTROL

A. Provide methods, means, and facilities to prevent pests and insects from damaging the Work.

1.18 POLLUTION CONTROL

A. Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations.

B. Comply with pollution and environmental control requirements of authorities having jurisdiction.

1.19 RODENT CONTROL

A. Provide methods, means, and facilities to prevent rodents from accessing or invading premises.

1.20 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

A. Remove temporary utilities, equipment, facilities and materials prior to Substantial Completion inspection.

B. Remove underground installations to a minimum depth of 2 feet.

C. Clean and repair damage caused by installation or use of temporary work.

D. Restore permanent facilities used during construction to specified condition.

END OF SECTION

DOCUMENT 01 60 00

PRODUCT REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Products.

B. Product delivery requirements.

C. Product storage and handling requirements.

D. Product options.

E. Product substitution procedures.

1.2 PRODUCTS

A. Furnish products of qualified manufacturers suitable for intended use. Furnish products of each type by single manufacturer unless specified otherwise.

B. Do not use materials and equipment removed from existing premises, except as specifically permitted by Contract Documents.

C. Furnish interchangeable components from same manufacturer for components being replaced.

D. All electrical work to conform to current national electric code requirements.

E. All electrical products, components and packaged systems are to be approved and labeled by a nationally recognized testing agency such as Underwriters Laboratory (UL) or equal.

F. The Contractor shall provide a third party certificate of inspection by independent inspection agency.

1.3 PRODUCT DELIVERY REQUIREMENTS

A. Transport and handle products in accordance with manufacturer's instructions.

B. Promptly inspect shipments to ensure products comply with requirements, quantities are correct, and products are undamaged.

C. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.

1.4 PRODUCT STORAGE AND HANDLING REQUIREMENTS

A. Store and protect products in accordance with manufacturers' instructions.

B. Store with seals and labels intact and legible.

C. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.

D. For exterior storage of fabricated products, place on sloped supports above ground.

E. Provide bonded off-site storage and protection when site does not permit on-site storage or protection.

F. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.

G. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

1.5 PRODUCT OPTIONS

A. Products Specified by Reference Standards or by Description Only: Any product meeting those standards or description.

B. Products Specified by Naming One or More Manufacturers: products of one of manufacturers named and meeting specifications, substitutions allowed. Submit request for substitution for any manufacturer not named in accordance with the following article.

C. Products Specified by Naming one manufacturer: Provide product from manufacturer listed. No substitutions permitted.

1.6 PRODUCT SUBSTITUTION PROCEDURES

A. Architect/Engineer will consider requests for Substitutions only within 30 days after date of Owner-Contractor Agreement.

B. Substitutions may be considered when a product becomes unavailable through no fault of Contractor.

C. Document each request with complete data substantiating compliance of proposed Substitution with Contract Documents.

D. A request constitutes a representation that Contractor:
1. Has investigated proposed product and determined that it meets or exceeds quality level of specified product.
2. Will provide same warranty for Substitution as for specified product.
3. Will coordinate installation and make changes to other Work which may be required for the Work to be complete with no additional cost to Owner.
4. Waives claims for additional costs or time extension which may subsequently become apparent.
5. Will reimburse Owner and Architect/Engineer for review or redesign services associated with re-approval by authorities having jurisdiction.

E. Substitutions will not be considered when they are indicated or implied on Shop Drawing or Product Data submittals, without separate written request, or when acceptance will require revision to Contract Documents.

F. Substitution Submittal Procedure:
   1. Submit two copies of request for Substitution for consideration. Limit each request to one proposed Substitution.
   2. Submit Shop Drawings, Product Data, and certified test results attesting to proposed product equivalence. Burden of proof is on proposer.
   3. Architect/Engineer will notify Contractor in writing of decision to accept or reject request.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

DOCUMENT 01 70 00

EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Related requirements.

B. Project conditions.

C. Coordination.

D. Patching materials.

E. Examination.

F. Preparation.

G. Cutting and patching.

H. Protection of installed work.

I. Final cleaning.

J. Closeout procedures.

K. General requirements for maintenance service.

L. Project record documents.

M. Operation and maintenance data.

N. Spare parts and maintenance products.

O. Product warranties and product bonds.

1.2 RELATED REQUIREMENTS

A. Section 01 10 00 - Summary: Identification of work sequence; and salvaged and relocated materials.

B. Section 01 40 00 - Quality Requirements: Testing and inspection procedures.

C. Section 01 50 00 - Temporary Facilities and Controls: Temporary interior partitions.

D. Individual Product Specification Sections:
   1. Advance notification to other sections of openings required in work of those sections.
   2. Limitations on cutting structural members.

2.4 PROJECT CONDITIONS

A. Use of explosives is not permitted.

B. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment.

C. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion.

D. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.

E. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere and over adjacent property.
   1. Provide dust-proof enclosures to prevent entry of dust generated outdoors.
   2. Provide dust-proof barriers between construction areas and areas continuing to be occupied by Owner.

F. Noise Control: Provide methods, means, and facilities to minimize noise produced by construction operations.
   1. Outdoors: Limit conduct of especially noisy exterior work to the hours of 8 am to 5 pm.

G. Pollution Control: Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations. Comply with federal, state, and local regulations.

1.4 COORDINATION

A. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements.

B. Notify affected utility companies and comply with their requirements.

C. Verify that utility requirements and characteristics of new operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.

D. Coordinate space requirements, supports, and installation of mechanical and electrical work that are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.

E. In finished areas, conceal pipes, ducts, and wiring within the construction unless otherwise noted. Coordinate locations of fixtures and outlets with finish elements.

F. Coordinate completion and clean-up of work of separate sections.

G. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

PART 2 PRODUCTS

2.1 PATCHING MATERIALS

A. New Materials: As specified in product sections; match existing products and work for patching and extending work.

B. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 01 60 00.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.

B. Verify that substrate is capable of structural support or attachment of new work being applied or attached.

C. Examine and verify specific conditions described in individual specification sections.

D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or miss-fabrication.

E. Verify that utility services are available, of the correct characteristics, and in the correct locations.

3.2 PREPARATION

A. Clean substrate surfaces prior to applying next material or substance.

B. Seal cracks or openings of substrate prior to applying next material or substance.

C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.3 GENERAL INSTALLATION REQUIREMENTS

A. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.

B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.

C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.

D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.

E. Make neat transitions between different surfaces, maintaining texture and appearance.

3.4 PROTECTION OF INSTALLED WORK

A. The contractor shall protect their installed work from damage by construction operations.

B. Provide special protection where specified in individual specification sections.

C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.

D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.

E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.

F. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.

G. Prohibit traffic from landscaped areas.

H. Remove protective coverings when no longer needed; reuse or recycle plastic coverings if possible.

3.5 FINAL CLEANING

A. The contractor shall provide final cleaning. Employ experienced workers or professional cleaners for final cleaning.

B. Execute final cleaning prior to final project assessment.

1. Clean areas to be occupied by Owner prior to final completion before Owner occupancy.

C. Use cleaning materials that are nonhazardous.

D. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.

E. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.

F. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.

G. Replace filters of operating equipment.

H. Clean debris from roofs, gutters, downspouts, and drainage systems.

I. Clean site; sweep paved areas, rake clean landscaped surfaces.

J. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

3.6 CLOSEOUT PROCEDURES

A. Make submittals that are required by governing or other authorities.
1. Provide copies to Architect/Engineer.

B. Notify Architect when work is considered ready for Substantial Completion.

C. Submit written certification that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Architect's review.

D. Correct items of work listed in executed Certificates of Substantial Completion and comply with requirements for access to Owner-occupied areas.

E. Notify Architect when work is considered finally complete.

F. Complete items of work determined by Architect's final inspection.

G. Submit final application for payment identifying total adjusted contract sum, previous payments and sum remaining due.

3.7 GENERAL REQUIREMENTS FOR MAINTENANCE SERVICE

A. Provide service and maintenance of components indicated in specification sections.

B. Maintenance Period: As indicated in specification sections or, if not indicated, not less than one year from the Date of Substantial Completion or the length of the specified warranty, whichever is longer.

C. Examine system components at a frequency consistent with reliable operation. Clean, adjust, and lubricate as required.

D. Include systematic examination, adjustment, and lubrication of components. Repair or replace parts whenever required. Use parts produced by the manufacturer of the original component.

E. Maintenance service shall not be assigned or transferred to any agent or subcontractor without prior written consent of the Owner.

3.8 PROJECT RECORD DOCUMENTS

A. Maintain on site one set of the following record documents; record actual revisions to the Work:
   1. Drawings
   2. Specifications
   3. Addenda
   4. Change Orders and other modifications to the Contract.
   5. Reviewed Shop Drawings, Product Data, and Samples.
   6. Manufacturer's instruction for assembly, installation, and adjust.

B. Ensure entries are complete and accurate, enabling future reference by Owner.

C. Store record documents separate from documents used for construction.

D. Record information concurrent with construction progress, not less than weekly.

E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
   1. Manufacturer's name and product model and number.
   2. Product substitutions or alternates utilized.
   3. Changes made by addenda and modifications.

F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
   1. Measured depths of foundations in relation to finish first floor datum.
   2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
   3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
   4. Field changes of dimension and detail.
   5. Details not on original contract drawings

G. Submit documents to Architect/Engineer with claim for final Application for Payment.

3.9 OPERATIONS AND MAINTENANCE DATA

A. Submit one copy of data bound in 8-1/2 x 11 inch (A4) text pages, three ring binders with durable plastic covers.

B. Prepare binder cover with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of project, and subject matter of binder when multiple binders are required.

C. Internally subdivide binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.

D. Drawings: Provide with reinforced punched binder tab. For drawings 11 x 17" or smaller bind in with text; fold larger drawings to size of text pages.

E. Contents: Prepare Table of Contents for each volume, with each product or system description identified, typed on white paper, in three parts as follows:
   1. Part 1: Directory, listing names, addresses and telephone numbers of Architect/Engineer, Contractor, Subcontractors, and major equipment suppliers.
   2. Part 2: Operation and maintenance instructions, arranged by system and subdivided by specification section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:
      a. Significant design criteria.
      b. List of equipment
      c. Parts list for each component.
      d. Operating instructions
      e. Maintenance instructions for equipment and systems.
      f. Maintenance instructions for special finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.

3. Part 3: Project documents and certificates, including the following:
   a. Shop drawings and product data.
   b. Air and water balance reports.
   c. Certificates
   d. Originals of warranties and bonds.

F. MATERIALS AND FINISHES:
1. Building Products, Applied Materials, and Finishes: include product data, with catalog number, size, composition, and color and texture designations.
2. Instructions for Care and Maintenance: Include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
3. Moisture Protection and Weather Exposed Products: Include product data listing applicable reference standards, chemical composition, and details for installation. Include recommendations for inspections, maintenance, and repair.

G. Equipment and Systems
1. Each item or system: Include description of unit or system, and component parts. Identify function, normal operating characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and model number of replaceable parts.
2. Panel Board Circuit Directories: Provide electrical service characteristics, controls, and communications; typed.
3. Include color coded wiring diagrams as installed.
4. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and special operating instructions.
5. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and trouble-shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
6. Include servicing and lubrications schedule, and list of lubricants required.
7. Include manufacturer's printed operation and maintenance instructions.
8. Include sequence of operations by controls manufacturer.
9. Include original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
10. Include control diagrams by controls manufacturer as installed.
11. Include charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
12. Include list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage
13. Include test and balancing reports as specified in Section 01 40 00 and mechanical specifications.

H. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit documents within ten days after acceptance.

I. Submit completed volumes fifteen days prior to final inspection. Architect/Engineer will review. Revise content of document sets as required.

J. Additional Requirements; As specified in individual product specification sections.

3.10 SPARE PARTS AND MAINTENANCE PRODUCTS

A. Furnish spare parts, maintenance, and extra products in quantities specified in individual specification sections.

B. Deliver to Project site and place in location as directed by Owner; obtain receipt prior to final payment.

3.11 PRODUCT WARRANTIES AND PRODUCT BONDS

A. Obtain warranties and bonds executed in duplicate by responsible subcontractors, suppliers, and manufacturers, within ten days after completion of applicable item of work.

B. Execute and assemble transferable warranty documents and bonds from subcontractors, suppliers, and manufacturers.

C. Verify documents are in proper form, contain full information, and are notarized.

D. Co-execute submittals when required.

E. Submit prior to final Application for Payment.

F. Time of Submittals:
   1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within ten days after acceptance.
   2. Make other submittals within ten days after Date of Substantial Completion, prior to final Application for Payment.
   3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within ten days after acceptance, listing date of acceptance as beginning of warranty or bond period.

END OF SECTION

SECTION 033000 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes cast-in-place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes, for the following:

1. Sidewalks
2. Curbing
3. Floor Slab

1.2 DEFINITIONS

A. Cementitious Materials: Portland cement alone or in combination with one or more of the following: blended hydraulic cement, fly ash and other pozzolans, ground granulated blast-furnace slag, and silica fume; subject to compliance with requirements.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

B. Design Mixtures: For each concrete mixture. Submit alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

1. Indicate amounts of mixing water to be withheld for later addition at Project site.

C. Construction Joint Layout: Indicate proposed construction joints required to construct the structure.

1. Location of construction joints is subject to approval of the Professional.

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

B. Welding certificates.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: A qualified installer who employs on Project personnel qualified as ACI-certified Flatwork Technician and Finisher and a supervisor who is an ACI-certified Concrete Flatwork Technician.

B. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.

1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities."

C. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant, obtain aggregate from single source, and obtain admixtures from single source from single manufacturer.

D. Welding Qualifications: Qualify procedures and personnel according to AWS D1.4/D 1.4M, "Structural Welding Code - Reinforcing Steel."

E. ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:

1. ACI 301, "Specifications for Structural Concrete," Sections 1 through 5.
2. ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."

1.6 DELIVERY, STORAGE, AND HANDLING

A. Waterstops: Store waterstops under cover to protect from moisture, sunlight, dirt, oil, and other contaminants.

PART 2 - PRODUCTS

2.1 FORM-FACING MATERIALS

A. Smooth-Formed Finished Concrete: Form-facing panels that will provide continuous, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints.

1. Plywood, metal, or other approved panel materials.
2. Exterior-grade plywood panels, suitable for concrete forms, complying with DOC PS 1, and as follows:

a. Medium-density overlay, Class 1 or better; mill-release agent treated and edge sealed where concrete is exposed to view.
b. Structural 1, B-B or better; mill oiled and edge sealed.
c. B-B (Concrete Form), Class 1 or better; mill oiled and edge sealed.

B. Rough-Formed Finished Concrete: Plywood, lumber, metal, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.

C. Forms for Cylindrical Columns, Pedestals, and Supports: Metal, glass-fiber-reinforced plastic, paper, or fiber tubes that will produce surfaces with gradual or abrupt irregularities not exceeding specified formwork surface class. Provide units with sufficient wall thickness to resist plastic concrete loads without detrimental deformation.

D. Chamfer Strips: Wood, metal, PVC, or rubber strips, 3/4 by 3/4 inch, minimum.

E. Rustication Strips: Wood, metal, PVC, or rubber strips, kerfed for ease of form removal.

F. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.

1. Formulate form-release agent with rust inhibitor for steel form-facing materials.

G. Form Ties: Factory-fabricated, removable or snap-off metal or glass-fiber-reinforced plastic form ties designed to resist lateral pressure of fresh concrete on forms and to prevent spalling of concrete on removal.

1. Furnish units that will leave no corrodible metal closer than 1 inch to the plane of exposed concrete surface.
2. Furnish ties with integral water-barrier plates to walls indicated to receive dampproofing or waterproofing.

2.2 STEEL REINFORCEMENT

A. Recycled Content of Steel Products: Postconsumer recycled content plus one-half of pre-consumer recycled content not less than 25 percent.

B. Reinforcing Bars: ASTM A 615/A 615M, Grade 60, deformed.

C. Plain-Steel Welded Wire Reinforcement: ASTM A 185/A 185M, plain, fabricated from as-drawn steel wire into flat sheets.

2.3 REINFORCEMENT ACCESSORIES

A. Joint Dowel Bars: ASTM A 615/A 615M, Grade 60, plain-steel bars, cut true to length with ends square and free of burrs.

B. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire reinforcement in place. Manufacture bar supports from steel wire, plastic, or precast concrete according to CRSI's "Manual of Standard Practice," of greater compressive strength than concrete and as follows:

1. For concrete surfaces exposed to view where legs of wire bar supports contact forms, use CRSI Class 1 plastic-protected steel wire or CRSI Class 2 stainless-steel bar supports.

2.4 CONCRETE MATERIALS

A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source, throughout Project:

1. Portland Cement: ASTM C 150, Type I, gray. Supplement with the following:

a. Fly Ash: ASTM C 618, Class F.

B. Normal-Weight Aggregates: ASTM C 33, Class 3S coarse aggregate or better, graded. Provide aggregates from a single source.

1. Maximum Coarse-Aggregate Size: 1-1/2 inches nominal.
2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.

C. Water: ASTM C 94/C 94M and potable.

2.5 ADMIXTURES

A. Air-Entraining Admixture: ASTM C 260.

2.6 WATERSTOPS

A. Self-Expanding Rubber Strip Waterstops: Manufactured rectangular or trapezoidal strip, bentonite-free hydrophilic polymer modified chloroprene rubber, for adhesive bonding to concrete, 3/8 by 3/4 inch.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

a. Adeka Ultra Seal/OCM, Inc.; Adeka Ultra Seal.
b. Greenstreak; Hydrotite.
c. Vinylex Corp.; Swellseal.

2.7 VAPOR RETARDERS

A. Sheet Vapor Retarder: ASTM E 1745, Class A. Include manufacturer's recommended adhesive or pressure-sensitive tape.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

a. Carlisle Coatings & Waterproofing, Inc.; Blackline 400.
b. Fortifiber Building Systems Group; Moistop Ultra 10.
c. Insulation Solutions, Inc.; Viper VaporCheck 10.
d. Meadows, W. R., Inc.; Perminator 10 mil.
e. Raven Industries Inc.; Vapor Block 10.
f. Reef Industries, Inc.; Griffolyn 10 mil Green.
g. Stego Industries, LLC; Stego Wrap 10 mil Class A.

2.8 CURING MATERIALS

A. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. when dry.

B. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.

C. Water: Potable.

2.9 RELATED MATERIALS

A. Expansion- and Isolation-Joint-Filler Strips: ASTM D1751 non-bituminous cellulosic fiber.

B. Retain one of two options in first paragraph below if semirigid joint filler is required to fill joints and support edges of trafficked contraction and construction joints.

C. Semi-rigid Joint Filler: Two-component, semi-rigid, 100 percent solids, epoxy resin with a Type A shore durometer hardness of 80 per ASTM D 2240.

D. Bonding Agent: ASTM C 1059/C 1059M, Type II, non-redispersible, acrylic emulsion or styrene butadiene.

E. Epoxy Bonding Adhesive: ASTM C 881, two-component epoxy resin, capable of humid curing and bonding to damp surfaces, of class suitable for application temperature and of grade to suit requirements, and as follows:

1. Types I and II, non-load bearing, for bonding hardened or freshly mixed concrete to hardened concrete.

2.10 REPAIR MATERIALS

A. Repair Underlayment: Cement-based, polymer-modified, self-leveling product that can be applied in thicknesses from 1/8 inch and that can be feathered at edges to match adjacent floor elevations.

1. Cement Binder: ASTM C 150, Portland cement or hydraulic or blended hydraulic cement as defined in ASTM C 219.
2. Primer: Product of underlayment manufacturer recommended for substrate, conditions, and application.
3. Aggregate: Well-graded, washed gravel, 1/8 to 1/4 inch or coarse sand as recommended by underlayment manufacturer.
4. Compressive Strength: Not less than 4100 psi at 28 days when tested according to ASTM C 109/C 109M.

B. Repair Overlayment: Cement-based, polymer-modified, self-leveling product that can be applied in thicknesses from 1/4 inch and that can be filled in over a scarified surface to match adjacent floor elevations.

1. Cement Binder: ASTM C 150, Portland cement or hydraulic or blended hydraulic cement as defined in ASTM C 219.
2. Primer: Product of topping manufacturer recommended for substrate, conditions, and application.
3. Aggregate: Well-graded, washed gravel, 1/8 to 1/4 inch or coarse sand as recommended by topping manufacturer.
4. Compressive Strength: Not less than 5000 psi at 28 days when tested according to ASTM C 109/C 109M.

2.11 CONCRETE MIXTURES, GENERAL

A. Cementitious Materials:

1. Fly Ash: 25 percent.
2. Combined Fly Ash and Pozzolan: 25 percent.
3. Combined Fly Ash or Pozzolan and Ground Granulated Blast-Furnace Slag: 50 percent Portland cement minimum, with fly ash or Pozzolan not exceeding 25 percent.

B. Limit water-soluble, chloride-ion content in hardened concrete to 0.30 percent by weight of cement.

C. Admixtures: Use admixtures according to manufacturer's written instructions.

1. Use water-reducing, high-range water-reducing, or plasticizing admixture in concrete, as required, for placement and workability.

2. Use water-reducing and retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.
3. Use water-reducing admixture in pumped concrete, concrete required to be watertight, and concrete with a water-cementitious materials ratio below 0.50.
4. Use corrosion-inhibiting admixture in concrete mixtures where indicated.

2.12 CONCRETE MIXTURES FOR BUILDING ELEMENTS

A. Footings: Proportion normal-weight concrete mixture as follows:

1. Minimum Compressive Strength: 3000 psi at 28 days.
2. Maximum Water-Cementitious Materials Ratio: 0.50.
3. Slump Limit: 4 inches, plus or minus 1 inch.
4. Air Content: 5.5 percent, plus or minus 1.5 percent at point of delivery for 1-1/2-inch nominal maximum aggregate size.
5. Air Content: 6 percent, plus or minus 1.5 percent at point of delivery for 1-inch nominal maximum aggregate size.

B. Foundation Walls: Proportion normal-weight concrete mixture as follows:

1. Minimum Compressive Strength: 3000 psi at 28 days.
2. Slump Limit: 4 inches, plus or minus 1 inch.
3. Air Content: 5.5 percent, plus or minus 1.5 percent at point of delivery for 1-1/2-inch nominal maximum aggregate size.
4. Air Content: 6 percent, plus or minus 1.5 percent at point of delivery for 1-inch nominal maximum aggregate size.

C. Slabs-on-Grade: Proportion normal-weight concrete mixture as follows:

1. Minimum Compressive Strength: 3000 psi at 28 days.
2. Minimum Cementitious Materials Content: 520 lb/cu. yd. .
3. Slump Limit: 4 inches, plus or minus 1 inch.
4. Air Content: 6 Insert number percent, plus or minus 1.5 percent at point of delivery for 1-inch nominal maximum aggregate size.
5. Air Content: Do not allow air content of trowel-finished floors to exceed 3 percent. Insert water-cementitious materials ratio here if slab-on-grade is subject to special exposure conditions or injurious sulfate exposure.

2.13 FABRICATING REINFORCEMENT

A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

2.14 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M, and furnish batch ticket information.

1. When air temperature is between 85 and 90 deg F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.

PART 3 - EXECUTION

3.1 FORMWORK

A. Design, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until structure can support such loads.

B. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.

C. Limit concrete surface irregularities, designated by ACI 347 as abrupt or gradual, as follows:

1. Class A, 1/8 inch for smooth-formed finished surfaces.
2. Class B, 1/4 inch for rough-formed finished surfaces.

D. Construct forms tight enough to prevent loss of concrete mortar.

E. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush or wrecking plates where stripping may damage cast concrete surfaces. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical.

1. Install keyways, reglets, recesses, and the like, for easy removal.
2. Do not use rust-stained steel form-facing material.

F. Set edge forms, bulkheads, and intermediate screed strips for slabs to achieve required elevations and slopes in finished concrete surfaces. Provide and secure units to support screed strips; use strike-off templates or compacting-type screeds.

G. Provide temporary openings for cleanouts and inspection ports where interior area of formwork is inaccessible. Close openings with panels tightly fitted to forms and securely braced to prevent loss of concrete mortar. Locate temporary openings in forms at inconspicuous locations.

H. Chamfer exterior corners and edges of permanently exposed concrete.

I. Form openings, chases, offsets, sinkages, keyways, reglets, blocking, screeds, and bulkheads required in the Work. Determine sizes and locations from trades providing such items.

J. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.

K. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.

L. Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.

3.2 EMBEDDED ITEMS

A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.

1. Install anchor rods, accurately located, to elevations required and complying with tolerances in Section 7.5 of AISC's "Code of Standard Practice for Steel Buildings and Bridges."

3.3 REMOVING AND REUSING FORMS

A. General: Formwork for sides of beams, walls, columns, and similar parts of the Work that does not support weight of concrete may be removed after cumulatively curing at not less than 50 deg F for 24 hours after placing concrete. Concrete has to be hard enough to not be damaged by form-removal operations and curing and protection operations need to be maintained.

1. Leave formwork for beam soffits, joists, slabs, and other structural elements that supports weight of concrete in place until concrete has achieved its 28-day design compressive strength.
2. Remove forms only if shores have been arranged to permit removal of forms without loosening or disturbing shores.

B. Clean and repair surfaces of forms to be reused in the Work. Split, frayed, delaminated, or otherwise damaged form-facing material will not be acceptable for exposed surfaces. Apply new form-release agent.

C. When forms are reused, clean surfaces, remove fins and laitance, and tighten to close joints. Align and secure joints to avoid offsets. Do not use patched forms for exposed concrete surfaces unless approved by Professional.

3.4 SHORES AND RESHORES

A. Comply with ACI 318 and ACI 301 for design, installation, and removal of shoring and re-shoring.

B. Plan sequence of removal of shores and re-shore to avoid damage to concrete. Locate and provide adequate re-shoring to support construction without excessive stress or deflection.

3.5 VAPOR RETARDERS

A. Sheet Vapor Retarders: Place, protect, and repair sheet vapor retarder according to ASTM E 1643 and manufacturer's written instructions.

1. Lap joints 6 inches and seal with manufacturer's recommended tape.

3.6 STEEL REINFORCEMENT

A. General: Comply with CRSI's "Manual of Standard Practice" for placing reinforcement.

1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.

B. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials that would reduce bond to concrete.

C. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars.

D. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.

E. Install welded wire reinforcement in longest practicable lengths on bar supports spaced to minimize sagging. Lap edges and ends of adjoining sheets at least one mesh spacing. Offset laps of adjoining sheet widths to prevent continuous laps in either direction. Lace overlaps with wire.

3.7 JOINTS

A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.

B. Construction Joints: Install so strength and appearance of concrete are not impaired, at locations indicated or as approved by Professional.

1. Place joints perpendicular to main reinforcement. Continue reinforcement across construction joints unless otherwise indicated. Do not continue reinforcement through sides of strip placements of floors and slabs.
2. Form keyed joints as indicated. Embed keys at least 1-1/2 inches into concrete.
3. Locate joints for beams, slabs, joists, and girders in the middle third of spans. Offset joints in girders a minimum distance of twice the beam width from a beam-girder intersection.
4. Locate horizontal joints in walls and columns at underside of floors, slabs, beams, and girders and at the top of footings or floor slabs.
5. Use epoxy-bonding adhesive at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.

C. Contraction Joints in Slabs-on-Grade: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of concrete thickness as follows:

1. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch- wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before concrete develops random contraction cracks.

D. Isolation Joints in Slabs-on-Grade: After removing formwork, install joint-filler strips at slab junctions with vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.

1. Extend joint-filler strips full width and depth of joint, terminating flush with finished concrete surface unless otherwise indicated.
2. Terminate full-width joint-filler strips not less than 1/2 inch or more than 1 inch below finished concrete surface where joint sealants, specified in Division 07 Section "Joint Sealants," are indicated.
3. Install joint-filler strips in lengths as long as practicable. Where more than one length is required, lace or clip sections together.

E. Doweled Joints: Install dowel bars and support assemblies at joints where indicated. Lubricate or asphalt coat one-half of dowel length to prevent concrete bonding to one side of joint.

3.8 WATERSTOPS

A. Self-Expanding Strip Waterstops: Install in construction joints and at other locations indicated, according to manufacturer's written instructions, adhesive bonding, mechanically fastening, and firmly pressing into place. Install in longest lengths practicable.

3.9 CONCRETE PLACEMENT

A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections have been performed.

B. Do not add water to concrete during delivery, at Project site, or during placement unless approved by Professional.

1. Do not add water to concrete after adding high-range water-reducing admixtures to mixture.

C. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as indicated. Deposit concrete to avoid segregation.

1. Deposit concrete in horizontal layers of depth to not exceed formwork design pressures and in a manner to avoid inclined construction joints.
2. Consolidate placed concrete with mechanical vibrating equipment according to ACI 301.
3. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations to rapidly penetrate placed layer and at least 6 inches into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity. At each insertion, limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing mixture constituents to segregate.

D. Deposit and consolidate concrete for floors and slabs in a continuous operation, within limits of construction joints, until placement of a panel or section is complete.

1. Consolidate concrete during placement operations so concrete is thoroughly worked around reinforcement and other embedded items and into corners.
2. Maintain reinforcement in position on chairs during concrete placement.
3. Screed slab surfaces with a straightedge and strike off to correct elevations.
4. Slope surfaces uniformly to drains where required.
5. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane, before excess bleedwater appears on the surface. Do not further disturb slab surfaces before starting finishing operations.

E. Cold-Weather Placement: Comply with ACI 306.1 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.

1. When average high and low temperature is expected to fall below 40 deg F for three successive days, maintain delivered concrete mixture temperature within the temperature range required by ACI 301.
2. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in mixture designs.

F. Hot-Weather Placement: Comply with ACI 301 and as follows:

1. Maintain concrete temperature below 90 deg F at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
2. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade uniformly moist without standing water, soft spots, or dry areas.

3.10 FINISHING FORMED SURFACES

A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defects repaired and patched. Remove fins and other projections that exceed specified limits on formed-surface irregularities.

1. Apply to concrete surfaces not exposed to public view.

B. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defects. Remove fins and other projections that exceed specified limits on formed-surface irregularities.

1. Apply to concrete surfaces exposed to public view, or to be covered with a coating or covering material applied directly to concrete.

C. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces unless otherwise indicated.

3.11 FINISHING FLOORS AND SLABS

A. General: Comply with ACI 302.1R recommendations for screeding, re-straightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.

B. Float Finish: Consolidate surface with power-driven floats or by hand floating if area is small or inaccessible to power driven floats. Re-straighten, cut down high spots, and fill low spots. Repeat float passes and re-straightening until surface is left with a uniform, smooth, granular texture.

1. Apply float finish to surfaces to receive trowel finish.

C. Trowel Finish: After applying float finish, apply first troweling and consolidate concrete by hand or power-driven trowel. Continue troweling passes and re-straighten until surface is free of trowel marks and uniform in texture and appearance. Grind smooth any surface defects that would telegraph through applied coatings or floor coverings.

1. Apply a trowel finish to surfaces exposed to view or to be covered with resilient flooring, carpet, ceramic or quarry tile set over a cleavage membrane, paint, or another thin-film-finish coating system.
2. Finish and measure surface so gap at any point between concrete surface and an unleveled, freestanding, 10-ft.- long straightedge resting on two high spots and placed anywhere on the surface does not exceed 1/4 inch.

D. Broom Finish: Apply a broom finish to exterior concrete platforms, steps, ramps, and elsewhere as indicated.

1. Immediately after float finishing, slightly roughen trafficked surface by brooming with fiber-bristle broom perpendicular to main traffic route. Coordinate required final finish with Professional before application.

3.12 MISCELLANEOUS CONCRETE ITEMS

A. Filling In: Fill in holes and openings left in concrete structures after work of other trades is in place unless otherwise indicated. Mix, place, and cure concrete, as specified, to blend with in-place construction. Provide other miscellaneous concrete filling indicated or required to complete the Work.

B. Curbs: Provide monolithic finish to interior curbs by stripping forms while concrete is still green and by steel-troweling surfaces to a hard, dense finish with corners, intersections, and terminations slightly rounded.

C. Equipment Bases and Foundations: Provide machine and equipment bases and foundations as shown on Drawings. Set anchor bolts for machines and equipment at correct elevations, complying with diagrams or templates from manufacturer furnishing machines and equipment.

3.13 CONCRETE PROTECTING AND CURING

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 for hot-weather protection during curing.

B. Formed Surfaces: Cure formed concrete surfaces, including underside of beams, supported slabs, and other similar surfaces. If forms remain during curing period, moist cure after loosening forms. If removing forms before end of curing period, continue curing for the remainder of the curing period.

C. Cure concrete according to ACI 308.1, by one or a combination of the following methods:

1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:

    a. Water.
    b. Continuous water-fog spray.
    c. Absorptive cover, water saturated, and kept continuously wet. Cover concrete surfaces and edges with 12-inch lap over adjacent absorptive covers.

2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period using cover material and waterproof tape.

    a. Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive floor coverings.
    b. Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive penetrating liquid floor treatments.
    c. Cure concrete surfaces to receive floor coverings with either a moisture-retaining cover or a curing compound that the manufacturer certifies will not interfere with bonding of floor covering used on Project.

3.14 JOINT FILLING

A. Prepare, clean, and install joint filler according to manufacturer's written instructions.

1. Defer joint filling until concrete has aged at least one month(s). Do not fill joints until construction traffic has permanently ceased.

B. Remove dirt, debris, saw cuttings, curing compounds, and sealers from joints; leave contact faces of joint clean and dry.

C. Install semi-rigid joint filler full depth in saw-cut joints and at least 2 inches deep in formed joints. Overfill joint and trim joint filler flush with top of joint after hardening.

3.15 CONCRETE SURFACE REPAIRS

A. Defective Concrete: Repair and patch defective areas when approved by Professional. Remove and replace concrete that cannot be repaired and patched to Professional's approval.

B. Patching Mortar: Mix dry-pack patching mortar, consisting of one part Portland cement to two and one-half parts fine aggregate passing a No. 16 sieve, using only enough water for handling and placing.

C. Repairing Formed Surfaces: Surface defects include color and texture irregularities, cracks, spalls, air bubbles, honeycombs, rock pockets, fins and other projections on the surface, and stains and other discolorations that cannot be removed by cleaning.

1. Immediately after form removal, cut out honeycombs, rock pockets, and voids more than 1/2 inch in any dimension to solid concrete. Limit cut depth to 3/4 inch. Make edges of cuts perpendicular to concrete surface. Clean, dampen with water, and brush-coat holes and voids with bonding agent. Fill and compact with patching mortar before bonding agent has dried. Fill form-tie voids with patching mortar or cone plugs secured in place with bonding agent.
2. Repair defects on surfaces exposed to view by blending white Portland cement and standard Portland cement so that, when dry, patching mortar will match surrounding color. Patch a test area at inconspicuous locations to verify mixture and color match before proceeding with patching. Compact mortar in place and strike off slightly higher than surrounding surface.
3. Repair defects on concealed formed surfaces that affect concrete's durability and structural performance as determined by Professional.

D. Repairing Unformed Surfaces: Test unformed surfaces, such as floors and slabs, for finish and verify surface tolerances specified for each surface. Correct low and high areas. Test surfaces sloped to drain for trueness of slope and smoothness; use a sloped template.

1. Repair finished surfaces containing defects. Surface defects include spalls, popouts, honeycombs, rock pockets, crazing and cracks in excess of 0.01 inch wide or that penetrate to reinforcement or completely through unreinforced sections regardless of width, and other objectionable conditions.
2. After concrete has cured at least 14 days, correct high areas by grinding.
3. Correct localized low areas during or immediately after completing surface finishing operations by cutting out low areas and replacing with patching mortar. Finish repaired areas to blend into adjacent concrete.
4. Correct other low areas scheduled to receive floor coverings with a repair underlayment. Prepare, mix, and apply repair underlayment and primer according to manufacturer's written instructions to produce a smooth, uniform, plane, and level surface. Feather edges to match adjacent floor elevations.

5. Correct other low areas scheduled to remain exposed with a repair topping. Cut out low areas to ensure a minimum repair topping depth of 1/4 inch to match adjacent floor elevations. Prepare, mix, and apply repair topping and primer according to manufacturer's written instructions to produce a smooth, uniform, plane, and level surface.
6. Repair defective areas, except random cracks and single holes 1 inch or less in diameter, by cutting out and replacing with fresh concrete. Remove defective areas with clean, square cuts and expose steel reinforcement with at least a 3/4-inch clearance all around. Dampen concrete surfaces in contact with patching concrete and apply bonding agent. Mix patching concrete of same materials and mixture as original concrete except without coarse aggregate. Place, compact, and finish to blend with adjacent finished concrete. Cure in same manner as adjacent concrete.
7. Repair random cracks and single holes 1 inch or less in diameter with patching mortar. Groove top of cracks and cut out holes to sound concrete and clean off dust, dirt, and loose particles. Dampen cleaned concrete surfaces and apply bonding agent. Place patching mortar before bonding agent has dried. Compact patching mortar and finish to match adjacent concrete. Keep patched area continuously moist for at least 72 hours.

E. Perform structural repairs of concrete, subject to Professional's approval, using epoxy adhesive and patching mortar.

F. Repair materials and installation not specified above may be used, subject to Professional's approval.

3.16 FIELD QUALITY CONTROL

A. Testing and Inspecting: Comply with Section 014000 Quality Control Testing Services and 014010 Quality Assurance Testing and Inspection Services.

B. Inspections:

1. Steel reinforcement placement.
2. Headed bolts and studs.
3. Verification of use of required design mixture.
4. Concrete placement, including conveying and depositing.
5. Curing procedures and maintenance of curing temperature.
6. Verification of concrete strength before removal of shores and forms from beams and slabs.

C. Concrete Tests: Testing of composite samples of fresh concrete obtained according to ASTM C 172 shall be performed according to the following requirements:
1. Testing Frequency: Obtain at least one composite sample for each 50 cu. yd. or fraction thereof of each concrete mixture placed each day.

    a. When frequency of testing will provide fewer than five compressive-strength tests for each concrete mixture, testing shall be conducted from at least five randomly selected batches or from each batch if fewer than five are used.

2. Slump: ASTM C 143/C 143M; one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture. Perform additional tests when concrete consistency appears to change.
3. Air Content: ASTM C 231, pressure method, for normal-weight concrete; one test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
4. Concrete Temperature: ASTM C 1064/C 1064M; one test hourly when air temperature is 40 deg F and below and when 80 deg F and above, and one test for each composite sample.
5. Compression Test Specimens: ASTM C 31/C 31M.

a. Cast and laboratory cure two sets of two standard cylinder specimens for each composite sample.
b. Cast and field cure two sets of two standard cylinder specimens for each composite sample.

6. Compressive-Strength Tests: ASTM C 39/C 39M; test one set of two laboratory-cured specimens at 7 days and one set of two specimens at 28 days.

   a. Test one set of two field-cured specimens at 7 days and one set of two specimens at 28 days.
   b. A compressive-strength test shall be the average compressive strength from a set of two specimens obtained from same composite sample and tested at age indicated.

7. When strength of field-cured cylinders is less than 85 percent of companion laboratory-cured cylinders, Contractor shall evaluate operations and provide corrective procedures for protecting and curing in-place concrete.
8. Strength of each concrete mixture will be satisfactory if every average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi.

   a. If the structural members are accepted on the basis of tests other than the original cylinder tests, the Contractor shall compensate Bureau one hundred ($100) dollars per cubic yard for each on hundred pounds per square inch below the specified strength. The original laboratory-cured 28 day test cylinder results only shall be used to determine the difference between specified and furnished strengths.

9. Test results shall be reported in writing to Professional, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, and type of break for both 7- and 28-day tests.
10. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Professional but will not be used as sole basis for approval or rejection of concrete.
11. Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Professional. Testing and inspecting agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42/C 42M or by other methods as directed by Professional.
12. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
13. Correct deficiencies in the Work that test reports and inspections indicate do not comply with the Contract Documents.

D. Measure floor and slab flatness and levelness according to ASTM E 1155 within 24 hours of finishing.

END OF SECTION

SECTION 061000 - ROUGH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Framing with dimension lumber.
2. Wood blocking, cants, and nailers.

1.3 DEFINITIONS

A. Dimension Lumber: Lumber of 2 inches nominal or greater but less than 5 inches nominal in least dimension.

B. Lumber grading agencies, and the abbreviations used to reference them, include the following:

1. NeLMA: Northeastern Lumber Manufacturers' Association.
2. NLGA: National Lumber Grades Authority.
3. WCLIB: West Coast Lumber Inspection Bureau.
4. WWPA: Western Wood Products Association.

1.4 QUALITY ASSURANCE

A. Testing Agency Qualifications: For testing agency providing classification marking for fire-retardant treated material, an inspection agency acceptable to authorities having jurisdiction that periodically performs inspections to verify that the material bearing the classification marking is representative of the material tested.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Stack lumber flat with spacers beneath and between each bundle to provide air circulation. Protect lumber from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by

the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.

1. Factory mark each piece of lumber with grade stamp of grading agency.
2. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
3. Provide dressed lumber, S4S, unless otherwise indicated.

B. Maximum Moisture Content of Lumber: 19 percent unless otherwise indicated.

2.2 WOOD-PRESERVATIVE-TREATED LUMBER

A. Preservative Treatment by Pressure Process: AWPA U1; Use Category UC2.

1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.

B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or that does not comply with requirements for untreated material.

C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.

D. Application: Treat items indicated on Drawings, and the following:

1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
2. Wood sills, sleepers, blocking, stripping, and similar concealed members in contact with masonry or concrete.

2.3 DIMENSION LUMBER FRAMING

A. Joists, Rafters, and Other Framing Not Listed Above: Construction or No. 2 grade.

1. Species:

a. Spruce-pine-fir; NLGA.

2.4 MISCELLANEOUS LUMBER

A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:

1. Blocking.
2. Nailers.
3. Cants.

B. For items of dimension lumber size, provide Construction or No. 2 grade lumber and any of the following species:

1. Spruce-pine-fir; NLGA.
2. Eastern softwoods; NeLMA.

C. For concealed boards, provide lumber with 19 percent maximum moisture content and any of the following species and grades:

1. Spruce-pine-fir (south) or spruce-pine-fir; Construction or No. 2 Common grade; NeLMA, NLGA, WCLIB, or WWPA.

D. For blocking not used for attachment of other construction, Utility, Stud, or No. 3 grade lumber of any species may be used provided that it is cut and selected to eliminate defects that will interfere with its attachment and purpose.

E. For blocking and nailers used for attachment of other construction, select and cut lumber to eliminate knots and other defects that will interfere with attachment of other work.

2.5 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.

1. Where rough carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.

B. Nails, Brads, and Staples: ASTM F 1667.

C. Power-Driven Fasteners: NES NER-272.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.

B. Do not splice structural members between supports unless otherwise indicated.

C. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.

1. Provide metal clips for fastening gypsum board or lath at corners and intersections where framing or blocking does not provide a surface for fastening edges of panels. Space clips not more than 16 inches o.c.

D. Provide fire blocking in furred spaces, stud spaces, and other concealed cavities as indicated and as follows:

1. Fire block furred spaces of walls, at each floor level, at ceiling, and at not more than 96 inches o.c. with solid wood blocking or noncombustible materials accurately fitted to close furred spaces.
2. Fire block concealed spaces of wood-framed walls and partitions at each floor level, at ceiling line of top story, and at not more than 96 inches o.c. Where fire blocking is not inherent in framing system used, provide closely fitted solid wood blocks of same width as framing members and 2-inch nominal thickness.
3. Fire block concealed spaces between floor sleepers with same material as sleepers to limit concealed spaces to not more than 100 sq. ft. and to solidly fill space below partitions.

4. Fire block concealed spaces behind combustible cornices and exterior trim at not more than 20 feet o.c.

E. Sort and select lumber so that natural characteristics will not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.

F. Comply with AWPA M4 for applying field treatment to cut surfaces of preservative-treated lumber.

1. Use inorganic boron for items that are continuously protected from liquid water.
2. Use copper naphthenate for items not continuously protected from liquid water.

G. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:

1. NES NER-272 for power-driven fasteners.
2. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.
3. Table R602.3(1), "Fastener Schedule for Structural Members," and Table R602.3(2), "Alternate Attachments," in ICC's International Residential Code for One- and Two-Family Dwellings.

H. Use steel common nails unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood. Drive nails snug but do not countersink nail heads unless otherwise indicated.

3.2 PROTECTION

A. Protect rough carpentry from weather. If, despite protection, rough carpentry becomes sufficiently wet that moisture content exceeds that specified, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

END OF SECTION 061000

SECTION 061600 - SHEATHING

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. Wall Sheathing

1.3 DELIVERY, STORAGE, AND HANDLING

A. Stack panels flat with spacers beneath and between each bundle to provide air circulation. Protect sheathing from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 WOOD PANEL PRODUCTS

A. Plywood: DOC PS 1.

B. Thickness: As needed to comply with requirements specified, but not less than thickness indicated.

C. Factory mark panels to indicate compliance with applicable standard.

2.2 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.

1. For roof sheathing, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.

B. Screws for Fastening Wood Structural Panels to Cold-Formed Metal Framing: ASTM C 954, except with wafer heads and reamer wings, length as recommended by screw manufacturer for material being fastened.

1. For wall and roof sheathing panels, provide screws with organic-polymer or other corrosion-protective coating having a salt-spray resistance of more than 800 hours according to ASTM B 117.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Do not use materials with defects that impair quality of sheathing or pieces that are too small to use with minimum number of joints or optimum joint arrangement. Arrange joints so that pieces do not span between fewer than three support members.

B. Cut panels at penetrations, edges, and other obstructions of work; fit tightly against abutting construction unless otherwise indicated.

C. Coordinate roof sheathing installation with flashing and joint-sealant installation so these materials are installed in sequence and manner that prevent exterior moisture from passing through completed assembly.

D. Do not bridge building expansion joints; cut and space edges of panels to match spacing of structural support elements.

E. Coordinate sheathing installation with installation of materials installed over sheathing so sheathing is not exposed to precipitation or left exposed at end of the workday when rain is forecast.

3.2 WOOD STRUCTURAL PANEL INSTALLATION

A. General: Comply with applicable recommendations in APA Form No. E30, "Engineered Wood Construction Guide," for types of structural-use panels and applications indicated.

B. Fastening Methods: Fasten panels as indicated below:

1. Roof Sheathing:

a. Screw to cold-formed metal framing.
b. Space panels 1/8 inch apart at edges and ends.

END OF SECTION 061600

SECTION 074100 - FACTORY MANUFACTURED PREFORMED METAL ROOF PANELS

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

1. This section covers the pre-finished, pre-fabricated hidden fastener snap-loc metal roof and wall system. All metal trim, accessories, fasteners, insulation and sealants indicated on the drawings as part of this section.
2. Drawings and general provisions of the Contract, including general and Supplementary Conditions and Division 01 Specifications, apply to this section.

1.2 SUMMARY

1. Section Includes
    1. Factory formed hidden fastener snap-loc metal roof and wall panels
2. Related work specified elsewhere. (Note: select from the below or add appropriate sections)
    1. Section 07600 - Flashing and Sheet Metal

1.3 DEFINITIONS

1. Metal Roof/Wall Panel Assembly: Metal roof/ panels, attachment system components, miscellaneous metal framing, thermal, and accessories necessary for a complete weathertight roofing system.
2. References:
    1. American Society for Testing and Materials (ASTM)
        1. ASTM A 653: Steel Sheet, Zinc Coated by the Hot Dip Process
        2. ASTM A 792: Steel Sheet, Aluminum-Zinc Alloy Coated by the Hot Dip Process
        3. ASTM B 209: Aluminum and Aluminum Alloy Sheet and Plate
        4. ASTM B370 Standard Specification for Copper Sheet and Strip for Building Construction
    2. Sheet Metal and Air Conditioning Contractors National Association (SMACNA)
        1. SMACNA Architectural Sheet Metal Manual, 1993 edition
    3. American Iron and Steel Institute (AISI)
        1. AISI Cold Formed Steel Design Manual
    4. Aluminum Association
        1. Aluminum Design Manual
    5. Metal Construction Association
        1. Preformed Metal Wall Guidelines
    6. Code References
        1. ASCE, Minimum Loads for Buildings and Other Structures
        2. BOCA National Building Codes
        3. UBC Uniform Building Code
        4. SBC Standard Building Code

1.4 QUALITY ASSURANCE

1. Manufacturer and erector shall demonstrate experience of a minimum of five (5) years in this type of project.

2. Panels shall be factory-produced only. No portable, installer-owned or installer-rented machines will be permitted.

1.5 SUBSTITUTIONS

1. The material, products and equipment specified in this section establish a standard for required function, dimension, appearance and quality to be met by any proposed substitution.

1.6 SYSTEM DESCRIPTION

1. Material to comply with:
    1. ASTM A792/A792M Standard Specification for Sheet Steel, 55% Aluminum-Zinc Alloy Coated by the Hot-Dip process

1.7 ROOF SYSTEM PERFORMANCE TESTING

1. General Performance: Metal roof/wall panels shall comply with performance requirements without failure due to defective manufacture, fabrication, installation or other defects in construction.
2. Roof System shall be designed to meet Standard Building Code Wind Load requirements.
3. Panels to meet:
    1. Roof/Wall System shall be designed to meet applicable Local Building Code and the System shall have tested by the Manufacturer per ASTM E-1592 and have the applicable Load Tables published from this testing for loads.

1.8 WARRANTIES

A. Finish warranty: Manufacturer's standard form in which manufacturer agrees to repair finish or replace standing seam metal roof panels that show evidence of deterioration of factory-applied finish within specified warranty period.
    1. Exposed Panels Finish - deterioration includes the following:
        a. Color fading more than 5 hunter units when tested according to ASTM D 2244
        b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214
        c. Cracking, checking, peeling or failure of a paint to adhere to a bare metal.
    2. Warranty Period: 20 Years from the date of substantial completion
B. Applicator shall furnish written warranty for a two (2) year period from date of substantial completion of building covering repairs required to maintain roof and flashings in watertight condition.

1.9 SUBMITTALS

1. Furnish detailed drawings showing profile and gauge of exterior sheets, location and type of fasteners, location, gauges, shape and method of attachment of all trim locations and types of sealants, and any other details as may be required for a weather-tight installation.
2. Provide finish samples of all colors specified.
3. Shop drawings: Show fabrication and installation layouts of metal roof panels, metal wall panels or metal soffit panels, details of edge conditions, side-seam joints, panel profiles, corners, anchorages, trim, flashings, closures and accessories, and special details. Distinguish between factory and field-assembled work
4. Coordination Drawings: Roof plans, drawn to scale, on which the following are shown and coordinated with each other, based on input from installer of the items involved:
    1. Roof panels and attachments
    2. Wood trusses, bracings and supports
    3. Roof-mounted items including snow guards and items mounted on roof curbs.

1.10 DELIVERY, STORAGE AND HANDLING

1. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
2. Deliver components, sheets, metal roof panels and other manufactured items so as not to be damaged or deformed. Package metal roof/wall panels for protection during transportation and handling.
3. Unload, store and erect metal roof panels in a manner to prevent bending, warping, twisting and surface damage.
4. Stack metal roof panels on platforms or pallets, covered with suitable weathertight and ventilated covering. Store metal roof/wall panels to ensure dryness. Do not store metal roof panels in contact with other materials that might cause staining, denting or other surface damage.
5. Protect strippable protective coating on any metal coated product from exposure to sunlight and high humidity, except to the extent necessary for material installation.

1.11 PROJECT CONDITIONS

1. Weather Limitations: proceed with installation only when existing and forecasted weather conditions permit metal roof panel work to be performed.
2. Field Measurements: Verify actual dimensions of construction contiguous with metal roof panels by field measurements before fabrication.

1.12 COORDINATION

1. Coordinate sizes and locations of roof curbs, equipment supports and roof penetrations with actual equipment provided.
2. Coordinate metal roof panels with rain drainage work, flashing, trim and construction of decks, and other adjoining work to provide a leakproof, secure and noncorrosive installation.

PART 2 - PRODUCTS

2.1 PANEL DESIGN

1. General: Provide factory-formed, prefinished, lappable snap-loc hidden fastener, structural ribbed metal roof/wall panel system, that has been pretested and certified by manufacturer to comply with specified requirements under installed conditions.
2. Total coverage of Roof panels when installed shall be 16".
3. Structural Requirements: Engineer panels for structural properties in accordance with latest edition of American Iron and Steel Institute's Cold Formed Steel Design Manual using effective width concept and Aluminum Associations Aluminum Design Manual.
4. Forming: Use continuous end rolling method. No end laps on panels. No portable rollforming machines will be permitted on this project, no installer-owned or installer-rented machines will be permitted. It is the intent of the Architect to provide Factory-Manufactured panel systems only for this project.
5. Panels shall be directly fastened to the substrate.
6. The panel shall have an overlapping sidelap feature.

2.2 ACCEPTABLE MANUFACTURERS

1. This project is detailed around the roofing product of Ideal Roofing; Junior H-F, 1418 Michael Street, Ottawa, ON, Canada. Tel: 613-746-3206, Email: info@idealroofing.ca

2.3 MATERIALS AND FINISHES

1. Product: Junior-HF, Hidden fastener system.
2. Preformed roofing panels shall be fabricated of 29 GA Steel
3. Color shall be selected by Architect from manufacturers standard colors.
4. Texture: Panel shall be smooth.
5. Finish shall be painted AZ50 galvalume with a top side film thickness of 0.70 to 0.90 mil over a 0.25 to 0.3 mil prime coat to provide a total dry film thickness of 0.95 to 1.25 mil, to meet AAMA 621. Bottom side shall be coated with a primer with a dry film thickness of 0.25 mil. Finish shall conform to all tests for adhesions, flexibility and longevity as specified by Kynar 500 or Hylar 5000 finish supplier.
6. If Strippable coating to be applied on the pre-finished panels to the top side to protect the finish during fabrication, shipping and handling, film shall be removed before installation.
7. Trim: Trim shall be fabricated of the same material and finish to match the profile, and will be press broken in lengths of 10 to 12 feet. Trim shall be formed only by the manufacturer of their approved dealer. Trim to be erected in overlapped condition. Use lap strips only as indicated on drawings. Miter conditions shall be factory welded material to match the sheeting. Trim to be fabricated in accordance with standard SMACNA procedure and details.
8. Closures: shall be pre-molded polyethylene to match the profile of the exposed fastener panel and shall be in lengths as supplied by the panel manufacturer.
9. Accessories/Fasteners: Fasteners shall be of type, material, size, corrosion resistance, holding power and other properties required to fasten miscellaneous framing members to substrates. Accessories and their fasteners shall be capable of resisting the specified design wind uplift forces and shall allow for thermal movement of the roof panel system.
10. Substrate shall be Plywood
11. Caulking: Shall be a polyurethane where it is exposed and there is no thermal movement. All caulking and sealing shall be done in a neat manner with excess caulking or sealant removed from exposed surfaces.
12. Vapor Retarder: retarder with a permeance of 0.05 or less as determined by ASTM 98.

2.4 FABRICATION

1. Comply with dimensions, profile limitations, gauges and fabrication details shown and if not shown, provide manufacturer's standard product fabrication.
2. Fabricate components of the system in factory, ready for field assembly.
3. Fabricate components and assemble units to comply with fire performance requirements specified.
4. Apply specified finishes in conformance with manufacturer's standard, and according to manufacturer's instructions.
5. Panels are lappable. It is recommended that individual aluminum roof panels not exceed 16' in length and steel roof panels not exceed 32' in length for thermal movement reasons.
6. Panels shall be roll formed on a stationary industrial type rolling mill to gradually shape the sheet metal. Portable rollformers rented or owned by the installer, are not acceptable.

PART 3 - EXECUTION

3.1 INSPECTION

1. Examine alignment of structural steel and related supports, primary and secondary roof framing, solid roof sheathing, prior to installation. Components should comply with shop drawings and be smooth, even, sound and free of depressions.
2. For the record, prepare written report, endorsed by installer, listing conditions detrimental to performance of the Work.
3. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 FASTENERS

1. Secure units to supports
2. Place fasteners as indicated in manufacturer's standards.

3.3 INSTALLATION

1. Panels shall be installed plumb and true in a proper alignment and in relation to the structural framing. The erector must have at least five years successful experience with similar applications.
2. Install metal panels, fasteners, trim and related sealants in accordance with approved shop drawings and as may be required for a weather-tight installation. Conform to standards set forth in SMACNA architectural sheet metal manuals and approved shop drawings for this project.
3. Remove all strippable coating and provide a dry-wipe down cleaning of the panels as they are erected.
4. Install panel system so it is watertight, without waves, warps, buckles or distortions, and allow for thermal movement considerations.
5. Abrasive devices shall not be used to cut on or near roof or wall panel system.
6. Apply sealant tape or caulking as necessary at flashing and panel joints to prevent water penetration.
7. Remove any strippable film immediately upon exposure to direct sunlight.
8. Vapor retarder: The joints, perimeter, and all openings shall be sealed per the manufacturer's instructions to provide a continuous vapor retarder.
9. Underlayment (solid substrate):
    1. Provide one layer of 30# felt with horizontal overlaps and endlaps staggered between layers.
    2. Provide ice and water shield membrane at all valley and eave conditions.
    3. Lay parallel to ridge line with 2 1/2" horizontal laps and 6" vertical laps

3.4 DAMAGED MATERIAL

1. Upon determination of responsibility, repair or replace damaged metal panels and trim to the satisfaction of the Architect and Owner.

END OF SECTION

SECTION 07 42 13 – METAL WALL PANELS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes: **Metal Board & Batten exterior wall panels with hidden fasteners, including trim and accessories**.

1.2 REFERENCES

A. General: Standards listed by reference form a part of this specification section. Standards listed are identified by issuing authority, abbreviation, designation number, title or other designation. Standards subsequently referenced in this Section are referred to by issuing authority abbreviation and standard designation.

B. ASTM International:

1. ASTM A 653 – Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
2. ASTM A 792 – Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.

C. Underwriters Laboratories (UL):

1. UL 263 - Fire Tests of Building Construction and Materials.

1.3 ADMINISTRATIVE REQUIREMENTS

A. Preinstallation Meetings: Conduct preinstallation meeting to clarify Project requirements, substrate conditions, manufacturer’s installation instructions and manufacturer’s warranty requirements.

1.4 ACTION SUBMITTALS

A. Product Technical Data: For each type of product required, including manufacturer's preparation recommendations, storage and handling requirements, and recommended installation methods.

B. Shop Drawings: Showing methods of installation, plans, sections, elevations and details of roof and wall panels, specified loads, flashings, vents, sealants, interfaces with all materials not supplied by the metal panel system manufacturer, and identification of proposed component parts and their finishes. Do not proceed with fabrication prior to approval of shop drawings.

C. Samples: Selection and verification samples for finishes, colors and textures. Submit two complete sample sets of each type of panel, trim, clip and fastener required.

D. Certificates: Product certificates signed by manufacturer certifying materials comply with specified performance characteristics, criteria and physical requirements.

E. Qualifications Statements: For manufacturer and installer.

F. Design Submittal: Comply with performance requirements and design criteria, including analysis data and calculations signed and sealed by a qualified professional engineer.

1.5 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For installed products including maintenance methods and precautions against cleaning materials and methods detrimental to finishes and performance.

B. Warranty: Warranty documents required in this section.

1.6 MAINTENANCE MATERIAL

A. Extra Materials: Deliver to Owner extra materials from same production run as products installed. Package products with protective covering and identify with descriptive labels. Comply with Division 01 Closeout Submittals Section.

1. Delivery, Storage and Protection: Comply with Owner’s requirements for delivery, storage and protection of extra materials.

1.7 QUALITY ASSURANCE

A. Manufacturer Qualifications:

1. Provider of advanced installer training.
2. Minimum of ten years of experience in manufacturing metal wall panel systems.
3. Provider of products produced in a permanent factory environment with fixed roll-forming equipment.

B. Installer Qualifications:

1. At least five years of experience in the installation of metal wall panels.
2. Experience on at least five projects of similar size, type and complexity as this Project that have been in service for a minimum of two years with satisfactory performance of the wall panel system.
3. Employer of workers for this Project who are competent in techniques required by manufacturer for installation indicated and who shall be supervised at all times when material is being installed.

C. Mock-Ups: Install at Project site a mock-up using required products and manufacturer's approved installation methods. Obtain Owner and Architect approval of finish, color, texture, pattern, trim, fasteners and quality of installation before proceeding with further work.

1. Size: **2’x2’**.
2. Maintenance: Maintain mock-up during construction for quality comparison. Remove and lawfully dispose of mock-up construction when no longer required.
3. Incorporation: Mock-up may be incorporated into final construction upon Owner approval.

1.8 DELIVERY, STORAGE AND HANDLING

A. General: Comply with manufacturer’s current printed product storage recommendations.

B. Delivery: Deliver materials in manufacturer’s original, unopened, undamaged containers with identification labels intact.

C. Storage: Store materials above ground, under waterproof covering, protected from exposure to harmful weather conditions and at temperature and humidity conditions recommended by manufacturer. Provide proper ventilation of metal panel system to prevent condensation build-up between each panel and trim or flashing component. Tilt stack to drain in wet conditions. Remove strippable plastic film before storage under high-heat conditions. Store products in manufacturer's unopened packaging until just prior to installation.

D. Handling: Exercise caution in unloading and handling metal panel system to prevent bending, warping, twisting and surface damage.

1.9 WARRANTY

A. Special Exposed Panel Finish Warranty: Manufacturer's standard form System Warranty for Chalk rating and fade rating in which manufacturer agrees to repair or replace panels that show evidence of deterioration within specified warranty period.

1. Deterioration shall include but is not limited to:

a. Color fading of more than 5 Hunter units when tested according to ASTM D 2244.
b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
c. Cracking, checking, peeling or failure of paint to adhere to bare metal.

2. Warranty Period: Chalk and fade rating for 20 years, and perforation for 40 years from date of Substantial Completion.
3. Manufacturer’s warranty may exclude surface deterioration due to physical damage and exposure to salt air environments.

PART 2 PRODUCTS

2.1 METAL WALL PANELS

A. Basis of Design Product: Subject to compliance with requirements provide Central States; Wood Look Board & Batten metal siding.

B. Substitution Limitations: Architect Approved Equal

C. Product Options:

1. Panel coverage: 10 inches (880.5 mm).
2. Rib Height: 3/4 inch (22.2 mm).
3. Material: 0.0185 inches Steel Panel with Galvalume AZ50
4. Attachment: Hidden direct fastened panel.
5. Application: Designed for application over open framing or solid substrate.
6. Surface Finish: Galvalume AZ50
7. Color: **As selected by Architect from manufacturer's standard colors.**

2.6 SOURCE QUALITY CONTROL

A. Source: Obtain metal wall panels, trim and other accessories from a single manufacturer.

B. Quality Control: Obtain metal wall panels, trim and other accessories from a manufacturer capable of providing on-site technical support and installation assistance.

PART 3 EXECUTION

3.2 PREPARATION

A. Miscellaneous Framing: Install furring, angles, subpurlins, and other miscellaneous wall panel support members and anchorage according to metal wall panel manufacturer's recommendations.

3.4 METAL WALL PANEL INSTALLATION

A. General: Comply with panel manufacturer’s installation instructions including but not limited to special techniques, interface with other work, and integration of systems.

B. Fasten metal wall panels to supports with concealed clips at each standing-seam joint at location, spacing, and using proper fasteners as recommended by panel manufacturer.

3.5 ACCESSORY INSTALLATION

A. General: Install accessories using techniques recommended by manufacturer and which will assure positive anchorage to building and weather tight mounting. Provide for thermal movement. Coordinate installation with flashings and other components.

B. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and the SMACNA "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and install units to true level. Install work with laps, joints, and seams that will be permanently watertight.

3.7 CLEANING

A. Remove temporary coverings and protection of adjacent work areas.

B. Repair or replace any installed products that have been damaged.

C. Clean installed panels in accordance with manufacturer’s instructions prior to Owner’s acceptance.

D. Remove and lawfully dispose of construction debris from Project site.

3.8 PROTECTION

A. Protect installed product and finish surfaces from damage during construction.

END OF SECTION 07 42 13 – METAL WALL PANELS

SECTION 07 42 13.1 – FLAT METAL WALL PANELS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes: **Concealed Fastener Metal Soffit and Wall Panel**

1.2 REFERENCES

A. General: Standards listed by reference form a part of this specification section. Standards listed are identified by issuing authority, abbreviation, designation number, title or other designation. Standards subsequently referenced in this Section are referred to by issuing authority abbreviation and standard designation.

B. ASTM International:

1. ASTM A 653 – Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
2. ASTM A 792 – Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.

C. Underwriters Laboratories (UL):

1. UL 263 - Fire Tests of Building Construction and Materials.

1.3 ADMINISTRATIVE REQUIREMENTS

A. Preinstallation Meetings: Conduct preinstallation meeting to clarify Project requirements, substrate conditions, manufacturer’s installation instructions and manufacturer’s warranty requirements.

1.4 ACTION SUBMITTALS

A. Product Technical Data: For each type of product required, including manufacturer's preparation recommendations, storage and handling requirements, and recommended installation methods.

B. Shop Drawings: Showing methods of installation, plans, sections, elevations and details of roof and wall panels, specified loads, flashings, vents, sealants, interfaces with all materials not supplied by the metal panel system manufacturer, and identification of proposed component parts and their finishes. Do not proceed with fabrication prior to approval of shop drawings.

C. Samples: Selection and verification samples for finishes, colors and textures. Submit two complete sample sets of each type of panel, trim, clip and fastener required.

D. Certificates: Product certificates signed by manufacturer certifying materials comply with specified performance characteristics, criteria and physical requirements.

E. Qualifications Statements: For manufacturer and installer.

F. Design Submittal: Comply with performance requirements and design criteria, including analysis data and calculations signed and sealed by a qualified professional engineer.

1.5 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For installed products including maintenance methods and precautions against cleaning materials and methods detrimental to finishes and performance.

B. Warranty: Warranty documents required in this section.

1.6 MAINTENANCE MATERIAL

A. Extra Materials: Deliver to Owner extra materials from same production run as products installed. Package products with protective covering and identify with descriptive labels. Comply with Division 01 Closeout Submittals Section.

1. Delivery, Storage and Protection: Comply with Owner’s requirements for delivery, storage and protection of extra materials.

1.7 QUALITY ASSURANCE

A. Manufacturer Qualifications:

1. Provider of advanced installer training.
2. Minimum of ten years of experience in manufacturing metal wall panel systems.
3. Provider of products produced in a permanent factory environment with fixed roll-forming equipment.

B. Installer Qualifications:

1. At least five years of experience in the installation of metal wall panels.
2. Experience on at least five projects of similar size, type and complexity as this Project that have been in service for a minimum of two years with satisfactory performance of the wall panel system.
3. Employer of workers for this Project who are competent in techniques required by manufacturer for installation indicated and who shall be supervised at all times when material is being installed.

C. Mock-Ups: Install at Project site a mock-up using required products and manufacturer's approved installation methods. Obtain Owner and Architect approval of finish, color, texture, pattern, trim, fasteners and quality of installation before proceeding with further work.

1. Size: **2’x2’**.
2. Maintenance: Maintain mock-up during construction for quality comparison. Remove and lawfully dispose of mock-up construction when no longer required.
3. Incorporation: Mock-up may be incorporated into final construction upon Owner approval.

1.8 DELIVERY, STORAGE AND HANDLING

A. General: Comply with manufacturer’s current printed product storage recommendations.

B. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.

C. Storage: Store materials above ground, under waterproof covering, protected from exposure to harmful weather conditions and at temperature and humidity conditions recommended by manufacturer. Provide proper ventilation of metal panel system to prevent condensation build-up between each panel and trim or flashing component. Tilt stack to drain in wet conditions. Remove strippable plastic film before storage under high-heat conditions. Store products in manufacturer's unopened packaging until just prior to installation.

D. Handling: Exercise caution in unloading and handling metal panel system to prevent bending, warping, twisting and surface damage.

1.9 WARRANTY

A. Special Exposed Panel Finish Warranty: Manufacturer's standard form System Warranty for Chalk rating and fade rating in which manufacturer agrees to repair or replace panels that show evidence of deterioration within specified warranty period.

1. Deterioration shall include but is not limited to:

a. Color fading of more than 5 Hunter units when tested according to ASTM D 2244.
b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
c. Cracking, checking, peeling or failure of paint to adhere to bare metal.

2. Warranty Period: Chalk and fade rating for 30 years, and perforation for 50 years from date of Substantial Completion.
3. Manufacturer's warranty may exclude surface deterioration due to physical damage and exposure to salt air environments.

PART 2 PRODUCTS

2.1 METAL WALL PANELS

A. Basis of Design Product: Subject to compliance with requirements provide Central States; Precision-Loc concealed fastener metal soffit and wall panel.

B. Substitution Limitations: Architect Approved Equal

C. Product Options:

1. Panel coverage width: 12 inches (880.5 mm).
2. Rib Height: 1 inch (22.2 mm).
3. Material: 0.023 inches Steel Panel with Galvalume AZ50
4. Attachment: Hidden direct fastened panel.
5. Surface Finish: Galvalume AZ50
6. Color: **As selected by Architect from manufacturer's standard colors.**

2.6 SOURCE QUALITY CONTROL

A. Source: Obtain metal wall panels, trim and other accessories from a single manufacturer.

B. Quality Control: Obtain metal wall panels, trim and other accessories from a manufacturer capable of providing on-site technical support and installation assistance.

PART 3 EXECUTION

3.2 PREPARATION

A. Miscellaneous Framing: Install furring, angles, subpurlins, and other miscellaneous wall panel support members and anchorage according to metal wall panel manufacturer's recommendations.

3.4 METAL WALL PANEL INSTALLATION

A. General: Comply with panel manufacturer’s installation instructions including but not limited to special techniques, interface with other work, and integration of systems.

B. Fasten metal wall panels to supports with concealed clips at each standing-seam joint at location, spacing, and using proper fasteners as recommended by panel manufacturer.

3.5 ACCESSORY INSTALLATION

A. General: Install accessories using techniques recommended by manufacturer and which will assure positive anchorage to building and weather tight mounting. Provide for thermal movement. Coordinate installation with flashings and other components.

B. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and the SMACNA "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and install units to true level. Install work with laps, joints, and seams that will be permanently watertight.

3.7 CLEANING

A. Remove temporary coverings and protection of adjacent work areas.

B. Repair or replace any installed products that have been damaged.

C. Clean installed panels in accordance with manufacturer’s instructions prior to Owner’s acceptance.

D. Remove and lawfully dispose of construction debris from Project site.

3.8 PROTECTION

A. Protect installed product and finish surfaces from damage during construction.

END OF SECTION 07 42 13 – METAL WALL PANELS

SECTION 076200 - SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes sheet metal flashing and trim in the following categories:
   1. Exposed trim and fascia.
   2. Metal flashing.

B. Related Sections: The following Sections contain requirements that relate to this Section:

   1. Division 7 Section "Joint Sealants" for elastomeric sealants.

1.2 PERFORMANCE REQUIREMENTS

A. General: Install sheet metal flashing and trim to withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failing.

1.3 SUBMITTALS

A. General: Submit each item in this Article according to the Conditions of the Contract and Division 1 Specification Sections.

B. Product Data including manufacturer's material and finish data, installation instructions, and general recommendations for each specified flashing material and fabricated product.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Engage an experience Installer who has completed sheet metal flashing and trim work similar in material, design, and extent to that indicated for this Project and with a record of successful in-service performance.

1.5 PROJECT CONDITIONS

A. Coordinate Work of this Section with interfacing and adjoining Work for proper sequencing of each installation. Ensure best possible weather resistance, durability of Work, and protection of materials and finishes.

PART 2 - PRODUCTS

2.1 METALS

A. Aluminum: Alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated and with not less than the strength and durability of alloy and temper designated below:

1. Factory-Painted Aluminum Sheet: ASTM B 209, 3003-H14, with a minimum thickness of 0.024 inch, unless otherwise indicated.

2.2 MISCELLANEOUS MATERIALS AND ACCESSORIES

A. Solder: ASTM B 32, Grade Sn50, used with rosin flux.

B. Fasteners: Same metal as sheet metal flashing or other noncorrosive metal as recommended by sheet metal manufacturer. Match finish of exposed heads with material being fastened.

C. Asphalt Mastic: SSPC-Paint 12, solvent-type asphalt mastic, nominally free of sulfur and containing no asbestos fibers, compounded for 15-mil dry film thickness per coat.

D. Mastic Sealant: Polyisobutylene; nonhardening, nonskinning, nondrying, nonmigrating sealant.

E. Elastomeric Sealant: Generic type recommended by sheet metal manufacturer and fabricator of components being sealed and complying with requirements for joint sealants as specified in Division 7 Section "Joint Sealants."

F. Epoxy Seam Sealer: 2-part, noncorrosive, aluminum seam-cementing compound, recommended by aluminum manufacturer for exterior and interior nonmoving joints, including riveted joints.

G. Adhesives: Type recommended by flashing sheet metal manufacturer for waterproof and weather-resistant seaming and adhesive application of flashing sheet metal.

H. Metal Accessories: Provide sheet metal clips, straps, anchoring devices, and similar accessory units as required for installation of Work, matching or compatible with material being installed; noncorrosive; size and thickness required for performance.

2.3 FABRICATION, GENERAL

A. Sheet Metal Fabrication Standard: Fabricate sheet metal flashing and trim to comply with recommendations of SMACNA's "Architectural Sheet Metal Manual" that apply to the design, dimensions, metal, and other characteristics of the item indicated.

B. Comply with details shown to fabricate sheet metal flashing and trim that fit substrates and result in waterproof and weather-resistant performance once installed. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.

C. Form exposed sheet metal Work that is without excessive oil canning, buckling, and tool marks and that is true to line and levels indicated, with exposed edges folded back to form hems.

D. Seams: Fabricate nonmoving seams in aluminum with flat-lock seams. Form seams and seal with epoxy seam sealer. Rivet joints for additional strength.

E. Expansion Provisions: Space movement joints at maximum of 10 feet with no joints allowed within 24 inches of corner or intersection. Where lapped or bayonet-type expansion provisions in Work cannot be used or would not be sufficiently weatherproof and waterproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with mastic sealant (concealed within joints).

F. Sealed Joints: Form non-expansion, but movable, joints in metal to accommodate elastomeric sealant to comply with SMACNA standards.

G. Separate metal from non-compatible metal or corrosive substrates by coating concealed surfaces at locations of contact with asphalt mastic or other permanent separation as recommended by manufacturer.

H. Conceal fasteners and expansion provisions where possible. Exposed fasteners are not allowed on faces of sheet metal exposed to public view.

I. Fabricate cleats and attachment devices from same material as sheet metal component being anchored or from compatible, noncorrosive metal recommended by sheet metal manufacturer.

1. Size: As recommended by SMACNA manual or sheet metal manufacturer for application but never less than thickness of metal being secured.

2.4 SHEET METAL FABRICATIONS

A. General: Fabricate sheet metal items in thickness or weight needed to comply with performance requirements but not less than that listed below for each application and metal.

B. Gutters : Fabricate from the following material:

1. Aluminum: minimum .032 inch thick.

2. Steel: 0.0239 inch thick

C. Downspouts: Fabricate from the following material:

1. Aluminum: 0.032 inch thick.

2. Steel: 0.0239 inch thick.

D. Exposed Trim and Fascia: Fabricate from the following material:

1. Aluminum: 0.032 inch thick.

E. Base Flashing: Fabricate from the following material:

1. Aluminum: 0.032 inch thick.

2. Steel: 0.1046 inch thick

F. Counterflashing: Fabricate from the following material:

1. Aluminum: 0.032 inch thick.

2. Steel: 0.1046 inch thick

G. Flashing Receivers: Fabricate from the following material:

1. Aluminum: 0.032 inch thick.

2. Steel: 0.1046 inch thick

H. Drip Edges: Fabricate from the following material:

1. Aluminum: 0.032 inch thick.

I. Eave Flashing: Fabricate from the following material:

1. Aluminum: 0.032 inch thick.

2.5 ALUMINUM EXTRUSION FABRICATIONS

A. Aluminum Extrusion Units: Fabricate extruded-aluminum running units with formed or extruded-aluminum joint covers for installation behind main members where possible. Fabricate mitered and welded corner units.

2.6 ALUMINUM FINISHES

A. General: Comply with Aluminum Association's (AA) "Designation System for Aluminum Finishes" for finish designations and application recommendations.

B. High-Performance Organic Coating Finish: AA-C12C42R1x (Chemical Finish: cleaned with inhibited chemicals; Chemical Finish: acid chromate-fluoride-phosphate conversion coating; Organic Coating: as specified below). Prepare, pre-treat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturer's instructions.

1. Fluoropolymer 2-Coat Coating System: Manufacturer's standard 2-coat, thermo-cured system composed of specially formulated inhibitive primer and fluoropolymer color topcoat containing not less than 70 percent polyvinylidene fluoride resin by weight; complying with AAMA 605.2.

a. Color and Gloss: As selected by Professional from manufacturer's full range of choices for color and gloss.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions under which sheet metal flashing and trim are to be installed and verify that Work may properly commence. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. General: Unless otherwise indicated, install sheet metal flashing and trim to comply with performance requirements, manufacturer's installation instructions, and SMACNA's "Architectural Sheet Metal

Manual." Anchor units of Work securely in place by methods indicated, providing for thermal expansion of metal units; conceal fasteners where possible, and set units true to line and level as indicated. Install Work with laps, joints, and seams that will be permanently watertight and weatherproof.

B. Install exposed sheet metal Work that is without excessive oil canning, buckling, and tool marks and that is true to line and levels indicated, with exposed edges folded back to form hems. Install sheet metal flashing and trim to fit substrates and to result in waterproof and weather-resistant performance. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.

C. Roof-Edge Flashings: Secure metal flashings at roof edges according to FM Loss Prevention Data Sheet 1-49 for specified wind zone.

D. Expansion Provisions: Provide for thermal expansion of exposed sheet metal Work. Space movement joints at maximum of 10 feet with no joints allowed within 24 inches of corner or intersection. Where lapped or bayonet-type expansion provisions in Work cannot be used or would not be sufficiently weatherproof and waterproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with mastic sealant (concealed within joints).

E. Soldered Joints: Clean surfaces to be soldered, removing oils and foreign matter. Pre-tin edges of sheets to be soldered to a width of 1-1/2 inches, except where pre-tinned surface would show in finished Work.

1. Do not solder the following metals:

    a. Aluminum.

2. Pre-tinning is not required for the following metals:

    a. Lead.
    b. Lead-coated copper.
    c. Terne-coated stainless steel.

3. Do not use torches for soldering. Heat surfaces to receive solder and flow solder into joint. Fill joint completely. Completely remove flux and spatter from exposed surfaces.

F. Sealed Joints: Form non-expansion, but movable, joints in metal to accommodate elastomeric sealant to comply with SMACNA standards. Fill joint with sealant and form metal to completely conceal sealant.

1. Use joint adhesive for nonmoving joints specified not to be soldered.

G. Seams: Fabricate nonmoving seams in aluminum with flat-lock seams. Form seams and seal with epoxy seam sealer. Rivet joints for additional strength.

H. Counterflashings: Coordinate installation of counterflashings with installation of assemblies to be protected by counterflashing. Install counterflashings in reglets or receivers. Secure in a waterproof manner by means of snap-in installation and sealant, lead wedges and sealant, interlocking folded seam, or blind rivets and sealant. Lap counterflashing joints a minimum of 2 inches and bed with sealant.

I. Roof-Drainage System: Install drainage items fabricated from sheet metal, with straps, adhesives, and anchors recommended by SMACNA's Manual or the item manufacturer, to drain roof in the most efficient manner. Coordinate roof-drain flashing installation with roof-drainage system installation. Coordinate flashing and sheet metal items for steep-sloped roofs with roofing installation.

J. Roof-Penetration Flashing: Coordinate roof-penetration flashing installation with roofing and installation of items penetrating roof.

3.3 CLEANING AND PROTECTION

A. Clean exposed metal surfaces, removing substances that might cause corrosion of metal or deterioration of finishes.

B. Provide final protection and maintain conditions that ensure sheet metal flashing and trim Work during construction is without damage or deterioration other than natural weathering at the time of Substantial Completion.

END OF SECTION 076200

SECTION 079200 - JOINT SEALANTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Urethane joint sealants.
2. Latex joint sealants.
3. Solvent-release-curing joint sealants.
4. Acoustical joint sealants.

1.2 ACTION SUBMITTALS

A. Product Data: For each joint-sealant product indicated.

B. Samples for Initial Selection: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.

1.3 INFORMATIONAL SUBMITTALS

A. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, indicating that sealants comply with requirements.

B. Warranties: Sample of special warranties.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of units required for this Project.

B. Source Limitations: Obtain each kind of joint sealant from single source from single manufacturer.

1.5 PROJECT 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.
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.

1.6 WARRANTY

A. Special warranties specified in this article exclude deterioration or failure of joint sealants from the following:

1. Movement of the structure caused by structural settlement or errors attributable to design or construction resulting in stresses on the sealant exceeding sealant manufacturer's written specifications for sealant elongation and compression.
2. Disintegration of joint substrates from natural 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 MATERIALS, 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. VOC Content of Interior Sealants: Sealants and sealant primers used inside the weatherproofing system shall comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):

1. Architectural Sealants: 250 g/L.
2. Sealant Primers for Nonporous Substrates: 250 g/L.
3. Sealant Primers for Porous Substrates: 775 g/L.

C. Liquid-Applied Joint Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied joint sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.

D. Stain-Test-Response Characteristics: Where sealants are specified to be non-staining to porous substrates, provide products that have undergone testing according to ASTM C 1248 and have not stained porous joint substrates indicated for Project.

E. Suitability for Contact with Food: Where sealants are indicated for joints that will come in repeated contact with food, provide products that comply with 21 CFR 177.2600.

F. Colors of Exposed Joint Sealants: As selected by Professional from manufacturer's full range.

2.2 URETHANE JOINT SEALANTS

A. Single-Component, Non-sag, Urethane Joint Sealant: ASTM C 920, Type S, Grade NS, Class 100/50, for Use NT.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

a. Sika Corporation, Construction Products Division; Sikaflex - 15LM.
b. Tremco Incorporated; Vulkem 921.

2.3 LATEX JOINT SEALANTS

A. Latex Joint Sealant: Acrylic latex or siliconized acrylic latex, ASTM C 834, Type OP, Grade NF.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

a. BASF Building Systems; Sonolac.
b. Pecora Corporation; AC-20+.
c. Tremco Incorporated; Tremflex 834.

2.4 SOLVENT-RELEASE-CURING JOINT SEALANTS

A. Acrylic-Based Joint Sealant: ASTM C 1311.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

a. Schnee-Morehead, Inc.; Acryl-R Acrylic Sealant.
b. Tremco Incorporated; Mono 555.

2.5 ACOUSTICAL JOINT SEALANTS

A. Acoustical Joint Sealant: Manufacturer's standard non-sag, paintable, non-staining latex sealant complying with ASTM C 834. Product effectively reduces airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

a. Pecora Corporation; AC-20 FTR.
b. USG Corporation; SHEETROCK Acoustical Sealant.

2.6 JOINT SEALANT BACKING

A. General: Provide sealant backings of material that are non-staining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.

B. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin) or any of the preceding types, as approved in writing by joint-sealant manufacturer for joint application indicated, and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.

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.

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 C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

C. Install sealant backings of kind indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.

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 Non-sag 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 per Figure 8A in ASTM C 1193, unless otherwise indicated.
4. Provide flush joint profile where indicated per Figure 8B in ASTM C 1193.
5. Provide recessed joint configuration of recess depth and at locations indicated per Figure 8C in ASTM C 1193.

G. Acoustical Sealant Installation: At sound-rated assemblies and elsewhere as indicated, 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 C 919 and with manufacturer's written recommendations.

3.4 FIELD QUALITY CONTROL

A. Evaluation of Field-Adhesion Test Results: Sealants not evidencing adhesive failure from testing or noncompliance with other indicated requirements will be considered satisfactory. Remove sealants that fail to adhere to joint substrates during testing or to comply with other requirements. Retest failed applications until test results prove sealants comply with indicated requirements.

3.5 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 and remove 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.

2. Joint-Sealant Color: As selected by Professional from manufacturer's full range of colors.

B. Joint-Sealant Application: Exterior joints in vertical surfaces and horizontal non-traffic surfaces.

1. Joint Locations:

   a. Construction joints in cast-in-place concrete.
   b. Control and expansion joints in unit masonry.
   c. Joints between different materials listed above.
   d. Perimeter joints between materials listed above and frames of doors windows.

2. Urethane Joint Sealant: Single component, non-sag, Class 100/50.
3. Joint-Sealant Color: As selected by Professional from manufacturer's full range of colors.

C. Joint-Sealant Application: Interior joints in vertical surfaces and horizontal non-traffic surfaces.

1. Joint Locations:

   a. Perimeter joints of exterior openings where indicated.
   b. Tile control and expansion joints.
   c. Perimeter joints between interior wall surfaces and frames of interior doors, windows and elevator entrances.

2. Joint Sealant: Latex.
3. Joint-Sealant Color: As selected by Professional from manufacturer's full range of colors.

END OF SECTION

SECTION 22 05 00 - Common Work Results For Plumbing

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Summary:

1. Basic plumbing requirements specifically applicable to Division 22 sections, in addition to Division 1 - General Requirements
2. General requirements for motors, hangers and supports, vibration isolation and seismic restraints.

B. Submittals: Product Data for materials and equipment specified in this Section.

1.2 DOCUMENTS

A. The general provisions of this Contract, including the bidding and Contract requirements, Division 0, Division 1, schedules, addenda, and modifications apply to the work of this Division.

B. Drawings and Specifications are supplementing each other. Work shown but not specified, or specified but not shown, shall be performed or furnished as though present in both Drawing and Specifications.

C. Related specifications

1. General construction work

1.3 COORDINATION

A. Coordinate scheduling, submittals, and Work of the various sections of the Project Manual to assure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.

B. Verify utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.

C. Coordinate electrical requirements with Division 26 Contractor.

D. Work is indicated diagrammatically on Drawings. Follow routing shown for duct and pipe as closely as practicable; place runs parallel with lines of building. Provide bends, offsets, and transitions as necessary to avoid conflicts with structure, finished surfaces, and other trades. Coordinate space requirements and utilize space efficiently to maximize accessibility for other installations, for maintenance, and for repairs. Resolve conflicts with other trades before proceeding. If conflicts cannot be resolved, notify Owner's Representative.

E. In finished areas except as otherwise indicated, conceal duct and piping within the construction. Coordinate location of fixtures and registers with finish elements.

F. Coordinate completion and cleanup of Work of separate sections in preparation for Completion and for portions of Work designated for Owner's occupancy.

G. After Owner occupancy of premises, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

1.4 CUTTING AND PATCHING

A. Provide cutting and patching for work of this Division.

B. Patch openings left by abandoned equipment, duct, and pipes.

C. Patch shall match existing finishes.

1.5 DISPOSAL

A. All material indicated for removal, or required to be removed to complete the work, shall be disposed of in accordance with Federal, state, and local regulations.

1.6 FIRESTOPPING

A. Provide fire-stopping wherever required for all penetrations.

1.7 ACCESS PANELS

A. Coordinate with the General Contractor for locations of wall and ceiling mounted access panels.

B. Access panels are furnished and installed by General Contractor unless noted otherwise.

PART 2 - PRODUCTS

2.1 HANGERS AND SUPPORTS

A. Hanger and Pipe Attachments: Factory fabricated with galvanized coatings; nonmetallic coated for hangers in direct contact with copper tubing.

B. Building Attachments: Powder-actuated-type, drive-pin attachments with pullout and shear capacities appropriate for supported loads and building materials.

C. Mechanical-Expansion Anchors: Insert wedge-type attachments with pullout and shear capacities appropriate for supported loads and building materials.

PART 3 - EXECUTION

3.1 GENERAL PIPING INSTALLATIONS

A. Install fittings for changes in direction and branch connections.

B. Install sleeves for pipes passing through concrete and masonry walls, gypsum board partitions, and concrete floor and roof slabs.

C. Exterior Wall, Pipe Penetrations: Mechanical sleeve seals installed in steel or cast-iron pipes for wall sleeves.

D. Comply with requirements in Division 07 Section "Penetration Firestopping" for sealing pipe penetrations in fire-rated construction.

E. Install unions at final connection to each piece of equipment.

F. Install dielectric unions and flanges to connect piping materials of dissimilar metals in gas piping.

G. Install dielectric coupling and nipple fittings to connect piping materials of dissimilar metals in water piping.

H. Cap piping remaining following removals with fittings designed for permanent use. All terminations shall be in concealed locations except in mechanical and utility spaces, unless otherwise noted.

3.2 GENERAL EQUIPMENT AND FIXTURE INSTALLATIONS

A. Provide blocking per manufacturer's recommendations to support wall mounted fixtures. Where not specified by the manufacturer, provide a minimum of ¾" plywood securely attached to framing members with sufficient strength to support the intended weight. The plywood backing shall encompass the entire area of contact between the fixture and the wall.

B. Install equipment to allow maximum possible headroom unless specific mounting heights are not indicated.

C. Install equipment level and plumb, parallel and perpendicular to other building systems and components, unless otherwise indicated.

D. Install mechanical equipment to facilitate service, maintenance, and repair or replacement of components. Connect equipment for ease of disconnecting, with minimum interference to other installations. Extend grease fittings to accessible locations.

E. Install equipment to allow right of way for piping installed at required slope.

3.3 HANGERS AND SUPPORTS

A. Install piping free of sags and bends. Provide horizontal support at spacing as follows:

1. Steel pipe
    a. Up to 1 inch: 8 feet
    b. 11/4 inch to 2 inches: 10 feet
    c. Over 2 inches: 12 feet
2. Copper tube
    a. Up to 1 inch: 6 feet
    b. 1-1/4 inch to 2 inches: 8 feet
    c. Over 2 inches: 10 feet
3. Non-metallic pipe
    a. Up to 1 inch: 4 feet
    b. 1-1/4 inch to 2 inches: 6 feet
    c. Over 2 inches: 8 feet

B. Comply with MSS SP-69 and MSS SP-89. Install building attachments within concrete or to structural steel.

C. Install hangers and supports to allow controlled thermal and seismic movement of piping systems.

D. Install powder-actuated drive-pin fasteners in concrete after concrete is cured. Do not use in lightweight concrete or in slabs less than 4 inches thick.

E. Install mechanical-expansion anchors in concrete after concrete is cured. Do not use in lightweight concrete or in slabs less than 4 inches thick.

F. Load Distribution: Install hangers and supports so piping live and dead loading and stresses from movement will not be transmitted to connected equipment.

G. Horizontal-Piping Hangers and Supports: Unless otherwise indicated and except as specified in piping system Specification Sections, install the following types:

1. Adjustable Steel Clevis Hangers (MSS Type 1): For suspension of uninsulated or insulated stationary pipes, NPS 1/2 to NPS 30.
2. Pipe Hangers (MSS Type 5): For suspension of pipes, NPS 1/2 to NPS 4, to allow off- center closure for hanger installation before pipe erection.
3. Adjustable Steel Band Hangers (MSS Type 7): For suspension of uninsulated stationary pipes, NPS 1/2 to NPS 8.
4. Adjustable Band Hangers (MSS Type 9): For suspension of uninsulated stationary pipes, NPS 1/2 to NPS 8.
5. Adjustable Swivel-Ring Band Hangers (MSS Type 10): For suspension of uninsulated stationary pipes, NPS 1/2 to NPS 2.

H. Vertical-Piping Clamps: Unless otherwise indicated and except as specified in piping system Specification Sections, install the following types:

1. Extension Pipe or Riser Clamps (MSS Type 8): For support of pipe risers, NPS 3/4 to NPS 20.
2. Carbon- or Alloy-Steel Riser Clamps (MSS Type 42): For support of pipe risers, NPS 3/4 to NPS 20, if longer ends are required for riser clamps.

3.4 PAINTING

A. Paint all new exposed and uncoated or uninsulated iron work and piping, including galvanized material, with primer and two coats of Rustoleum paint. Wire brush iron work to remove rust prior to painting.

B. Color to be determined by Owner or Architect.

3.5 RECORD DRAWINGS

A. The Contractor shall maintain a set of record documents clearly indicating all changes from the contract drawings to be use in creating as-built drawings.

3.6 CLOSE OUT REQUIREMENTS

A. In addition to any or all requirements listed in Division 1 specifications, the following are required to be submitted to the Architect/Engineer:
1. As-built drawing markup.
2. Copy of all Valve Charts.
3. Operation and Maintenance Manual.
4. Report of final plumbing inspection.

END OF SECTION

SECTION 22 05 53 - IDENTIFICATION FOR PLUMBING PIPING AND EQUIPMENT

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Stencils.

1.2 REFERENCE STANDARDS

A. ASME A13.1 - Scheme for the Identification of Piping Systems; The American Society of Mechanical Engineers; 2007 (ANSI/ASME A13.1).

B. ASTM D709 - Standard Specification for Laminated Thermosetting Materials; 2013.

1.3 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.

B. List: Submit list of wording, symbols, letter size, and color coding for mechanical identification.

PART 2 PRODUCTS

2.1 IDENTIFICATION APPLICATIONS

A. Piping: Pipe Markers, Stencils.

2.2 STENCILS (CONCEALED PIPING)

A. Stencils: With clean cut symbols and letters of following size:
   1. 3/4 to 1-1/4 inch Outside Diameter of Insulation or Pipe: 8 inch long color field, 1/2 inch high letters.
   2. 1-1/2 to 2 inch Outside Diameter of Insulation or Pipe: 8 inch long color field, 3/4 inch high letters.
   3. 2-1/2 to 6 inch Outside Diameter of Insulation or Pipe: 12 inch long color field, 1-1/4 inch high letters.

B. Stencil Paint: As specified in Section 09 90 00, semi-gloss enamel, colors conforming to ASME A13.1.

2.3 PIPE MARKERS (EXPOSED PIPING)

A. Comply with ASME A13.1.

B. Plastic Pipe Markers: Factory fabricated, flexible, semi- rigid plastic, preformed to fit around pipe or pipe covering; minimum information indicating flow direction arrow and identification of fluid being conveyed.

C. Plastic Tape Pipe Markers: Flexible, vinyl film tape with pressure sensitive adhesive backing and printed markings.

PART 3 EXECUTION

3.1 PREPARATION

A. Degrease and clean surfaces to receive adhesive for identification materials.

B. Prepare surfaces in accordance with Section 09 90 00 for stencil painting.

END OF SECTION

SECTION 22 07 19 - PIPING INSULATION

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

A. Pipe Hangers and Supports: Section 220529.

1.02 ABBREVIATIONS

A. FS: Federal Specification.

B. K: Thermal Conductivity, i.e., maximum Btu per inch thickness per hour per square foot.

C. pcf: Pounds per cubic foot.

D. PVC: Polyvinylchloride.

1.03 SUBMITTALS

A. Product Data: Manufacturer's catalog sheets, specifications and installation instructions for the following:
   1. Insulation Materials.
   2. Jacket Materials.

B. Quality Control Submittals:
   1. Installers Qualification Data:
      a. Name of each person who will be performing the Work, and their employer's name, business address and telephone number.
      b. Furnish names and addresses of the required number of similar projects that each person has worked on which meet the qualifications.

1.04 QUALITY ASSURANCE

A. Qualifications: The persons installing the Work of this Section and their Supervisor shall be personally experienced in mechanical insulation work and shall have been regularly employed by a company installing mechanical insulation for a minimum of 5 years.

B. Regulatory Requirements:
   1. Insulation installed inside buildings, including laminated jackets, mastics, sealants and adhesives shall have a Fire Spread/Smoke Developed Rating of 25/50 or less based on ASTM E 84.

PART 2 PRODUCTS

2.01 PIPING INSULATION

A. Fibrous Glass (Mineral Fiber) Insulation: Composed principally of fibers manufactured from rock, slag, or glass, with or without binders, and asbestos free.
   1. Preformed Pipe Insulation: Minimum density 3 pcf; ASTM C 547:
      a. Class 1 (Suitable for Temperatures Up to 450 degrees F): K of 0.26 at 75 degrees F.
   2. Premolded Fitting Insulation: Minimum density 4.0 pcf, K of 0.26 at 75 degrees F; ASTM C 547, Class 1.

3. Insulation Inserts for PVC Fitting Jackets: Minimum density 1.5 pcf, K of 0.28 at 75 degrees F; ASTM C 553, Type III.
   a. Suitable for temperatures up to 450 degrees F.

B. Flexible Elastomeric Foam Insulation:
1. FM tested and approved, meeting the following:
   a. Maximum Water Vapor Transmission: 0.10 perm - inch based on ASTM E 96, Procedure A.
   b. K of 0.27 at 75 degrees F based on ASTM C 518 or C 177.
   c. Fire Spread/Smoke Developed Rating: 25/50 or less based on ASTM E 84.
2. Pipe Insulation: ASTM C 534, Type I.
3. Polyethylene and polyolefin insulation is not acceptable.

C. High Density Jacketed Insulation Inserts for Hangers and Supports:
1. For Use with Fibrous Glass Insulation:
   a. Cold Service Piping:
      1) Polyurethane Foam: Minimum density 4 pcf, K of 0.13 at 75 degrees F, minimum compressive strength of 125 psi.
   b. Hot Service Piping:
      1) Calcium Silicate: Minimum density 15 pcf, K of 0.50 at 300 degrees F; ASTM C 533.
      2) Perlite: Minimum density 12 pcf, K of 0.60 at 300 degrees F; ASTM C 610.
2. For Use with Flexible Elastomeric Foam Insulation: Hardwood dowels and blocks, length or thickness equal to insulation thickness, other dimensions as specified or required.

D. Cements:
1. Fibrous Glass Thermal Insulating Cement: Asbestos free; ASTM C 195.
2. Fibrous Glass Hydraulic Setting Thermal Insulating and Finishing Cement: ASTM C 449/C 449M.

2.02 INSULATION JACKETS

A. Laminated Vapor Barrier Jackets for Piping: Factory applied by insulation manufacturer, conforming to ASTM C 1136, Type I.
1. Type I: Reinforced white kraft and aluminum foil laminate with kraft facing out.
   a. Pipe Jackets: Furnished with integral 1-1/2 inch self sealing longitudinal lap, and separate 3 inch wide adhesive backed butt strips.
2. Laminated vapor barrier jackets are not required for flexible elastomeric foam insulation.

B. Canvas Jackets: Cotton duck, fire retardant, complying with NFPA 701, 4 oz or 6 oz per sq yd as specified.

C. Premolded PVC Fitting Jackets:
1. Constructed of high impact, UV resistant PVC.
   a. ASTM D 1784, Class 14253-C.
   b. Working Temperature: 0-150 degrees F.

D. Metal Jacketing:

1. Aluminum: ASTM B 209, Alloys 1100, 30003, 3105 or 5005, Temper H14, 0.016 inch thick.
    a. Factory Pre-formed Sectional Pipe Jacketing:
        1) Smooth outer finish with integral bonded laminated polyethylene film - kraft paper moisture barrier underside.
        2) Pittsburgh or modified Pittsburgh longitudinal lock seams.
        3) 2 inch overlapping circumferential joints with integral locking clips, or butt joints sealed with 2 inch wide mastic backed aluminum snap bands.
    b. Fastening Devices:
        1) Strapping: Type 18-8 stainless steel, 0.020 inch thick, 1/2 and 3/4 inch wide as specified.
        2) Wing Seals: Type 18-8 stainless steel, 0.032 inch thick.
        3) Sheet Metal Screws: Panhead, Type A, hardened aluminum, and stainless steel.

E. Under Lavatory Piping Protection Cover: ADA compliant.
1. Construction: 1/8 inch thick chemical, microbial, and fungal resistant, injection molded smooth PVC vinyl with internal ribs.
2. Fasteners: Reusable, finger press internal fasteners presenting no sharp or abrasive external surfaces.
3. Cover Trimming: Tear on internal, dimensioned tear lines for proper fit.
4. Kit includes covering for 8 inch tailpiece-trap, 8 inch waste arm, hot and cold water supplies and valves, and required fasteners.
5. Acceptable Covers:
    a. Lav Guard 2, E-Z Series by IPS Corp., 202 Industrial Park Lane, Collierville, TN 38017, (800) 340-5969, www.truebro.com.
    b. Pro-Extreme Series by Plumberex, P.O. Box 1684, Palm Springs, CA 92263, (800) 475-8629, www.plumberex.com.

2.03 ADHESIVES, MASTICS, AND SEALERS

A. Lagging Adhesive (Canvas Jackets): Childers' CP-50AMV1, Epolux's Cadalag 336, Foster's 30-36.

B. Vapor Lap Seal Adhesive (Fibrous Glass Insulation): Childers' CP-82, Epolux's Cadoprene 400, Foster's 85-60 or 85-20.

C. Vapor Barrier Mastic(Fibrous Glass Insulation): Permeance shall be .03 perms or less at 45 mils dry per ASTM E 96. Childers' CP-34, Epolux's Cadalar 670, Foster's 30-65.

D. Adhesive (Flexible Elastomeric Foam): Armstrong's 520, Childers' CP-82, Epolux's Cadoprene 488, Foster's 85-75. 5 gallon cans only

E. Adhesive (Fiberglass Duct Liner): Childers' Chil Quick CP-127, Foster Vapor Fas 85-60. Must comply with ASTM C 916, Type II

F. Weather Barrier Breather Mastic (Reinforcing Membrane): Childers' VI-CRYL CP-10/11, Foster's Weatherite 46-50.

G. Sealant (Metal Pipe Jacket): Non hardening elastomeric sealants. Foster Elastolar 95-44, Childers Chil Byl CP-76, Pittsburgh Corning 727

H. Reinforcing Membrane: Childers' Chil Glas #10, Foster Mast a Fab, Pittsburgh Corning PC 79

2.04 MISCELLANEOUS MATERIALS

A. Pressure Sensitive Tape for Sealing Laminated Jackets:
   1. Acceptable Manufacturers: Alpha Associates, Ideal Tape, Morgan Adhesive.
   2. Type: Same construction as jacket.

B. Wire, Bands, and Wire Mesh:
   1. Binding and Lacing Wire: Nickel copper alloy or copper clad steel, gage as specified.
   2. Bands: Galvanized steel, 1/2 inch wide x 0.015 inch thick, with 0.032 inch thick galvanized wing seals.
   3. Wire Mesh: Woven 20 gage steel wire with 1 inch hexagonal openings, galvanized after weaving.

C. Reinforcing Membrane: Glass or Polyester, 10 x 10 mesh. Alpha Associates Style 59, Childer's Chil-Glas, Foster's MAST-A-FAB.

PART 3 EXECUTION

3.01 PREPARATION

A. Perform the following before starting insulation Work:
   1. Install hangers, supports and appurtenances in their permanent locations.
   2. Complete testing of piping.
   3. Clean and dry surfaces to be insulated.

3.02 INSTALLATION, GENERAL

A. Install the Work of this Section in accordance with the manufacturer's printed installation instructions unless otherwise specified.

B. Provide continuous piping insulation and jacketing when passing thru interior wall, floor, and ceiling construction.
   1. At Through Penetration Firestops: Coordinate insulation densities with the requirements of approved firestop system being installed. See Section 07 84 00.
      a. Insulation densities required by approved firestop system may vary with the densities specified in this Section. When this occurs use the higher density insulation.

C. Do not intermix different insulation materials on individual runs of piping.

3.03 INSTALLATION AT HANGERS AND SUPPORTS

A. Reset and realign hangers and supports if they are displaced while installing insulation.

B. Install high density jacketed insulation inserts at hangers and supports for insulated piping.

C. Insulation Inserts For Use with Fibrous Glass Insulation:
   1. Where clevis hangers are used, install insulation shields and high density jacketed insulation inserts between shield and pipe.
      a. Where insulation is subject to compression at points over 180 degrees apart, e.g. riser clamps, U-bolts, trapezes, etc.; fully encircle pipe with 2 protection shields and 2 high density jacketed fibrous glass insulation inserts within supporting members.

1) Exception: Locations where pipe covering protection saddles are specified for hot service piping, 6 inch and larger.

D. Insulation Inserts For Use with Flexible Elastomeric Foam Insulation:
1. Where clevis hangers are used, install insulation shields with hardwood filler pieces, same thickness as adjoining insulation, inserted in undersized die cut or slotted holes in insulation at support points.
2. Contour hardwood blocks to match the curvature of pipe, and shield.
3. Coat dowels and blocks with insulation adhesive, and insert while still wet.
4. Vapor seal outer surfaces of dowels and blocks with adhesive after insertion.
5. Install filler pieces as follows:

PIPE/TUBING SIZE	FILLER PIECES	POSITION
Thru 1-1/2”	2 dowel plugs	6 o’clock; in tandem
2” thru 4”	1 block, 2 dowel plugs	6 o’clock, and 4 & 8 o’clock respectively
6” thru 8”	2 blocks, 4 dowel plugs	6 o’clock; in tandem and 4 & 8 o’clock; in tandem

3.04 INSTALLATION OF FIBROUS GLASS COLD SERVICE INSULATION

A. Install insulation materials with a field or factory applied ASTM C 1136 Type I laminated vapor barrier jacket, unless otherwise specified.

B. Piping:
1. Butt insulation joints together, continuously seal minimum 1-1/2 inch wide self-sealing longitudinal jacket laps and 3-inch wide butt adhesive backed strips.
a. Substitution: 3 inch wide pressure sensitive sealing tape, of same material as jacket, may be used in lieu of butt strips.
2. Bed insulation in a 2-inch wide band of vapor barrier mastic, and vapor seal exposed ends of insulation with vapor barrier mastic at each butt joint between pipe insulation and equipment, fittings or flanges at the following intervals:
a. Horizontal Pipe Runs: 21 ft.
b. Vertical Pipe Runs: 9 ft.

C. Fittings, Valves, Flanges and Irregular Surfaces:
1. Insulate with mitre cut or premolded fitting insulation of same material and thickness as pipe insulation.
2. Secure insulation in place with 16-gage wire, with ends twisted and turned down into insulation.
3. Butt insulation against pipe insulation and bond with joint sealer.
4. Insulate valves up to and including bonnets, without interfering with packing nuts.
5. Apply leveling coat of insulating cement to smooth out insulation and cover wiring.
6. When insulating cement has dried, seal fitting, valve and flange insulation, by imbedding a layer of reinforcing membrane or 4 oz. canvas jacket between 2 flood coats of vapor barrier mastic, each 1/8 inch thick wet.
7. Lap reinforcing membrane or canvas on itself and adjoining pipe insulation at least 2 inches.
8. Trowel, brush or rubber glove outside coat over entire insulated surface.
9. Exceptions:

a. Type C and D Piping Systems: Valves, fittings and flanges may be insulated with premolded PVC fitting jackets, with fibrous glass insulation inserts.
   1) Additional insulation inserts are required for services with operating temperatures under 45 degrees F or where insulation thickness exceeds 1-1/2 inches. The surface temperature of PVC fitting jacket must not go below 45 degrees F.

3.05 INSTALLATION OF FIBROUS GLASS HOT SERVICE INSULATION

A. Install insulation materials with field or factory applied ASTM C 1136 Type I laminated vapor barrier jacket unless otherwise specified.

B. Canvas Jackets on Piping, Fittings, Valves, Flanges, Unions, and Irregular Surfaces:
   1. For Piping 2 inch Size and Smaller: 4 oz per sq yd unless otherwise specified.
   2. For Piping Over 2 inch Size: 6 oz per sq yd unless otherwise specified.

C. Piping:
   1. Butt insulation joints together, continuously seal minimum 1-1/2 inch wide self-sealing longitudinal jacket laps and 3-inch wide adhesive backed butt strips.
      a. Substitution: 3 inch wide pressure sensitive sealing tape, of same material as the jacket, may be used in lieu of butt strips.
   2. Fill voids in insulation at hanger with insulating cement.
   3. Exceptions:
      a. Piping in Accessible Shafts, Attic Spaces, Crawl Spaces, Unfinished Spaces and Concealed Piping: Butt insulation joints together and secure minimum 1-1/2 inch wide longitudinal jacket laps and 3 inch wide butt strips of same material as jacket, with outward clinching staples on maximum 4 inch centers. Fill voids in insulation at hangers with insulating cement.

D. Fittings, Valves, Flanges and Irregular Surfaces:
   1. Insulate with mitre cut or premolded fitting insulation of same material and thickness as insulation.
   2. Secure in place with 16-gage wire, with ends twisted and turned down into insulation.
   3. Butt fitting, valve and flange insulation against pipe insulation, and fill voids with insulating cement.
   4. Insulate valves up to and including bonnets, without interfering with packing nuts.
   5. Apply leveling coat of insulating cement to smooth out insulation and cover wiring.
   6. After insulating cement has dried, coat insulated surface with lagging adhesive, and apply 4 oz or 6 oz canvas jacket as required by pipe size.
      a. Lap canvas jacket on itself and adjoining pipe insulation at least 2 inches.
      b. Size entire canvas jacket with lagging adhesive.
   7. Exceptions:
      a. In Types E, and F Service Piping Systems: Valves, fittings and flanges may be insulated with premolded PVC fitting jackets, with fibrous glass insulation inserts.
         1) Additional insulation inserts are required for services with operating temperatures over 250 degrees F or where insulation thickness exceeds 1-1/2 inches. The surface temperature of PVC fitting jacket must not exceed 150 degrees F.

b. In Types E, and F Service Piping Systems: Insulate fittings, valves, and irregular surfaces 3 inch size and smaller with insulating cement covered with 4 oz or 6 oz canvas jacket as required by pipe size.
   1) Terminate pipe insulation adjacent to flanges and unions with insulating cement, trowelled down to pipe on a bevel.

c. Fittings, Valves, Flanges, and Irregular Surfaces In Concealed Piping, Piping in Accessible Shafts, Attic Spaces, Crawl Spaces, Unfinished Rooms, Unfinished Spaces, and Tunnels: Sizing of canvas surface is not required.

3.06 INSTALLATION OF FLEXIBLE ELASTOMERIC FOAM INSULATION

A. Where possible, slip insulation over the pipe, and seal butt joints with adhesive.
   1. Where the slip-on technique is not possible, slit the insulation and install.
   2. Re-seal with adhesive, making sure the mating surfaces are completely joined.

B. Insulate fittings and valves with miter cut sections. Use templates provided by the manufacturer, and assemble the cut sections in accordance with the manufacturer's printed instructions.
   1. Insulate threaded fittings and valves with sleeved fitting covers. Over lap and seal the covers to the adjoining pipe insulation with adhesive.

C. Carefully mate and seal with adhesive all contact surfaces to maintain the integrity of the vapor barrier of the system.

D. Piping Exposed Exterior to a Building, Totally Exposed to the Elements:
   1. Apply flexible elastomeric foam insulation to piping with adhesive.
   2. Apply reinforcing membrane around piping insulation with adhesive or mastic.
   3. Adhesive Applied System: Apply 2 coats of finish. See Section 099103.
   4. Mastic Applied System: Apply another coat of mastic over reinforcing membrane.

3.07 INSTALLATION OF SHEET METAL JACKETING ON PIPING

A. Secure jacketing to insulated piping with preformed aluminum snap straps and stainless steel strapping installed with special banding wrench.

B. Jacket exposed insulated fittings, valves and flanges with mitred sections of aluminum jacketing.
   1. Seal joints with sealant and secure with preformed aluminum bands.
   3. Substitution: Factory fabricated, preformed, sectional aluminum fitting covers or premolded polyvinylchloride fitting covers may be used in lieu of mitred sections of aluminum jacketing for covering fittings, valves and flanges.

3.08 FIELD QUALITY CONTROL

A. Field Samples: The Director's Representative, may at their discretion, take field samples of installed insulation for the purpose of checking materials and application. Reinsulate sample cut areas.

3.09 PIPING INSULATION SCHEDULE

A. Insulate all cold service and hot service piping, and appurtenances except where otherwise specified.

B. Schedule of Items Not to be Insulated:
1. Chrome plated piping, unless otherwise specified.
2. Exposed piping in finished spaces, serving one fixture, or piece of equipment, and which connection from the main, branch, or riser, is 24 inches or less in length.
3. Water heater blow-off piping.
4. Air vents, pressure reducing valves, pilot lines, safety valves, relief valves.
5. Water meters.
6. Piping buried in the ground, unless otherwise specified herein.
7. Items installed by others, unless otherwise specified herein.
8. Sanitary drainage piping, unless otherwise specified herein.
9. Mechanical equipment with factory applied steel jacket.
10. Hot service piping 81 degrees F to 104 degrees F.
11. Flanges and unions in Type E, F, and G service piping systems.
12. Sprinkler and standpipe piping, unless otherwise specified.3.10

COLD SERVICE INSULATION MATERIAL SCHEDULE

TYPE	SERVICE AND TEMPERATURES	INSULATION MATERIAL	PIPE SIZES (INCHES)	MINIMUM (NOMINAL) INSULATION THICKNESS (INCHES)
C	Fluids (except domestic cold water) 40 F to 80 F.	Flex. Elastomeric Foam or Fibrous Glass	1-1/2 & less Over 1-1/2	1 1-1/2
D	Domestic cold water, and as specified. 33 F to 80 F.	Flex. Elastomeric Foam or Fibrous Glass	All Sizes	1/2

A. NOTES:
1. Sprinkler and Standpipe Piping (First 10 feet connected to domestic water main within building): Insulate with same materials and thicknesses specified for domestic cold water.
2. Roof Drain Bodies Below Roof, Horizontal Conductor Piping Including Drops, and First Fitting on Vertical conductor: Insulate with same materials and thicknesses specified for domestic cold water.
3. Piping Serving Handicapped Accessible Lavatories:
   a. Insulate exposed hot water supply and waste piping with flexible elastomeric foam pipe insulation.

3.11 HOT SERVICE INSULATION MATERIAL SCHEDULE

	SERVICE AND TEMPERATURES	INSULATION MATERIAL	PIPE SIZES (INCHES)	MINIMUM (NOMINAL) INSULATION THICKNESS (INCHES)
E	Water and other fluids 105 F to140 F.	Flex. Elastomeric Foam or Fibrous Glass	1-1/2 & Less Over 1-1/2	1 2
F	Water and other fluids 141 F to 250 F.	Fibrous Glass	6 & Less 8 & Up	2 2-1/2

A. NOTES:

1. Insulate piping in tunnels and conduits with insulation of thickness as follows:
   a. Types E, and F Service: Minimum 2 inch thick unless greater thickness is specified in Hot Service Insulation material Schedule above.

3.12 SCHEDULE OF METAL JACKETING FOR INSULATED PIPE

1. The aforementioned also applies to down feed piping systems.

END OF SECTION

SECTION 22 10 05 - PLUMBING PIPING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Pipe, pipe fittings, valves, connections and specialties for:
   1. Sanitary sewer systems.
   2. Domestic water systems.
   3. Flanges, unions, and couplings.
   4. Pipe hangers and supports.
   5. Valves.
   6. Flow controls.

1.2 RELATED REQUIREMENTS

A. Section 22 05 53 - Identification for Plumbing Piping and Equipment.

B. Section 22 07 19 - Plumbing Piping Insulation.

1.3 REFERENCE STANDARDS

A. ASME B16.3 - Malleable Iron Threaded Fittings: Classes 150 and 300; The American Society of Mechanical Engineers; 2011.

B. ASME B16.18 - Cast Copper Alloy Solder Joint Pressure Fittings; The American Society of Mechanical Engineers; 2012 (ANSI B16.18).

C. ASME B16.22 - Wrought Copper and Copper Alloy Solder-Joint Pressure Fittings; The American Society of Mechanical Engineers; 2013.

D. ASME B16.29 - Wrought Copper and Wrought Copper Alloy Solder Joint Drainage Fittings - DWV; The American Society of Mechanical Engineers; 2012.

E. ASME B31.2 - Fuel Gas Piping; The American Society of Mechanical Engineers; 1968.

F. ASME B31.9 - Building Services Piping; The American Society of Mechanical Engineers; 2014 (ANSI/ASME B31.9).

G. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless; 2012.

H. ASTM A74 - Standard Specification for Cast Iron Soil Pipe and Fittings; 2015.

I. ASTM A234/A234M - Standard Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and High Temperature Service; 2015.

J. ASTM B32 - Standard Specification for Solder Metal; 2008 (Reapproved 2014).

K. ASTM B 306 - Standard Specification for Copper Drainage Tube (DWV); 2002.

L. ASTM C564 - Standard Specification for Rubber Gaskets for Cast Iron Soil Pipe and Fittings; 2014.

M. ASTM D2564 - Standard Specification for Solvent Cements for Poly(Vinyl Chloride) (PVC) Plastic Piping Systems; 2012.

N. ASTM D2665 - Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings; 2014.

O. ASTM D2855 - Standard Practice for Making Solvent-Cemented Joints with Poly(Vinyl

Chloride) (PVC) Pipe and Fittings; 1996 (Reapproved 2010).

P. ASTM D3034 - Standard Specification for Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings; 2014.

Q. ASTM F477 - Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe; 2010.

R. AWWA C105/A21.5 - Polyethylene Encasement for Ductile-Iron Pipe Systems; American Water Works Association; 2010 (ANSI/AWWA C105/A21.5).

S. AWWA C111/A21.11 - Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings; American Water Works Association; 2012 (ANSI/AWWA C111/A21.11).

AA. AWWA C151/A21.51 - Ductile-Iron Pipe, Centrifugally Cast; American Water Works Association; 2009 (ANSI/AWWA C151/A21.51).

AB. AWWA C651 - Disinfecting Water Mains; American Water Works Association; 2005 (ANSI/AWWA C651).

AC. CISPI 301 - Standard Specification for Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste and Vent Piping Applications; Cast Iron Soil Pipe Institute; 2009.

AD. CISPI 310 - Specification for Coupling for Use in Connection with Hubless Cast Iron Soil Pipe and Fittings for Sanitary Drain, Waste, and Vent Piping Applications; Cast Iron Soil Pipe Institute; 2011

AE. ICC-ES AC01 - Acceptance Criteria for Expansion Anchors in Masonry Elements; 2012. AF.

ICC-ES AC106 - Acceptance Criteria for Predrilled Fasteners (Screw Anchors) in Masonry Elements; 2012.

AG. ICC-ES AC193 - Acceptance Criteria for Mechanical Anchors in Concrete Elements; 2013. AH.

ICC-ES AC308 - Acceptance Criteria for Post-Installed Adhesive Anchors in Concrete Elements; 2013.

AI. MSS SP-58 - Pipe Hangers and Supports - Materials, Design, Manufacture, Selection, Application, and Installation; Manufacturers Standardization Society of the Valve and Fittings Industry, Inc.; 2009.

AJ. NFPA 58 - Liquefied Petroleum Gas Code; National Fire Protection Association; 2014. AK.

NSF 61 - Drinking Water System Components - Health Effects; 2014 (Errata 2015).

AL. NSF 372 - Drinking Water System Components - Lead Content; 2011.

AM. National Sanitation Foundation: NSF 61 - Low lead pipe, Fittings and Valves.

1.4 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide data on pipe materials, pipe fittings, valves, hangers, supports and accessories. Provide manufacturers catalog information. Indicate valve data and ratings.

C. Project Record Documents: Record actual locations of valves.

D. Maintenance Materials: Furnish the following for Owner’s use in maintenance of project.
   1. See Section 01 60 00 - Product Requirements, for additional provisions.

1.5 QUALITY ASSURANCE

A. Perform Work in accordance with State of New York, standards.

B. Valves: Manufacturer's name and pressure rating marked on valve body.

C. Identify pipe with marking including size, ASTM material classification, ASTM specification,

potable water certification, water pressure rating.

1.6 REGULATORY REQUIREMENTS

A. Perform Work in accordance with State of New York plumbing code.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Accept valves on site in shipping containers with labeling in place. Inspect for damage.

B. Protect piping systems from entry of foreign materials by temporary covers, completing sections of the work, and isolating parts of completed system.

1.8 FIELD CONDITIONS

A. Do not install underground piping when bedding is wet or frozen.

PART 2 PRODUCTS

2.1 GENERAL REQUIREMENTS

A. Potable Water Supply Systems: Provide piping, pipe fittings, and solder and flux (if used), that comply with NSF 61 and NSF 372 for maximum lead content; label pipe and fittings.

2.4 SANITARY SEWER PIPING, BURIED WITHIN 5 FEET OF BUILDING

A. Cast Iron Pipe: ASTM A74 extra heavy weight.
   1. Fittings: Cast iron.
   2. Joints: Hub-and-spigot, CISPI HSN compression type with ASTM C564 neoprene gaskets or lead and oakum.

B. PVC Pipe: ASTM D2665 or ASTM D3034.
   1. Fittings: PVC.
   2. Joints: Solvent welded, with ASTM D2564 solvent cement.

2.5 SANITARY SEWER PIPING, ABOVE GRADE

A. Cast Iron Pipe: CISPI 301, hubless, service weight.
   1. Fittings: Cast iron.
   2. Joints: CISPI 310, neoprene gaskets and stainless steel clamp-and-shield assemblies.

B. PVC Pipe: ASTM D2665 or ASTM D3034.
   1. Fittings: PVC.
   2. Joints: Solvent welded, with ASTM D2564 solvent cement.

2.6 DOMESTIC WATER PIPING, BURIED WITHIN 5 FEET OF BUILDING

A. Ductile Iron Pipe: AWWA C151/A21.51, 3 inches and larger.
   1. Fittings: AWWA C110, ductile iron, standard thickness. Cement Mortar lining in conformance with AWWA C-104.
   2. Joints: AWWA C111/A21.11, rubber gasket with 3/4 inch diameter rods.
   3. Jackets: AWWA C105 polyethylene jacket.

2.7 DOMESTIC WATER PIPING, ABOVE GRADE

A. PEX, ASTM: F877

1. Fittings: Brass or Poly
2. Joints: Clamp ASTM F2098 or Expansion ring system

B. Copper Tubing for pipe 2 1/2 inches and smaller: ASTM B 88 (ASTM B 88M), Type L (B), Drawn (H)
   1. Fittings: ASME B16.18, cast copper alloy or ASME B16.22, wrought copper and bronze.
   2. Joints: ASTM B 32, alloy Sn95 solder. Lead free.

C. Copper Tubing for pipe 3 inches and larger: ASTM B88, Type L (B), hard drawn, rolled grooved ends
   1. Fittings: ASTM B584 bronze sand castings, grooved ends.
   2. Joints: Grooved mechanical couplings meeting ASTM F1476.
      a. Housing Clamps: ASTM A395/A395M and ASTM A536 ductile iron, enamel coated, compatible with copper tubing sizes, to engage and lock designed to permit some angular deflection, contraction, and expansion.
      b. Gasket: Elastomer composition for operating temperature range from -30 degrees F to 180 degrees F.
      c. Accessories: Stainless steel bolts, nuts, and washers.
   3. Mechanically pressed fitting are allowed for this application.

2.8 FLANGES, UNIONS, AND COUPLINGS

A. Unions for Pipe Sizes [2] inches and Under:
   1. Copper tube and pipe: Class 150 bronze unions with soldered joints.
   2. PVC Piping: PVC

B. Flanges for Pipe Size Over 2 inches:
   1. Copper tube and pipe: Class 150 slip-on bronze flanges; preformed neoprene gaskets.
   2. Dielectric Connections: Union with galvanized or plated steel threaded end, copper solder end, water impervious isolation barrier.
   3. PVC Piping: PVC
   4. Gaskets: 1/16 inch thick preformed neoprene gaskets

2.9 PIPE HANGERS AND SUPPORTS

A. Provide hangers and supports that comply with MSS SP-58.
   1. If type of hanger or support for a particular situation is not indicated, select appropriate type using MSS SP-58 recommendations.
   2. Overhead Supports: Individual steel rod hangers attached to structure or to trapeze hangers.
   3. Trapeze Hangers: Welded steel channel frames attached to structure.
   4. Vertical Pipe Support: Steel riser clamp.
   5. Floor Supports: Concrete pier or steel pedestal with floor flange; fixture attachment.

B. PLUMBING PIPING - DRAIN, WASTE, AND VENT:
   1. Conform to ASME B31.9.
   2. Hangers for Pipe Sizes 1/2 Inch to 1-1/2 Inches: Malleable iron, adjustable swivel, split ring.
   3. Hangers for Pipe Sizes 2 Inches and Over: Carbon steel, adjustable, clevis.
   4. Multiple or Trapeze Hangers: Steel channels with welded spacers and hanger rods.
   5. Wall Support for Pipe Sizes to 3 Inches: Cast iron hook.
   6. Wall Support for Pipe Sizes 4 Inches and Over: Welded steel bracket and wrought steel clamp.
   7. Vertical Support: Steel riser clamp.
   8. Floor Support: Cast iron adjustable pipe saddle, lock nut, nipple, floor flange, and concrete pier or steel support.
   9. Copper Pipe Support: Carbon steel ring, adjustable, copper plated.

C. PLUMBING PIPING - WATER:
   1. Hangers, Hanger Fasteners, Clamps, Straps, Guide, Wall Supports, Vertical Supports, Floor

Supports and Restraints used on domestic CPVC piping must be chemically compatible with CTS Flowguard Gold piping and fittings per manufacturers recommendations.

D. INSERTS
1. Inserts: Malleable iron case of galvanized steel shell and expander plug for threaded connection with lateral adjustment, top slot for reinforcing rods, lugs for attaching to forms; size inserts to suit threaded hanger rods.

E. FLASHING
1. Metal Flashing: 26 gage thick galvanized steel.
2. Metal Counterflashing: 22 gage thick galvanized steel.
3. Flexible Flashing: 47 mil thick sheet compatible with roofing.
4. Caps: Steel, 22 gage minimum; 16 gage at fire resistant elements.

F. SLEEVES
1. Sleeves for Pipes through Non-fire Rated Floors: 18 gage thick galvanized steel.
2. Sleeves for Pipes through Non-fire Rated Beams, Walls, Footings, and Potentially Wet Floors: Steel pipe or 18 gage thick galvanized steel.
3. Sealant: refer to Section 07 90 00.

G. MECHANICAL SLEEVE SEALS
1. Product Description: Modular mechanical type, consisting of interlocking synthetic rubber links shaped to continuously fill annular space between object and sleeve, connected with bolts and pressure plates causing rubber sealing elements to expand when tightened, providing watertight seal and electrical insulation.

H. FIRESTOPPING
1. Refer to Specification Section 07 84 00.

2.10 BALL VALVES

A. Manufacturers:
1. Nibco, Inc.
2. Spears EverTuff CTS CPVC for Potable Water system.
3. Milwaukee Valve Company;
4. Substitutions: See Section 01 60 00 - Product Requirements.
5.

B. Construction, 3 inches and Smaller: MSS SP-110, Class 150, 400 psi CWP, bronze, two-piece body, chrome plated brass ball, regular port, teflon seats and stuffing box ring, blow-out proof stem, lever handle, solder or threaded ends with union. Lead free.

C. Compatible with Potable water system CPVC piping and NSF lead free certified.

2.11 WALL HYDRANT

Wall Hydrant, HYD-1: Exposed, Ecotrol, lead-free, non-freeze automatic draining wall hydrant for flush installation. Furnished with type 304 stainless steel faceplate.

2.12 WATER HAMMER ARRESTOR

A. Stainless steel bellow type, complies with and sized in accordance with PDI WH-201.

B. Pre-charged suitable for operation in temperature range 34 to 250 degrees F and maximum 150 psi working pressure.

2.13 FLOOR DRAIN (FD)

A. Floor Drain, FD-1,: ASME A112.21.1; cast iron two piece body with double drainage flange, weep

holes, , reversible clamping collar, and round adjustable nickel-bronze strainer.

B. All floor drains shall be provided with trap and waterless trap seal similar to Trap Guard or equal.

C. equal.

2.14 CLEANOUTS

A. Cleanout, Interior Finished Floor Area, CO-1: cast iron body with anchor flange, reversible clamping collar, threaded top assembly, and round polished bronze scored cover.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that excavations are to required grade, dry, and not over-excavated.

3.2 PREPARATION

A. Ream pipe and tube ends. Remove burrs. Bevel plain end ferrous pipe.

B. Remove scale and dirt, on inside and outside, before assembly. Protect open ends with temporary plugs or caps.

C. Prepare piping connections to equipment with flanges or unions.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions and recommendations.

B. Provide non-conducting dielectric connections wherever jointing dissimilar metals.

C. Provide connection from CPVC piping to Plumbing Fixtures per piping manufacturers recommendations.

D. Route piping in orderly manner and maintain gradient. Route parallel and perpendicular to walls.

E. Install piping to maintain headroom, conserve space, and not interfere with use of space.

F. Group piping whenever practical at common elevations.

G. Install piping to allow for expansion and contraction without stressing pipe, joints, or connected equipment. Refer to Section 22 05 16.

H. Provide clearance in hangers and from structure and other equipment for installation of insulation and access to valves and fittings.

I. Provide access where valves and fittings are not exposed.

J. Install vent piping penetrating roofed areas to maintain integrity of roof assembly.

K. Where pipe support members are welded to structural building framing, scrape, brush clean, and apply one coat of zinc rich primer to welding.

L. Backfill in accordance with Section 31 23 23.

M. Trench - Provide 3 inches of sand for bedding material at trench bottom to provide uniform bedding for piping. Level bedding materials and install pipe on prepared bedding. Encase installed piping with 6 inches of pea gravel. Provide fill material to trench and compact to 90 percent maximum density. Route pipe in straight line.

N. Install bell and spigot pipe with bell end upstream.

O. Install valves with stems upright or horizontal, not inverted.

P. Install water piping to ASME B31.9.

Q. CPVC Pipe: Make solvent-welded joints in accordance with ASTM F493 and ASTM F402.

R. Sleeve pipes passing through partitions, walls and floors.

S. PVC piping is not allowed to be installed in places of assembly, plenum spaces, exit discharge corridors or stairs. Use cast iron or copper piping in these locations.

T. Install firestopping at fire rated construction perimeters and openings containing penetrating sleeves and piping.

U. Install water hammer arrestors complete with accessible isolation valve on hot and cold water supply piping to fixtures to prevent hammer or install air chambers on hot and cold water supply piping to each fixture or group of fixtures (each washroom). Fabricate same size as supply pipe or 3/4 inch minimum, and minimum 18 inches long.

V. Inserts:
1. Provide inserts for placement in concrete formwork.
2. Provide inserts for suspending hangers from reinforced concrete slabs and sides of reinforced concrete beams.
3. Where concrete slabs form finished ceiling, locate inserts flush with slab surface.
4. Where inserts are omitted, drill through concrete slab from below and provide through-bolt with recessed square steel plate and nut above slab.

W. Pipe Hangers and Supports:
1. Install in accordance with ASME B31.9.
2. Support horizontal piping as scheduled.
3. Install hangers to provide minimum 1/2 inch space between finished covering and adjacent work.
4. Place hangers within 12 inches of each horizontal elbow.
5. Use hangers with 1-1/2 inch minimum vertical adjustment. Design hangers for pipe movement without disengagement of supported pipe.
6. Support vertical piping at floor. Support riser piping independently of connected horizontal piping.
7. Where several pipes can be installed in parallel and at same elevation, provide multiple or trapeze hangers.
8. Provide hangers adjacent to motor driven equipment with vibration isolation; refer to Section 22 05 48.
9. Support cast iron drainage piping at every joint.

X. Flashing
1. Provide flexible flashing and metal counterflashing where piping penetrates roof.
2. Flash vent and soil pipes projecting 3 inches minimum above finished roof surface with lead worked 1 inch minimum into hub, 8 inches minimum clear on sides with 24 x 24 inches sheet size.

3. Flash floor drains / floor sinks, floor cleanouts in floors with topping over finished areas with lead, 10 inches clear on sides with minimum 36 x 36 inch sheet size. Fasten flashing to drain clamp device.
4. Seal floor, shower, and mop sink drains watertight to adjacent materials.

Y. Sleeves
1. Set sleeves in position in forms. Provide reinforcing around sleeves.
2. Size sleeves large enough to allow for movement due to expansion and contraction. Provide for continuous insulation wrapping.
3. Extend sleeves through floors 1 inch above finished floor level. Caulk sleeves.
4. Where piping penetrates floor, ceiling, or wall, close off space between pipe and adjacent work

with fire stopping, insulation and caulk airtight. Provide close fitting metal collar or escutcheon covers at both sides of penetration.

5. Install chrome plated steel escutcheons at finished surfaces.

3.4 APPLICATION

A. Install unions downstream of valves and at equipment or apparatus connections.

B. Provide flow controls in water recirculating systems where indicated.

3.5 TOLERANCES

A. Sanitary Drainage Piping: Establish invert elevations, slopes for drainage to 1/8 inch per foot minimum on mains 4 inches and larger. Install branch mains smaller than 4 inch with 1/4 inch per foot minimum.

3.6 DISINFECTION OF DOMESTIC WATER PIPING SYSTEM

A. Disinfect water distribution system in accordance with Section 33 13 00.

B. Final water samples shall be sent to a Pennsylvania State Department of Health approved testing lab and sample test results shall be submitted to A/E of record.

C. Prior to starting work, verify system is complete, flushed and clean.

D. Ensure Ph of water to be treated is between 7.4 and 7.6 by adding alkali (caustic soda or soda ash) or acid (hydrochloric).

E. Inject disinfectant, free chlorine in liquid, powder, tablet or gas form, throughout system to obtain 50 to 80 mg/L residual.

F. Bleed water from outlets to ensure distribution and test for disinfectant residual at minimum 15 percent of outlets.

G. Maintain disinfectant in system for 24 hours.

H. If final disinfectant residual tests less than 25 mg/L, repeat treatment.

I. Flush disinfectant from system until residual equal to that of incoming water or 1.0 mg/L.

J. Take samples no sooner than 24 hours after flushing, from 10 percent of outlets and from water entry, and analyze in accordance with AWWA C651.

3.7 SERVICE CONNECTIONS

A. Test sanitary waste and vent piping system in accordance with Plumbing Code of Pennsylvania.

B. Test domestic CPVC water piping system in accordance with Plumbing Code of Pennsylvania.

C. Test gas piping system in accordance with Fuel Gas Code of Pennsylvania, and SED Manual of Planning Standards.

3.8 SCHEDULES

A. Pipe Hanger Spacing:
   1. Metal Piping:
      a. Pipe size: 1/2 inches to 1-1/4 inches:
         1) Maximum hanger spacing: 6.5 ft.
         2) Hanger rod diameter: 3/8 inches.
      b. Pipe size: 1-1/2 inches to 2 inches:

1) Maximum hanger spacing: 10 ft.
2) Hanger rod diameter: 3/8 inch.

c. Pipe size: 2-1/2 inches to 3 inches:
1) Maximum hanger spacing: 10 ft.
2) Hanger rod diameter: 1/2 inch.

d. Pipe size: 4 inches to 6 inches:
1) Maximum hanger spacing: 10 ft.
2) Hanger rod diameter: 5/8 inch.

2. Cast Iron (All Sizes) pipe length less than 10':
a. Maximum hanger Spacing: 5 ft.
b. Hanger rod diameter: 5/8 inch
3. Cast Iron (All Sizes) with 10 foot length of pipe
a. Maximum hanger Spacing: 10 ft.
b. Hanger rod diameter: 5/8 inch
4. CPVC, 1 inch and smaller
a. Maximum hanger Spacing: 3 ft.
b. Hanger rod diameter: 1/2 inch
5. CPVC, 1-1/4 inches and larger
a. Maximum hanger Spacing: 4 ft.
b. Hanger rod diameter: 1/2 inch

END OF SECTION

SECTION 262416 - PANELBOARDS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Lighting and appliance branch-circuit panelboards.

1.2 PERFORMANCE REQUIREMENTS

A. Seismic Performance: Panelboards shall withstand the effects of earthquake motions determined according to SEI/ASCE 7.

1. The term "withstand" means "the unit will remain in place without separation of any parts from the device when subjected to the seismic forces specified."

1.3 ACTION SUBMITTALS

A. Product Data: For each type of panelboard, switching and overcurrent protective device, transient voltage suppression device, accessory, and component indicated. Include dimensions and manufacturers' technical data on features, performance, electrical characteristics, ratings, and finishes.

1.4 INFORMATIONAL SUBMITTALS

A. Panelboard Schedules: For installation in panelboards. Submit final versions after load balancing.

1.5 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For panelboards and components to include in emergency, operation, and maintenance manuals.

1. Manufacturer's written instructions for testing and adjusting overcurrent protective devices.
2. Time-current curves, including selectable ranges for each type of overcurrent protective device that allows adjustments.

1.6 QUALITY ASSURANCE

A. Source Limitations: Obtain panelboards, overcurrent protective devices, components, and accessories from single source from single manufacturer.

B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

C. Comply with NEMA PB 1.

D. Comply with NFPA 70.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Remove loose packing and flammable materials from inside panelboards; install temporary electric heating (250 W per panelboard) to prevent condensation.

B. Handle and prepare panelboards for installation according to NECA 407.

1.8 PROJECT CONDITIONS

A. Environmental Limitations:

1. Do not deliver or install panelboards until spaces are enclosed and weathertight, wet work in spaces is complete and dry, work above panelboards is complete, and temporary HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during the remainder of the construction period.
2. Rate equipment for continuous operation under the following conditions unless otherwise indicated:

a. Ambient Temperature: Not exceeding 23° F to plus 104° F.
b. Altitude: Not exceeding 6600 feet.

B. Service Conditions: NEMA PB 1, usual service conditions, as follows:

1. Ambient temperatures within limits specified.
2. Altitude not exceeding 6,600 feet.

1.9 COORDINATION

A. Coordinate layout and installation of panelboards and components with other construction that penetrates walls or is supported by them, including electrical and other types of equipment, raceways, piping, encumbrances to workspace clearance requirements, and adjacent surfaces. Maintain required workspace clearances and required clearances for equipment access doors and panels.

B. Coordinate sizes and locations of concrete bases with actual equipment provided. Cast anchor-bolt inserts into bases. Concrete, reinforcement, and formwork requirements are specified in Division 03.

1.10 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace equipment that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Five years from date of Substantial Completion

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS FOR PANELBOARDS

A. Fabricate and test panelboards according to IEEE 344 to withstand seismic forces defined in Division 26 Section "Vibration and Seismic Controls for Electrical Systems."

B. Enclosures: Surface-mounted cabinets.

1. Rated for environmental conditions at installed location.

a. Indoor Dry and Clean Locations: NEMA 250, Type 1.

2. Hinged Front Cover: Entire front trim hinged to box and with standard door within hinged trim cover, lockable.
3. Finishes:

a. Panels and Trim: Steel and galvanized steel, factory finished immediately after cleaning and pre-treating with manufacturer's standard two-coat, baked-on finish consisting of prime coat and thermosetting topcoat.
b. Back Boxes: Galvanized steel.

4. Directory Card: Inside panelboard door, mounted in transparent card holder.

C. Incoming Mains Location: Top.

D. Phase, Neutral, and Ground Buses:

1. Material: Hard-drawn copper, 98 percent conductivity.
2. Equipment Ground Bus: Adequate for feeder and branch-circuit equipment grounding conductors; bonded to box.
3. Extra-Capacity Neutral Bus: Neutral bus rated 200 percent of phase bus and UL listed as suitable for nonlinear loads.

E. Conductor Connectors: Suitable for use with conductor material and sizes.

1. Material: Tin-plated aluminum.
2. Main and Neutral Lugs: Compression type.
3. Ground Lugs and Bus-Configured Terminators: Compression type.
4. Sub-feed (Double) Lugs: Compression type suitable for use with conductor material. Locate at same end of bus as incoming lugs or main device.
5. Extra-Capacity Neutral Lugs: Rated 200 percent of phase lugs mounted on extra-capacity neutral bus.

F. Service Equipment Label: NRTL labeled for use as service equipment for panelboards or load centers with one or more main service disconnecting and overcurrent protective devices.

G. Future Devices: Mounting brackets, bus connections, filler plates, and necessary appurtenances required for future installation of devices.

H. Panelboard Short-Circuit Current Rating: Fully rated to interrupt symmetrical short-circuit current available at terminals.

2.2 LIGHTING AND APPLIANCE BRANCH-CIRCUIT PANELBOARDS

A. Manufacturers: Subject to compliance with requirements:

1. Eaton Electrical Inc.; Cutler-Hammer Business Unit.
2. General Electric Company; GE Consumer & Industrial - Electrical Distribution.
3. Siemens Energy & Automation, Inc.
4. Square D

B. Panelboards: NEMA PB 1, lighting and appliance branch-circuit type.

C. Mains: Circuit breaker or lugs only.

D. Branch Overcurrent Protective Devices: Bolt-on circuit breakers, replaceable without disturbing adjacent units.

E. Contactors in Main Bus: NEMA ICS 2, Class A, mechanically held, general-purpose controller, with same short-circuit interrupting rating as panelboard.

1. External Control-Power Source: 120-V branch circuit.

F. Doors: Concealed hinges; secured with flush latch with tumbler lock; keyed alike.

G. Column-Type Panelboards: Narrow gutter extension, with cover, to overhead junction box equipped with ground and neutral terminal buses.

2.3 ACCESSORY COMPONENTS AND FEATURES

A. Accessory Set: Include tools and miscellaneous items required for overcurrent protective device test, inspection, maintenance, and operation.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Receive, inspect, handle, and store panelboards according to NECA 407.

B. Examine panelboards before installation. Reject panelboards that are damaged or rusted or have been subjected to water saturation.

C. Examine elements and surfaces to receive panelboards for compliance with installation tolerances and other conditions affecting performance of the Work.

D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Install panelboards and accessories according to NECA 407.

B. Equipment Mounting: Install panelboards on concrete bases, 4-inch nominal thickness.

1. Install dowel rods to connect concrete base to concrete floor. Unless otherwise indicated, install dowel rods on 18-inch centers around full perimeter of base.
2. For panelboards, install epoxy-coated anchor bolts that extend through concrete base and anchor into structural concrete floor.
3. Place and secure anchorage devices. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
4. Install anchor bolts to elevations required for proper attachment to panelboards.
5. Attach panelboard to the vertical finished or structural surface behind the panelboard.

C. Temporary Lifting Provisions: Remove temporary lifting eyes, channels, and brackets and temporary blocking of moving parts from panelboards.

D. Comply with mounting and anchoring requirements specified in Division 26 Section "Vibration and Seismic Controls for Electrical Systems."

E. Mount top of trim 90 inches above finished floor unless otherwise indicated.

F. Mount panelboard cabinet plumb and rigid without distortion of box. Mount recessed panelboards with fronts uniformly flush with wall finish and mating with back box.

G. Install overcurrent protective devices and controllers not already factory installed.

1. Set field-adjustable, circuit-breaker trip ranges.

H. Install filler plates in unused spaces.

I. Stub four 1-inch empty conduits from panelboard into accessible ceiling space or space designated to be ceiling space in the future. Stub four 1-inch empty conduits into raised floor space or below slab not on grade.

J. Provide 25% space in all panels.

K. Arrange conductors in gutters into groups and bundle and wrap with wire ties after completing load balancing.

L. Comply with NECA 1.

3.3 IDENTIFICATION

A. Identify field-installed conductors, interconnecting wiring, and components; provide warning signs complying with Division 26 Section "Identification for Electrical Systems."

B. Create a directory to indicate installed circuit loads after balancing panelboard loads; incorporate Using Agency's final room designations. Obtain approval before installing. Use a computer or typewriter to create directory; handwritten directories are not acceptable.

C. Panelboard Nameplates: Label each panelboard with a nameplate complying with requirements for identification specified in Division 26 Section "Identification for Electrical Systems."

D. Device Nameplates: Label each branch circuit device in distribution panelboards with a nameplate complying with requirements for identification specified in Division 26 Section "Identification for Electrical Systems."

3.4 ADJUSTING

A. Adjust moving parts and operable component to function smoothly, and lubricate as recommended by manufacturer.

B. Set field-adjustable circuit-breaker trip ranges as indicated

C. Load Balancing: After Substantial Completion, but not more than 60 days after Final Acceptance, measure load balancing and make circuit changes.

1. Measure as directed during period of normal system loading.
2. Perform load-balancing circuit changes outside normal occupancy/working schedule of the facility and at time directed. Avoid disrupting critical 24-hour services such as fax machines and on-line data processing, computing, transmitting, and receiving equipment.
3. After circuit changes, recheck loads during normal load period. Record all load readings before and after changes and submit test records.
4. Tolerance: Difference exceeding 20 percent between phase loads, within a panelboard, is not acceptable. Rebalance and recheck as necessary to meet this minimum requirement.

3.5 PROTECTION

A. Temporary Heating: Apply temporary heat to maintain temperature according to manufacturer's written instructions.

END OF SECTION 262416

SECTION 31 05 13 - SOILS FOR EARTHWORK

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Subsoil materials.

1.2 RELATED REQUIREMENTS:

A. Section 31 05 16 - Aggregates for Earthwork.

B. Section 31 23 16 - Excavation.

C. Section 31 23 16.13 - Trenching.

1.3 REFERENCE STANDARDS

A. AASHTO T 180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop.

B. ASTM D 698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft3 (600 kN-m/m3)).

C. ASTM D 1557 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (6,000 ft-lbf/ft3 (2,700 kN-m/m3)).

D. ASTM D 2487 - Standard Classification of Soils for Engineering Purposes (Unified Soil Classification System).

1.4 SUBMITTALS

A. Section 01 30 00 - Administrative Requirements: Submittal Procedures

B. Materials Source: Submit name of imported materials source.

C. Manufacturer's Certificate: Certify Products meet or exceed specified requirements.

1.5 QUALITY ASSURANCE

A. Furnish each subsoil and topsoil material from a single source throughout the Work.

B. Perform Work in accordance with NYSDOT standards.

PART 2 PRODUCTS

2.1 SUBSOIL MATERIALS

A. Excavated and re-used material or imported select borrow.

B. Graded.

C. Free of lumps larger than 3 inch, rocks larger than 2 inch, and debris.

D. Conforming to ASTM D 2487.

2.2 TOPSOIL MATERIALS

A. On-site Topsoil:
   1. Excavated and re-used material.
   2. Graded.
   3. Free of roots, rocks larger than 1/2 inch, subsoil, debris, large weeds, and foreign matter.

a. Screening: Single screened.

4. Conforming to ASTM D 2487.

B. Imported Topsoil
1. Imported borrow.
2. Friable loam.
3. Reasonably free of roots, rocks larger than 1/2 inch, subsoil, debris, large weeds, and foreign matter.
a. Screening: Double screened.
4. Acidity range (pH) of 5.5 to 7.5
5. Containing minimum of 4 percent and maximum of 25 percent inorganic matter.
6. Conforming to ASTM D 2487.
7. Limit decaying matter to 5 percent of total content by volume.
8. Imported soil shall be tested by a preapproved testing agency with a minimum of five years experience testing soils in the State of New York. Report/results shall be provided to engineer on soils ability to support proper grass growth before imported soil is brought onto the jobsite. Report/results shall contain testing agency's suggestions on fertilizers and any necessary additives inorder for soil to provide a continual healthy growing enviornment for grass or other intended plants.
9. Imported soils shall only be supplied to job from pre approved borrow pits that have provided testing results to engineer. No topsoil shall be brought onto site without approval of engineer.

2.3 SOURCE QUALITY CONTROL

A. Section 01 40 00 - Quality Requirements: Testing and analysis of soil material.

B. Testing and Analysis of Subsoil Material: Perform in accordance with ASTM D 698, ASTM D 1557, and AASHTO T 180.

C. Testing and Analysis of Topsoil Material: Perform in accordance with ASTM D 698, ASTM D 1557, and AASHTO T 180.

D. When tests indicate materials do not meet specified requirements, change material and retest.

E. Furnish materials of each type from the same source throughout the Work.

PART 3 EXECUTION

3.1 EXCAVATION

A. Excavate subsoil and topsoil from areas designated. Strip topsoil to full depth of topsoil in designated areas.

B. Stockpile excavated material meeting requirements for subsoil and topsoil materials.

C. Remove excess excavated materials, subsoil, and topsoil not intended for reuse from site.

D. Remove excavated materials not meeting requirements for subsoil and topsoil materials from site.

3.2 STOCKPILING

A. Stockpile materials on site as designated by Architect.

B. Stockpile in sufficient quantities to meet Project schedule and requirements.

C. Separate differing materials with dividers or stockpile apart to prevent mixing.

D. Stockpile topsoil 12 feet high maximum.

E. Prevent intermixing of soil types or contamination.

F. Direct surface water away from stockpile site to prevent erosion or deterioration of materials.

G. Stockpile unsuitable materials on impervious material and cover to prevent erosion and leaching until disposed of.

3.3 STOCKPILE CLEANUP

A. Remove stockpile, leave area in clean and neat condition. Grade site surface to prevent free standing surface water.

B. Subsoil materials required to be transported off site may be disposed of at a site designated by the owner. Location shall be within 10 miles of project site.

END OF SECTION

SECTION 31 05 16 - AGGREGATES FOR EARTHWORK

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Coarse aggregate materials.

B. Fine aggregate materials.

C. Blended aggregate materials.

1.2 RELATED SECTIONS:

A. Section 31 05 13 - Soils for Earthwork.

B. Section 31 23 16 - Excavation.

C. Section 31 23 16.13 - Trenching.

1.3 REFERENCES

A. AASHTO T 180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54kg (10 lb) Rammer and a 457 mm (18 in) Drop.

B. ASTM C 136 - Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.

C. ASTM D 698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft3).

D. ASTM D 1557 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (6,000 ft-lbf/ft3).

E. ASTM D 2487 - Standard Classification of Soils for Engineering Purposes (Unified Soil Classification System).

F. ASTM D 4318 - Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.

1.4 SUBMITTALS

A. Section 01 30 00 - Administrative Requirements: Submittal Procedures.

B. Materials Source: Submit name of imported materials suppliers.

C. Manufacturer's Certificate: Certify Products meet or exceed specified requirements.

1.5 QUALITY ASSURANCE

A. Furnish each aggregate material from a single source throughout the Work.

B. Perform Work in accordance with NYSDOT standards.

PART 2 PRODUCTS

2.1 COURSE AGGREGATE MATERIALS

A. CRUSHED STONE: Crushed stone shall be a mixture of 50% No. 1 & 2 crushed stone meeting all requirements in Section 703-02 of the NYSDOT Standard Specification or conform to AASHTO No. 57 coarse stone aggregate meeting all requirements in Section 703.3 of PennDOT Form 408 Specifications.

B. GRANULAR FILL: Granular fill shall meet all requirements specified for Type 4 Subbase in Section 304-2.02 of the NYSDOT Standard Specification or No. 2RC aggregate in Section 703.3 of PennDOT Form 408 Specification.

C. GRAVEL (STRUCTURAL) FILL: Gravel fill shall meet all requirements for Type 3 Subbase in Section 304-2.02 of the NYSDOT Standard Specification or Item 2A in Section 703.3 of PennDOT Form 408 Specification.

2.2 FINE AGGREGATE MATERIALS

A. CUSHION SAND: Cushion sand shall consist of clean, hard, durable, uncoated particles, free from lumps of clay and all deleterious substances. It shall meet the following gradation requirements and shall be approved by the Engineer before use.

Sieve Size	Percent Passing by Weight
1/4 inch	100
No. 50	0-35
No. 100	0-10

B. PEA STONE: Stone meeting all requirements in Section 605-2.02 of the NYSDOT Standard Specification; free of shale, clay, friable material and debris. Pea stone shall consist of clean, durable rock of uniform quality.

Sieve Size	Percent Passing by Weight
1 inch	100
1/2 inch	30-100
1/4 inch	0-30
No. 10	0-10
No. 20	0-5

2.3 BLENDED AGGREGATE MATERIAL

A. CRUSHER RUN :Crusher run shall meet all requirements for Type 2 subbase in Section 304-2.02 of the NYSDOT Standard Specification or crushed No. 2A coarse aggregate in Section 703.3 of PennDOT Form 408 Specification.

B. SELECT NATIVE FILL: General: On-site material shall be considered select fill if it is free from organic materials and debris, meets the following gradation and soundness requirements, and is approved by the Architect.

Sieve Size	Percent Passing by Weight
4 inch	100
No. 40	0-70
No. 200	0-15

Soundness: Less than 30 percent magnesium sulfate soundness loss.

C. UNCLASSIFIED FILL On-site material used as unclassified fill shall be free of stones larger than 8 inches in the largest dimension, shall be free of organic materials and debris, and shall be approved by the Architect.

2.4 SOURCE QUALITY CONTROL

A. Section 01 40 00 - Quality Requirements: Testing and inspection services.

B. Coarse Aggregate Material - Testing and Analysis: Perform in accordance with ASTM D 698, ASTM D 1557, ASTM D 4318, ASTM C 136, and AASHTO T 180.

C. Fine Aggregate Material - Testing and Analysis: Perform in accordance with ASTM D698, ASTM D 1557, ASTM D 4318, ASTM C 136, and AASHTO T 180.

D. When tests indicate materials do not meet specified requirements, change material and retest.

PART 3 EXECUTION

3.1 EXCAVATION

A. Excavate aggregate materials from on-site locations as indicated on drawings or designated by Architect as specified in Section 31 23 16 - Excavation.

B. Stockpile excavated material meeting requirements for coarse aggregate and fine aggregate materials.

C. Remove excess excavated, coarse aggregate, and fine aggregate materials not intended for reuse from site.

D. Remove excavated materials not meeting requirements for coarse aggregate and fine aggregate materials from site.

3.2 STOCKPILING

A. Stockpile materials on site at locations indicated or designated by Architect.

B. Stockpile in sufficient quantities to meet Project schedule and requirements.

C. Separate different aggregate materials with dividers or stockpile individually to prevent mixing.

D. Direct surface water away from stockpile site to prevent erosion or deterioration of materials.

E. Stockpile unsuitable materials on impervious material and cover to prevent erosion and leaching until disposed of.

3.3 STOCKPILE CLEANUP

A. Remove stockpile, leave area in clean and neat condition. Grade site surface to prevent free standing surface water.

B. When borrow area is indicated, leave area in clean and neat condition. Grade site surface to prevent free standing surface water.

END OF SECTION

SECTION 31 23 16 - EXCAVATION

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Excavating for footings, slabs-on-grade, paving, and site structures, and landscaping.

B. Soil densification

1.2 RELATED REQUIREMENTS

A. Section 31 23 16.13 - Trenching: Excavating for utility trenches outside the building to utility main connections.

1.3 SUBMITTALS

A. Section 01 30 00 - Administrative Requirements: Submittal Procedure

B. Excavation Protection Plan: Describe sheeting, shoring, and bracing materials and installation required to protect excavations, adjacent structures, and adjacent property; include structural calculations to support plan.

C. Shop Drawings: Indicated soil densification grid for each size and configuration footing requiring soils densification.

1.4 QUALITY ASSURANCE

A. Verify that survey bench mark and intended elevations for the Work are as indicated.

B. Perform work in accordance with NYSDOT standards.

C. Fill Material Tests: A sieve analysis, loss on ignition, and magnesium sulfate soundness test shall be taken for each type of material from each source of material. Tests will be in accordance with appropriate ASTM methods. Tests shall be taken by an approved independent laboratory and results submitted directly to the Architect before such material is used for fill. Material which fails to meet the specified requirements shall be removed from the site. Payment for tests shall be as described in General Requirements.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that survey bench mark and intended elevations for the work are as indicated.

3.2 PREPARATION

A. Identify required lines, levels, contours, and datum locations.

B. Protect utilities that remain and protect from damage.

C. Call Local Utility Line Information service (UFPO) at 811 not less than three working days before performing Work.
   1. Request underground utilities to be located and marked within surrounding construction areas.

D. Notify utility company to remove and relocate utilities.

E. Protect bench marks, survey control points, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.

F. Protect plants, lawns, and other features to remain.

3.3 GENERAL EXCAVATION

A. Underpin adjacent structures that could be damaged by excavating work.

B. Excavate to accommodate building foundations, slab on grade, and paving, construction operations and site structures.

C. Notify Architect of unexpected subsurface conditions and discontinue affected Work in area until notified to resume work.

D. Slope banks of excavations deeper than 4 feet to angle of repose or less until shored.

E. Do not interfere with 45 degree bearing splay of foundations.

F. Cut utility trenches wide enough to allow inspection of installed utilities.

G. Hand trim excavations. Remove loose matter.

H. Remove lumped subsoil, boulders, and rock up to 1/3 cu yd measured by volume.

I. Grade top perimeter of excavation to prevent surface water from draining into excavation.

J. Remove excavated material that is unsuitable for re-use from site.

K. Stockpile excavated material to be re-used in area designated on site..

L. Remove excess excavated material from site.

M. Compact disturbed load bearing soil in direct contact with foundations to original bearing capacity; perform compaction in accordance with Section 31 23 23 and Section 31 23 16.13.

N. Repair or replace any items indicated to remain damaged by excavation.

3.4 TOPSOIL EXCAVATION

A. Excavate topsoil from areas to be further excavated, re-landscaped, or regraded, marked areas, entire site, without mixing with foreign materials for use in finish grading.

B. Do not excavate wet topsoil.

C. Stockpile in area designated on site to depth not exceeding 8 feet and protect from erosion. Stockpile material on impervious material 36 mil Hypalon material and cover over with same material, until disposal.

D. Do not remove topsoil from site.

3.5 SUBSOIL EXCAVATION

A. Excavate subsoil from areas to be further excavated, re-landscaped, or regraded. marked areas. entire site.

B. Do not excavate wet subsoil or excavate and process wet material to obtain optimum moisture content.

C. When excavating through roots, perform Work by hand and cut roots with sharp axe.

D. Remove excess subsoil not intended for reuse, from site.

E. Benching Slopes: Horizontally bench existing slopes greater than 1: 4 to key placed fill material to slope to provide firm bearing.

F. Stability: Replace damaged or displaced subsoil as specified for fill.

3.6 FIELD QUALITY CONTROL

A. See Section 01 40 00 - Quality Requirements, for general requirements for field inspection and testing.

B. Provide for visual inspection of load-bearing excavated surfaces before placement of foundations.

3.7 PROTECTION

A. Prevent displacement of banks and keep loose soil from falling into excavation; maintain soil stability.

B. Protect bottom of excavations and soil adjacent to and beneath foundation from freezing.

C. Protect structures, utilities and other facilities from damage caused by settlement, lateral movement, undermining, washout and other hazards created by earth operations.

END OF SECTION

SECTION 31 23 16.13 - TRENCHING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Excavation trenches for utilities outside the buildings to utility main connections.

B. Compacted fill from top of utility bedding to subgrade elevations.

C. Backfilling and compaction.

1.2 RELATED REQUIREMENTS

A. Section 31 23 16 - Excavation: Building and foundation excavating.

1.3 DEFINITIONS

A. Finish Grade Elevations: Indicated on site drawings.

B. Subgrade Elevations: Indicated on site drawings.

C. Utility: Any buried pipe, duct, conduit, or cable.

1.4 REFERENCES

A. AASHTO T 180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54 kg (10-lb) Rammer and a 457 mm (18 in.) Drop; American Association of State Highway and Transportation Officials; 2010

B. ASTM D698 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft3 (600 kN-m/m3)); 2012.

C. ASTM D1556 - Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method; 2007.

D. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft3 (2,700 kN m/m3)); 2012.

E. ASTM D2167 - Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method; 2008.

F. ASTM D3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth); 2005.

1.5 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.

B. Materials Sources: Submit name of imported materials source.

C. Fill Composition Test Reports: Results of laboratory tests on proposed and actual materials used.

D. Compaction Density Test Reports.

E. Excavation Protection Plan: Describing sheeting, shoring, and bracing materials and installation required to protect excavations and adjacent structures and property; include structural calculations to support plan.

F. Product Data: Submit data for geo-textile fabric indicating fabric and construction.

G. Manufacturer's Certificate: Certify Products meet or exceed specified requirements.

1.6 DELIVERY, STORAGE, AND HANDLING

A. When necessary, store materials on site in advance of need.

B. When fill materials need to be stored on site, locate stockpiles where designated.
   1. Separate differing materials with dividers or stockpile separately to prevent intermixing.
   2. Prevent contamination.
   3. Protect stockpiles from erosion and deterioration of materials.

1.7 QUALITY ASSURANCE

A. Perform work in accordance with NYSDOT standards.

1.8 FIELD MEASUREMENTS

A. Verify field measurements prior to fabrication.

1.9 COORDINATION

A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.

B. Verify work associated with lower elevation utilities is complete before placing higher elevation utilities.

PART 2 PRODUCTS

2.1 FILL MATERIALS

A. See Section 31 05 13 - Soils for Earthwork.

B. See Section 31 05 16 - Aggregates for Earthwork.

2.2 ACCESSORIES

A. Geotextile Fabric: Non-biodegradable, woven.

2.3 SOURCE QUALITY CONTROL

A. See Section 01 40 00 - Quality Requirements, for general requirements for testing and analysis of soil material.

B. Where fill materials are specified by reference to a specific standard, test and analyze samples for compliance before delivery to site.

C. If tests indicate materials do not meet specified requirements, change material and retest.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that survey bench marks and intended elevations for the work are as indicated.

3.2 PREPARATION

A. Identify required lines, levels, contours, and datum locations.

3.3 TRENCHING

A. Notify Architect of unexpected subsurface conditions and discontinue affected Work in area until notified to resume work.

B. Slope banks of excavations deeper than 4 feet to angle of repose or less until shored.

C. Do not interfere with 45 degree bearing splay of foundations.

D. Cut trenches wide enough to allow inspection of installed utilities.

E. Hand trim excavations. Remove loose matter.

F. Remove large stones and other hard matter that could damage piping or impede consistent backfilling or compaction.

G. Remove lumped subsoil, boulders, and rock up to 1/3 cu yd measured by volume..

H. Remove excavated material that is unsuitable for re-use from site.

I. Stockpile excavated material to be re-used in area designated.

J. Remove excess excavated material from site.

K. Do not advance open trench more than 100 feet ahead of installed pipe.

L. Excavate bottom of trenches maximum of 2 feet wider than outside diameter of pipe or as indicated on plans.

M. Excavate trenches to depth indicated on drawings. Provide uniform and continuous bearing and support for bedding material and pipe utilities.

N. When Project conditions permit, slope side walls of excavation starting 2 feet above top of pipe. When side walls cannot be sloped, provide sheeting and shoring to protect excavation as specified in this section or as required by OSHA.

O. When subsurface materials at bottom of trench are loose or soft, excavate to greater depth as directed by Architect/Engineer until suitable material is encountered. Notify Architect/Engineer, and request instructions prior to excavation.

P. Cut out soft areas of sub-grade not capable of compaction in place. Backfill with approved fill material and compact to density equal to or greater than requirements for subsequent backfill material.

Q. Correct over excavated areas with compacted backfill as specified for authorized excavation or replace with fill concrete as directed by Architect/Engineer.

3.4 PREPARATION FOR UTILITY PLACEMENT

A. Cut out soft areas of subgrade not capable of compaction in place. Backfill with general fill.

B. Compact subgrade to density equal to or greater than requirements for subsequent fill material.

C. Until ready to backfill, maintain excavations and prevent loose soil from falling into excavation.

3.5 BACKFILLING

A. Backfill to contours and elevations indicated using unfrozen materials.

B. Employ a placement method that does not disturb or damage other work.

C. Systematically fill to allow maximum time for natural settlement. Do not fill over porous, wet, frozen or spongy subgrade surfaces.

D. Maintain optimum moisture content of fill materials to attain required compaction density.

E. Granular Fill: Place and compact materials in equal continuous layers not exceeding 6 inches compacted depth.

F. Soil Fill: Place and compact material in equal continuous layers not exceeding 8 inches compacted depth.

G. Slope grade away from building minimum 2 inches in 10 ft, unless noted otherwise. Make gradual grade changes. Blend slope into level areas.

H. Correct areas that are over-excavated.
   1. Other areas: Use general fill, flush to required elevation, compacted to minimum 97 percent of maximum dry density.

I. Compaction Density Unless Otherwise Specified or Indicated:
   1. Under paving, slabs-on-grade, and similar construction: 97 percent of maximum dry density.
   2. At other locations: 95 percent of maximum dry density.

J. Reshape and re-compact fills subjected to vehicular traffic.

K. Place geotextile fabric over bedding fill prior to placing subsequent fill materials.

L. Place fill material in continuous layers and compact in accordance with schedule at end of this section.

M. Employ placement method that does not disturb or damage foundation perimeter drainage, utilities in trench, and other below grade improvements.

N. Do not leave open trenching at end of working day.

O. Protect open trenches at all times during installation of trenching.

3.6 BEDDING AND FILL AT SPECIFIC LOCATIONS

A. Use general fill unless otherwise specified or indicated.

3.7 TOLERANCES

A. Section 01 40 00 - Quality Requirements: Tolerances.

B. Top Surface of General Backfilling: Plus or minus 1 inch from required elevations.

C. Top Surface of Backfilling Under Paved Areas: Plus or minus 1 inch from required elevations.

3.8 FIELD QUALITY CONTROL

A. See Section 01 40 00 - Quality Requirements, for general requirements for field inspection and testing.

B. Perform compaction density testing on compacted fill in accordance with ASTM D1556, ASTM D2167, ASTM D3017, or ASTM D6938.

C. Evaluate results in relation to compaction curve determined by testing uncompacted material in accordance with ASTM D 698 ("standard Proctor"), ASTM D 1557 ("modified Proctor"), or AASHTO T 180.

D. If tests indicate work does not meet specified requirements, remove work, replace and retest.

E. Frequency of Tests: 1 for every 50 feet of trench.

3.9 CLEANING

A. Leave unused materials in a neat, compact stockpile.

B. Remove unused stockpiled materials, leave area in a clean and neat condition. Grade stockpile area to prevent standing surface water.

C. Leave borrow areas in a clean and neat condition. Grade to prevent standing surface water.

END OF SECTION

SECTION 33 31 11 - SITE SANITARY UTILITY SEWAGE PIPING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Sanitary sewerage drainage piping, fittings, and accessories.

B. Connection of building sanitary drainage system to existing sewers.

C. Cleanout Access.

1.2 RELATED REQUIREMENTS

A. Section 03 30 00 - Cast-in-Place Concrete: Concrete for cleanout base pad construction.

B. Section 31 23 16 - Excavation: Excavating of trenches.

C. Section 31 23 16.13 - Trenching: Excavating, bedding, and backfilling.

1.3 DEFINITIONS

A. Bedding: Fill placed under, beside and directly over pipe, prior to subsequent backfill operations.

1.4 REFERENCE STANDARDS

A. ASTM D1785 - Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120; 2015.

B. ASTM D2321 - Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications; 2014.

C. ASTM D2729 - Standard Specification for Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings; 2011.

D. ASTM D3034 - Standard Specification for Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings; 2014.

1.5 ADMINISTRATIVE REQUIREMENTS

A. Coordination: Coordinate the installation of sanitary piping with size, location and installation of service utilities.

B. Sequencing: Ensure that utility connections are achieved in an orderly and expeditious manner.

1.6 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide data indicating pipe and pipe accessories.

C. Manufacturer's Installation Instructions: Indicate special procedures required to install Products specified.

D. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

E. Project Record Documents:
   1. Record location of pipe runs, connections, manholes, cleanouts, and invert elevations.
   2. Identify and describe unexpected variations to subsoil conditions or discovery of uncharted utilities.

PART 2 PRODUCTS

2.1 SEWER PIPE MATERIALS

A. Provide products that comply with applicable code(s).

B. Plastic Pipe: ASTM D2729, Poly(Vinyl Chloride) (PVC) material; inside nominal diameter of 4-15 inches, bell and spigot style solvent sealed joint end.

C. Plastic Pipe: ASTM D3034, Type PSM, Poly(Vinyl Chloride) (PVC) material; inside nominal diameter of 4-15 inches, bell and spigot style solvent sealed joint end.

D. Plastic Pipe: ASTM D1785, Schedule 40, Poly(Vinyl Chloride) (PVC) material; inside nominal diameter of 4-18 inches, bell and spigot style solvent sealed joint end.

E. Joint Seals: Mechanical clamp ring type, stainless steel expanding and contracting sleeve, neoprene ribbed gasket for positive seal.

F. Fittings: Same material as pipe molded or formed to suit pipe size and end design, in required tee, bends, elbows, cleanouts, reducers, traps and other configurations required.

2.2 PIPE ACCESSORIES

A. Trace Wire: Magnetic detectable conductor, brightly colored plastic covering, imprinted with "Sewer Service " in large letters. Tracer wire shall be a minimum of 10 gauge copper wire with UF insulation.

2.3 CLEANOUT

A. Lid and Frame: Cast iron construction, hinged lid.
   1. Lid Design: solid cover imprinted with "SEWER" .
   2. Cleanout lid shall be a minimum of 12 inches or unless otherwise shown on the engineering drawings.

2.4 BEDDING AND COVER MATERIALS

A. Pipe Bedding Material: As specified in Section 31 23 16.13.

B. Pipe Cover Material: As specified in Section 31 23 16.13.

PART 3 EXECUTION

3.1 GENERAL

A. Perform work in accordance with applicable code(s).

3.2 TRENCHING

A. See Section 31 23 16.13 for additional requirements.

B. Hand trim excavation for accurate placement of pipe to elevations indicated.

C. Backfill around sides and to top of pipe with cover fill, tamp in place and compact, then complete backfilling.

3.3 INSTALLATION - PIPE

A. Verify that trench cut is ready to receive work and excavations, dimensions, and elevations are as indicated on layout drawings.

B. Install pipe, fittings, and accessories in accordance with manufacturer's instructions. Seal watertight.
   1. Plastic Pipe: Also comply with ASTM D2321.

C. Lay pipe to slope gradients noted on layout drawings; with maximum variation from true slope of 1/8 inch in 10 feet.

D. Connect to building sanitary sewer outlet and existing sewer system, through installed sleeves.

E. Install trace wire 6 inches above top of pipe; coordinate with Section 31 23 16.13.

3.4 INSTALLATION - CLEANOUTS

A. Form bottom of excavation clean and smooth to correct elevation.

B. Form and place cast-in-place concrete base pad, with provision for sanitary sewer pipe end sections.

C. Establish elevations and pipe inverts for inlets and outlets as indicated.

D. Mount lid and frame level in grout, secured to top cone section to elevation indicated.

3.5 FIELD QUALITY CONTROL

A. Perform field inspection and testing in accordance with Section 01 40 00.

B. If tests indicate Work does not meet specified requirements, remove Work, replace and retest at no cost to the Owner.

C. Pressure Test
   1. Low-pressure Air Test (applies to all piping materials):
      a. Test each section of gravity sewer piping between manholes.
      b. Where customer service connections are installed under the Contract, test connections and service lines concurrently with the main, unless directed otherwise by the Engineer.
      c. Introduce air pressure slowly to approximately 4 psig.
         1) Determine ground water elevation above spring line of pipe for every foot of ground water above spring line of pipe, increase. starting air test pressure by 0.43 psig; do not increase pressure above 10 psig.
      d. Allow pressure to stabilize for at least five minutes. Adjust pressure to 3.5 psig or increased test pressure as determined above when ground water is present. Start test.
      e. Test: Determine test duration for sewer section with single pipe size from the following table. Do not make allowance for laterals.

AIR TEST TABLE
Minimum Test Time for Various Pipe Sizes

Nominal Pipe Size, Inches	T (time), Min/100 feet
3	0.2
4	0.3
6	0.7
8	1.2
10	1.5
12	1.8
15	2.1
18	2.4
21	3.0
24	3.6

1) Record drop in pressure during test period; when air pressure has dropped more than 1.0 psig during test period, piping has failed; when 1.0 psig air pressure drop has not occurred during test period, discontinue test and piping is accepted.
2) When piping fails, determine source of air leakage, make corrections and retest; test section in incremental stages until leaks are isolated; after leaks are repaired, retest entire section between manholes.

D. Deflection Test (Applies to Plastic Sewer Pipe)
   1. Perform vertical ring deflection testing after backfilling has been in place for at least 30 days but not longer than 12 months.
   2. Allowable maximum deflection for installed plastic sewer pipe limited to 5 percent of original vertical internal diameter.
   3. Perform deflection testing using properly sized rigid ball or 'Go, No-Go' mandrel.
   4. Furnish rigid ball or mandrel with diameter not less than 95 percent of base or average inside diameter of pipe as determined by ASTM standard to which pipe is manufactured. Measure pipe in compliance with ASTM D2122.
   5. Perform test without mechanical pulling devices.
   6. Locate, excavate, replace and retest pipe exceeding allowable deflection.

E. Lamp Test
   1. Lamp gravity piping after flushing and cleaning.
   2. Perform lamping operation by shining light at one end of each pipe section between manholes; observe light at other end; reject pipe not installed with uniform line and grade; remove and reinstall rejected pipe sections; re-clean and lamp until pipe section achieves uniform line and grade.

END OF SECTION